# Intensive language contact in the Caucasus: the case of Tsova-Tush

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## The case of Tsova-Tush

Jesse Wichers Schreur

Languages of the Caucasus

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# Intensive language contact in the Caucasus

The case of Tsova-Tush

Jesse Wichers Schreur

Freie Universität Berlin

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# Acknowledgments

This book is based on my doctoral thesis, which would not have been completed without the help of many friends, colleagues, and collaborators.

First and foremost, I would like to thank the entire Tsova-Tush community in Zemo Alvani for hosting me and allowing me to investigate their precious and complicated language. My warmest thanks goes out to Rezo Orbetishvili and Nisa Bakhtarishvili for taking me in, introducing me to the community, feeding me copious meals, and treating me like a family member. I also thank Dantes Echishvili and Rezo Shankishvili for their collaboration and their kind heart.

I sincerely thank my supervisor Gilles Authier for introducing me to minority languages of the Caucasus, for being patient with my slow writing, and for hosting me in Paris so many times, to the point that I think I have lived there for several years now. Several other people have invested in me in terms of supervision and guidance. A huge thank you to Monika Rind-Pawlowski, for close-reading my work several times, but equally importantly for her friendship and the Wohnmobil adventures. Thank you to Gerd Carling for stepping in at the last moment, and for exchanging stories of adapting to the German bureaucratic system. A heartfelt thank you to Jost Gippert, who had no obligation to help me, but still provided crucial pointers, suggestions and nudges in the right direction.

A huge thank you to my two friends and fellow PhD candidates, Max Ionov and Hasmik Sargsyan. We had an intense and turbulent time in Frankfurt, and I thank you for the late nights, the heartfelt conversations and the amazing banter. Max, thank you so much for our friendship and for all of the adventures we undertook.

I want to thank my fellow young researchers of Tsova-Tush, Diana Kakashvili, Bryn Hauk and Felix Anker. We were never all in the same place at the same time, but it did feel like our own little community, and I have fond memories of our email conversations and occasional live meet-ups. Thank you, Diana, for always being ready to discuss anything from Tsova-Tush grammar to Georgian university politics and thank you for our amazing trip to Dadaloba.

A big thank you to the community of Caucasologists that I got to be a part of. I thank both the more established members, Timur Maisak, Johanna Nichols, Alice Harris, Diana Forker, Nina Sumbatova, Nina Dobrushina, Misha Daniel,

# Summary in Georgian – ქართული მოკლე შინაარსი

დასკვნა ქართულ ენაზე წოვათუშური აღმოსავლეთ კავკასიური ენაა, რომელზეც და-ახლოებით 300 ადამიანი საუბრობს აღმოსავლეთ საქართველოში, სოფელ ზემო ალ-ვანში. იგი ნახურ ჯგუფს განეკუთვნება და ჩეჩნურისა და ინგუშურის ახლომონათესავე ენაა. წოვათუშური განიცდის ქართულის მძლავრ გავლენას. წოვათუშურად მოლაპარა-კეები ბილინგვები არიან, მშობლიური წოვათუშურის გარდა, საუბრობენ ქართულადაც და მათი ეთნიკური თვითაღქმა ქართულია. წინამდებარე დისერტაციას სამი მიზანი აქვს: (1) შეიტანოს წვლილი წოვათუშური ენის ზოგადი აღწერის საქმეში და შეავსოს ის ხარ-ვეზები, რაც არსებობს ამ ენის შესახებ აქამდე არსებულ სამეცნიერო ლიტერატურაში, რეფერენციული გრამატიკის არარსებობის პირობებში; (2) შეუპირისპიროს ერთმანეთს წოვათუშური, ჩეჩნურ-ინგუშური და ქართული ეკვივალენტური კონსტრუქციები, რათა შე-საძლებელი გახდეს ჰიპოთეზების ჩამოყალიბება იმის შესახებ, თუ რომელი კონსტრუქ-ციაა საკუთრივ წოვათუშური და რომელი ქართულის გავლენით წარმოქმნილი; (3) წარ-მოადგინოს ენათა კონტაქტის ყველაზე სარწმუნო დიაქრონიული სურათი წოვათუშური ენის ისტორიული მონაცემებისა და ისტორიული სოციოლინგვისტური მდგომარეობის გათვალისწინებით.

პირველ თავში მოცემულია წოვათუშური ენის ზოგადი დახასიათება (ნაწილი 1.2.1) და მის აღსანიშნად ხმარებული ტერმინები, აქვე საუბარია აღმოსავლურ კავკასიურ ენა-თა ოჯახში წოვათუშური ენის ადგილისა და დიალექტური სახესხვაობების ხარისხის შე-სახებ. ამავე თავში წარმოდგენილი ტიპოლოგიური მონახაზი, ამის შემდეგ კი წოვათუ-შური ენის კვლევის მოკლე ისტორია. ამას მოსდევს თუშეთის დახასიათება, წოვათუშე-ბის მოკლე ისტორია, მათი წეს-ჩვეულებების საბაზისო აღწერა და სოციოლინგვისტური სურათი. 1.3 ნაწილში მოცემულია მსჯელობა წინამდებარე ნაშრომის მეთოდოლოგი-აზე, მიმოხილულია ენათა კონტაქტის შესახებ არსებულ სამეცნიერო ლიტერატურაში წამოჭრილი აქტუალური საკითხები, ასევე, ძირითადი ემპირიული ბაზა და ნაშრომში გამოყენებული მეთოდები.

მეორე თავი ეხება ფონეტიკისა და ფონოლოგიის საკითხებს. წარმოდგენილია ხმო-ვანთა და თანხმოვანთა სისტემა, აგრეთვე აქამდე უცნობი ფონემა **ჳ** ([ɦʷ] ან [w̰]). გან-ხილულია ყველაზე მნიშვნელოვანი ფონოლოგიური პროცესები, შემდეგ კი მასალა შე-დარებულია ქართულის მონაცემებთან. როგორც წოვათუშურის, ისე ქართულისათვის დამახასიათებელია ერთგვარი ფონოლოგიური მოვლენა, **რ**-ს დისიმილაცია: **რ**-ს შემ-

ცველი ორი წოვათუშური სუფიქსი — აბლატიური ბრუნვის ბოლოსართი **-რენ** და მრავ-
ლობითობის მაწარმოებელი არქეული **-ერნ**, **რ**-ს იცვლის **ლ**-დ, როდესაც დაერთვის **რ**-
ს შემცველ ძირს. წოვათუშურის ეს მახასიათებელი, როგორც ამას 1850-იანი წლები-
დან მოყოლებული დაკვირვება ამჟღავნებს, წარმოადგენს ქართულის ანალოგს როგორც
დისტრიბუციის მხრივ, ისე სხვა დეტალებით. ქართული ენის წოვათუშურზე გავლენის
კიდევ ერთი ნიშანი ამ უკანასკნელში ბევრი ახალი თანხმოვანკომპლექსის გაჩენაა.
ეს განპირობებულია ქართულიდან დიდი რაოდენობით ნასესხები სიტყვებით, რომელ-
თა თანხმოვანკომპლექსები არ გამარტივებულა მსესხებელ ენაში. მოცემული თავი
სრულდება ნასესხები სიტყვების ფონოლოგიური ადაპტაციის შესახებ მსჯელობით. აქ
ჩანს, რომ ნასესხობათა უფრო ძველი ფენა წოვათუშურში შეიცავს ფონემა **-ო**-ს, მაშინ
როდესაც სალიტერატურო ქართულში მის ადგილას გვაქვს **-ვა**-, ქართულის **-ნ**-ს ნაც-
ვლად კი -ჸ- არის წარმოდგენილი. ეს მახასიათებელი მიუთითებენ, რომ ნასესხებების
წყაროს ქართულის ჩრდილო-დასავლური დიალექტები წარმოადგენს, ყველაზე მეტად
კი თუშური დიალექტი. დასახელებულ ელემენტთა შემცველი უფრო გვიანი ნასესხობე-
ბი კი პირდაპირ სალიტერატურო ქართულიდანაა შესული. ამასთანავე, ქართულიდან
ნასესხებ ისეთ სიტყვებში, რომლებშიც თანხმოვანკომპლექსების პირველ წევრად **მ**-
გვაქვს, იგი იკარგება. სხვა თანხმოვანკომპლექსები არ მარტივდება.

    მესამე თავში განხილულია სახელის ფლექსიისა და სახელური ფრაზის სტრუქტურის
საკითხები. მოცემული თავი იწყება წოვათუშური ენის ბრუნვათა სისტემისა და ძირითა-
დი გრამატიკული ბრუნვების განხილვით. წინამდებარე ნაშრომი იძლევა ლოკატიური
ბრუნვების ახლებურ გაგებას, რომლებიც (გარდა "გვერდით"-სერიისა) მოიცავს დაღეს-
ტნური ენების ლოკატიური ბრუნვების მსგავს რთულ სუფიქსებიან სისტემას. აქვეა ბრუ-
ნების სხვადასხვა ტიპის გამოყოფის პირველი მცდელობა. ქვეთავი, რომელშიც განხი-
ლულია ნასესხები სიტყვების ადაპტაცია, გვიჩვენებს, რომ: (1) ქართულიდან ნასესხე-
ბი სიტყვები ერთიანდება თანხმოვანფუძიანი სახელების ბრუნების ტიპში; (2) ნასესხები
სიტყვების გრამატიკული კლასი განისაზღვრება იმავე ფონოლოგიური და სემანტიკური
კრიტერიუმებით, რითაც საკუთრივ წოვათუშური სიტყვებისა; (3) ზედსართავი სახელე-
ბის სესხება ხშირია, მაგრამ საკუთრივ წოვათუშური ზედსართავებისაგან განსხვავებით,
ისინი ბრუნვაში შეთანხმებას არ გვიჩვენებენ; (4) უფრო ადრეული სახელური ნასესხო-
ბები ერთიანდება Cუ-ბრუნების ტიპში, ადრე ნასესხები ზედსართავი სახელები კი და-
ირთავენ წოვათუშური ზედსართავების ბოლოსართ -ონ-ს, ამასთანავე, ირიბ ბრუნვებში,
როგორც ბრუნვაში შეთანხმების ნიშანს, იძებენ -ჩო დაბოლოებას და ამგვარად, უფრო
მეტად არიან ინტეგრირებული წოვათუშური ენის გრამატიკულ სისტემაში. მესამე თავი
გრძელდება ყველაზე მნიშვნელოვანი მასჩვრელების - ჩვენებითი ნაცვალსახელების,
რიცხვითი სახელების, ზედსართავებისა და აღწერით. სპეციალური ქვეთავი ეძღვნება
მოცემულ მასჩვრელთა შეთანხმების ხარისხს. ამის შემდეგ განხილულია რთული სა-
ხელური ფრაზები, ნათესაობითი ბრუნვითა და შერწყმული ტიპის სახელური ფრაზებით.
პირველად არის განალიზებული მასჩვრელ-საზღვრულის ისეთი კონსტრუქციები, სა-
დაც არსებითი სახელის ირიბი ფორმა დაბოლოების გარეშეა გამოყენებული სხვა სა-

ხელის მსაზღვრელად. აღნიშნული თავი სრულდება ისეთ სახელურ ფრაზებზე მსჯელო-
ბით, რომელიც არ შეიცავს სახელს: ნაცვალსახელური ფრაზები და გაარსებითებული
მსაზღვრელები. სტრუქტურული კონტაქტის მხრივ ეს თავი აჩვენებს, რომ: (1) ადგილო-
ბითი (Essive), "შორის"-ადგილობითი (Interessive), "შიდა"-ადგილობითი (Inessive),
"ზედა"-ადგილობითი (Superessive), ყველა ამ ადგილობით ბრუნებში წარმოდგენი-
ლი სახელები გამოიყენება მიმართულებითი ფუნქციით. სხვა ნახურ ენებში მათი ამგვა-
რი ფუნქცია არ დასტურდება, მაგრამ ქართულში რეგულარულად გამოიყენება, ამ უკა-
ნასკნელში მიმართულებით-ადგილობითი განსხვავება ცხადად გამოხატული არ არის
სახელებში; (2) გარდა საკუთარი სინთეზური ვარიანტებისა, ზედსართავი სახელის შე-
დარებითი ხარისხის გადმოსაცემად წოვათუშურს გააჩნია ანალიზური კონსტრუქციებიც.
ასეთი კონსტრუქციები არ მოიპოვება ჩეჩნურსა და ინგუშურში, მაგრამ სავალდებულოა
ქართულში, ამასთანავე, ისინი ერთი და იმავე მორფემით იწარმოება ორივე ენაში, წო-
ვათუშურში ქართულიდან ნასესხები მორფემა - **უ ფრო** გამოიყენება შესადარებლად.
გარდა ამისა, უფროობითი ხარისხის ანალიზური წარმოებისა ჩეჩნურსა და ინგუშურში,
წოვათუშურში კი გამოიყენება სპეციალური მორფი **ჰ'ამახეც**, რომელიც ქართულის შე-
საბამისი ფუნქციის მორფემის **ყველაზე** კალკია. (3) როგორც წესი, ასზე მეტის აღნიშ-
ვნელი რიცხვითი სახელები წოვათუშურში ქართულიდან არის ნასესხები. (4) ჩეჩნურ-
ინგუშურის იმ ჩვენებითი ნაცვალსახელების საპირისპიროდ, რომლებიც II პირთან ახ-
ლომყოფობას გამოხატავენ, წოვათუშურში I-II პირთან არმყოფობის აღმნიშვნელი ო
გამოიყენება დეიქტურად ნეიტრალურ მესამე პირის ნაცვალსახელადაც. იგი ქართული
ის ნაცვალსახელის ზუსტ ანალოგს წარმოადგენ. (5) უარყოფითი ნაცვალსახელებით
ნაწარმოები ფრაზები მათი ქართული შესატყვისებების ანალოგიურია და განსხვავდება სა-
კუთრივ წოვათუშური კონსტრუქციებისგან (მოიპოვება სხვა ნახურ ენებშიც), რომლებიც
შედგება განსხვასდვრელი ნაცვალსახელისა და უარყოფისგან წინადადების დონეზე.

მეოთხე თავი ზმნის ფლექსიას ეხება. მასში განხილულია ყველა წოვათუშური აფიქსი
და აბლაუტი, ზმნურ ფორმაში წარმოდგენილი მარცხნიდან მარჯვნისაკენ. ნომინატივში
(იშვიათად ერგატივში) მდგარი აქტანტის აღმნიშვნელი კლასის პრეფიქსი, არაპრო-
დუქტიული მორფოლოგიური მოვლენები, როგორებიცაა ინფიქსითა და აბლაუტით გა-
მოხატული ზმნის ძირის ასპექტი (ჩვეულებისამებრ ზმნის მრავლობითიობასთან დაკავ-
შირებული), ფუძის მონაცვლეობა, რომელიც მასთან შეწყობილი პირების მრავლობი-
თობას გამოხატავ, დრო-კილოთა ყველა სუფიქსი და სუბიექტის გამომხატველი აფიქ-
სები. ეს თავი იდლება ახლებურ ხედვას შემდგ საკითხებზე: (1) წოვათუშური განარჩევს
ზმნურ კატეგორიას — უკვეობითს (Iamitive), მის გამოსახატავად დადებით წინადადება-
ში გამოყენებულია ბმული მორფემა "უკვე", უარყოფით წინადადებაში კი "ადარ". (2)
მანამდე ცნობილი იყო, რომ ზმნის ფორმა, რომელსაც -**რალო** სუფიქსი დაერთვის,
სრულ ასპექტსა და უნახავ მოქმედებას გამოხატავ, მაგრამ წინამდებარე ნაშრომში
ჩვენ მას ვადევ წარსული დროის კავშირებითი კილოს კვალიფიკაციას (რადგან მას
შეუძლია კავშირებითი კილოს შინარსის გამოხატვა სხვა კონტექსტში). მან აგრეთვე
შეიძინა დამატებითი ფუნქცია — იმ თხრობაში, რომელიც სრულიად უნახავ მოქმედე-

ბას გადმოსცემს, იგი არასრულ ასპექტს გამოხატავს. ენათა სტურქტურული კონტაქტის მხრივ, წინამდებარე თავი აჩვენებს შემდეგს: (1) მიუხედავად იმისა, რომ ორივე ენაში გამოიყენება ნამყო სრულად წოდებული ზმნის ფორმები, ფაქტობრივი პირობითი კონ-სტრუქციები საკმაო განსხვავებულია წოვათუშურსა და ქართულში. ამიტომ უსაფუძ-ვლო იქნებოდა ამაში ქართულის გავლენის დანახვა. (2) წოვათუშურში ჩამოყალიბდა სუბიექტური პირის ნიშნები (კოჯიმა 2019), რომლებსაც ობიექტური პირის კლიტიკურ ნაწილაკებთან ერთად შეუძლიათ გამოხატონ იგივე ინფორმაცია, რაც ქართულმა პო-ლიპერსონალურმა ფინიტურმა ზმნურმა ფორმამ. ნასესხებ ზმნებს რაც შეეხება, უშუა-ლოდ ზმნურ ფორმებთან ერთად, წოვათუშურმა ქართულისაგან ისესხა ასპექტის ზმნის-წინებით გარჩევის საშუალება. ამასთანავე, მრავლობითობის გამოსახატავად ბრძანე-ბითობისა და იმ ფორმებში, რომლებიც შეიცავენ მრავლობითი რიცხვის პირველი პირის ინკლუზიურ ნაცვალსახელს, ისესხა სუფიქსი **-თ**. ეს ბმული მორფემის სესხის იშვიათ მოვლენას გვიჩვენებს.

მეხუთე თავში სამი ურთიერთდაკავშირებული თემაა განხილული: ზმნის ვალენტო-ბა და პირთა ასახვის მოდელები (ნომინატიური, ერგატიული და დატიური კონსტრუქ-ციებ) მორფოლოგიურად რთული ზმნები და აქტანტური დერივაცია. პირველ რიგში, დახასიათებულია წოვათუშური ზმნის ვალენტობის ძირითადი მოდელები, აგრეთვე მო-ცემულია ვრცელი მსჯელობა წოვათუშურის გრამატიკაში ცნობილი და ხშირად განხილ-ვადი საკითხის — ერთპირიანი ზმნების შესახებ, რომლებიც მოითხოვენ სუბიექტს ერგა-ტიულ ბრუნვაში. შემთავაზებულია გარდაუცვალი ზმნის ახალი ტიპოლოგია წოვათუშუ-რისთვის. ასევე გამოთქმულია მოსაზრება, რომ შესაძლოა ამ ტიპის ზმნები არ წარმო-ადგენდეს ქართული ენის გავლენის შედეგს, რომლისთვისაც აგრეთვე დამახასიათებე-ლია გარდაუვალი ზმნის იგივე კატეგორია (ლექსიკური ზმნების წყება, ასევე მრფო-სინტაქსური მოდელები საკმაო განსხვავებულია). 5.3 ნაწილში კლასიფიცირებულია წოვათუშური რთული ზმნების სხვადასხვა სახეობები: მეშველზმნიანი კონსტრუქციები, მეშველზმნიანი კომპოზიტები (light verb constructions), ზმნური დვანდვა კომპოზიტე-ბი, რედუპლიკაციის შედეგად მიღებული და ნაზმდსართავავი ზმნები. ზმნა **დ-ი** "კეთე-ბა" (**დ-** კლასის ნიშანია) გამოიყენება მეშველ ზმნად ფრაზებსა და კომპოზიტებში, **დ-ი** და **დ-აღ** აგრეთვე გამოიყენება ზედსართავი სახელებისაგან გარდამავალი და გარდა-უვალი ზმნის საწარმოებლად. იგივე ზმნები მონაწილეობენ აქტანტურ დერივაციაშის, რომელიც განხილულია 5.4 ნაწილში. ამავე თავში მიმოხილულია მორფოლოგიური კა-უზაციასც, გარდაუვალი კონსტრუქციების წარმოება **დ-ის** "დარჩენა" ზმნის გამოყენებით და პოტენციალისი. 5.5 ნაწილში წარმოდგენილია ნასესხები ზმნების ადაპტაციის საშუ-ალებები იმავე ზმნების — გარდამავალი **დ-ი**-ისა და გარდაუვალი **დ-აღ**-ის გამოყენე-ბით. ქართული ზმნები, რომლების მესამე კლასში ერთიანდება (ერთვალენტიანი ზმნე-ბი, რომლებიც პერფექტულ დროებს აწარმოებენ ზმნისწინის გარეშე, სემანტიკურად, ძირითადად შეიცავენ არამიზნიან (atelic) ზმნებს, სინტაქსურად მოითხოვენ სუბიექტს ერგატიულ ბრუნვაში მეორე სერიაში), წოვათუშურში ადაპტირებულია ერთვალენტია-ნი გარდამავალი ზმნის მორფოსინტაქსით. ამ კონკრეტული ზმნების სესხებით წოვათუ-

შურს ახლა გააჩნია გარდაუვალი ზმნების სერია, რომელიც გარდამავალი ზმნის მორ-ფოლოგიით ხასიათდება (მეშვეli ზმნა **დ-ი**). ზოგადი კლასის ნიშანი **დ-** (რომელიც არ აღნიშნავს ზმნასთან შეწყობილ არცერთ პირს), არამიზნიანი (atelic) სემანტიკა და ყვე-ლა სუბიექტური პირი ერგატიულ ბრუნვაში. ამასთანავე, ზმნები ნასესხებია ძველი ქარ-თულის მასდარის ვითარებითი ბრუნვის ფორმით, რომელიც თანამედროვე ქართულში აღარ გამოიყენება, მაგრამ წოვათუშურში პროდუქტიულია, აქ მან ნასესხებ ზმნების ადაპტირების ფუნქცია შეიძინა.

მეექვსე თავში განხილულია რთული წინადადებების ნაწილების შეერთების საკითხი, უმთავრესად სუბორდინაცია. დამოკიდებული წინადადებების მთავარ ტიპებთან — მი-მართებით, დამატებით, გარემოებით დამოკიდებულ წინადადებებთან ერთად გაანალი-ზებულია ქართული ენის გავლენა აღნიშნულ უბანზე. წოვათუშურს გააჩნია როგორც ფინიტური, ისე არაფინიტური სუბორდინაციული დამოკიდებული წინადადების წარმოე-ბის საშუალება, ზოგჯერ კი ერთი და იმავე ტიპისათვის რამდენიმე სტრატეგიას იყენებს. არაფინიტური კონსტრუქციები მოიცავს მიმღეობებს, კონვერბებს, ნაზმნარ სახელებსა და ინფინიტივებს, ყველა კონსტრუქცია, რომელიც საერთოა ჩეჩნურ-ინგუშურთან (და დაღესტნურ ენებთან), ამის გათვალისწინებით, ისინი განხილულია არქაიზმებად. უნდა აღინიშნოს, რომ ზოგიერთ ტიპში, სახელდობრ, დამატებით დამოკიდებულ წინადადე-ბაში, რომელიც შეიცავს გრძნობა-აღქმის ზმნებს, ჩეჩნური და ინგუშური იყენებს ფინი-ტურ ზმნებს, მაგრამ წოვათუშური ამ მხრივ განსხვავებულ ვითარებას გვიჩვენებს. წოვა-თუშურმა ქართულისაგან ისესხა დამატებითი დამოკიდებული წინადადების, აგრეთვე გარემოებითი, დროის, ვითარებისა და მიზნის გარემოებითი დამოკიდებული წინადა-დების კავშირების გამოყენებით წარმოების საშუალები. მიმართებით სიტყვების წარ-მოქმნის ყალიბი - კითხვითი ნაცვალსახელისა და ენკლიტიკური კავშირის გამოყენე-ბით. "რადგან" კავშირის წარმოების ყალიბი, მიზნის გარემოებით დამოკიდებული წი-ნადადების წარმოების საშუალება ზოგადი მაქვემდებარებელი კავშირის საშუალებით, და კავშირებითი ფინიტური ფორმა. ამასთანავე, თანწყობის ნაწილი, წარმოდგენი-ლია ზმნის ფინიტური ფორმის, რომელსაც ჩვენ შეგებობით, თანმიმდევრობით ვუწო-დებთ, პირველი აღწერის მცდელობა. იგი იწარმოება სუფიქს -**ე**-თი იმ დამოკიდებულ წინადადებაში, რომელსაც ერთი და იგივე სუბიექტი აქვს და მაჯგუფებელი კავშირი **ეჲ** იმ წინადებაში, რომელსაც სხვადასხვა სუბიექტი აქვს. **ეჲ**-ს გამოყენების ყველა საპი-რისპირო მაგალითი, მიჩნეულია ქართული ენის სტრუქტურულ კოპირებად.

დაბოლოს, მეშვიდე თავი აჯამებს წოვათუშურში ენათა კონტაქტით გამონვეულ ყვე-ლა მაგალითს. ასევე გვანწვდის ინფორმაციას, რომელ პერიოდში მოხდა შესაბამისი ცვლილება. ემპირიული მასალა გვიჩვენებს, რომ მოგვიანო პერიოდში (მას შემდეგ, რაც გაიზარდა მოლაპარაკეთა შორის ბილინგვიზმის ხარისხი და სიმძლავრე), მორ-ფოლოგიური მოდელების სესხების უფრო მეტი მაგალითია. ენათა კონტაქტის ინტენსი-ურობის ზრდასთან ერთად სინტაქსური მოდელების სესხების მაგალითებიც დასტურდე-ბა. ზმნის მრავლობითი რიცხვის მაწარმოებელი **-თ** მორფების სესხება მნიშვნელოვან გამონაკლისს წარმოდგენს, იგი დამოწმებულია ბილინგვიზმის შედარებით ადრეულ

ეტაპზე. ენათა კონტაქტის შედეგად გამოწვეული ძირითადი ცვლილებები 1820 წლამ-
დე უნდა მომხდარიყო, როდესაც წოვათუშთა და თუშეთის სხვა თემების მოსახლეობის
რაოდენობა მნიშვნელოვნად არ განსხვავდებოდა, ბილინგვალიზმის დონე შედარებით
დაბალი, ეთნიკური თვითიდენტიფიკაცია კი უკვე ქართული იყო.

# Abbreviations

| | | | |
|---|---|---|---|
| 1 | first person | D | D gender |
| 2 | second person | DAT | dative |
| 3 | third person | DEF | definite |
| ABL | ablative | DEICT | deictic particle |
| ABSTR | abstract noun | DEM | demonstrative |
| ADABL | adablative | DIST | distal |
| ADD | additive particle | DISTR | distributive |
| ADESS | adessive | ELAT | elative |
| ADJZ | adjectivizer | EMPH | emphatic particle |
| ADTERM | adterminative | ERG | ergative |
| ADTRANS | adtranslative | ESS | essive |
| ADV | adverbial | EXCL | exclusive |
| ADVB | adverbial case | F | feminine |
| AFF | affirmative particle | FUT | future |
| AGR | agreement | GEN | genitive |
| ALL | allative | HAB | habitual |
| ANIM | animate | HORT | hortative |
| ANTE | anteceding converb | HPL | human plural |
| AOR | aorist | IAM | iamitive |
| APPROX | approximative | ILL | illative |
| APUD | APUD-locative | IMP | imperative |
| APUDABL | apudablative | IMPF | imperfect |
| APUDESS | apudessive | IN | IN-locative |
| APUDLAT | apudlative | INCL | inclusive |
| B | B gender | INDF | indefinite |
| BEN | benefactive | INESS | inessive |
| CAUS | causative | INF | infinitive |
| CMP | comparative | INS | instrumental |
| COND | conditional | INTERABL | interablative |
| CONT | contact case | INTERESS | interessive |
| CONTR | contrastive particle | INTERLAT | interlative |
| COP | copula | INTERM | in-terminative |

*Abbreviations*

| | | | | |
|---|---|---|---|---|
| INTERTERM | interterminative | | PST | past |
| INTERTRANS | intertranslative | | PTCL | particle |
| INTR | intransitive | | PTCP | participle |
| INTRANS | intranslative | | PV | preverb |
| IPFV | imperfective | | Q | question particle |
| J | J gender | | QUOT | quotative |
| LAT | lative | | RECP | reciprocal |
| LV | light verb | | REDUPL | reduplication |
| M | masculine | | REFL | reflexive |
| MED | medial | | REL | relative |
| MULT | multiplicative | | REM | remote past |
| NEG | negative | | RSTRCT | restrictive |
| NMLZ | nominalizer | | SBJV | subjunctive |
| NOM | nominative | | SEQ | sequential |
| NPST | non-past | | SG | singular |
| NW | nonwitnessed | | SIMUL | simultaneous converb |
| OBL | oblique | | SUBORD | subordinator |
| OPT | optative | | SUPER | SUPER-locative |
| ORD | ordinal | | SUPERABL | superablative |
| PFV | perfective | | SUPERESS | superessive |
| PL | plural | | SUPERL | superlative |
| POL | polite | | SUPERLAT | super-lative case |
| POSS | possessive | | TERM | terminative |
| POT | potential | | TM | thematic marker |
| PRIV | privative | | TR | transitive |
| PROG | progressive | | TRANS | translative |
| PROH | prohibitive | | VN | verbal noun |
| PROX | proximal | | VOC | vocative |
| PRS | present | | | |

# Transcription and transliteration

Table 1: Tsova-Tush transcription

| Practical transcription | Phonetic value (IPA) | Mkhedruli (practical) | Mkhedruli (academic) | Cyrillic (academic) |
|---|---|---|---|---|
| a | b | ა | ა | а |
| b | b | ბ | ბ | б |
| c | t͡s | ც | ც | ц |
| c' | t͡s' | წ | წ | цI |
| č | t͡ʃ | ჩ | ჩ | ч |
| č' | t͡ʃ' | ჭ | ჭ | чI |
| d | d | დ | დ | д |
| e | e | ე | ე | е, э |
| g | g | გ | გ | г |
| ğ | ʁ | ღ | ღ | гI |
| h | h | ჰ | ჰ | хI |
| ħ | н | ჰ' | ჰ> | хь |
| i | i | ი | ი | и |
| j | j | ჲ | ჲ | й |
| k | kʰ | კ | კ | к |
| k' | k' | კ | კ | кI |
| l | l | ლ | ლ | л |
| ll | lː | ლლ | ლₐ | лл |
| ɬ | l̥ | ლ' | ლ' | лъ |
| m | m | მ | მ | м |
| n | n | ნ | ნ | н |
| o | o | ო | ო | о |
| ŏ | w | ჵ | ჵ | (о) |
| p | pʰ | ფ | ფ | п |
| p' | p' | პ | პ | пI |
| q | qʰ | ყ | ყ | кх |
| qq | qʰː | ყყ | ყₐ | ккх |
| q' | q' | �ყ | ჸ | къ |

| Practical transcription | Phonetic value (IPA) | Mkhedruli (practical) | Mkhedruli (academic) | Cyrillic (academic) |
|---|---|---|---|---|
| q'q' | q': | ყყ | ყə | ккъ |
| r | r | რ | რ | р |
| s | s | ს | ს | с |
| ss | s: | სს | სə | сс |
| š | ʃ | შ | შ | ш |
| t | tʰ | თ | თ | т |
| tt | tʰ: | თთ | თə | тт |
| t' | t' | ტ | ტ | тӀ |
| t't' | t': | ტტ | ტə | тӀтӀ |
| u | u | უ | უ | у |
| ŭ | w | ̆უ | ̆უ | (у) |
| v | ʋ | ვ | ვ | в |
| w | ɦʷ | ვ | ͡უ | в |
| x | χ | ხ | ხ | х |
| xx | χ: | ხხ | ხə | хх |
| z | z | ზ | ზ | з |
| ž | ʒ | ჟ | ჟ | ж |
| ʒ | ʣ | ძ | ძ | дз |
| ǯ | ʤ | ჯ | ჯ | дж |
| ʕ̝ | ʔʕ | ჰშ | ɛ | Ӏ |
| ʕ | ʕ | ჰ | ჰ | Ӏ |
| ʔ | ʔ | ჸ | ჸ | ' |
| ○ⁿ | ○̃ | ○ⁿ | ○ⁿ | ○ⁿ |

Table 2: Georgian transliteration (OG = Old Georgian)

| Mkhedruli | Phonetic value (IPA) | Practical transliteration | In names[1] |
|---|---|---|---|
| ა | a | a | a |
| ბ | b | b | b |
| გ | g | g | g |
| დ | d | d | d |
| ე | e | e | e |
| ვ | ʋ, w | v (OG v, w) | v |
| ჽ (OG) | ej | ej | |

| Mkhedruli | Phonetic value (IPA) | Practical transliteration | In names |
|---|---|---|---|
| დ | z | z | z |
| თ | tʰ | t | t |
| ი | i | i | i |
| კ | k' | k' | k |
| ლ | l | l | l |
| მ | m | m | m |
| ნ | n | n | n |
| ჲ (OG) | j | j | |
| ო | o | o | o |
| პ | p' | p' | p |
| ჟ | ʒ | ž | zh |
| რ | r | r | r |
| ს | s | s | s |
| ტ | t' | t' | t |
| ჳ (OG) | wi | wi | |
| უ | u | u (OG u, w) | u |
| ფ | pʰ | p | p |
| ქ | kʰ | k | k |
| ღ | ʁ | ğ | gh |
| ყ | q' | q' | k |
| შ | ʃ | š | sh |
| ჩ | ʧ | č | ch |
| ც | ts | c | ts |
| ძ | dz | ʒ | dz |
| წ | ts' | c' | ts |
| ჭ | ʧ' | č' | ch |
| ხ | χ | x | kh |
| ჴ (OG) | qʰ | q | |
| ჯ | ʤ | ž | j |
| ჰ | h | h | h |
| ჵ (OG) | o | ō | |

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[1]Georgian names in citations and running text are transliterated in the following way. Exceptions are those authors that already have transliterated their names according to the German or French spelling system (e.g. Tschenkéli, not Chkhenkeli; Charachidzé, not Sharashidze). The characters *ej, j, vi, q, ō* are only used in Old Georgian, and are not used in names.

Table 3: Vainakh transcription (C = Chechen, I = Ingush, UCB = University of California, Berkeley)

| Practical transcription | Phonetic value (IPA) | Cyrillic | UCB transcription |
|---|---|---|---|
| a | ʌ | а | a |
| ā | aː, a | а | aa |
| æ | æ | аь | ea (I) / ae (C) |
| ā�æ (æ) | æː (I) | аь | ea |
| e | ʲɛ | е, э | e (I) / ia (C) |
| e | ɛ (C) | е, э | e |
| ē | eː (C) | е, э | ee |
| ie | iːɛ | е, э | ie |
| i | i | и | i |
| ī | iː | ий (C) / ий, уй (I) | ii |
| ɨ | ɨ (I) | и | y |
| o | o | о | o |
| ō | oː (C) | о | oo |
| oa | ɔa | оа | oa |
| oā (oa) | ɔaː (I) / ɔː (C) | оа | oa |
| uo | uo (C) | о | o |
| ūo (uo) | uːo | о | uo |
| u | u | у | u |
| ū | uː | у (C) / ув (I) | uu |
| y | y (C) | уь | y |
| ȳ | yː | уьй | yy |
| ø | yœ (C) | оь | oe |
| ø̄ (ø) | yːœ (C) | оь | oe |
| p | pʰ | п | p |
| p' | p' | пӏ | p' |
| b | b | б | b |
| t | tʰ | т | t |
| tt | tʰː | тт | tt |
| t' | t' | тӏ | t' |
| d | d | д | d |
| c | ts | ц | c |
| c' | ts' | цӏ | c' |
| ʒ | dz | з | dz |
| č | ʧ | ч | ch |

| Practical transcription | Phonetic value (IPA) | Cyrillic | UCB transcription |
|---|---|---|---|
| č' | ʧʼ | чӀ | ch' |
| ӡ | ʤ | ж | dzh |
| kʲ | kʰʲ (I) | к | jk |
| k'ʲ | k'ʲ (I) | кӀ | jk' |
| gʲ | gʲ (I) | г | jg |
| k | kʰ | к | k |
| k' | k' | кӀ | k' |
| g | g | г | g |
| q | qʰ | кх | q |
| qq | qʰ: | ккх | qq |
| q' | q' | къ | q' |
| ʔ | ʔ | ъ | ʻ |
| f | f | ф | f |
| s | s | с | s |
| ss | s: | сс | ss |
| z | z | з | z |
| š | ʃ | ш | sh |
| ž | ʒ | ж | zh |
| x | χ | х | x |
| ğ | ʁ | гӀ | gh |
| ħ | ħ | хь | hw, w |
| ʕ | ʕ, ʔʕ | Ӏ | w |
| h | h | хӀ | h |
| v | ʋ | в | v |
| m | m | м | m |
| n | n | н | n |
| l | l | л | l |
| r | r | р | r |
| rh | r̥ | рхӀ | rh |
| j | j | й | j |

# 1 Introduction

## 1.1 About this work

The Caucasus is a mountainous region between the Black Sea and the Caspian Sea. It is famous for its linguistic diversity, with close to 65 languages of six different language families spoken in an area approximately the size of Germany. Many languages in the Caucasus are spoken by fewer than 5000 speakers in only one or a handful of villages. Many of these "small" languages, especially those in Daghestan, have been known to be relatively stable in the last centuries in terms of their numbers of speakers (Daniel et al. 2021: 523). Other "small" languages, especially those spoken in Georgia and Azerbaijan, have been characterised by heavy language contact or language shift (or sometimes both), such as Khinalug (Rind-Pawlowksi 2023), Kryz (Authier 2010), Udi (Gippert 2008) and Tsova-Tush (Wichers Schreur 2021).

Tsova-Tush is an East Caucasian language spoken in one single village in Eastern Georgia by approximately 300 speakers. Since its early description, scholars have been intrigued by the high degree of linguistic influence from the Georgian language (Schiefner 1856: 4).

> Der fremde Einfluss erstreckt sich namentlich bei dem Nomen sehr weit; bei der Wortbildung spielen fremde Ableitungssilben eine grosse Rolle und in der Syntax ist so manche Erscheinung eben nur durch den Einfluss des Georgischen zu erklären.

> [The foreign influence extends far, especially on the Noun; derivational suffixes play a large part, and in the domain of syntax, some phenomena can only be explained by Georgian influence.]

The present work has a threefold goal: (1) to contribute to the overall description of the Tsova-Tush language, by filling gaps in the previous literature in absence of a reference grammar. (2) To contrast Tsova-Tush constructions with functionally equivalent constructions in Chechen and Ingush, its closest relatives, and with Georgian, the language of wider communication that all Tsova-Tush

speakers speak as a second language, in order to form hypotheses concerning which Tsova-Tush constructions are inherited, and which have arisen under the influence of Georgian. (3) To provide the most probable diachronic scenario of language contact, by looking at historical Tsova-Tush language data, as well as at its historical sociolinguistics.

This introductory chapter will provide a general overview of Tsova-Tush (Section 1.2.1), describing its nomenclature, its place in the East Caucasian language family and its degree of dialectal variation. A typological outline is given in Section 1.2.1.4, after which a short history of investigations into Tsova-Tush is provided. Subsequently a description of Tusheti (Section 1.2.2), a short history of the Tsova-Tush (Section 1.2.3), a basic description of Tsova-Tush cultural practices (Section 1.2.4) and an outline of the sociolinguistics of Tsova-Tush (Section 1.2.5) will be presented. Section 1.3 will describe the basics of Georgian grammar. In Section 1.4, the present study will be outlined methodologically, presenting the relevant topics in the language contact literature, as well as the main data and methods used in this work.

In the subsequent chapters, various topics of Tsova-Tush grammar will be discussed. In each chapter, a detailed description of Tsova-Tush contructions pertaining to a given grammatical domain will be provided, as well as a comparison with functionally equivalent constructions in Chechen and Ingush (the closest relatives of Tsova-Tush), as well as in Georgian. At the end of each chapter, it will be established which aspects of Tsova-Tush grammar can be best explained by contact with Georgian. The chapters are centered around several classical domains of grammatical description: phonology (Chapter 2), nominal inflection and the noun phrase (Chapter 3), verbal inflection (Chapter 4), verbal derivation and valency (Chapter 5), and clause combining (Chapter 6). In Chapter 7, all instances of Georgian influence on Tsova-Tush are summarised and classified chronologically and in terms of the sociolinguistic scenario that most plausibly led to the borrowing of Georgian constructions and features into Tsova-Tush.

## 1.2 The Tsova-Tush language and its speakers

### 1.2.1 General remarks

Tsova-Tush is the native language of approximately 300 adults of the Tsova-Tush people, the vast majority of whom live in the village of Zemo Alvani in the eastern part of Georgia, just south of the Great Caucasus mountain range.

### 1.2.1.1  Language name

When speaking Tsova-Tush, speakers usually use the term *bac* (*bacav* 'a Tsova-Tush man', *bac-bi* Bats-PL, 'the Tsova-Tush') when referring to their people, and call their language *bacbur mot't'* 'Bats.ADJZ language'. The most common occurance of the language name is in the phrase 'in Tsova-Tush', which can be *bejcbrat*, but more often is simply *vejğeš* 'in our (language)'. The root *bac* has formed the basis for several derivations that are used as the language name in English (*Batsbi*), French (*Bats*), German (*Batsisch*) and Russian (Бацбийский). However, when speaking Georgian or any other language, the Tsova-Tush refer to themselves or their language as 'Tsova-Tush' (წოვათუშური ენა *c'ovatušuri ena* 'the Tsova-Tush language'; წოვათუში *c'ovatuši* 'a Tsova-Tush person'), which has been the preferred designation by most contemporary scholars (e.g. Holisky & Gagua 1994, Hauk 2020). A minority of Tsova-Tush, spearheaded by native-speaker linguists, prefer the term "the Tush language", which could potentially lead to confusion with the Tush dialect of the Georgian language.[1]

### 1.2.1.2  Tsova-Tush and the East Caucasian familiy

Tsova-Tush belongs to the Nakh branch of the East Caucasian family. The other two members of the Nakh branch, Chechen and Ingush, show a high degree of structural and phonological overlap but are more closely related to each other than to Tsova-Tush, see Figure 1.1. Chechen and Ingush taken together are sometimes referred to as Vainakh. Ingush is spoken by the Ingush people, numbering approximately 300,000, most of whom live in the Republic of Ingushetia within the Russian Federation. Chechen dialects are spoken by the vast majority of the approximately one million Chechens, who live in Chechnya (the Chechen Republic, also part of the Russian Federation). In Chechnya, Standard Chechen, based on the lowland dialects, is an official language besides Russian. Chechen is also spoken by the Akki Chechens in Daghestan and by the Kisti Chechens living in the Pankisi valley in Georgia (see Figure 1.3), a half-hour drive from the Tsova-Tush village of Zemo Alvani.

The Nakh branch is often assumed to be the first to split off from Proto-East-Caucasian, since the Nakh languages are typologically quite distinct from Daghestanian languages (hence the label "Nakh-Daghestanian"), with their high num-

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[1]According to Abram Shavkhelishvili (text E013 in the corpus (see Section 1.4.3.3 for abbreviations)), the Ossetic name for the Tsova-Tush (or perhaps for the Tush in general) is *guda*. The Tsezic names for the Tush are Bezhta $i^nq$ (Majid Khalilov, p.c.), Hinuq *eq*, Tsez $a^ʕq$, Asakh Tsez $ha^ʕq$. Chechen and Ingush use the designation *bacoj* for the Tsova-Tush.

Proto-Nakh

Tsova-Tush      Ingush      Chechen dialects
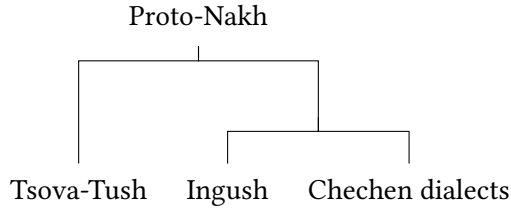
Figure 1.1: Nakh family tree

ber of vowel phonemes and the absence of a system of spatial cases as in Daghestanian languages (but in fact, see Section 3.3.3 for a Daghestanian-style system of spatial cases in Tsova-Tush). However, at this point it is not clear whether the distinctive features of Nakh are innovations, in which case they could have arisen at any point in the family tree. The only possible evidence for the early split between Nakh and the ancestor of all other East Caucasian languages, would be non-trivial innovations reconstructed for the ancestor of all Daghestanian languages. Since reconstructions of Proto-East-Caucasian are very scarce, only one instance of such a Daghestanian innovation to the exclusion of Nakh has been proposed, a (relatively trivial) phonological change from PEC *st* to Proto-Daghestanian *c* (Nichols 2003b). Hence, a cautious researcher is, for the time being, left with a rather shallow tree, that looks approximately like the one presented in Figure 1.2.

Proto-East-Caucasian

Nakh    Tsezic    Avar-Andic    Lak    Dargic    Khinalug    Lezgic
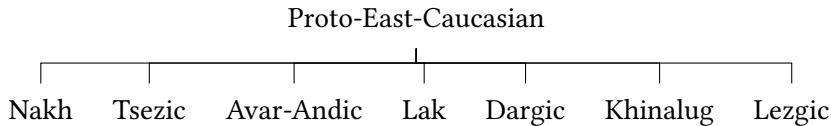
Figure 1.2: Shallow East Caucasian tree

### 1.2.1.3  Dialectal variation

Variation in Tsova-Tush is mostly observed between different generations of speakers. See Section 1.4.3.3 for historical linguistic changes in the last 200 years that characterise the speech of different generational groups. Tiny differences are reported in the speech of inhabitants of different neighbourhoods in Zemo Alvani (Gagua 1977), corresponding to different villages in Tsovata (see Section 1.2.2).

### 1.2.1.4 Typological outline

Tsova-Tush has a relatively large consonant system with a five-way contrast in obstruents (voiced, aspirated, long aspirated, ejective, long ejective), which includes uvulars and pharyngeals. Pharyngealisation (phonetically, probably epiglottalisation) is a phonation property of syllables, audible mostly on the vowel but traditionally analysed as consonant phonemes. Phonemically, the vowel system is small, with several phonological processes creating diphthongs, long vowels and nasal vowels. In contrast to the other Nakh languages, there is no centralisation of short unaccented vowels. There is a system of morphophonological alternations between the presence and absence of a vowel, resulting from various deletion processes.

The numeral system is decimal for the first two decades and vigesimal thereafter (although numerals higher than 1000 are usually borrowed from Georgian, see Section 3.4.2). From cardinals, a rich set of derivatives such as ordinals, distributives and multiplicatives are formed.

Tsova-Tush features both head-marking and dependent-marking. Nouns and pronouns distinguish four or five basic grammatical cases, whose endings are monoexponential, and 24 spatial cases, most of which are cumulative (i.e. they consist of two suffixes). Most nouns have a distinct form, called Oblique, to which non-Nominative cases are added. Cases follow one of several lexically determined plural suffixes. There are four gender agreement markers which distinguish, depending on how one counts them, up to eight genders. Gender agreement is a partial category: only about 30% of the verb roots and 10 adjective roots take gender agreement.

Verbs distinguish a large number of TAME forms, which blend aspect and evidentiality with pure tense. In addition to these, there are a handful of suppletive verb stems marking argument plurality, and several, no longer productive means of indicating pluractionality, both partial categories (the distinction is expressed only in a limited set of verbs). For most tense-aspect forms Tsova-Tush distinguishes a corresponding indirect evidential form by means of suffixation and periphrastic constructions.

Two converbs are derived from verbs: anterior and simultaneous, used in temporal adverbial clauses and clause chaining. There is a rich system of finite subordination with subordinating conjunctions as the main device for complementation and adjunct subordination. Relativisation uses deletion, and non-finite relative clauses precede the noun, while finite relative clauses follow it. Clause chaining is achieved by using specialised sequential verb forms, which are finite.

There are derivations that change argument structure (detransitivising, transitivising, causativising) but no inflectional or syntactically-based passivisation.

### 1.2.1.5 Previous scholarship

Tsova-Tush is significant for having received the first grammatical description within the East Caucasian language family. The priest and native speaker Iob Tsiskarishvili produced a manuscript of a grammar, a glossary and a New Testament translation (Tsiskarov 1848a,b, 1849). The material was taken to Saint Petersburg by Marie-Félicité Brosset (Brosset 1849) with the purpose of publishing it. Although the manuscripts themselves were never published, they formed the basis of a grammar written by Anton Schiefner (Schiefner 1854, 1856, 1859). This grammar is greatly expanded from Tsiskarishvili's original, and Schiefner enlisted the help of Tsiskarishvili's brother, the native speaker Giorgi Tsiskarishvili, for elicitation.

Apart from a very brief field recording by Adolf Dirr (Dirr 1909b), no known investigation into Tsova-Tush was made from the 1850s until the early Soviet era, when two scholars independently wrote new descriptions of the language. In Tbilisi, Rusudan Gagua started her description of Tsova-Tush with a dissertation on the case system (Gagua 1943), after which she continued publishing throughout the Soviet era (Gagua 1948, 1952, 1956, 1962, 1983, 1987, Holisky & Gagua 1994). Meanwhile in Moscow, the Chechen Yunus Desheriev, head of the Department of Caucasian languages (which had recently moved from Saint Petersburg/Leningrad to Moscow) wrote an influential grammar (Desheriev 1953). In Tbilisi, Gagua was joined by Latavra Sanikidze (Sanikidze 1966, 1976, 1984) and native speaker Kote Chrelashvili (Chrelashvili 1967, 1982, 1984, 1987, 1990). Both scholars produced short grammars in the Georgian grammatical tradition: Chrelashvili (2002, 2007), Sanikidze (2010).

In the United States, Dee-Ann Holisky started working on Tsova-Tush in the early eighties (Holisky 1984, 1985, 1987), connecting Tsova-Tush data with theoretical frameworks. Her work culminated in the much-cited grammar sketch, written with Rusudan Gagua (Holisky & Gagua 1994) and was continued by Alice Harris, who introduced Tsova-Tush to a wider audience with her work on exuberant exponence (Harris 2008a, 2009, 2011, 2013, Harris & Samuel 2011). Together with Bryn Hauk (Hauk 2020), she wrote a new grammar sketch (Hauk & Harris forthcoming).

Meanwhile in Telavi, the regional capital near Zemo Alvani, a team of native speaker linguists at Telavi State University recently created a number of monographs on various subdomains of Tsova-Tush grammar (Mikeladze 2008, 2011,

2013, Gigashvili 2016, Bertlani 2012), in addition to their collections of texts and dictionary volumes.

Four dictionaries have been published to date: Kadagidze & Kadagidze (1984), an impressive, 1000-page handwritten Tsova-Tush-Georgian-Russian dictionary of high quality[2]; Fähnrich (2001), a more concise, Tsova-Tush-German dictionary based on Kadagidze & Kadagidze (1984); a newer, four-volume dictionary by the Telavi team (Bertlani et al. 2012, 2013, 2018, 2019). A new Tsova-Tush-Georgian dictionary has recently been compiled at the Chikobava Institute of Linguistics by Diana Kakashvili, based on Kadagidze & Kadagidze (1984), but containing several more lemmas and some additional grammatical information on nouns (Kakashvili 2022, 2019).

### 1.2.2  Tusheti and Eastern Georgia

Tusheti, the ancestral home of the Tush, is a small mountainous region of approximately 1200 km$^2$ bordered by Khevsureti in the West, Chechnya in the north, Daghestan in the east and the plains of Kakheti in the south. Its inhabited areas lie at an elevation of approximately 2000 metres, while its peaks are at 3000–4250 meters. The Tush are traditionally divided into four *temis* (singular *temi*, meaning both 'group of villages' and 'clan'), corresponding to the major valleys of Tusheti (see Figure 1.3). Members of three *temis*, the Pirikiti ('other side') Tush, the Chaghma ('downhill') Tush and the Gometsari Tush traditionally speak the Tush dialect of the Georgian language.[3] Only the Tsova *temi* additionally speaks the Nakh language Tsova-Tush, and is thereby perhaps the only group identifying as ethnically Georgian that speaks a language that is not Kartvelian.

Tusheti and Khevsureti[4] lie directly south of the topographical ridge, the line connecting the highest peaks of the Great Caucasus range, which forms the border between Georgia and the Russian Federation. It is important to note, however,

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[2]This dictionary was started and collected by father and son Davit (1861–1937) and Niko (1895–1976) Kadagidze and edited by Rusudan Gagua with the help of Latavra Sanikidze, Izolda Jolbordi, Eva Usharauli-Kadagidze, and Elene Kadagidze. It was digitised by Rusudan Papiashvili and Jost Gippert, and is available at http://titus.fkidg1.uni-frankfurt.de/texte/etce/cauc/batsbi/tt_dict/tt_dilex.htm

[3]Since the Chaghma valley is now the most populous, and many villages in the Gometsari and Pirikiti valleys are abandoned, the term 'Chaghma' is often used for all Tush other than the Tsova-Tush. In 1886, when the Russian imperial census was conducted (after the migration to the plains, but before the construction of Zemo Alvani, see below at the end of Section 1.2.3), the Tsova community had 1533 members, Pirikiti 1296, Gometsari 1358, Chagma 1420 (Transcaucasian Statistical Committee 1893).

[4]As well as the region known as Khevi, west of Khevsureti.
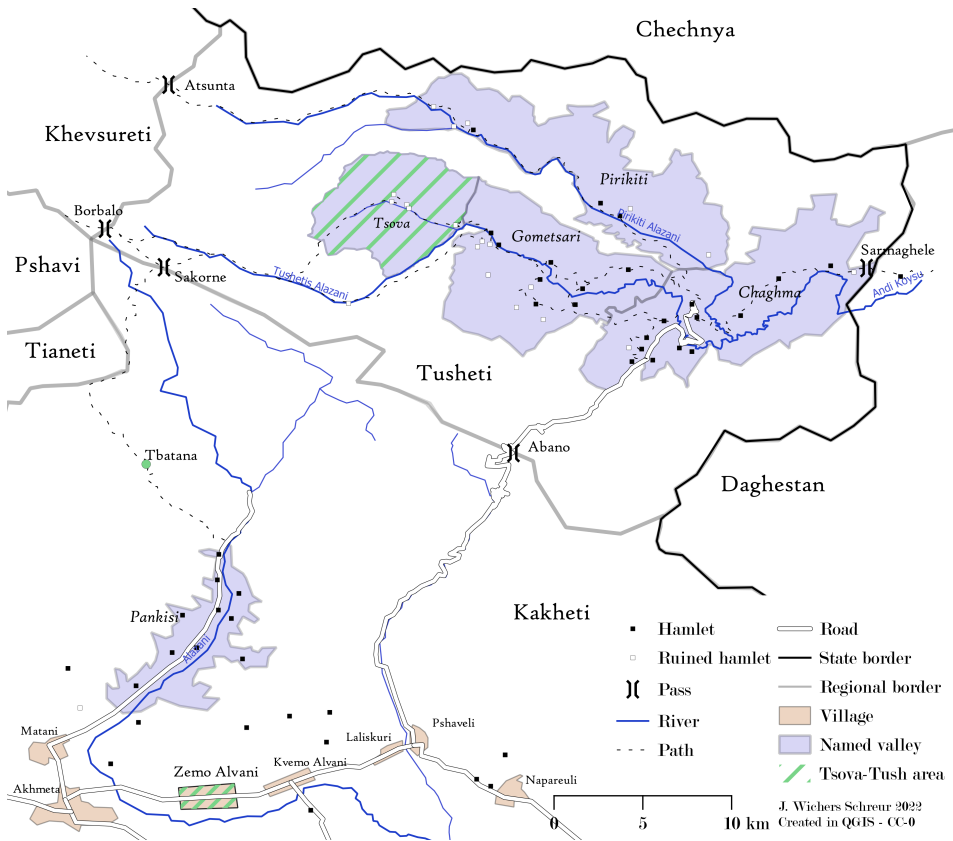
Figure 1.3: Map of Tusheti, key locations highlighted in green

that both regions lie north of the Caucasian watershed, and rivers (and therefore footpaths) connect Tusheti to Daghestan, and Khevsureti to Chechnya and Ingushetia.

There are five main entrances into Tusheti:

1. Abano Pass, crossed by the current jeep road connecting Tusheti to the Kakhetian plains.

2. Sakorne pass, connecting the Alazani basin (that runs southward via Tbatana and the Pankisi valley into the Kakhetian plains and into Azarbaijan) with the Tushetis Alazani basin (running eastward into the Gometsari valley and the Chagma basin, where it joins the Pirikitis Alazani to form the Andi Koysu). The area around the source of both the Alazani and

the Tushetis Alazani is called Alaznistavi (Georgian *alaznistavi* 'beginning of Alazani', Tsova-Tush *ʕambarča*). The Sakorne pass is the one the Tsova-Tush traditionally crossed to travel between the Tsovata valley and Alvani.

3. Borbalo pass, connecting the Alaznistavi area with Pshavi and lower Khevsureti to the west.

4. Atsunta pass, connecting the Pirikiti valley with upper Khevsureti to the west.

5. Samaghele pass, on a path parallel to the Andi Koysu, east of Omalo, crossing the national border at Intsukhi (Georgian *inc'uxi/ibc'oxi*). This pass connects the Chaghma basin to Daghestan in the East, and is closed for civilians and guarded by the military.

### 1.2.3 History of the Tsova-Tush people



Figure 1.4: Ruined village of Indurta with its towers still standing. Photo by Diana Kakashvili

The ethnogenesis of the Tsova-Tush people and the settling of the Tsovata valley is a hotly debated topic. The scarcity of historic sources from before the 19th century combined with sometimes strong ethno-nationalist tendencies of researchers from the area give rise to conflicting perspectives and a tense scholarly debate. Since the present work is about language contact, and different possible historical scenarios could have given rise to different language contact situations, the topic needs to be addressed here.

Three possible historical scenarios are represented in the historical literature. All three will be discussed in more detail below.

1. The ancestors of the Tsova-Tush are a Nakh tribe who migrated from the northern slopes of the Caucasus mountains to Tusheti (inhabited by Georgians) after inter-tribal strife.

2. The regions Khevsureti and Tusheti (both north of the Caucasian drainage divide) were first populated by Nakh tribes, which then shifted to Georgian ethnic self-identification and (all but the Tsova-Tush) to the Georgian language.

3. The Tsova-Tush have been ethnically Georgian since time immemorial, and Nakh features in the Tsova-Tush language are due to contact with Nakh peoples throughout history.

According to Nichols (2011, 2004b), Proto-Nakh was spoken in the highlands between the upper Alazani river (present-day Tusheti), the upper Argun river (present-day Chechnya and Khevsureti), and the upper Assa river (present-day Ingushetia and Khevsureti). This area, at altitudes of around 2000 meters, is where these major rivers have their sources to the south of the crest, which then flow north through passes, making it natural for one ethnic group to occupy both the north and south slopes. Furthermore, it has long been assumed that the Khevsur and the Tush peoples were originally Nakh, based on similarities in both material and intangible culture, such as the construction of towers, the animal sacrifice at stone shrines, and the worship of a number of deities (later adopted into the local version of orthodox Christianity) (Klaproth 1812, Zisserman 1879, Tsiskarov 1846, Güldenstädt 1787). Many 19th century sources mention the diverse linguistic situation in Tusheti, with both Georgian-speaking villages, as well as Nakh-speaking[5] ones in Tsovata, but also in the Pirikiti valley (Zisserman 1879, Eliosidze 1874 as cited in Gigashvili & Gotsiridze 2014), which is now

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[5]The term "Kist" was used by Georgian scholars of this period to refer to Nakh in general, as opposed to the contemporary Kisti Chechens in the Pankisi gorge.

completely Georgian-speaking. Additionally, most toponyms in Tusheti have a clear Nakh origin, although their precise etymology is often unknown. Furthermore, the Tush and Khevsur dialects of Georgian betray a clear Nakh substrate in their phonology and lexicon (Uturgaidze 1966). According to Georgian semi-legendary historiography (9th century *Georgian Chronicles* compiled by Leonti Mroveli), king Saurmag, successor to, and son-in-law of legendary king Parnavaz, invited the Dzurdzuks (i.e. Nakh tribes) to inhabit the southern slopes of the Caucasus in the 2nd century BC (Rayfield 2012: 24). Whether this account is accurate or not, it is clear that the areas now known as Tusheti, Khevsureti (and possibly also Khevi) have been inhabited by Nakh tribes for many centuries, although the date of their settlement, as well as of its subsequent Georgianisation, remains unclear. It is tempting to view the Tsova-Tush as the last Nakh-speaking remnant of this migration, the only group not to have switched to Georgian under influence of Georgian-speaking tribes that have moved up from the south along the Aragvi, Iori, and Alazani rivers.

The claim that the ancestors of the Tsova-Tush migrated to Tusheti from Nakh-speaking areas elsewhere (Dirr 1909a, Elanidze 1988) has in the past been supported by some Tsova-Tush authors (Bukurauli 1897, Tsiskarov 1846). Its main argument centers around a toponymic parallel. The archaic place name for the Tsovata valley is Tsova-Tush *vabu*, and its inhabitants were called *vab-bi* (remembered by older speakers[6] and attested in poems in Tsiskarov (1848a) and Schiefner (1854)). This can be connected with Chechen *vabo* (Desheriev 1963), a historical region of the central Caucasus (Suleymanov 1976). Ellis (1788) places the Vabbi (spelled Wabi) near the source of the Terek river, in the present-day Georgian region of Khevi (that is to say, on the southern slopes, but north of the drainage divide). Whatever be its exact location, this region is identified as the homeland of the Feappii (Ingush *fæppī*), a historical Nakh clan federation (Wixman 1984: 82–83, Nichols 2011). The Feappii are closely related to the origins of the Ingush, who before the 18th century seem to have consisted of two clan confederations, the Ghalghaai (the modern self-designation for all contemporary Ingush), who lived near the confluence of the Assa and Ghuloi-khi rivers, and the Feappii, who apparently lived higher up and on the southern slopes (Nichols 2011). Time estimates for this proposed migration of the *vabbi*/*fæppī* to the Tsovata valley range from the 8th/9th century (Makalatia 1933: 17) to the second half of the 17th century (Elanidze 1988). Another possibility is that such a migration did not take place, and that the homeland of the Vabbi/Feappii in fact included the Tsovata valley itself.

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[6]Recorded in E288 and MM407 (for abbreviations of subcorpora, see Section 1.4.3.3).

More contemporary Georgian scholars have compared the modern Tsova-Tush, other Tush, and Chechens, and have come to the conclusion that the Tsova-Tush are virtually indistinguishable from other Tush clans, as seen from an anthropological perspective (Sharashidze 1960). These scholars sharply contrast the Tsova-Tush with (Kisti) Chechens, mainly based on religious practices, which leads them to the conclusion that the Tsova-Tush cannot have anything to do with Nakh peoples, and must have been ethnically and linguistically Georgian since time immemorial (e.g. Itonishvili 2012). In this view, Nakh features and words in Tsova-Tush are explained as contact phenomena. This sentiment is in line with many Tsova-Tush themselves, who strongly self-identify as ethnically Georgian, and emphasise their difference to Nakh people (see below, Section 1.2.5.2).

Although much remains unclear regarding the origins of the Tsova-Tush, one can hypothesise the following: (1) Tusheti (as well as Khevsureti and Khevi) must have been Nakh speaking before the advent of Georgian tribes from the southern lowlands; (2) The Tsova-Tush (*vab-bi*) can be connected to the Feappii of Ingush legendary history. This does not necessarily imply that the Tsova-Tush language is genealogically more closely related to Ingush than to other Nakh varieties, or that the Tsova-Tush must have migrated from the northern slopes (since the Feappii are said to have inhabited the southern slopes as well and it is unknown whether the Nakh variety they spoke actually resembled contemporary Ingush more closely than any other Nakh variety).

The Christianisation of Tusheti was completed in the 9th century.[7] In 1575, the Tsova-Tush, together with other Tush tribes, sought the protection of King Levan of Kakheti against the Daghestanians. They were allowed to pasture their flocks in the Alvani area (Allen 1970: 288–289). From that time onward the Tsova-Tush accepted the kings of Kakheti as their patron (Desheriev 1953). Almost a century later, the Tush (both Tsova-Tush and the other *temis*) affirmed their claim over Alvani by coming to the aid of the princes of Kakheti and Aragvi. In 1659, under the leadership of legendary hero Zezva Gaprindauli, they helped temporarily defeat the Persians at the fortresses of Bakhtrioni and Alaverdi.

The Tsovata valley (see Figure 1.5) is a valley of approximately 25 km$^2$ around the stream Tsovatistskali (*c'ovatisc'q'ali*), a tributary of the Tushetis Alazani. Although we do not know when exactly it was first settled, we know it contained four villages: Sagirta, Etelta, Mozarta, Indurta (see Figure 1.5). The village of Shavtskala (Georgian *šavc'q'ala* 'blackwater'), located just outside of the Tsovata

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[7]For a description of pre-Christian practices, some of which survive to this day, see e.g. Charachidzé (1968), Tuite (2004).
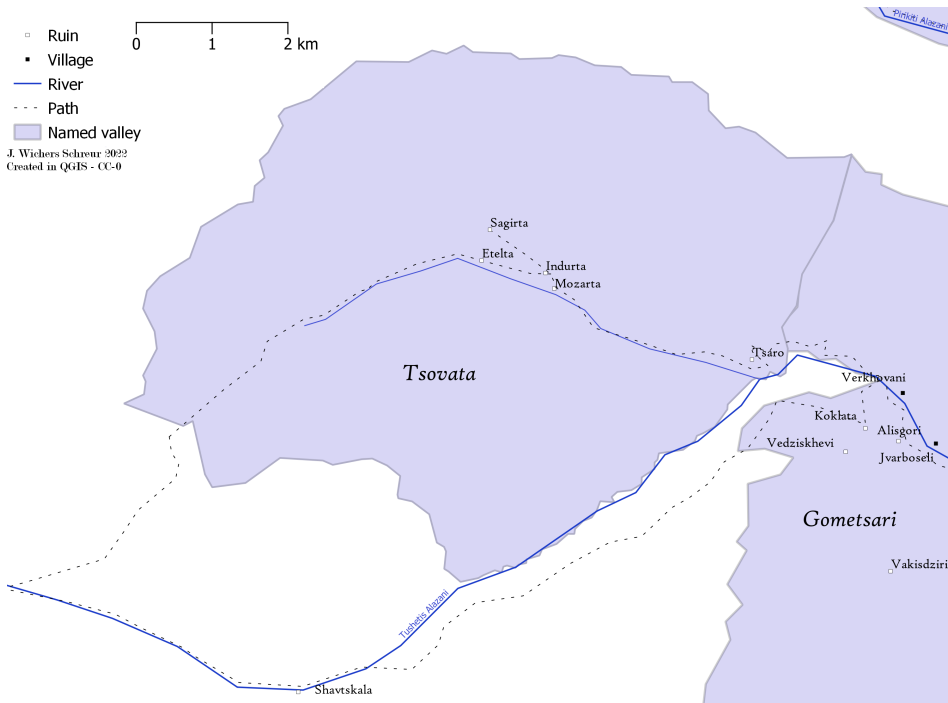
Figure 1.5: Map of the Tsovata valley

valley, was founded at a later (but otherwise unknown) date. The distance between each of the settlements in Tsovata was between 500m and 1 km. These settlements were, according to legend, established by Tsova-Tush brothers from the village of Tsaro, 4–5 km from these villages, at the entrance of the Tsovata valley. Tsaro is therefore considered the legendary homeland of the Tsova-Tush forefathers (Desheriev 1953). In fact, the root lying at the basis of Tsova, *c'o* [8] is straightforwardly connected to Tsaro (*c'ar*).[9] Towards the end of the 18th century, houses were built in Tbatana, the Pankisi valley, and the Alvani region. From that time, almost all families went to these lower places for the winter.

Up until the 1820s the Tsova-Tush lived in Tsovata semi-permanently, practicing vertical transhumance (see Section 1.2.4), with winter pastures in the Alvani area and intermediate pastures and some accommodation in Tbatana. In the 1820s, a large avalanche or landslide (Makalatia 1933) or flood (Itonishvili 2012)

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[8]The *-va* of *c'o-va* being an individualising suffix, compare *mastxo-v(a)* 'enemy', *donlo-v(a)* 'rider'.

[9]The two forms show an archaic Nominative-Oblique alternation, compare *šo* 'year (NOM)', *šar-* 'year (OBL)'; *ǧo* 'clan, family (NOM)', *ǧar-* 'clan, family (OBL)'; *pħu* 'dog (NOM)', *pħar-* 'dog (OBL)'.

destroyed the village of Etelta (Makalatia 1933) or Indurta (Itonishvili 2012) or Sagirta (Desheriev 1953). The aforementioned sources also mention the already difficult living conditions in Tsovata, with little food, harsh winters, and frequent raids by Daghestanians. Subsequently, in the 1820s and 30s, most families abandoned Tsovata and settled near their winter pastures in the Alvani region, and moved to Gurgalchala, Pkhakalkura and Tsistolkura, hamlets that had been founded in the 18th century (Fähnrich 2001). Tsovata remains empty to this day, the ruined villages (see Figure 1.4) are only used as shelters by sheepherders in summer.

Around 1925, the modern villages of Zemo Alvani and Kvemo Alvani were built on a grid template under the supervision of Tsova-Tush Davit Abashidze, an early Soviet surveyor. Zemo Alvani has nine streets that are three kilometres long and run east-west, crossed by seven "connector streets" (with no houses on them) at appr. 500 meter intervals, see Figure 1.6. Small channels/gulleys run along all streets for irrigation. According to the 2014 census, Zemo Alvani had 3306 inhabitants, an estimated two-thirds of whom are Tsova-Tush, with the remainder consisting of other Tush, who also make up the entire population of Kvemo Alvani and Laliskuri (see Figure 1.3).



Figure 1.6: Photo of Zemo Alvani with the Alazani river to its left, and the Gombori hills in the background. The foothills of the Greater Caucasus can be seen on the right-hand side. Photo by Pete Mozay.

### 1.2.4 Basic sociological and anthropological facts

A starting point for the anthropological study of the Tush is Makalatia (1933). The Tsova-Tush, as well as other Tush, display a combination of customs connected to traditional mountain life, and customs they have in common with the other Georgians living on the Kakhetian plains.

Traditional vertical transhumance is still practiced by some Tush. Adult men take their flocks of sheep, numbering several hundred heads, from their summer pastures in Tsovata to their winter pastures in Alvani and Shiraki (see Figure 1.7) each year. The alpine meadows of Tbatana function as a middle station. Women, children and the elderly are not involved in the practice of transhumance, and stay in Alvani (previously, in the high villages of Tsovata). This type of vertical transhumance has been prevalent in all of the central and eastern Caucasus for centuries (Wixman 1980: 57). These days, the majority of men, too, lead a sedentary lifestyle, working in urban centers like Akhmeta, Telavi or Tbilisi, or working as seasonal workers in Grozny, Vladikavkaz, Moscow or other cities in the Russian Federation, or in Western Europe. Many other families lead a subsistence lifestyle with a small number of cattle and a vegetable garden. The traditional diet consisted of mutton, cheese and bread, including traditional dishes such as *k'ot'or*, a cheese-filled flatbread baked in a skillet, and khinkali, mutton-filled dumplings. Nowadays, families have adopted a diet typical of the plains, involving products such as eggplant, bell pepper, cornflour and many fruits. Even though few native plant names remain in Tsova-Tush and most have been replaced by Georgian, Tsova-Tush plant use in fact shows clear traces of a (previous) pastoralist lifestyle (Pieroni et al. 2020: 393).

The Tush traditionally brewed beer, although many Tush now own small-scale or medium-size vineyards. Beer was drunk (rarely libated) in many rituals of purification, remembrance of the deceased, and initiation into adulthood. The Tsova-Tush celebrate several holidays, the most important being Dadaloba (*dad(a)* 'father', *-loba* is an abstract noun suffix). Dadaloba takes place in Tsovata, and involves ritualistic toasting with beer at a stone shrine, a horse race, the remembrance of 'extinct' clans, the sacrificial slaughter of animals, and the preparation of khinkali. Another holiday, shared by all Tush, celebrates the above-mentioned victory by Zezva Gaprindauli, and is called Zezvaoba. Taking place in Kvemo Alvani, it involves the most important horse race of the season, as well as boxing and wrestling matches, trading of local handicrafts such as carpets and felt clothing, and singing and dancing. Since their migration to the plains, the Tsova-Tush observe Georgian orthodox Christian holidays (most prominently Easter) and their appurtenant traditions. Zemo Alvani features two big churches
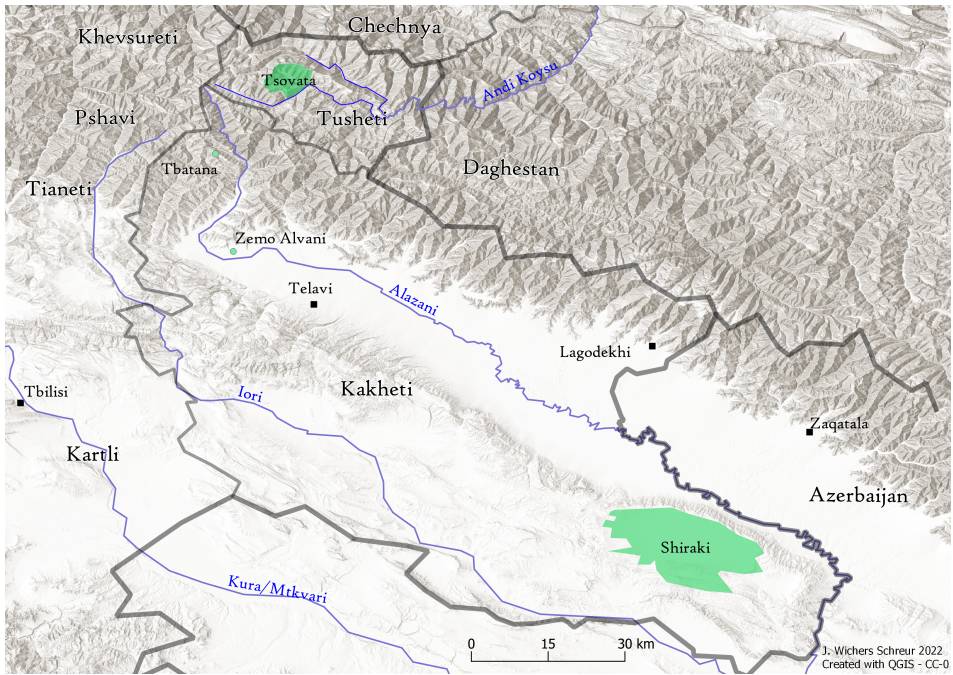
Figure 1.7: Map of Kakheti, key locations highlighted in green

with accompanying graveyards, as well as two smaller churches. Most Tush do not go to mass.[10]

Traditional Tsova-Tush society was clan-based. The Tsova-Tush *temi* is divided into several smaller clans (Tsova-Tush *gor* from Georgian *gvari*, having partially replaced older *k'ur* 'smoke' > 'hearth' > 'family'), originally centered around one defence tower in Tsovata. Marriage was strictly within the *temi* but exogamous in terms of sub-clans. Nowadays, the majority of Tsova-Tush marry outside the *temi* with other Tush, or with Kakhetians, Ossetians, Kisti or others. This change in marriage practice is assumed to have taken place shortly after the Tsova-Tush migration from the mountains (although direct sociolinguistic evidence is lacking), and has contributed greatly to language shift, for which see below, Section 1.2.5.3.

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[10]As is the case for many communities in Kakheti.

### 1.2.5 Sociolinguistics

#### 1.2.5.1 Basics

Tsova-Tush has no recognised official status in Georgia. According to Article 8 of the Georgian Constitution, the only official language in the country is the Georgian language, alongside the Abkhaz language in the occupied/secessionist territory of Abkhazia. Although minor policies towards the integration of some minorities have sporadically been implemented, such as the creation of minority language textbooks written in Georgian, and Georgian language textbooks written in minority languages, this has been done only for the minority languages with the largest numbers of speakers: Abkhaz, Armenian, Azeri, Megrelian, Ossetian, and Svan. Smaller, one-village languages such as Tsova-Tush, Udi, Tat, Bezhta, and Hunzib (all spoken in the eastern region of Kakheti) receive no governmental support.[11] One has to note that whenever non-governmental organisations run projects with the goal of strengthening minority rights, these projects select minorities based on ethnic self-identification, and therefore often do not include the Tsova-Tush, who have been self-identifying as ethnically Georgian for at least a century.

According to a questionnaire carried out in 2020 by Rezo Orbetishvili, my main collaborator in Zemo Alvani, among the 2700 Tsova-Tush living in the village, only 275 claim to speak Tsova-Tush, and an additional 783 report to be passively or partially proficient in the language.

#### 1.2.5.2 Multilingualism and language attitudes

All Tsova-Tush speakers are bilingual in Georgian. Most speakers report having learned Tsova-Tush and Georgian simultaneously as a child. The Georgian language is used by the Tsova-Tush in all aspects of life, from formal domains, such as education, governance, media, to informal domains, such as talking to neighbours and family. Only when all participants of a given conversation are fluent Tsova-Tush speakers, which is very rare (considering there are 275 of them), some Tsova-Tush might be used, although the use of Georgian is very common here as well (Rezo Orbetishvili, p.c.).

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[11]This is not to say that the bigger languages do receive a lot of support. Most support is for the Kartvelian languages Svan and Megrelian (since these speakers identify as ethnic Georgians), and even for those languages, support is usually professed, not practised. Kisti children receive Kisti Chechen classes, and the Avar, Hunzib and Bezhta children receive Avar classes from teachers paid by the Georgian state. This is because the Chechens and Avars are large, recognised Caucasian ethnic groups, whereas the Tsova-Tush are classified as Georgian, and thus receive only Georgian education.

Nowadays, the Tsova-Tush speak a regional variety of Standard Georgian that betrays their Tush heritage and their Kakhetian environment on a phonetic and lexical level. Although the contemporary state of the Georgian dialects is poorly investigated, it is clear that the vast majority of speakers no longer preserve the phonological, morphosyntactic, and most lexical peculiarities of the dialects as they are described in the middle of the 20th century (see e.g. Khubutia (1969), Shanidze (1957), Uturgaidze (1966, 1960) for Tush, and Jorbenadze (1989), Gigineishvili et al. (1961) for an extensive bibliography of all Georgian dialects). Even though dialect characteristics seem to be decreasing, this work adduces evidence of a much stronger influence of the Tush dialect in the past, see Sections 2.5 and 7.1.2.1. As this work deals with the morphosyntactic influence of Georgian on Tsova-Tush, and as Standard Georgian and contemporary Tush and Kakhetian Georgian do not differ significantly in that domain, Standard Georgian will serve as a point of comparison (although occasionally, the Tush dialect is compared against directly).

Many Tsova-Tush speakers age 40 and above are also proficient in Russian. Although during the Soviet era, Russian was considered by many Georgians not to be a truly 'foreign' language, but rather a sort of second native language (Blauvelt 2013), this statement does not fully apply to rural Kakheti. There were very few Russian schools and most local Georgians only received Russian classes as a foreign language, except those that received university education. Men who served in the Soviet Army know Russian, women mostly do not (Diana Kakashvili, p.c.). Nowadays, although attitudes towards the Russian language are relatively neutral, it is used in restricted situations only, such as in communication with tourists or Azerbaijani nationals.

Attitudes of Tsova-Tush speakers towards their language have not been systematically investigated and can be said to be complicated. On the one hand, the gradual loss of Tsova-Tush is generally lamented, and many Tsova-Tush, whether they are fluent speakers or not, welcome supporting initiatives such as the creation of learning materials and Tsova-Tush language classes being included in the curriculum. On the other hand, as stated elsewhere, it is crucial for the Tsova-Tush to be considered ethnically Georgian, and not Nakh. Language plays an important role in the construction of the Georgian ethnic and national identity, and for some Tsova-Tush, their ancestral language might represent something of an obstacle towards full acceptance into the larger Georgian ethnic identity. Many Georgians from other regions who have not visited Alvani confuse the Tush with non-Georgian Muslims, and the loss of the their language might just make it easier for the Tsova-Tush to counteract these stereotypes. It

should be noted, however, that most Georgians are unaware of the existence of the Tsova-Tush language.

### 1.2.5.3 Language shift

The traditional multilingual situation of the Tsova-Tush was probably what Nichols (2013b) refers to as "asymmetrical vertical multilingualism". This means that highlanders who were speakers of rather small languages acquired larger languages spoken further down the mountains and in the lowlands in order to be able to communicate in the market places located within these larger communities. For the Tsova-Tush, this meant that before the 1830s, only a relatively small number of men were fluent in Georgian. In fact, some contemporary speakers report that among the generation of their grandparents (born approximately between 1880 and 1920), there were still many monolingual Tsova-Tush speakers. It is, however, unclear how prevalent bilingualism really was at this period, let alone before. Gigashvili et al. (2020: 109) suggest that, prior to the 1820s, there was only "weakly developed individual bilingualism" among the Tsova-Tush. Shanidze (1970), on the other hand, suggests that a shift to Georgian as the dominant language began as early as the 18th century.

Estimates of numbers of speakers have dropped from 3000 (Holisky & Gagua 1994) to 1000 (Gippert 2008), to 500 (Mosely 2010, Koryakov 2006, Rieks Smeets p.c.). As mentioned, based on the survey by Rezo Orbetishvili (p.c.) the number of fluent speakers is now (in 2023) estimated to be around 300 speakers, with another 750 speakers having some (passive) proficiency. Gigashvili & Gotsiridze (2014) have carried out their own survey, concluding that the number of speakers below 40 is 160, with no speaker but one scoring "very well" on their fluency test. Furthermore, the language is hardly, if at all, transmitted to the generation under the age of 25. Out of the approximately 180 school children (age 6–18) in Zemo Alvani, only 4% claim to be able to speak Tsova-Tush, while 60% claim their parents speak it in and around the house. Education is conducted in Georgian exclusively. Informal teaching sessions are being organised with children age 6–10, but learning materials are lacking, and the language of instruction is Georgian.

All in all, Tsova-Tush is classified as severely endangered (Mosely 2010) due to its low number of speakers and its lack of transmission to new generations. Therefore, unless serious revitalisation efforts are initiated now, Tsova-Tush is estimated to go extinct within the next decades.

## 1.3 The Georgian language

Georgian is a Kartvelian language spoken by approximately 4 million speakers, mostly in Georgia (where it is the national language), in neighbouring Turkey, Azerbaijan, Iran and by diaspora communities in Russia, Ukraine, Armenia, the USA, Germany and elsewhere. It is one of very few languages of the Caucasus that have a historical writing tradition, and Georgian inscriptions have been found as early as the 5th c. AD.

In terms of phonology, Georgian features a three-way distinction in consonants (voiced, aspirated, ejective), and is famous for its large consonant clusters with up to 8 segments in onset position. The vowel system consists of the vowels /a, e, i, o, u/.

Georgian features both head-marking and dependent-marking. Nouns distinguish 7 core cases and an additional 9 secondary cases that can also be analysed as postpositions. Core grammatical cases are the Nominative, Dative and Ergative, clearly distinguished in nouns, but not distinguished in pronouns. All nouns inflect according to the same declension pattern (with minor morphophonological variation), and Georgian does not have grammatical gender.

Georgian verbal morphology is agglutinative in principle, although TAME and person inflection involves so-called distributed exponence, in which the marking of grammatical meaning is distributed across multiple morphs, each of which contribute to that meaning, but without a defined meaning itself. Verbs distinguish 11 synthetic TAME forms, grouped into 3 so-called series, based on shared morphological principles, and the argument encoding for transitive and active intransitive verbs (Nominative subject in the "Present" series, Ergative subject in the "Aorist" series, Dative subject in the "Perfect" series). The Georgian verb can mark up to 3 arguments, which involves a complex hierarchy to decide which marker is overtly expressed. A special set of markers (pre-radical vowels) are used for valency operations, but each is also used to signal tense-aspect forms.

Georgian features mostly finite subordination (see Chapter 6) using relative pronouns, subordinating conjunctions and a general subordinator used in relative, complement and adjunct clauses.

Descriptions of Georgian in this work are based on grammars such as Hewitt (1995), Vogt (1971), and Shanidze (1953), and on the more detailed references cited in the individual sections.

## 1.4 The present study

This work has a threefold goal:

1. To contribute to the overall description of the Tsova-Tush language, by filling gaps in the previous literature, most prominently, the system of spatial cases (Section 3.3.3), the verbal forms that have indirect evidential semantics (Section 4.7), and the domain of clause combining (Section 6);

2. To contrast Tsova-Tush constructions with functionally equivalent constructions in two groups of languages: (a) Chechen and Ingush, its closest relatives, and (b) Georgian, the language of wider communication, which all Tsova-Tush speakers speak as a second language. This is done in order to form hypotheses concerning which Tsova-Tush construction is inherited, and which has arisen under influence of Georgian;

3. To provide the most probable diachronic scenario of language contact, by looking at historical Tsova-Tush language data, as well as at its historical sociolinguistics.

Additionally, the adaptation of Georgian lexical material into the Tsova-Tush grammatical system is described. See Section 2.5 for phonological adaptation, Section 3.3.5 for the morphological adaptation of nouns, and Section 5.5 for the morphosyntactic adaptation of verbs. See Section 7.1.2.1 for different semantic domains within the borrowed lexicon.

In Section 1.4.1, relevant topics in the language contact theory will be discussed. Section 1.4.2 contains the main research questions, and Section 1.4.3 is devoted to the main methods and the Tsova-Tush language data that forms the basis for this work.

### 1.4.1 Language contact

#### 1.4.1.1 Introduction to the field

The field of language contact studies can be divided broadly into three main areas of research: (1) the psycholinguistics of multilingual individuals, (2) the sociolinguistics of multilingual communities, and (3) studies into the results of language contact, i.e. contact-induced language change. The term "language contact", therefore can be viewed as shorthand for a range of different complex psycholinguistic and sociolinguistic scenarios (Pakendorf 2007: 25). This characterisation of language contact is by no means meant as a definition. For a more in-

depth and theoretical treatment, see the sources in the following sections, where a brief overview of relevant topics is given.

### 1.4.1.2 Structural dimensions

In research on language contact, most scholars distinguish between two main types of contact-induced change (i.e. structural outcomes of language contact): the transfer of linguistic form (i.e. concrete phonological shapes) and the transfer of structural and semantic patterns (i.e. restructuring, replication or calques of form-meaning pairs) (see Weinreich 1953, Haugen 1953, Heath 1984, Matras & Sakel 2007). This distinction received various names (e.g. "direct diffusion" vs. "indirect diffusion" (Heath 1978: 119), "global copying" vs. "selective copying" (Johanson 1999, 2002)), but recently the opposition has become known as pattern borrowing (PAT) vs. matter borrowing (MAT) (Matras & Sakel 2007, adopted by many authors, such as Gardani 2020, Arkadiev 2018, Wiemer & Wälchli 2012). Sakel (2007) gives a definition:

> We speak of MAT-borrowing when morphological material and its phonological shape from one language is replicated in another language. PAT describes the case where only the patterns of the other language are replicated, while the form itself is not borrowed. In many cases of MAT-borrowing, also the function of the borrowed element is taken over, that is MAT and PAT are combined.

Another important topic of research into the structural aspects of language contact is the relative likelihood of borrowing of different types of forms and categories, that is, the borrowability of items and constructions (see Haspelmath & Tadmor 2009, Moravcsik 1978, Thomason & Kaufman 1988, van Hout & Muysken 1988, Field 2002, Matras 2011). For example, it seems that nouns are more likely to be borrowed than non-nouns and function words[12], free morphemes more likely than bound morphemes, derivational morphology more than inflectional morphology, agglutinating affixes more than fusional affixes, superlatives more than comparatives, clause linking more than word morphology, among many other hierarchies.

Note that the above generalisations have to be viewed as tendencies, as no linguistic feature is entirely "borrowing-proof" (Aikhenvald 2007: 2). In fact, this observation has led some scholars to the suggestion that "the attempt to develop

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[12]This, of course, does not mean that it is "difficult" to borrow function words, just that nouns are even more likely to be borrowed.

any universal hierarchy of borrowing should perhaps be abandoned" (Curnow 2001). However, even though it has been established that everying can be borrowed, it remains clear that not everything is borrowed equally frequently: some grammatical and other features are particularly open to – and others are more resistant to – borrowing. Figure 1.8, adapted from Owens (1996) reflects which parts of the language are more likely to be shared with its relatives, and which are easily attributable to language contact.

**More similar to genealogical relatives**

Form-function pairings in inflectional morphology
Core lexicon
Syntactic constructions
Discourse structure
Structure of idioms

**More similar to neighbouring languages**
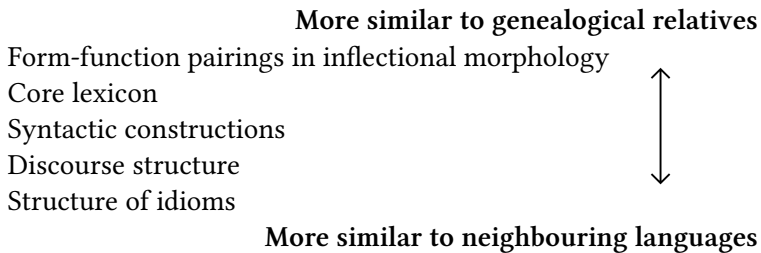
Figure 1.8: Genealogical versus contact-induced elements in a language

Tsova-Tush is no exception this generalisation. It will become clear (see Section 7.1.5) that the contact-induced change in Tsova-Tush is restricted to clausal syntax, calques in morphology, and the borrowing of non-core vocabulary, with only a single instance of a borrowed inflectional morpheme (see Section 4.9).

### 1.4.1.3 Social dimensions

Groups of people may be exposed to, and/or use more than one language. Certain particularities of different types of community multilingualism can have consequences for (1) the sociolinguistic situation (i.e. the number and type of people speaking a given language, and in which circumstances), and (2) the structure and make-up of the language itself.

The process of abandonment of one language for another by a community or parts of a community is referred to as language shift. Clyne (2003: 20), however, distinguishes several uses of the phrase language shift, whether it refers to individuals or communities, and whether it is a shift in (1) main language, (2) dominant language, (3) the language use in one or several specific social domains (e.g. home, work, school), or (4) particular language skills (reading, writing, speaking, listening).

The notion of social prestige is often used in research concerning language shift and contact-induced language change (e.g. Haugen 1966). The prestige factor of a given language (e.g. a rich literary heritage, high degree of language

planning, potential international standing) or of its speakers (political, cultural and/or economic elite) motivates speakers to switch to speaking this language (additionally or exclusively), or adopt speech patterns or words into their own language.

However, the notion of prestige does not provide a direct explanation for the borrowing of word-forms or construction to replace forms or construction that already existed in the language prior to contact. It also does not explain why some categories are more likely to be borrowed than others. Therefore, prestige can sometimes be better understood as a licence to employ forms or constructions from a language that has e.g. more institutional support or a wider community of speakers (Matras 2012: 19). Instead, recent research has focussed more on decisions and communicative acts by individual speakers against the background of social prestige, rather than centering a theory of language contact around social factors such as prestige.

Sociolinguistic aspects such as language attitudes, prestige, political dominance, and language planning have long been viewed as the prime predictors of the degree of contact-induced change (see e.g. Kiparsky 1938, Coteanu 1957, cited in Thomason & Kaufman 1988).

Thomason & Kaufman (1988: 66) mention three concrete measurable aspects of the so-called intensity of contact between two populations:

1. Relative population size. The smaller the community using the affected language is compared to the community using the donor language, the higher the intensity of contact.

2. Length of contact. Borrowing that involves extensive structural change often have a history of several hundred years of intimate contact (Thomason & Kaufman 1988: 41). On the other hand, as stated already, language shift may take as little as a generation.

3. Degree of bilingualism. Although lexical borrowing frequently takes place without widespread bilingualism, extensive structural borrowing requires extensive bilingualism over a considerable period of time (although counterexamples exist (Thomason & Kaufman 1988: 346)).

Using the criteria above, but without giving explicit benchmarks for any of them, Thomason & Kaufman (1988) have devised five categories of intensity of contact.

1. *Casual contact.* Only non-basic vocabulary is borrowed.

2. *Slightly more intense contact.* Besides the above, also conjunctions and adverbs are borrowed. Phonologically, new phonemes can be adopted, but only in loanwords. Syntactically, new functions of existing constructions are borrowed, or new orderings that cause no typological change.

3. *More intense contact.* Besides the above, also adpositions, derivational affixes, personal and demonstrative pronouns, low numerals are borrowed more likely than in category 2. Phonologically, stress rules and prosody are borrowed. Syntactically, minor orderings such as noun-adposition can be affected.

4. *Strong cultural pressure.* Besides the above, phonological rules can be borrowed, as well as the additional or loss of entire contrastive features. Extensive word order changes occur and inflectional categories and affixes are borrowed.

5. *Very strong cultural pressure.* Significant typological change: new morphophonological rules, phonetic changes, word structure rules (such as prefixation vs. suffixation, flexional vs. agglutinative), alignment systems, agreement rules, and bound pronominal elements can all be borrowed.

As stated above, prestige as a technical concept has been widely used to explain the degree of contact-induced change in a given speech community. In its most extreme form, the claim is that "nothing can be borrowed from a language which is not regarded as prestigious by speakers of the borrowing language" (Moravcsik 1975). However, there are clear exceptions: communities that are shifting to another language often take phonological features and/or some lexical items into the target language, resulting in influence from a less prestigious language into a more prestigious one (Thomason & Kaufman 1988: 37).

More exceptions are those of dialect borrowings and so-called small-scale multilingualism. These communities are variously described as practicing "egalitarian multilingualism" (François 2012) or "balanced multilingualism" (Aikhenvald 2007). When attempting to generalise over these types of community, it is noted that (1) multilingual language use is not primarily motivated by power relations or prestige (this does not mean that these societies are necessarily egalitarian or traditional). (2) These communities seemed to have remained at the margin of those processes that create officially monolingual societies with enforced standard language cultures (Lüpke 2016: 46–47, see also Pakendorf et al. 2021). This

must have been the situation in the Caucasus before the advent of regional lingua francas (see Daniel et al. 2021) and later national languages like Georgian, Azeri and Russian.

### 1.4.1.4 Psychological dimensions

Code-switching, or the alternation between two (or more) languages within a single discourse, sentence, or constituent, is observed in the speech of many multilinguals (Poplack 1980: 583). These multilinguals, even those who acquired their languages from birth (like the Tsova-Tush), have to master the rules on appropriate, context-bound selection of one form or construction over another as part of a process of socialisation (Lanza 1997). Some environments, language pairs, or social networks allow for a greater flexibility of choices (Grosjean 2001, 2008), and hence, code-switching is more likely to occur.

It is known for decades now that multilingual speakers do not "switch off" one of their languages in communication, but that their full linguistic repertoire is available to them at all times (see e.g. Bialystok et al. 2012). Hence 'contact' is by some researchers seen as speakers' creative negotiation of this repertoire along with the pragmatic and sociolinguistic conventions that govern their distribution (Matras 2012).

Single-word code-switches (i.e. insertions) have long been recognised as a source of loanwords (see e.g. Gardner-Chloros 1987). The distinction between single code-switches and borrowings is conceptually transparent: single-word insertions are part of the synchronic, discourse-based behaviour of multilinguals, whereas borrowings are instances of language change, fully entrenched in the entire speech community. Most often, there exists a lack of direct data on the spread of each Georgian lexical item in the Tsova-Tush community, when they engage in monolingual Tsova-Tush practices. Therefore, inclusion of lexical items in a dictionary will be used as a proxy: in this work, Georgian lexemes that occur in the Tsova-Tush dictionary (Kadagidze & Kadagidze 1984) are considered to be borrowings, and other Georgian material to be code-switching (see Deuchar et al. 2018 for a methodological precedent; see also Forker 2019).

Pattern borrowing, too, can be seen as a result of the above-mentioned creative negotiation of the multilingual speaker's repertoire (Matras 2012). All that is needed for an individual's spontaneous innovation to become an instance of contact-induced change, is (1) the ability and willingness of a community of interlocutors to understand and accept the meaning of the new construction and subsequently (2) a relatively low degree of normative control on the language that is exercised in this community.

**1.4.1.5 Previous work on Tsova-Tush-Georgian language contact**

Outcomes of contact in the Caucasus have not yet been studied on a systematic basis, and have only attracted considerable (albeit selective) attention in recent decades (Dobrushina et al. 2020: 61). For a discussion of contact phenomena in Adyghe (West Caucasian), see Höhlig (1997). There is some research on language contact in East Caucasian, but many languages of the area have not been documented thoroughly enough to identify most contact-induced changes. Some recent studies include Johanson (2006), Dobrushina (2017), Authier (2010), Rind-Pawlowksi (2023) on Turkic influence in East Caucasian. For other studies, see also Belyaev (2019) on Ossetic, Forker (2019) on Hinuq and Maisak (2019a,b, 2016) on Lezgic languages. An important case study is Kojima (2019) on Georgian influence in Tsova-Tush resulting in the development of person marking, which is discussed in-depth in Section 4.8. Khalilov (2004) discusses Georgian loanwords in Tsezic and other Daghestanian languages.

Already in the 19th century, the Tsova-Tush scholar Ivane Bukurauli laments the idea that his native language "becomes more and more mutilated as it is being influenced by the Georgian language and at a certain point in time will perish completely" (Bukurauli 1897: 43).[13]

Even though linguistic influence of Georgian is mentioned in every description of Tsova-Tush, a structured overview of contact phenomena in Tsova-Tush is lacking. Most scholarly effort has instead been devoted to:

- Describing the lexical and phonological similarities between the Nakh languages and the Northeast Georgian dialects such as Tush, Khevsur, Pshav and Mokheve (e.g. Kakashvili 2021, Uturgaidze 1966, Chincharauli 2003). This is generally seen as Nakh substrate influence on these dialects.

- Characterising the number and type of Georgian loanwords in Tsova-Tush (throughout Schiefner 1856 and Desheriev 1953). For an overview, see Fähnrich (1998), Wichers Schreur (2021), Gippert (2008). See Sections 2.5 for phonological adaptation, 3.3.5 for the morphological adaptation of nouns, and 5.5 for the morphosyntactic adaptation of verbs. See Section 7.1.2.1 for different semantic domains within the borrowed lexicon.

- Describing the changing sociolinguistic situation of the Tsova-Tush during the last two centuries (Gigashvili 2016, 2014, Gigashvili & Gotsiridze 2014).

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[13]ნწვები ლაპარაკობენ დამასინჯებულ ღლიღურს ენაზეç და ქართული ენის გავლენის ქვეშ ყოფნის გამო უფრო მახინჯდება და მოვა დრო, რომ სრულიად ბოლო მოეღება.

Regarding the third topic, two scholars have independently devised a periodisation of recent sociolinguistic changes of the Tsova-Tush language. Firstly, Desheriev (1953: 5–20) uses a model describing language shift that mirrors Marxist social theory.[14] See Table 1.1 for the general framework adopted by Desheriev.

Table 1.1: Desheriev's phases of language contact

|  | 1 | 2 | 3 |
|---|---|---|---|
| Multilingualism | Monolingualism | Bilingualism | Monolingualism |
| Lexicon | Some borrowings pertaining to hitherto unfamiliar concepts | Intense borrowing, replacement, mixed multi-word expressions | Some words of the former language might be retained |
| Phonology | Borrowing of some sounds | Greater influence | |
| Morphology | Borrowing is rare | Borrowed bound morphemes used with native roots | |
| Syntax | None | Some pattern borrowing | |

Applied to the Tsova-Tush situation, Desheriev arrives at the periodisation as seen in Table 1.2, dividing recent Tsova-Tush history into three periods, mainly based on the rate of multilingualism of its speakers.

The application of the top-down model of Table 1.1 has certain disadvantages. Firstly, it uses the multilingualism status of the Tsova-Tush people as the deciding factor in demarcating the three periods. However, we must assume a gradual shift from Tsova-Tush to Georgian in the past 200 years. If a sharp increase in the number of Georgian bilinguals or a sharp decrease in the number of Tsova-Tush speakers exists, Desheriev does not identify them in absolute terms. Secondly, Desheriev does not correlate these three stages with specific outcomes of contact-induced language change. Most instances of contact-induced change take place in the second period, where Tsova-Tush-Georgian bilingualism is prevalent, with no further chronology. Instances of contact-induced change taking place in the first period are described in vague and general terms, and no concrete examples

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[14]Based on the famous linguistic article by Stalin (1952), which itself is perhaps ghost-written, or at least heavily inspired by Arnold Chikobava (Medvedev 2003).

Table 1.2: Desheriev's phases of Tsova-Tush-Georgian language contact

|  | 1 | 2 | 3 |
| --- | --- | --- | --- |
| Multilingualism | Tsova-Tush | Tsova-Tush+Georgian | Georgian |
| Lexicon | Some borrowings pertaining to hitherto unfamiliar concepts | Intense borrowing, replacement, mixed multi-word expressions | Some Tsova-Tush relics |
| Phonology | Borrowing of some sounds | Greater influence | |
| Morphology | Borrowing is rare | *-ur*, NOM.PL-morphemes, verb adaptation | |
| Syntax | None | Finite relative clauses | |

(except for lexical items) are mentioned. A third problem, for our purposes, is the fact that no dates have been attached to the three periods, so that no correlations between specific histocial processes and outcomes of contact-induced change can be drawn.

Another periodisation attempt, this time with absolute dates, is by Mikeladze (2008: 14–15), see Table 1.3. This periodisation has the advantage of being more concrete, since it provides more or less absolute dates that demarcate the different phases. Additionally, it notes the different varieties of Georgian that the Tsova-Tush must have been in contact with. The first period is characterised by life in the Tsovata valley (see Section 1.2.3), where the Tsova-Tush were mostly in contact with Tush Georgian. After migration downhill to the Alvani region, they came into closer contact with the Kakhetian dialect of Georgian, and to some extent also with the standard language. In the Soviet era, the standard language was propagated more intensively, and Russian was introduced (although it had a marginal status in Kakheti). After the collapse of the Soviet Union, the standard language played an even bigger role, decreasing the use of regional dialects.

Mikeladze's 4 phases provide a useful description of the changing sociolinguistic situation of the past 200 years, especially in regards to the changing contact varieties, the intensity of pressure from the prestige variety, and the settlement

Table 1.3: Mikeladze's phases of Tsova-Tush-Georgian language contact. Geo.: Georgian.

|  | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Dates | −1820 | 1820–1920 | 1920–1990 | 1990– |
| Government | Tsarist | Tsarist | Soviet | Post-Soviet |
| Settlement | Tsovata valley | Alvani region | Alvani | Alvani |
| Conctact variety | Tush Geo. | Kakhetian Geo. (+standard) | Standard Geo. (+Russian) | Standard Geo. |

history (see also Gigashvili & Gotsiridze 2014). No correlations to linguistic outcomes of the given language contact situation are proposed.

These outcomes (i.e. proposed instances of contact-induced change), however, have been noted already since the earliest descriptions of Tsova-Tush. Both Schiefner (1856: 4) and Desheriev (1953: 12–14) have mentioned the following contact phenomena, even if only in passing. It is interesting to note that Desheriev (1953: 12–14) characterises the amount of structural influence from Georgian as relatively little, while Schiefner (1856: 4) calls the influence, especially in the nominal domain, extensive. The following phenomena were observed by Desheriev and Schiefner:

- A large amount of loanwords (see Wichers Schreur (2021), Gippert (2008) and Section 7.1.2.1)

- Borrowing of the derivational suffix *-ur* (see Section 3.4.4)

- Borrowing of a plural/polite verbal suffix *-t* (see Section 4.9)

- Development of subject cross-reference markers on the verb (see Section 4.8)

- The use of postpositions/adverbs as verbal prefixes[15]

- The use of conjunctions and finite subordination (see Section 6)

The fact that these phenomena are actually structural copies of Georgian is by no means proven. In the present work, I critically assess these phenomena and adduce several more. I then provide the most probable scenario of contact for

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[15]This phenomenon falls beyond the scope of this work.

each of them, and establish correlations between the sociolinguistic and historical factors on the one hand, and specific outcomes of contact-induced change on the other.

### 1.4.2 Main research questions

In other words, besides trying to contribute to a more thorough description of the Tsova-Tush language, the main aims of this work are to answer the following two questions.

1. What Tsova-Tush constructions have likely arisen due to contact with Georgian?

2. How can these influences be explained by the changing sociolinguistic situation of Tsova-Tush in the past 200 years?

### 1.4.3 Data and methods

#### 1.4.3.1 Theoretical framework

The theoretical framework employed in this work can be best described with the expression "Basic Linguistic Theory", following Dixon (1997, 2010a). Basic Linguistic Theory is the framework that underlies most descriptive and typological work of the last 50 years, but, being an informal theory, this fact is not always made explicit in these works (Dryer 2006). The usage of the term "Basic Linguistic Theory" stems from the observations that (1) there is no such thing as atheoretical or theory-neutral description, since it is impossible to describe language without making some theoretical assumptions; and (2) the extent to which most descriptive work shares the same theoretical assumptions is striking, especially when one considers how much such work has in common in its assumptions compared to other theoretical frameworks. It is important to note, however, that theoretical notions used in description should be kept distinct from explanatory theories that try to answer the question why a given language is the way it is. In this work, these explanations will be couched in general theories about grammaticalisation and language change (following Dryer 2006) and, more specifically, will be compared against observations in the domain of contact-induced language change (see Secion 1.4.1).

**1.4.3.2  Methodology**

Contact-induced change has often been invoked as the explanation for a situation where two languages feature a similar word or structure that cannot be the result of common inheritance. To warrant such an explanation, however, at least two things need to be proven (see Poplack & Levey 2010).

1. Actual language change occured, and the observed phenomenon is not simply an instance of synchronic variation in the language.

2. The change is contact-induced, and not a result of language-internal developments.

As to the first condition, variation is a necessary condition for change, but it is not the same. Variation is prevalent when the speaker group is bilingual and/or the speakers are residents of minority-language communities in intense contact with a majority language (Poplack & Levey 2010: 394, and see Section 1.4.1). However, it cannot on face value be excluded that a suspected outcome of contact-induced change wasn't already present in the language before contact occurred. Thus, the first step in establishing the existence of change is comparison over time. Three comparison points could potentially be found to compare a language variety against, in order to test if the feature in question is actually the result of change, or simply an instance of previously existing variation.

1. The language variety used by an older generation of speakers. Good examples of this include Otheguy et al. (2007) and Saad (2020). Unfortunately, because virtually all Tsova-Tush speakers are between 60 and 90 years of age, no attempt at discerning inter-generational differences in speech was made.

2. Previous stages of the same language variety. Tsova-Tush language data is available from the middle of the 19th century and the middle of the 20th century, allowing us to identify differences and inferring change between these different stages. See Section 1.4.3.3 for a characterisation of these different stages of attestation. Also, even if earlier data of a given construction is lacking, it can sometimes be ascertained using internal reconstruction (see e.g. McColl Millar 2015: 234, Joseph & Janda 2003: 243)

3. Comparison with related varieties. If a given feature in a language variety is absent in its immediate sister languages, and most other languages of the family, this feature can be hypothesised to be an innovation. Therefore,

in this work, Tsova-Tush constructions are sometimes compared against functionally equivalent constructions in Chechen and Ingush, especially when historical Tsova-Tush-internal evidence is inconclusive. This is operationalised with the historical-comparative method (see e.g. McColl Millar 2015: 191, Joseph & Janda 2003: 199)

Speakers of Tsova-Tush self-report to have Tsova-Tush and Georgian as (nearly) simultaneously acquired L1s. Therefore, in contrast to ethnic minority speech communities where the investigated minority language is clearly an L2 for many speakers (see Poplack 1997: 305), Tsova-Tush speakers have fully acquired Tsova-Tush as one of their first languages. Even if certain aspects of Tsova-Tush grammar could be attributed to attrition due to underuse, the corpus-based nature of the present research ensures that potential attrition features are presented only when they are shared by a majority of speakers, and which can therefore be characterised as language change at a community level.

Once a given linguistic feature has been established as an innovation, it is compared against a structurally equivalent system in Georgian, the presumed donor language. Only when the constructions in the two languages are sufficiently parallel, we are able to claim that this similarity of constructions is the outcome of contact. In other words (Poplack & Levey 2010: 400–401):

> If the hierarchy of constraints conditioning the variable occurrence of a candidate for change in a contact variety is the same as that of its pre-contact precursor, while differing from that of its presumed source, no structural change has taken place. If it features a constraint hierarchy different from those of both its pre-contact precursor and the presumed source, we can infer that change has occurred, but not one that is contact-induced. Only when a candidate for change in a contact variety features a constraint hierarchy different from that of its pre-contact precursor, but parallel to that of its presumed source, can we conclude in favour of contact-induced change.

In this work, the presumed donor language is always Georgian. Although Tsova-Tush contains many loanwords that ultimately originate from Russian, Turkic or Iranian, these (with very few exceptions) are also found in Georgian, whether they occur in standard Georgian or in eastern dialects. Turkic and Iranian lexical items that are not found in Georgian are not treated in this work for two reasons. First of all, they are very few. The dictionary of Kadagidze & Kadagidze (1984) only contains 4 nouns of Turkic origin that do not occur in Georgian: *doxt'ur* 'doctor' (but also found in Megrelian, a sister language of Georgian), *tep* 'hill', *som* 'som (Turkic currency)' and *zoran* 'strong, brave'. This last

word is also found indirectly in Chechen *zørtala* 'dense, strongly built, stocky' and may be of Iranian origin. Secondly, lexical borrowing is not the focus of this work. For a brief discussion on Russian loanwords, all of which, again, are found in colloquial Georgian, see Wichers Schreur (2021). In sum, we only have verified historical evidence for contact with Georgian, and the vast majority of Iranian, Turkic and Russian lexical items can also be explained through Georgian contact. There is no evidence for long-lasting and/or intense contact between Tsova-Tush and Turkic or Iranian peoples that would result in the type of morposyntactic influence discussed in this work.

To summarise, this work follows the workflow below, paraphrased and adapted from Thomason (2001: 93–94):

1. Situate the proposed change with respect to its host linguistic system. Tsova-Tush linguistic facts are described in similar fashion to a sketch grammar, in order to show how a given construction is embedded in the larger grammatical system.

2. Identify a presumed source of the change. As a first step, the donor language in this work is always presumed to be Georgian. The specific variety (Old Georgian, Tush Georgian, or the modern standard language) can sometimes be compared against directly, or has to be deduced indirectly through periodisation (see Section 1.4.1.5).

3. Locate structural features shared by the source and recipient languages. Tsova-Tush and Georgian constructions are compared in depth.

4. Prove that the proposed interference features were not present in the pre-contact variety. This is usually achieved by comparing contemporary Tsova-Tush against historical sources from the mid-19th and mid-20th century. Additionally, Tsova-Tush constructions are compared against Chechen and Ingush equivalents.

5. Prove that the proposed interference features were present in the source variety prior to contact. Occasionally, historical stages of Georgian will be compared, if a given construction has changed in the history of the language.

Another issue is the type of data that is used to investigate contact-induced changes. Since manifestations of change can be rare in running discourse, much published evidence comes from experimental or quasi-experimental data

(Poplack & Levey 2010: 396), such as elicitation, reaction tests, or forced inter-
views. Since this type of atypical situations may result in atypical behaviour, the
present work makes use of corpus data only. The corpus is sufficiently large (see
Section 1.4.3.3 below), and only potentially contact-induced constructions that
have a sufficient corpus frequency have been presented here.

### 1.4.3.3  The Tsova-Tush corpus

The Tsova-Tush language data in this work are from a corpus containing approx-
imately 250,000 tokens. It consists of a number of subcorpora, shown in Table 1.4.

Most examples in this work are from subcorpus E, which contains the most
free spoken material. Each example is tagged with a letter combination indicat-
ing a subcorpus, as seen in Table 1.4, followed by a number combination indicat-
ing text, paragraph, sentence. Hence, EK002-5.4 refers to the fourth sentence of
the fifth paragraph of the second text in Kadagidze (2009). English translations
of E and BH are taken over directly, unless specified otherwise. Other English
translations are produced by myself, translated from the Tsova-Tush, taking the
Georgian (KK, KC, EK, LS, MM, LJ), Russian (IT, YD) or German (AS) translations
into account. Third persons are translated with 'she', 'he', or 'they' according to
context, except in KK, which consists of separate sample sentences, where 3rd
persons are translated with 's/he' or 'they'.

Other Tsova-Tush examples are attributed directly to their source, be it exam-
ple sentences from grammar sketches and articles, or from separately published
single texts such as Holisky & Kadagidze (1989) and Kojima (2009). The oldest
audio recording is Dirr (1909b).

Based on phonological features (for which see Section 2.3), the subcorpora can
be divided into three periods:

1. The middle of the 19th century (IT, AS). Many final vowels are not yet re-
   duced or apocopated, final -*ħ* is not yet deleted, umlaut causes diphthongs.

2. The middle of the 20th century (YD, KK). Final vowels are written as re-
   duced, final -*ħ* is written as optional (they are written in brackets), umlaut
   can cause diphthongs or monophthongs.

3. The 21st century (E, EK, LS, LJ, KC, MM, BH, WS). Final vowels are apoc-
   opated (although sometimes written as reduced vowels orthographically),
   final -*ħ* is deleted, umlaut causes mostly monophthongs.

Table 1.4: Tsova-Tush sources (chronologically)

| Abbr. | Reference | |
|---|---|---|
| IT | Tsiskarov 1848a, 1849 | New Testament translation[a] and 9 songs |
| AS | Schiefner 1854, 1856, 1859 | 7 Bible excerpts, 2 folk tales and a poem |
| YD | Desheriev 1953 | 18 sample texts from grammar |
| KK | Kadagidze & Kadagidze 1984 | ± 10.000 sample sentences from dictionary[b] |
| KC | Chrelashvili 2002 | 12 sample texts from grammar |
| E | described in: Gippert 2008 | Large documentation project ECLING[c] |
| EK | Kadagidze 2009 | Text collection |
| LS | Sanikidze 2010 | 15 sample texts from grammar |
| MM1 | Mikeladze et al. 2011 | Text collection |
| MM2 | Mikeladze et al. 2014 | Text collection |
| MM3 | Mikeladze 2015 | Poetry collection |
| MM4 | Mikeladze et al. 2017 | Text collection |
| LJ | Jamarishvili 2019 | Text collection |
| BH | described in: Hauk 2020 | Bryn Hauk's documentation[d] |
| WS | (not published) | This author's documentation (Section 1.4.3.4) |

[a]The transliteration and translation of this manuscript is still in its early stages.

[b]Digitised by Rusudan Papiashvili and Jost Gippert, and available at http://titus.fkidg1.uni-frankfurt.de/texte/etce/cauc/batsbi/tt_dict/tt_dilex.htm.

[c]Endangered Caucasian Languages in Georgia, available at https://archive.mpi.nl/tla/islandora/object/tla%3A1839_00_0000_0000_0008_24AD_F.

[d]Available at https://scholarspace.manoa.hawaii.edu/handle/10125/42581.

Unless otherwise specified, all Standard Modern Georgian examples are taken from the Georgian National Corpus (GNC)[16]. The author is indicated with most examples. Georgian examples without reference to an author are taken from the Georgian Reference corpus (GRC), also located in the GNC. Old Georgian, Chechen and Ingush examples are taken from the academic literature, and are cited as such. This work contains several examples of the Tush dialect of Georgian. They are cited similarly to Tsova-Tush examples, with two-letter tags for each source (see Table 1.5).

Table 1.5: Tush Georgian sources

| Abbr. | Reference | |
|-------|-----------|--|
| TU | in: Uturgaidze 1960 | Text collection |
| IG | in: Gigineishvili et al. 1961 | Text collection |
| GC | (online) | Texts on GDC[a] collected by Giorgi Tsotsanidze in the 1980s |
| TT | (online) | Texts on GDC collected in the 2000s |

[a]Georgian Dialect Corpus: http://corpora.co

Although not always referred to explicitly, this work makes use of dictionaries of Modern Georgian (Rayfield 2006), Old Georgian (Abuladze 1973), Tush Georgian (Tsotsanidze 2002), Chechen (Matsiev 1961, Nichols & Vagapov 2004), and Ingush (Nichols 2004a).

#### 1.4.3.4 Fieldwork

In 2017, 2018 and 2019, I conducted fieldwork in Zemo Alvani, residing in the village for six weeks every summer. I organised elicitation sessions with a group of 5 collaborators, age 55–65. Furthermore, I recorded mainly dialogues of male participants, in an effort to complement the ECLING corpus (subcorpus E, see Section 1.4.3.3 above), which consists mostly of monologues, where female speakers are overrepresented. All recordings were transcribed and translated into Georgian with the help of my main collaborator, Rezo Orbetishvili. The texts are glossed and translated into English, and will be published online, along with the rest of the corpus. For the recordings, a ZOOM H4NSP handheld audio recorder

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[16]http://gnc.gov.ge

was used, and the recordings were processed using ELAN[17] and FLEx.[18] In all, 3 hours of dialogue were recorded (2500 tokens), and additionally, 5 short texts were translated from Russian or Georgian (another 2500 tokens).

### 1.4.3.5 Conventions

All glossing is mine. The transcription of Georgian, Ingush and Chechen from secondary sources is adapted for consistency. All examples of languages other than Tsova-Tush are preceded by the name of the language variety. Hence, all examples without a language indicator are Tsova-Tush. In running text, labels that are used for specific Tsova-Tush form-function pairings (i.e. language-particular categories such as tense-aspect forms and case forms) are capitalised, following the convention of Comrie (1976). Phonological processes are also capitalised. The practical transcription used in this work is a broad phonetic transcription (i.e. expresses surface forms), and is used throughout this work. Tsova-Tush data in numbered examples is given in its surface form (with all phonetic processes already applied), whereas Tsova-Tush data in tables represents underlying morphological forms. Data in running text can be either surface form or underlying morphology, which will be indicated in each case.

In glossed examples, round brackets are used for glosses of morphemes that have disappeared through regular phonological processes. The exception is the verbal root *i* 'do', which when deleted is expressed as "∅" in examples. A period is used to separate several abbreviations that are rendering a single object-language morpheme. If English lacks a single-word gloss for a lexical root, an underscore is used to connect elements of a multi-word expression.

When citing a lexical Tsova-Tush verb, the Verbal Noun in *-ar* is used as citation form, as per tradition.

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[17]https://archive.mpi.nl/tla/elan/download
[18]https://software.sil.org/fieldworks/download/

# 2 Phonetics and phonology

## 2.1 Introduction

In this chapter, the phoneme system of Tsova-Tush will be presented (Section 2.2), including a novel description of the consonant *w*. In Section 2.3, the various phonological processes will be discussed. Georgian influence on Tsova-Tush phonology will be treated in Section 2.4, where it will be shown that (1) Tsova-Tush adopted the Georgian R-Dissimilation rule (which states that an /r/ in some suffixes changes to *l* if the morphological base contains another /r/), and that (2) Tsova-Tush increased its number of possible consonant clusters due to the large amount of Georgian loanwords. Lastly, in Section 2.5, a brief overview of the phonological adaptation of Georgian loanwords into Tsova-Tush is given, which includes some remarks on historical aspects and different layers of loanwords. Note that, apart from Hauk & Hakim (2019), no acoustic or other quantitative phonetic studies have been conducted for Tsova-Tush, and no audio files of laboratory recordings are available. Therefore, all descriptions in this section are based on observations by ear (from field recordings and elicitations) and on previous qualitative descriptions and analyses.

## 2.2 Phoneme system

### 2.2.1 Consonants

Table 2.1 gives the consonant system of Tsova-Tush in a practical transcription system, common to Caucasian linguistics. Where the symbols do not coincide with IPA, the corresponding IPA symbols have been added in square brackets. For the voiced epiglottal fricative, shown in brackets in this table, see the discussion below in this section.

Tsova-Tush ejective stops are characterised by a shorter duration and creakier voice quality in the following vowel, but not by closure duration or the duration of a preceding vowel. Long consonants (*tt, t't', qq, q'q', ss, xx, ll*) differ from their short counterparts only in total duration and closure duration (Hauk & Hakim 2019), and not by any other phonetic cue (such as a difference in Voice Onset Time

Table 2.1: Tsova-Tush consonant system

| | Lab. | Alv. | Post. | Vel. | Uv. | Epi. | Glot. |
|---|---|---|---|---|---|---|---|
| Plosive | p [pʰ]<br>p'<br>b | t [tʰ] · tt [tʰː]<br>t' · t't' [t'ː]<br>d<br>c [ts] · c' [ts'] · ʒ [ʣ] | č [ʧ]<br>č' [ʧ']<br>ǯ [ʤ]<br>š [ʃ]<br>ž [ʒ] | k [kʰ]<br>k'<br>g | q [qʰ] · qq [qʰˑ]<br>q' · q'q' [q'ˑ] | | ʔ |
| Fricative | | s · ss [sː]<br>z | | | x [χ] · xx [χː]<br>ǧ [ʁ] | ħ [ʜ]<br>(ʕ [ʁ̞]) | h |
| Nasal | m | n | | | | | |
| Lateral | | l<br>ɬ [l̥] · ll [lː] | | | | | |
| Approx. | v [ʋ] | r | j | | | | w [ɦʷ] |

or burst intensity, as in other Caucasian languages with so-called "geminate/ fortis/intensive" consonants). They occur only at the alveolar and uvular place of articulation and are found only in non-initial position. They do not occur in mono-morphemic consonant clusters but when a cluster arises at a morpheme boundary, long consonants tend not to be shortened. Some minimal pairs (from Hauk & Harris forthcoming) include *qetar* 'get up' - *qettar* 'know'; *it'* 'run (NPST)' - *it't* 'ten'; *eqar* 'these (ERG)' - *eqqar* 'jump'; *d-aq'-d-ar* 'dry (v.)' - *d-aq'q'-d-ar* 'examine, check'; *is* 'that (MED)' - *iss* 'nine'; *d-axar* 'go' - *d-axxar* 'drown, choke'; *qali$^n$* 'triplet, threesome' - *qalli$^n$* 'ate (PFV)'. An eighth long consonant *šš* seems to be found only in one word (*eššinŏ* 'crazy').

The voiceless lateral *ł* does not occur in initial position. Minimal pairs (Hauk & Harris forthcoming) contrasting *ł* and *l* are *meła$^n$* 'drink (INF)' - *mela$^n$* 'ink', *d-alar* 'die' - *d-ałar* 'go out, appear'. Tsova-Tush features another sound, the lenghtened voiced lateral approximant *ll*. Whether this *ll* and *ł* are in free variation, or phonemically distinct, remains to be investigated.

Tsova-Tush *r* is a single tap. It becomes voiceless when followed by the voiceless lateral approximant *ł* (*vorł* [vor̝ł] 'seven', *marłŏ* [mar̝ł̥w̥] 'nose'). Word-final *v* is realised as a glide [w]. The sound *h*, only found word-initially followed by a vowel, is rare. The sound *w* (which can be analysed as [ɦʷ] or [w̥]) is found only in the words *wum* 'something', *wun* 'why', *wux* 'what', *wumaʔ* 'all' and is therefore lexically rare, but well attested in terms of corpus frequency (as these words are used often). It is distinct from *v* (see the minimal pair *wux* [ɦʷuχ] 'what', *vux* [ʋuχ] 'backwards (M.SG)'), and from *h* (see the near-minimal pair *wun* [ɦʷũ] 'why' versus *huv* [huw] 'seed'). Its cognates in Chechen and Ingush are *h* and *f*, respectively (although these phonemes have a wider distribution in these languages).

Glottal *ʔ* occurs in all positions, but by tradition is not written word-initially in this work. Examples include *e$^n$* [ʔẽ] 'shadow', *d-aʔar* [daʔar] 'come', *q'oʔ* [q'oʔ], *oʔ* [ʔoʔ] 'grain, seed'. All words that seem to start in vowel actually start in a glottal stop (Kojima 2007). The sounds *ħ* and *ʕ* are pharyngeal or epiglottal (cognate sounds are generally described as epiglottal in closely related languages (Nichols 2000), although no direct acoustic evidence is available for Tsova-Tush). Three pharyngeal/epiglottal sounds can be identified. *ħ* [ħ] occurs word-initially (*ħalŏ* 'up', *ħedar* 'be late', *ħič'ŭ* 'look (NPST)', *ħo* 'you (NOM.SG)', *ħu$^n$* 'forest'), in second position after voiceless non-ejective plosives (including affricates, excluding uvulars) (*pħe* 'village', *tħak'* 'footprint', *cħa* 'one', *čħog* 'type of fresh cheese', *kħeki$^n$* 'ready'), in intervocalic position (*aħŏ* 'down', *d-eħar* 'steal'), and word-finally (*duħ* 'blade, tip', *laħ* 'snake'). The sound *ʕ* [ʕ] exclusively occurs in the second position of a word-initial consonant cluster, containing a voiced or ejective

(non-uvular) first segment (*bʕarkʼ* 'eye', *dʕeʔ* 'liver', *nʕan* 'worm', *vʕalaʔ* '(not) at all', *jʕeʔ* 'spindle', *pʼʕaⁿ* 'wing', *tʼʕakʼ* 'filth', *cʼʕerkoⁿ* 'suddenly', *čʼʕağoⁿ* 'strong', *kʼʕavar* 'lame sheep'). A third sound, sometimes described as an epiglottal stop, is found exclusively word-initially (*ʕa* 'winter', *ʕep* 'shame', *ʕiriⁿ* 'sharp', *ʕop-d-ar* 'cover (v.)', *ʕurdeⁿ* 'in the morning'). However, this sound can be analysed (probably phonetically, but definitely phonologically) as a combination of *ʔ + ʕ*. This gives us the following distribution: ʕ as second consonant of a word, after voiced or ejective obstruent, or after a glottal stop; ħ elsewhere. The two sounds are thus in complementary distribution and ħ becomes voiced when the articulation of the preceding consonant involves "movement of the glottis" (Kojima 2007).[1] In this work, [ʜ] is written *ħ*, #C[ʕ]V is written *#Cʕ V*, #[ʔʕ]V is written *#ʕV*, and #[ʔ]V is written *#V*.

## 2.2.2 Vowels

Tsova-Tush features five vowels *a, e, i, o, u,* and what seems like a marginal phoneme *ā* [aː]. Kadagidze & Kadagidze (1984) contains six words (all verbs) with *ā* (none with other long vowels) that cannot be explained by synchronic phonological processes. They are *d-āɬar* '(intransitive verb used in multi-word expressions)' (cf. *d-aɬar* 'give'), *d-āttar* 'be poured' (cf. *d-attar* 'roast, bake'), *d-āšar* 'shave' (cf. *d-ašar* 'melt, thaw'), *d-āxar* 'live' (cf. *d-axar* 'go'), *d-āxar* 'extract' (cf. *d-axar* 'get drunk'), *d-āxkʼ-d-ar* 'bring along, drive' (cf. *d-axkʼ-d-ar* 'let rot'). Various processes create long vowels (due to Vowel Mergers and compensatory lengthening), diphthongs (due to Umlaut), and nasalised vowels (due to Nasalisation). Whatever their origin, long vowels are never written as such in practical transcription, but where necessary, phonetically long vowels are indicated by accompanying IPA transcription.

## 2.3 Phonological processes

Tsova-Tush exhibits a relatively large number of phonological rules that obscure the relationship between phonetic surface form and underlying morphemes. This is contrasted with the situation in Georgian, where relatively little allomorphy or allophony is found. It is also contrasted with Chechen and Ingush, where several processes have taken place that are similar to those in Tsova-Tush, but the results of which have largely been phonemicised. For example, all Vainakh final unaccented vowels (only some of which triggered umlaut on the preceding vowel)

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[1]A feature [−idle glottis] is proposed by Brandão de Carvalho et al. (2025).

have been reduced to *a* [ɐ]. In words where the original (pre-umlaut) vowel never surfaces, the umlauted vowel is considered a phoneme. See e.g. Chechen, Ingush *c'ena* [c'en(ɐ)] 'clean' < Proto-Nakh *\*c'ani(n)*, as in Tsova-Tush *c'ēn, c'ejnĭ* [c'eːn], underlyingly *c'ani* 'clean', still seen in the adverb *c'ani-š* 'cleanly'.

In tables in this work, morphemes will be cited with no phonological processes applied unless specified, while glossed examples and word forms will be provided in their surface form.

### 2.3.1 Nasalisation

Word-final *n* is deleted, nasalising the preceding vowel. See Table 2.2 for examples. Remember that in this work, nasal vowels are written $V^n$.

Table 2.2: Tsova-Tush Nasalisation

| | | |
|---|---|---|
| *gagan* | *gaga$^n$* | 'egg' |
| *bader-e-n* | *badre$^n$* | 'child (GEN)' |
| *ał-in* | *ałi$^n$* | 's/he said' |
| *d-aqqon* | *daqqo$^n$* | 'big' |
| *ʕa-lun* | *ʕalu$^n$* | 'wintery' |

Word-internal (but still syllable-final) Nasalisation is also observed, although its distribution is less transparent. Table 2.3 presents the most common sequences of Nasalisation on morpheme boundaries, as well as morpheme-internally (forms in brackets represent less frequent alternatives). As seen in the table, the sequence *-i-en=so* (-TR-AOR=1SG.NOM) can be found as *iensŏ* (in which Nasalisation has not applied), as *ie$^n$sŏ* (with Nasalisation) and as *iesŏ* (where the *n* is lost without a trace). It is still unclear whether this instance of word-internal nasalisation has occurred because the Nasalisation rule was active before the grammaticalisation of the 1st person pronoun, or because Nasalisation occurs more readily before *s* (no other instances of *Vns* are attested). In subcorpus MM, the authors write any syllable-final nasal stop as nasalisation instead. It is unclear whether this represents actual phonetic observations or a spelling convention. Subcorpus E (consisting of audio recordings only) represents the most contemporary and least edited language and also features the largest amount of variation, which points to a system in the midst of change. The exact distribution of word-internal Nasalisation remains to be investigated.

Table 2.3: Tsova-Tush medial nasalisation. (1) *-i-en=so* 'TR-AOR-1SG.NOM'; (2) *-al-in-so* 'INTR-AOR-1SG.NOM'; (3) *-ino-čo* 'PTCP.PST-OBL'; (4) any morpheme-internal nasal, like *inc* 'now'

|     | KK | EK | E | MM |
|-----|----|----|----|----|
| (1) | *-iesǒ* | *-iesǒ (-ie$^n$sǒ, -iensǒ)* | *-iesǒ (-ie$^n$sǒ, iensǒ)* | *-ie$^n$sǒ* |
| (2) | *-ali$^n$sǒ (-alisǒ)* | *-alisǒ* | *-ali$^n$sǒ* | *-ali$^n$sǒ* |
| (3) | *-inčǒ* | *-inčǒ* | *-inčǒ (-i$^n$čǒ)* | *-i$^n$čǒ* |
| (4) | *inc* | *inc* | *inc* | *i$^n$c* |

### 2.3.2 Vowel mergers

A vowel hiatus arising on a morpheme boundary is resolved by merging the two vowels. Since most stems end in a consonant and most suffixes start in one, few instances of mergers have been found, and more research into their precise distribution is necessary. Table 2.4 shows the most common and most consistent vowel combinations and an illustrative example for each. *ui* represents a monosyllabic diphthong, see Section 2.3.5.

Table 2.4: Tsova-Tush vowel mergers

| | | |
|---|---|---|
| o + a | > oː | *v-ağ-o-as > vağos* [ʋaʁoːs] 'I will come' |
| a + a | > aː | *v-ağ-ora-as > vağras* [ʋaʁraːs] 'I was coming' |
| o + i | > ui | *do-i > dui* 'horses' |
| u + i | > ui | *ʕu-i > ʕui* 'shepherds' |

### 2.3.3 Apocope

In Tsova-Tush multi-syllabic words, word-final non-nasal vowels are, with very few exceptions[2], regularly deleted. Final *a, e, i* are deleted fully, while final *o* and *u* are reduced to *ǒ, ǔ* (both [w]). Table 2.5 shows an example for each vowel.

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[2]The plural marker *-i* is never apocopated, nor is the nominalising suffix *-a* or the relativising suffix *-e*. This can be treated as an exception to a phonological rule, or (equally exceptionally) all three suffixes can be analysed as being underlyingly long (as is the case for Chechen and Ingush plural *ī*). The apocope rule is then extended to shorten final long vowels (of which the above-mentioned suffixes would be the only instances). Enclitic particles are also not reduced. A fuller investigation of phonological processes on the boundary of clitics and hosts in Tsova-Tush is needed.

As seen from the table, Apocope causes compensatory lengthening on preceding vowels if these vowels end up in a monosyllable after apocope. This causes phonological oppositions like *mott* [motʰ:] 'place, bed' and *mott* [mo:tʰ:] 'it seems'. It is yet unknown whether Apocope and vowel deletion in general triggers compensatory lengthening of vowels in multi-syllabic Tsova-Tush words.

Table 2.5: Tsova-Tush Apocope

| | | |
|---|---|---|
| *nana* | *nan* [na:n] | 'mother (NOM)' |
| *mott-e* | *mott* [mo:tʰ:] | 'it seems' |
| *ditxi* | *ditx* [di:tχ] | 'meat (NOM)' |
| *nan-e-go* | *nanegŏ* [nanegw] | 'mother (ALL)' |
| *xił-u* | *xiłŭ* [χi:l̥w̥] | 's/he/they will be' |

Compensatory lengthening is the underlying cause for all nouns and adjectives in Kadagidze & Kadagidze (1984) containing a long *ā* vowel, see Table 2.6.

Table 2.6: Tsova-Tush nouns with supposed long *a*

| In Dict. | Underlying | Phonetic | |
|---|---|---|---|
| *āg* | *aga* | [a:g] | 'grandmother' |
| *ālĕ* | *ale* | [a:l] | 'lord' |
| *āsĕ* | *ase* | [a:s] | 'calf' |
| *bāl* | *bala* | [ba:l] | 'misfortune' |
| *bāx* | *baxa* | [ba:χ] | 'rich' |
| *dāq'* | *daq'a* | [da:q'] | 'share, part' |
| *māx* | *maxa* | [ma:χ] | 'needle' |

In older works, now apocopated vowels *e, i, o, u* were still written as reduced vowels ⟨ĕ, ĭ, ŏ, ŭ⟩. These reduced vowels were pronounced as very short vowels or their non-syllabic equivalents (Gagua 1956). In contemporary Tsova-Tush, this is only true for *ŏ* and *ŭ*, which are now pronounced [w]. However, in allegro speech, these two vowels too are deleted completely. The apocopated/reduced vowel *a* was never written, and therefore presumably not pronounced since the middle of the 19th century. Vowel apocope is also found in Tush Georgian (Gigineishvili et al. 1961) and Chechen and Ingush (Nichols 2011). Apocopated *i* and *u* trigger Umlaut on the preceding vowel, see below.

The Apocope rule takes the output of the Nasalisation rule as input. That is, *n* before word-final vowels is not deleted (e.g. *nan* (not *$na^n$) 'mother' from *nana*, see Table 2.7a). Word-final nasal vowels are not deleted (see Table 2.7b).

Table 2.7: Tsova-Tush Nasalisation

| (a) | | | | (b) | | |
|---|---|---|---|---|---|---|
| *aɬ-ine* | *aɬin* | 's/he said (SEQ)' | | *gagan* | *gaga^n* | 'egg' |
| *alon-i* | *aluin* | 'into Alvani' | | *bader-e-n* | *badre^n* | 'child (GEN)' |
| *nana* | *nan* | 'mother' | | *aɬ-in* | *aɬi^n* | 's/he said' |
| | | | | *d-aqqon* | *daqqo^n* | 'big' |
| | | | | *ʕa-lun* | *ʕalu^n* | 'wintery' |

### 2.3.4 Syncope

In words with more than two syllables, vowels in penultimate syllables are deleted, for example *daq'reğ* 'food (TRANS)' from *d-aq'-ar-e-ğ*; *badrex* 'child (CONT)' from *bader-e-x*. In words where both Syncope and Apocope can apply, Apocope is applied first: *ak'idŏ* [ak'idw] 'string of fruit' < Georgian *ak'ido* (as opposed to *ejk'dŏ*, the expected form if Syncope would have operated first). This is especially clear in four-syllable words, such as *tet'-ora-lo* 'would cut'. First, Apocope applies, giving *tet'oralŏ* [tet'oralw], after which the penultimate syllable is *t'o* (instead of *ra*) on which Syncope operates, yielding the surface form *tet'ralŏ*. Whether this type of vowel loss triggers compensatory lengthening is unknown at this point.

As already mentioned by Holisky & Gagua (1994: 156), Syncope does not occur if the result would be an "impermissible consonant cluster". Then, as now, it remains unclear what constitutes an impermissible cluster.

### 2.3.5 Umlaut

The vowels *i* and *u*, if (and only if) deleted by Apocope or Syncope, trigger Umlaut on the vowel in the preceding syllable. See Table 2.9 for the umlauted version of each underlying vowel. Deleted *i* triggers i-Umlaut, meaning the affected vowel becomes more like *i* (i.e. more front and close), see Table 2.8a. Deleted *u* also triggers i-Umlaut when the consonant(s) between the deleted *u* and the vowel in the preceding syllable is coronal (i.e. (post)alveolar), see Table 2.8b. If the intervening consonant is not coronal (i.e. labial, velar, uvular or (epi)glottal),

a deleted *u* triggers u-Umlaut, meaning the affected vowel becomes more like *u* (i.e. more close and rounded), see Table 2.8c. When a deleted *u* is followed by a coronal consonant, it triggers i-Umlaut, regardless of the intervening consonant, see Table 2.8d.[3]

Table 2.8: Tsova-Tush Umlaut

| (a) | | | (b) | | |
|---|---|---|---|---|---|
| ʕabik'-ī | ʕebk'i | 'spoons' | ħac'uk'-ī | ħec'k'i | 'birds' |
| lev-ira-as | livras | 'I was saying' | qett-u | qittŭ [qi:t:w] | 's/he stands up' |
| j-ot'-in-as | juit'nas | 'I went' | j-ot'-u | juit'ŭ | 'she goes' |
| tuxi | tuix | 'salt' | busu | buisŭ | 'at night' |

| (c) | | | (d) | | |
|---|---|---|---|---|---|
| gagu-a-x | gougax | 'knees (CONT)' | k'ox-urat | k'uixrat | 'in Georgian' |
| tabu | toubŭ | 'gelded ram' | gomur-ī | guimri | 'stables' |
| dopxu | dupxŭ [du:pxw] | 'clothes' | apuš-ī | epši | 'lies' |

Similarly to deleted *a, e, o*, deleted *u* and *i* trigger compensatory lengthening if the outcome after deletion is a monosyllable. This results in some minimal pairs, like *meq* 'couch', *meq* ([me:q] < *maqi*) 'bread'. This lenghtening is not reflected in the practical transcription. The exact effect of Umlaut on vowel length in polysyllables is hitherto unknown: no phonetic research has been conducted, and existing sources (E, MM) mark vowel length erratically. Regardless of vowel length, Umlaut only occurs when the trigger is deleted, hence it can be called Compensatory Umlaut.

Table 2.9 shows the outcome of the Umlaut process in attestations throughout the past two centuries. Stage 1 represents texts from the middle of the 19th century (IT, AS), stage 2 is around the middle of the 20th century, represented by subcorpora YD and KK, while stage 3 represents contemporary Tsova-Tush. Stage 4 represents contemporary Tsova-Tush in contexts where phonetic shortening applies, which seems to be in unstressed syllables, although a phonetic investigation is lacking here.

As is clear from Table 2.9, Umlaut started out as pure diphthongisation, and up until around the 1980s, this remained to be the case (although some diphthongs changed quality). Subcorpus KK (the dictionary by Kadagidze & Kadagidze 1984) mainly gives forms with diphthongs (stage 2), but gives some monophthongs

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[3]Although exceptions can be found: *agur-i > ougri* 'bricks'.

Table 2.9: Tsova-Tush Umlaut historically

| Underlying vowel | Historical stages | | | |
|---|---|---|---|---|
| | 1 | **2** | 3 | 4 |
| i-umlaut | | | | |
| *a* | *ai* | *ai* | *ej, e* [ej, eː] | (*e*) |
| *e* | *ei* | *ei* | *i* [iː] | (*i*) |
| *o* | *oi* | *ui* | *ui* | (*y*) |
| *u* | *ui* | *ui* | *ui* | (*y*) |
| u-umlaut | | | | |
| *a* | *au* | *au* | *ou* | (*o*) |
| *o* | *ou* | *ou* | *u* [uː] | (*u*) |

(stage 3) as alternatives. Umlauted vowels in contemporary Tsova-Tush (stage 3) are a mix of diphthongs (*ui, ou*) and monophthongs (*e, i, u*).

A small number of lexical items contain diphthongs or long vowels that, on a synchronic level, cannot be explained as the result of an Umlaut process, such as *pst'uinǒ* 'woman' and *ʕērtva$^n$* (KK *ʕairtva$^n$*) 'plenty'.

The following overview presents the subsequent phonological processes for each deleted vowel.

- *a*: Compensatory Lengthening of vowel in preceding monosyllable; complete deletion

- *e*: Compensatory Lengthening of vowel in preceding monosyllable; complete deletion

- *i*: Compensatory Lengthening of vowel in preceding monosyllable; i-Umlaut of vowel in preceding syllable; complete deletion

- *o*: Compensatory Lengthening of vowel in preceding monosyllable; if word-final, reduction to *ǒ* [w]; if word-internal, complete deletion.

- *u*: Compensatory Lengthening of vowel in preceding monosyllable; i-Umlaut or u-Umlaut of vowel in preceding syllable. If word-final, reduction to *ǔ* [w]; if word-internal, complete deletion.

### 2.3.6 Pharyngeal deletion

The pharyngeal/epiglottal fricative *ħ* is deleted in polysyllabic words in word-final position. This rule is applied simultaneously with the Apocope rule: vowels before word-final *ħ* are not apocopated (e.g. *xilo* (not *\*xilŏ*) 'in the water' from *xi-loħ*). That is, the Apocope rule is not applied to the output of Laryngeal Deletion. On the other hand, if *ħ* becomes word-final after vowel deletions, it is not deleted (e.g. *vaħ* (not *\*va*) 'if he is' from *v-a-ħe*). That is, Laryngeal Deletion is not applied to the outcome of Apocope.

Due to this process, the Essive case marker *-ħ* on nouns and the Ergative 2nd person singular cross-reference marker *-aħ* often do not show up in surface forms, see Table 2.10.

Table 2.10: Tsova-Tush Laryngeal Deletion

| | | | |
|---|---|---|---|
| Polysyllabic: | | | |
| *gomur-e-ħ* | stable-OBL-ESS | *guimre* | 'in the stable' |
| *xi-loħ* | water-INTERESS | *xilo* | 'in the water' |
| *kalak-iħ* | city-INESS | *kalki* | 'in the city' |
| *tit'-en-aħ* | cut.PFV-AOR-2SG.ERG | *tit'na* | 'you have cut it' |
| *lev-i-aħ* | say.IPFV-NPST-2SG.ERG | *liva* | 'you say' |
| *v-ağ-ora-aħ* | M.SG-come.IPFV-IMPRF-2SG.ERG | *vağra* | 'you were coming' |
| Monosyllabic: | | | |
| *pħe-ħ* | village-ESS | *pħeħ* | 'in the village' |
| *laħ* | snake | *laħ* | 'snake' |
| Final vowel: | | | |
| *v-a-ħe* | M.Sg-be-COND | *vaħ* | 'if he is' |

Final laryngeals are not deleted in the oldest subcorpora (IT, AS, YD). KK (Kadagidze & Kadagidze 1984) marks the Deletion as optional.

## 2.4 Georgian influence

### 2.4.1 R-Dissimilation

Another (morpho-)phonological process observed in Tsova-Tush has a clear parallel in Georgian. Two suffixes containing *r*, the Ablative case suffix *-ren* and the archaic plural suffix *-erč* change their *r* to *l* when the root it attaches to contains an *r*. See Table 2.11 for examples.

Table 2.11: Tsova-Tush R-Dissimilation

| -erč | PL | -ren | ABL |
|------|-----|------|-----|
| buin-erč | 'fists' | zǧven-e-re$^n$ | 'from the attic' |
| tab-erč | 'gelded rams' | sk'ol-re$^n$ | 'from the school' |
| maq-erč | 'songs' | naq'-re$^n$ | 'from the road' |
| t'ʕer-elč | 'stars' | kor-le$^n$ | 'from the hand' |
| herc'-elč | 'pots' | kuirt-le$^n$ | 'from the head' |
| mʕar-elč | 'nails' | nažt'r-e-le$^n$ | 'from the stable' |

R-Dissimilation does not apply in compounds when only the first element in the compound contains an *r* (e.g. *kort-st'ejk'-re$^n$* 'head-man-ABL, 'from the leader'), but it does when the *r* is in the second element, e.g. *pxak'al-q'ur-le$^n$* 'rabbit-place-ABL, from Pkhakalkure'. It also does not apply when there is an *l* between the *r* of the suffix and the *r* of the root (*jerusalim-re$^n$* 'from Jerusalem'). The rule does apply regardless of intervening syllables (*qer-ba-le$^n$* 'from the stones', *ru-e-le$^n$* 'from the stream'), only intervening lexemes cause the non-application. The R-Dissimilation rule also does not apply to other affixes, such as the Verbal Noun suffix *-ar* or the various verbal suffixes containing the morph *-ra*, see Table 2.12 (remember that word-final *-ra* is reduced to *-r*, as seen in the third column of Table 2.12.

Table 2.12: Tsova-Tush absence of R-Dissimilation

| -ar | VN | -Vra | IMPRF |
|-----|-----|------|-------|
| dat'ar | 'run away' | dat'er | 'was running away' |
| apšar | 'chew' | apšor | 'was chewing' |
| mok'ecadalar | 'curl up' | mok'ecadalar | 'was curling up' |
| xarcar | 'change' | xarcor | 'was changing' |
| larłar | 'count' | larłer | 'was counting' |
| t'urt'ladar | 'cover in dirt' | t'urt'lador | 'was covering in dirt' |

This same phenomenon is observed in several suffixes in Georgian, such as the adjectival affixes *-ur, m- -ar, -ier*, see Table 2.13 (examples from Shanidze 1953: 24).

In Georgian, exactly like in Tsova-Tush, this dissimilation does not occur in compounds (*mk'erd-gan-ieri* 'broad-chested' < 'chest' + 'width' + ADJZ), or

Table 2.13: Georgian R-Dissimilation

| *-ur* | ADJ | *m- -ar* | ADJ | *-ier* | ADJ |
|---|---|---|---|---|---|
| *inglis-ur-i* | 'English' | *m-k'vd-ar-i* | 'dead' | *nič'-ier-i* | 'gifted' |
| *k'ac-ur-i* | 'manly' | *m-dn-ar-i* | 'molten' | *gon-ier-i* | 'intelligent' |
| *ʒaǧl-ur-i* | 'dog-like' | *m-xm-ar-i* | 'wilted' | *sul-ier-i* | 'animate' |
| *rus-ul-i* | 'Russian' | *m-q'r-al-i* | 'stinking' | *xorc-iel-i* | 'mortal, carnal' |
| *imer-ul-i* | 'Imeretian' | *m-šr-al-i* | 'dry' | *carieli* | 'empty' |
| *ǧor-ul-i* | 'pig-like' | *m-kr-al-i* | 'faded' | *gemrieli* | 'tasty' |

when an *l* occurs between both *r*'s in the same word (*avst'rali-ur-i* 'Australian') (Shanidze 1953: 24). A similar phonological process in Chechen or Ingush is not observed, which leads us to the hypothesis that the Tsova-Tush phonological rule is contact-induced, and has been introduced under influence of Georgian. Of course, dissimilation involving liquids has typological parallels (see Cohn (1992) for the same rule in Sundanese), and thus could have happened independently of Georgian. However, the fact that (1) not all suffixes that contain *r* partake in the rule, making it morphophonological rather than purely phonological, and (2) this rule is not found elsewhere in the Caucasus, makes the coincidence too big to not warrant language contact as an explanation.

The Tsova-Tush rule is already observed in 19th century language material, such as in *k'air-le[n]* 'from Cairo' (AS008-3.1), *koirt-le[n]* 'from the head' (AS008-14.2).

### 2.4.2 Phonotactics

Due to the introduction of numerous Georgian loanwords into Tsova-Tush, the set of consonant clusters that are allowed has expanded. I will focus on word-initial consonant clusters here. In inherited Nakh words in Tsova-Tush, just like in Chechen and Ingush, words can start with a single consonant, or a consonant plus an approximant or a laryngeal. Additionally, a word can start with a so-called harmonic cluster, i.e. a cluster of two consonants where the second consonant is further back in terms of place of articulation than the first, and both exhibit the same voicing and airstream mechanism (see Nichols 2011: 86–87 and Aronson 1991: 223 for harmonic clusters in Ingush and Georgian, respectively). Table 2.14 shows all basic types of initial consonant combinations. Not all cells are filled, since (1) uvulars and velars cannot be the first element of a harmonic

cluster, (2) uvulars cannot combine with laryngeals, and (3) not every combination is attested, since Tsova-Tush only retains approximately 1200 Nakh roots.

Besides those in Table 2.14, Tsova-Tush can form clusters with *s* + ejective stop: *sk'iv* 'spark', *st'ak'* 'man' (for the development of this last cluster in the history of Nakh, see Nichols 2003b: 219–220). Also found word-initially is the cluster *xk'* : *xk'or* 'bladder', *xk'e* 'valley'. Only two words with an inherited word-initial three-consonant cluster are found: *pst'u* 'wife' (cf. Chechen *stie* 'wife', *zuda* 'wife'; Ingush *sie-* 'wife') and *pst'u* 'ox' (cf. Chechen *stu* 'ox'; Ingush *ust* 'ox').

Georgian loanwords exhibit a wider variety of initial consonant clusters, usually clusters with *r* before a stop, or a harmonic cluster + approximant, e.g. *grdeml* 'anvil', *t'q''ve* 'prisoner', *brʒandbad-d-ar* 'order', *k'vnet'ad-d-ar* 'gnaw', *rbevad-d-ar* 'raid', *txlešed-d-ar* 'slap', *rk'vevad-d-ar* 'winnow', *rc'me$^n$* 'conviction'.

Additionally, Georgian loanwords have introduced word-initial *r*, which is absent in inherited Nakh words. Examples include *raxt'* 'decorated bridle', *recep't'* 'recipe', *riq'* 'rocky river bank', *roč'ŏ* 'black grouse', *rus* 'Russian'. Hence, since the adoption of these and similar loanwords, Tsova-Tush no longer features a constraint against word-initial *r*, making its phonotactics closer to that of Georgian.

## 2.5 Phonological adaptation of loanwords

Tsova-Tush and Georgian have relatively similar phonological systems. More specifically, all Georgian phonemes exist in Tsova-Tush as well. However, we observe several phonological differences when we compare certain Tsova-Tush lexical items with their counterparts in Standard Modern Georgian. Note that word-final Georgian *-i* is a Nominative ending, which is not borrowed into Tsova-Tush (see Section 3.3.5).

### 2.5.1 Tsova-Tush *-o-*, Georgian *-va-*

The Georgian sequence *-va-* corresponds with Tsova-Tush *-o-*, such as *gor* 'family name', from Georgian *gvar-i*; *baro(d)* 'dig with spade', from Georgian *barva*; *golŏ* 'drought', from Georgian *gvalva*. At first glance, this looks like a case of monophthongisation in Tsova-Tush, but further Georgian evidence suggests otherwise. In Georgian, we find several doublets with a *-va-/-o-* alternation. Often, both are used in colloquial speech, and no geographical distribution is obvious (yet), such as in *k'vank'ila* / *k'onk'ila* 'yoke prop on cart', *k'vac'axuri* / *k'oc'axuri* 'berberis', *ğvalo* / *ğolo* 'wild sorrel', *xvadabuni* / *xodabuni* 'large clearing, arable

Table 2.14: Tsova-Tush inherited word-initial consonants

| Single | | Harmonic | | Approximant | | Laryngeal | |
|---|---|---|---|---|---|---|---|
| *bader* | 'child' | *bža$^n$* | 'large cattle' | *blu-* | 'mute' | *bʕorc'* | 'wolf' |
| *pešk'ar* | 'kid' | *pxi* | 'five' | *plokŏ* | 'New Year ritual' | *pħu* | 'dog' |
| *p'ant'* | 'crab apple' | | | | | *p'ʕa$^n$* | 'wing' |
| *doš* | 'word' | | | | | *dʕeʔ* | 'liver' |
| *tišar* | 'sink' | *txir* | 'frost' | | | *tħak'* | 'footprint' |
| *t'iv* | 'bridge' | *t'q'a* | 'twenty' | | | *t'ʕir* | 'star' |
| *cac* | 'sieve' | | | *cru* | 'show-off' | *cħa* | 'one' |
| *c'a* | 'house' | *c'q'e* | 'once' | *c'rint'* | 'infant' | *c'ʕop'* | 'tip' |
| *ža$^n$* | 'sandal' | | | | | | |
| *ča* | 'bear' | *čxot'* | 'waterfall' | | | *čħog* | 'fresh cheese' |
| *č'ek'* | 'green bean' | *č'k'a* | 'crowd' | | | *č'ʕaǧo$^n$* | 'strong' |
| *gerc'* | 'weapon' | | | | | | |
| *kotti$^n$* | 'narrow' | | | | | *kħeki$^n$* | 'ready' |
| *k'uč'* | 'hill top' | | | *k'ramp'ul* | 'tusk' | *k'ʕak'* | 'heel' |
| *qer* | 'stone' | | | | | | |
| *q'ono$^n$* | 'young' | | | *q'lort'* | 'gulp' | | |
| *(ʔ)apuš* | 'lie' | | | | | *(ʔ)ʕarč'i$^n$* | 'black' |

tract', *dagvalvili* / *dagoluli* 'parched, withered', *lak'vara* / *lak'ora* 'groove in upper millstone', *mc'vadi* / *mc'odi* 'barbecued meat'. Other word pairs do have a known dialectal distribution. Two clear patterns can be discerned:

1. -*o*- is used in Eastern Georgian (particularly the Northeastern dialects Khevsur, Tush, Pshav, Mokheve, Mtiulian), where standard Georgian has -*va*-: Standard Georgian *k'vamli* 'smoke; household' Khevsur, Tush, Pshav *k'omli* 'id.'; *gvarvala* 'vetch' (plant species, vicia) *gorvela* 'id.'; *gvari* 'last name' Mtiulian *gori* 'id.'; *alvani* 'Alvani' Tush *aloni* 'id.'; *zvavi* 'avalanche' Mokheve, Pshav *zovi* 'id.'; *zvarak'i* 'sacrificial bullock' Mtiulian *zora* 'id.'; *tvali* 'eye' Mokheve *toli* 'id.'; *savati* 'great bustard' Pshav *saoti* 'id.'; *kvabi* 'pot' Khevsur *kobi* 'id.'; *cvari* 'drop of wine' Kakhetian *cori* 'id.'; *sxva* 'other' Mokheve *cxo* 'id.'; *cxvari* 'sheep' Mokheve *cxori* 'id.'; *xvavi* 'heap of threshed corn stalks' Ingilo, Kakhetian *xovi* 'id.'; *žvaroba* 'festival at pagan shrine' Pshav *žoroba*.[4]

2. Standard Georgian has -*o*- where (Western Georgian) Imeretian has -*va*-, such as Imeretian *k'vaxunži* 'mocassin', standard *k'oxunži* 'id.'; Lower Imeretian *svali* 'wedge', standard *soli* 'id.'; Imeretian *xvamli* 'pleiades', standard *xomli* 'id.'.

Hence, it is clear that Tsova-Tush borrowed these words from a (North)east Georgian dialect (most likely Tush), which already had the *o* before contact. Due to the continuous contact of Tsova-Tush speakers with Standard Georgian (remember that all are bilingual), words can in principle be borrowed again, replacing the first borrowing. Consequently, we find variants of the same item in the corpus, e.g. *memcxor* (87 occurrences in my corpus) and *memcxvar* (4 occurrences) 'shepherd' from Georgian *memcxvare*. Knowing this, we can distinguish between different layers of loanwords. Words with -*o*- where standard Georgian has -*va*-, must have been borrowed when the main language of contact was Tush Georgian, whereas words with -*va*- (such as *zvar* 'large vinyard' (Georgian *zvari* 'id.'), *sazğvar* 'border' (Georgian *sazğvar-i* 'id.')) must have been borrowed from Standard Georgian at a later stage.

### 2.5.2 Tsova-Tush -*q*-, Georgian -*x*-

Tsova-Tush possesses some loanwords containing the consonant *q*, which does not occur in standard Georgian. These words too must have been borrowed at

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[4]The only known counterexamples are Khevsur *dvaleba* 'lambing time', Standard *doloba* 'id.'; Tush *ečva* 'adze', Standard *ečo* 'id.'.

the time when Tsova-Tush speakers were more closely in contact with speakers of Tush Georgian, which does have the sound *q* (see Section 1.4.1.5). Hence we find Tsova-Tush *qoqob* 'pheasant', from Tush Georgian *qoqobi* (cf. Standard Georgian *xoxobi*); *venaq* 'vine' from Tush Georgian *venaqi* (standard Georgian *venaxi*); *tiq* 'clay' from Tush Georgian *tiqa* (Standard Georgian *tixa*). As with the *-va-/-o-* alternation described above, these words can be borrowed several times, and more recently from Standard Georgian, which has *-x-* in these instances. Thus, we find older *qširo$^n$* 'frequent' from Tush Georgian *qširi*, and more recent *xširo$^n$* from Standard Georgian *xširi*.

### 2.5.3 Tsova-Tush cluster reduction

Georgian *m-* as the first segment of a word-initial consonant cluster is dropped: *c'od* from Georgian *mc'vad-i*; *zitev* 'dowry', from Georgian *mzitev-i*; *k'alav* 'tinsmith' from Georgian *mk'alav-i*. Other consonant clusters are usually retained, see Section 2.4.2.

### 2.5.4 Other remarks

Russian loans are relatively frequent and are presumed to have been borrowed with Georgian as an intermediate language (Wichers Schreur 2021). Thus, Russian voiceless consonants are adopted as ejectives in Georgian (and remain ejectives in Tsova-Tush), and all consonants lose any palatalisation, e.g. *st'ak'a$^n$* 'glass (cup)' from Russian *stakan*; *ap'elsi$^n$* 'orange' from Russian *ap$^j$el$^j$sin*; *k'raot'* 'bed' from Russian *krovat$^j$* [krɐvat$^j$].

Note that all loans undergo all phonological processes as described in Section 2.3. This means that all final and (under certain conditions) penultimate vowels are deleted, potentially triggering umlaut: *mok'riv* 'boxer', from Georgian *mok'rive*, *muine$^n$* 'scabious, mangy' from Georgian *munian-i* 'id.' (where the *-i-* triggered i-umlaut on the preceding syllable, after which the sequence *ia* merged into *-e-*); *nejtlded* 'godmother' from Georgian *natlideda* 'id.'.

## 2.6 Summary

In terms of basic description, this chapter has provided new insight into the following domains:

1. A previously unknown phoneme *w* ([ɦʷ] or [w̰]) has been identified.

In terms of structural language contact, this chapter has shown the following parallels between Tsova-Tush and Georgian, which are most likely to be attributed to influence of the latter on the former language.

1.  R-Dissimilation: Two suffixes containing *r*, the Ablative case suffix *-ren* and the archaic plural suffix *-erč* change their *r* to *l* when the root it attaches to contains an *r*. This feature was observed already in the oldest Tsova-Tush data.

In terms of loanword adaptation, this chapter has shown that:

1.  An older layer of loanwords can be identified containing the phonemes *-o-* where standard Georgian has *-va-* and *-q-* where standard Georgian has *-x-*. These sounds point to a Northeast Georgian donor dialect, most likely Tush Georgian.

2.  Georgian loanwords containing clusters with an initial *m-* lose this sound in Tsova-Tush. Other clusters are preserved.

# 3 Nominal inflection and the noun phrase

## 3.1 Introduction

In this chapter, structural aspects of the Tsova-Tush noun phrase will be discussed. In Section 3.3.1, the inflectional categories of nouns will be discussed, with special attention given to a novel analysis of the system of spatial cases. In the same section, a first attempt at classifying nouns into declension classes is given. In Section 3.4, the inflection of the most common types of modifiers is presented, and Section 3.5 shows along which parameters these modifiers agree with the head noun. Section 3.6 shows a number of ways in which noun phrases can be combined to form other noun phrases (including a preliminary analysis of caseless modifying nouns in Section 3.6.2), whereas in Section 3.7, attention will be devoted to pronoun phrases and other noun phrases without a noun.

In terms of contact-induced change, this chapter shows that Georgian influenced Tsova-Tush noun phrases considerably: (1) The Essive cases often have lative semantics (Section 3.3.3), (2) The comparative and superlative constructions are borrowed or calqued from Georgian (Section 3.4.4), (3) Tsova-Tush numerals higher than one hundred are usually borrowed from Georgian (Section 3.4.2), (4) the distal demonstrative is used as a deictically neutral third person personal pronoun (Section 3.7.2), and (5) Tsova-Tush uses negative pronouns as opposed to constructions with indefinite pronouns and clausal negation (Section 3.7.3).

Furthermore, Section 3.3.5.1 discusses the two different layers of loanwords as seen by their morphological adaptation, Section 3.3.5.2 presents data on the gender assignment of loanwords, and Section 3.4.5 discusses the morphological adaptation of adjectives.

## 3.2 Simple noun phrases

Tsova-Tush noun phrases are headed by nouns or pronouns. For headless noun phrases (featuring only modifiers), see Section 3.7. However, core arguments do

not need to be expressed overtly. This fact is expected, as this feature is found in almost all languages of the Caucasus (Polinsky 2021: 9), including in Georgian (Tuite 1998: 43–36). Tsova-Tush features an ergative alignment system[1] (see Section 5.2). A transitive verb requires its subject to be in the Ergative case, but in Example (1a), it is left out completely. Similarly, in (1b) and (1c), the object, which would otherwise have been in the Nominative case, is not expressed.

(1)  a.  *kuirc'l-e-x          ʕajrtva$^n$ ve$^n$   mał-e$^n$.*
         wedding-OBL-CONT plenty   wine drink.PFV-AOR
         'At the wedding, [they] drank a lot of wine.'                    (KK038-3018)

    b.  *magram šeron=aʔ    d-i-e$^n$    o    cok'l-e-v.*
         but      REFL=EMPH D-do-AOR DIST fox-OBL-ERG
         'But the fox did [it] himself.'                                  (E159-29)

    c.  *t'atbu-v      daxsna-d-Ø-or  mšobl-i-v.*
         silver.OBL-INS save-D-TR-IMPF parent-PL-ERG
         'The parents saved [them] with money.'                          (MM116-2.3)

It is very common for a noun phrase to consist of only one noun, as in (2a), where both agent and object are expressed by a single noun each, as well as in (2b), which contains an experiencer and an object.

(2)  a.  *pst'uin-čo-v      šur agrilbad-j-i-e$^n$.*
         woman-OBL-ERG milk cool-J-TR-AOR
         'The/a woman cooled the/some/∅ milk.'                            (KK001-3018)

    b.  *badr-e-n      nan    j-ag-i$^n$.*
         child-OBL-DAT mother F.SG-see-AOR
         'The/a child saw a/the/its mother.'                             (KK001-0017)

As can be seen from Example (2), Tsova-Tush features no dedicated class of articles, i.e. words that appear regularly in combination with nouns to show the definiteness, specificity, anaphoricity, case, gender or number of the noun they modify (Dryer 2007: 152). The Tsova-Tush demonstrative, however, can be used with an anaphoric or definite function, while the numeral 'one' can be used as an indefinite article to introduce new information. See Section 3.4.1 for demonstratives and Section 3.4.2 for numerals.

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[1]The alignment system of Tsova-Tush is not dependent on tense-aspect or any other feature that would cause a split alignment system, such as the one found in Georgian. It does, however, allow for intransitive arguments in the Ergative under specific conditions, for which see Section 5.2.

In default word order, demonstratives, quantifiers, participial relative clauses, Genitives, adjectives and numerals all precede the head noun. Relative clauses using a relative pronoun or the general subordinating conjunction *me*, as well as quantified nouns in the Genitive follow the head noun. For a more detailed discussion of all relative clauses, see Section 6.3.

## 3.3 Nouns

### 3.3.1 Introduction

Nouns inflect for case and number, with regular case morphology, but unpredictable plural formation. Many, but not all nouns feature an opposition between a Nominative and an Oblique stem, to which all case inflections attach (see Section 3.3.4).

The plural is marked by one of several plural suffixes. The productive suffix *-i* is found, besides the non-productive and less frequent *-ar, -š, -bi, -mi, -ni, -er* (< *-ar-i*), *-iš* (< *-i-š*), *-arč* (< *-ar-š*), and *-erč* (< *ar-i-š*).

### 3.3.2 Grammatical cases

Tsova-Tush features a set of five grammatical cases and 24 spatial cases. The boundaries between these two sets are fuzzy and somewhat arbitrary. The distinction made in this work is based on several criteria: grammatical cases are syntactically mostly used as verbal arguments and modifiers, they do not participate in a two-slot system morphologically and phonologically consist of a single consonant. Spatial cases, on the other hand, mostly convey spatial information, syntactically form adjunct phrases, mostly participate in a two-slot system and are phonologically mostly syllabic.

Table 3.1 shows the core grammatical case markers which will be discussed briefly.

The Nominative case is used to signify the intransitive subject (3a), transitive object (3b) and nominal predicate (3c). Since the Nominative case involves zero marking, in this work, nouns in this case are glossed without the label nom. Many phonological processes can obscure the relation between the surface form of the Nominative noun (i.e. the bare stem) and its underlying phonological form, for which see Section 2.3.

Table 3.1: Tsova-Tush grammatial cases

| Case | Marker |
|------|--------|
| Nominative[a] | ∅ |
| Ergative | *-v, -s* |
| Genitive[b] | *-n* |
| Dative[c] | *-n* |
| Instrumental[d] | *-v* |

[a]The label Nominative is preferred over Absolutive in most Caucasological works.
[b]Word-final Genitive *-n* is dropped, nasalising the preceding vowel, see Section 2.3.
[c]Dative *-n* is historically from *-ni*, and does not drop in auslaut, see below in this section.
[d]See Section 'Ergative' below in this section for a discussion on whether this is a separate case.

(3)  a.  *buħ-loħ*  **duq  nax**  *d-av-i$^n$.*
         war-INTERESS **many people** D-die-AOR
         'In the war, many people died.'                    (KK001-0032)

     b.  *bac-bi-v*  **zorajšĭ duq**  *ougr-i*  *j-ak'-or.*
         Tsova_Tush-PL-ERG **very  many** brick-PL J-bake-IMPF
         'The Tsova-Tush used to bake very many bricks.'     (KK001-0021)

     c.  *qa*       *badr-e-$^n$*  **ajtaʔŏ**  *v-a-sŏ.*
         three.OBL child-OBL-GEN **godparent** M.SG-be-1SG.NOM
         'I am a godfather to three children.'               (KK001-0061)

The Ergative case is used for the subject of transitive verbs (4a, 4b).[2] The *-s* suffix is used only in the singular for most nouns (and demonstratives) referring to humans, including proper nouns and personified animals (Hauk & Harris forthcoming). The *-v* suffix is used for all other singular nouns, all plurals, and all demonstratives referencing non-human referents. This represents a fairly common type of Differential Subject Marking (see Aikhenvald et al. 2001, Hoop & Swart 2008).

(4)  a.  **bac-bi-v**       *zorajšĭ duq*  *ougr-i*  *j-ak'-or.*
         **Tsova_Tush-PL-ERG** very    many brick-PL J-bake-IMPF
         'The Tsova-Tush used to bake very many bricks.'     (KK001-0021)

[2]Additionally, with first and second person pronouns, the Ergative can be used with a particular set of intransitive verbs that allow both Nominative and Ergative subjects and with some intransitive verbs that require their first or second person subject to be in the Ergative (see Section 5.2 and Holisky 1987).

b. **ajkm-e-s**    ab-i    d-ał-i$^n$       so$^n$.
   **doctor-OBL-ERG** pill-PL B.PL-give-AOR 1SG.DAT
   'The doctor gave me pills.'                                    (KK001-0002)

Note that the Instrumental case is also marked by *-v* (see below in this section) (Gagua 1948). Since nouns that receive *-s* in the Ergative all refer to humans, and hence are not attested with Instrumental case marking, another way of analysing this part of Tsova-Tush case morphology would be to divide nouns into two categories: (1) a small class consisting of most singular nouns referring to humans, which receive *-s* in the Ergative, and which do not occur in Instrumental, and (2) all other nouns (including the plurals of nouns in category 1), which can be marked by *-v*, indicating a single Ergative/Instrumental case.

The Genitive case is mostly used to express possession (5a), materials (5b) and part-whole relationships (5c). It is formed by adding the suffix *-n* to the Oblique stem. Through regular phonological rules, in word-final position, the suffix is realised as nasalisation on the preceding vowel. See Section 3.6.1 for a full discussion on Genitive modification within the noun phrase.

(5)   a. *j-ax-e$^n$*      *o*   **ħaš-e-$^n$**       *matt-e.*
         F.SG-go-AOR DIST guest-OBL-GEN bed-OBL(ESS)
         'She went to that guest's bed.'                          (E179-92)

      b. *gam xe$^n$ exk'-uinĭ*    **ʕajħk'-e-$^n$**    *gerc' d-a.*
         chisel wood dig-PTCP.NPST **iron-OBL-GEN** tool  D-be
         'A chisel is an iron woodcarving tool.'                  (KK003-0677)

      c. *c'q'e lec'a-d-∅-oš*        **gutn-e-$^n$**        *c'ʕop'*
         once plough-D-TR-SIMUL **plough-OBL-GEN** tip
         *st'en-ax-čo-x*            *uill-d-is-e$^n$.*
         what.OBL-INDF-OBL-CONT knock-D-LV-AOR
         'While ploughing one day, the tip of the plough bumped into
         something.'                                             (WS001-10.4)

The Dative case is used for the indirect object (6a) of a verb and for the subject of experiential verbs (6c). Many postpositions govern the Dative case in nouns (6d). The Dative case is formed by suffixing *-n* to the root. Preceding vowels, however, are not nasalised by the Dative ending when it is in final position. This can be explained historically, since it can be concluded clearly from older texts that the Dative ending must have been *-ni* underlyingly. The *i* was apocopated regularly (see Section 2.3), which caused umlaut of the preceding vowel (see Example (6a), where the form *oquinĭ* is still underlyingly *oqu-ni*). However, the

vowel of the ending *-ni* never surfaces in contemporary Tsova-Tush, and some nouns do not undergo Umlaut in the dative (Example (6b)). Therefore, the Dative case marker poses a problem for synchronic phonological analysis. In one analysis, there are two Dative case markers, *-ni*, which triggers Umlaut, and *-na* (or potentially *-ne*), which does not, the choice of which is determined lexically. The final vowels never show up in surface forms. Alternatively, the Dative case ending is a uniform *-n*, which defies the Tsova-Tush Nasalisation rule.

(6)  a.  *as*            *laum-re$^n$*      *v-eʔ-čeħ*           *doli$^n$* **oqui-nĭ**
1SG.ERG mountain-ABL M.SG-come-ANTE after DIST.OBL-DAT
*šari$^n$*       *k'ex*         *j-ał-j-al-i$^n$*.
REFL.POSS saddle_tree J-give-J-INTR-AOR
'After I came back from the mountains, I gave him/her his/her own saddle tree.'                (KK001-0114)

   b.  *q'ovel* **načxo-n**    *cħa bui, ax  k'il xruišo$^n$*  *j-ec'*        *ču*
every **cheese-DAT** one fist  half kilo rock_salt J-need(NPST) in
*j-oxk'-a$^n$*.
J-put.PFV.PL-INF
'For every cheese, you have to put in a handful to half a kilo of rock salt.'                (E005-34)

   c.  **natesv-i-n=a**          *xaʔ-i$^n$*,        **mezobl-i-n=a**
**relative-PL-DAT=ADD** know.PFV-AOR **neighbour-PL-DAT=ADD**
*xaʔ-i$^n$*        *me*       *išt'-išt'*          *d-a-r=en*.
know.PFV-AOR SUBORD so.PROX-so.PROX D-be-IMPF=QUOT
'Both the relatives and the neighbours found out that it was like this.'                (E255-70)

   d.  **do-i-n**=*mak=aʔ*            *xabž-en-etx*          *wumaʔ nax*.
**horse.OBL-PL-DAT**=on=EMPH sit_down-AOR-1PL.ERG all      people
'We all mounted the horses.'                (EK019-5.15)

The Instrumental case is mostly used for instruments (7a) and means of transportation (7b).

(7)  a.  **cark'-i-v**    *daħ tet'-oš*,       *daħ j-ał-e$^n$*              *o*
**tooth-PL-INS** PV   cut.IPFV-SIMUL PV   F.SG-go_out-AOR DIST
*ħun-a-x*.
forest-OBL.PL-CONT
'Biting with her teeth, she escaped those woods.'                (E179-114)

b. *uis-ren=a      t'q'oʔ,* **mankan-e-v** *v-ex-n-as.*
   there-ABL=ADD again, **car-OBL-INS** M.SG-go-AOR-1SG.ERG
   'And from there again, I went by car.'                    (E275-17)

### 3.3.3 Spatial cases

As shown in Table 3.2, Tsova-Tush has 24 spatial cases, 20 of which are combinations of one of 4 possible locational suffixes (zero for neutral, *-go* AD 'at, near', *-lo* INTER 'between, among, in', *-i* IN 'in'), and one of 5 movement suffixes (zero for Lative, *-ħ* Essive, *-ren* Ablative, *-ǧ* Translative, *-mcin* Terminative). Additionally, an APUD-series ('by, near') of case suffixes and a Contact case are found, which do not participate in the two-slot system of the other spatial cases. While not observing this morphological principle, the cases can nonetheless be considered spatial cases along phonological, semantic and syntactic criteria (see Section 3.3.2).[3]

Table 3.2: Tsova-Tush spatial cases

|         | Lative   | Essive | Ablative | Translative | Terminative |
|---------|----------|--------|----------|-------------|-------------|
| Neutral | (-∅)     | *-ħ*   | *-ren*   | *-ǧ*        | *-mcin*     |
| AD      | *-go*    | *-go-ħ* | *-go-ren* | *-go-ǧ*     | *-go-mcin*  |
| INTER   | *-lo*    | *-lo-ħ* | *-lo-ren* | *-lo-ǧ*     | *-lo-mcin*  |
| IN      | *-i*     | *-i-ħ* | *-i-ren* | *-i-ǧ*      | *-i-mcin*   |
| APUD    | *-goħi*  | *-cin* | *-xin*   |             |             |
| CONT    |          | *-x*   |          |             |             |

Many of these spatial cases (*-ren, -xin, -mcin*) were analysed as postpositions in earlier descriptions (Holisky & Gagua 1994: 168–170), and it is important to distinguish between the two. In this work, postpositions are defined as words that follow nouns, with the noun governed by the postposition being in either the Dative case or a spatial case. That is, postpositions can only follow nouns bearing case inflection. The two morphs that cause the boundary between spatial cases and postpositions to be somewhat fuzzy are *maka* 'on' and *k'ik'el* 'under'. These elements can be used both as locational suffixes (since they can be added directly to the stem), but are also found as postpositions, used with nouns in the

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[3]The Contact case is special: on a semantic and syntactic level, it can mark both non-canonical objects (like grammatical cases) and spatial adjuncts (like spatial cases), it does not participate in a two-slot system (just as grammatical cases) morphologically, and, also like grammatical cases, is phonologically non-syllabic and mono-consonantal.

Dative case, as seen in Example (8). Note that *mak* can also be used as a preverb. In what follows, reference is made to the Super-lative, Superessive, Superablative, Sublative, Subessive cases, but it should be kept in mind that these are recent or ongoing grammaticalisations.

(8)  a.  *dapx-ire-č*        ***don-e-n=mak***        *xaʔ-eⁿ.*
         sweat.OBL-ADJZ-OBL **horse-OBL-DAT=on** sit-AOR
         'S/he sat on a sweaty horse.'                                        (E193-4)

     b.  *ši-lǧe-č*        ***don-mak***        *ʕe-v-aǧ-in*                    *st'ak'*
         two-ORD-OBL **horse-SUPERLAT** sit_down-M.SG-LV-PTCP.AOR man
         *t'q'uiħ t'ot'-i    axk'-in        v-a.*
         behind hand-PL tie-PTCP.PST M.SG-be
         'The man that mounted the second horse has his hands tied behind.'
                                                                              (E145-36)

The Tsova-Tush system of spatial cases in many ways resembles that of Daghestanian languages. In many of these languages, the same two suffixal slots can be identified: The first slot specifies the location of an item with respect to a reference point, while in the second slot, "movement" suffixes indicate the type of direction (or lack thereof). This can potentially lead to many combined spatial case suffixes, for example 42 in Inkhokwari (Khalilova 2009), or 112 in Tsez (Comrie & Polinsky 1998: 103). In some Daghestanian languages, these spatial case suffixes can in principle be combined with any noun stem, although most languages show preferences for some case suffixes to combine with a semantically defined subset of nouns, such as in Sanzhi Dargwa, which distinguishes between animate nouns (usually marked with the AD-series) and inanimate nouns (usually marked with the LOC-series) (Forker 2020: 64). In Tsova-Tush, the lexical semantics of a noun determine the locational suffix (AD, INTER, IN) used. The AD-suffixes are used primarily with singular animate nouns, INTER-suffixes combine only with nouns denoting liquids, masses and collections, as well as with all plural nouns, and IN-suffixes are used exclusively with certain toponyms, nouns denoting rooms, and the noun *kalak* 'city'.[4] Nouns that do not fit in any of these three categories use the "neutral" location, whereas the APUD-series of case suffixes can combine with nouns from any of the above categories.

In the following section, the Lative cases (the Allative, Interlative, Illative and Super-lative) will be discussed first, after which the Essive cases (the Essive, Adessive, Interessive, Inessive and Superessive), the Ablative cases (the Ablative, Adablative, Interablative, Superablative and Elative), the Translative cases

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[4]This noun, a borrowing from Georgian, is most often used to refer to the city of Tbilisi.

(Translative, Adtranslative, Intertranslative and Intranslative), and the Terminative cases (the Terminative, Adterminative and Interterminative) will be discussed. The APUD-series and the Contact case will then be discussed separately, after which special attention is devoted to the "neutral" Lative. It is once again important to note that regular phonological processes (see Section 2.3) apply to these endings, such that final *-o* is reduced to *-ŏ* [w] or is apocopated completely, final *-i* is apocopated, triggering i-umlaut on the preceding vowel, and final *-ħ* is dropped, preventing the preceding vowel from apocopating.[5]

The Lative cases (Allative (9a)[6], Interlative (9b), Illative (9c) and Super-lative (9d)) describe movement towards a reference point.

(9)  a.  *samair-len-i       b-axk'-e$^n$       **jesui-go**.*
         Samaria-ADJZ-PL m.PL-come.PL-AOR Jesus-ALL
         'The Samarians came to Jesus.'                    (AS001-1.30)

   b.  *bader **lav-e-lŏ**        d-ax-iti-en=ĕ,       daħa*
         child **snow-OBL-INTERLAT** D-go-CAUS-AOR=and PV
         *pšel-d-i-e$^n$.*
         cold-D-TR-AOR
         'They let the child go into the snow, and let it get cold.'    (KK004-1115)

   c.  *xk'olix       tab-ajrčĭ       **kalajk-ĭ** qel-ŏ       daħ d-oxk'-a$^n$.*
         in_summer gelded_ram **city-ILL** bring-NPST PV   D-sell.PFV-INF
         'In the summer, one brings the gelded rams to Tbilisi to sell them.'
                                                            (KK004-1115)

   d.  *joħ  ču  mič-x=ak'       xeʔ-mak'-er,       čhan šu-ci$^n$*
         girl PV where-CONT=INDF sit_down-POT-IMPF PTCL 2PL-APUDESS
         ***keč-mak**            beden=a?.*
         **back_of_neck-SUPERLAT** except=EMPH
         'Where could the girl sit down, if not on the back of your necks?'
                                                            (E058-21)

Additionally, the Allative case is used to signify addressees of speech verbs (10).

(10)  ***mgzavr-i-g***     *d-uğ-a     lat-er       "qor-i".*
      **traveller-PL-ALL** D-cry-INF do.HAB-IMPF apple-PL
      'He used to shout at travellers: "Apples!"'                    (E031-4)

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[5] In the older subcorpora AS and KK, final *-ħ* is retained. In AS, most final vowels are retained.
[6] Original orthography of (9a): Samairleni baxke Jesuigo.

The Essive cases (Essive (11a), Adessive (11b), Interessive (11c) and Inessive (11d)) describe a location at a certain reference point. The Essive cases end in *-ħ*, which is deleted word-finally (see Section 2.3). The "neutral" Essive consists of only *-ħ* and when it is deleted, the gloss ESS is written in parentheses attached to the previous morpheme, as per the conventions outlined in Section 1.4.3.5.

(11)  a.  *ča-i-ⁿ       ditx qexk'-d-∅-ora-lǒ      d-aqqui-čǒ **herc'ni-ħ**.*
         bear-OBL-GEN meat prepare-D-TR-IMPF-SBJV D-big-OBL **pot.OBL-ESS**
         'Apparently they used to prepare bear meat in big pots.' (KK033-5408)

    b.  *k'nat-i že-gǒ     b-ax-eně, **že-go**       b-ʕiʔ-ene*
         boy-PL sheep-ALL M.PL-go-SEQ, **sheep-ADESS** M.PL-stay.PFV-SEQ
         *šine-q        batta-ħ,      inc ma že-greⁿ       ču*
         two.OBL-APPROX month.OBL-ESS now but sheep-ADABL PV
         *b-ağ-ǒ.*
         M.PL-come-NPST
         'The boys went to the sheep, stayed with the sheep for about two months, but now they are coming (back) from the sheep.' (KK017-3195)

    c.  *magram **bac-bi-lo**              is  d-aqqoⁿ ʕep   d-a - co*
         but     **Tsova_Tush-PL-INTERESS** MED D-big  shame D-be  NEG
         *šeʒleba-l-a    vir-e-n=mak       st'ak' xaʔ-aⁿ.*
         can-INTR-NPST  donkey-OBL-DAT=on man   sit-INF
         'But among the Tsova-Tush, that is a big sin: A man cannot sit on a donkey's back.'                                    (E010-42)

    d.  ***širk-i**    magram deniʔ    q'aħeⁿ dažar d-a.*
         **Shiraki-INESS** but      generally bitter  grass D-be
         'In Shiraki, however, the grass is generally bitter.'    (E043-53)

Although a Superessive case is attested (12a), the meaning of a location on top of a reference point is usually conveyed by the postposition *mak* following a noun in the Dative case (Example (12b)).

(12)  a.  *lom-re-č          **naq'-maka**      vai-ⁿ          dui*
         mountain-ADJZ-OBL **road.OBL-SUPERESS** 1PL.INCL-GEN horse.PL
         *teɫ-iš-x         d-a.*
         be_better-SIMUL-CMP B.PL-be
         'On a mountain path, our horses are better.'              (E043-109)

b. *cħa d-aqqoⁿ zoraⁿ ħac'uk' d-a, **k'mat'u-n=mak***
 one D-big brave bird D-be **rock.OBL-DAT=on**
 *teg-o-d-∅ beⁿ.*
 make.IPFV-NPST-D-TR nest
 'It's a big brave bird, it makes its nests on a rock.' (E042-273)

Additionally, the Adessive is used with all types of nouns in predicative possessive constructions, (13).[7]

(13) ***qoqb-e-goħ*** *j-axxeⁿ, q'arc'eⁿ muğ j-a.*
 **pheasant-OBL-ADESS** J-long colourful tail J-be
 'A pheasant has a long colourful tail.' (KK033-3195)

This case is also used with human nouns and with pronouns to signify a type of affectedness of a referent to a given event, as in (14). In these cases, the Adessive marks a person that is emotionally invested in the action or event, but does not participate directly, also known as a benefactive, or malefactive[8].

(14) a. *cħajnčone met'rŏ daħ č'ʕağ-d-∅-oger **txo-go.***
 almost metro PV close-D-TR-IAM.IMPF **1PL-ADESS**
 'The metro almost closed on us.' (MM107-2.16)

 b. *j-aq'i-č maqo-v **bečv-e-go** cark' j-ʕog-iⁿ.*
 J-dry-OBL bread-ERG **poor_thing-OBL-ADESS** tooth J-break.PFV-AOR
 'The dry bread broke the poor thing's tooth.' (WS001-2.12)

 c. *as is joħ šarn j-ik'-o-s*
 1SG.ERG MED girl away F.SG-take.ANIM-NPST-1SG.ERG
 ***šu-goħ**=en.*
 **2PL-ADESS**=QUOT
 'I will take that girl away from you.' [9] (E153-31)

The Ablative cases (Ablative (15a), Adablative (15b), Interablative (15c), Elative (15d) and Superablative (15e)[10]) are used to signal movement away from a reference point.

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[7]The Genitive case is never used for this type of construction, in contrast to Chechen and Ingush.
[8]Sometimes called an ethical dative in European languages.
[9]The malefactive *šugoħ* is translated as 'from you' by the compilers of corpus E.
[10]Original orthography of (15e): Jeso Kʿrist aḥwose gornakmaḱre, miċḥe ṭeċdie Kʿristanul duila.

(15) a. *as* **laum-reⁿ** *v-eʔ-čeħ* *doliⁿ oqui-nĭ*
1SG.ERG **mountain-ABL** M.SG-come-ANTE after DIST.OBL-DAT
*šariⁿ* *k'ex* *j-ał-j-al-iⁿ.*
POSS.REFL saddle_tree J-give-J-INTR-AOR
'After I came back from the mountains, s/he gave him/her a saddle tree.' (KK001-0114)

b. *k'nat-i že-gŏ* *b-ax-enĕ,* *že-go*
boy-PL sheep-ALL M.PL-go-AOR.SEQ, sheep-ADESS
*b-ʕiʔ-enĕ* *šine-q* *batta-ħ,* *inc ma*
M.PL-stay.PFV-AOR.SEQ two.OBL-APPROX month.OBL-ESS now but
**že-greⁿ** *ču b-ağ-ŏ.*
**sheep-ADABL** PV M.PL-come-NPST
'The boys went to the sheep, stayed with the sheep for about two months, but now they are coming (back) from the sheep.' (KK017-3195)

c. **ħun-lreⁿ** *pšaj-šĭ* *alzn-e-lŏ* *ix-ŏ.*
**forest-INTERABL** tributary-PL Alazani-OBL-INTERLAT go.IPFV-NPST
'The tributaries flow out of the forest into the Alazani.' (KK022-3871)

d. **aln-ireⁿ** *cħa so* *v-is-e-sŏ.*
**Alvani-ELAT** one 1SG.NOM M.SG-remain-AOR-1SG.NOM
'I was the only one remaining from Alvani.' (E094-14)

e. *jeso krist' aħ* *v-oss-eⁿ* **gornak'-makreⁿ,**
Jesus Christ down M.SG-go_down-AOR **hill-SUPERABL**
*mič-ħ-e* *tec'-d-i-eⁿ* *krist'anul d-∅-uila.*
where-ESS-REL teach-D-TR-AOR Christian D-do-NMLZ
'Jesus Christ came down from (on top of the) hill where he taught Christian deeds.' (AS002-1.1)

The Translative case is used with nouns that express the result of a change of identity (16a, 16b) and with nouns that signify a capacity in which the subject performs an action (16c). These constructions are known as depictive (Himmelmann & Schultze-Berndt 2005) or functive (Creissels 2014a) phrases.

(16) a. *magram o* *nan* *t'q'oʔ* **qa-e-ğ** *j-erc'-iⁿ.*
but DIST mother again **pig-OBL-TRANS** F.SG-turn-AOR
'But that mother turned into a pig again.' (E179-113)

b. *mor-i* **picr-i-ğ=aě,** **svet'-i-ğ=aě** *daħ j-arl-iⁿ.*
log-PL **plank-PL-TRANS=ADD** **pole-PL-TRANS=ADD** PV J-cut-AOR
'They cut the logs into planks and poles.' (KK004-1115)

c. *so*      *oqui-ciⁿ*          *d-ʕivʔ šar-e*
1SG.NOM DIST.OBL-APUDESS D-four year-OBL(ESS)
*v-a-ra-s*          **možamajgr-e-ǧ.**
M.SG-be-IMPF-1SG.NOM **hired_labourer-OBL-TRANS**
'I was with him for four years as a hired labourer.'          (E115-28)

The Translative case is also used with the postpositions *aħ*, 'down' *daħ* 'away',
and *ħal* 'down' to convey the meanings 'towards', 'from' or 'through', as in Ex-
ample (17a). This same meaning is the only attested use of the Adtranslative (17b),
Intertranslative (17c) and Intranslative (17d).

(17)   a. *qor* **juq'-e-ǧ=daħ**          *daħ tit'-n-as.*
apple **middle-OBL-TRANS=through** PV   cut.PFV-AOR-1SG.ERG
'I cut the apple through the middle.'          (KK004-1115)

b. **so-goǧ=ā**          *b-a-r*      *o*    *niq' ħal*
**1SG-ADTRANS=down** B.SG-be-IMPF DIST road PV
*b-aʔ-uin.*
B.SG-come.PFV-PTCP.NPST
'That road was directed down towards me.'          (E145-20)

c. *mak*    *qaxk'-uš*      *do-i-n*          *o*
on_top hang.PL-SIMUL horse.OBL-PL-DAT DIST
**lav-e-loǧ=da**          *daħ co  d-et'-mak'-ě,*    *ču*
**snow-OBL-INTERTRANS=through** PV   NEG D-run-POT-NPST PV
*ploba-l-a.*
sink-INTR-NPST
'When they are loaded, the horses cannot run through that snow,
they sink.'          (EK005-15.1)

d. **t'batn-iǧ=ā**          *aħo*  *v-ik'-nor,*          *buisŭ.*
**Tbatana-INTRANS=down** down M.SG-take.ANIM-NW.REM at_night
'They (apparently) took him down to Tbatana at night.'          (E146-28)

The Terminative cases (Terminative, Adterminative, Interterminative, Intermi-
native) signify a motion up until a reference point. With these cases, the picture
is less clear-cut than with the other spatial cases. Firstly, the Interterminative
case suffix *-lomcin* is also used as a postposition meaning 'until', which is cliti-
cised to adverbs and even to verb stems, where it forms temporal adjunct clauses
(see Section 6.4.1). Furthermore, besides the Interminative case (which is indeed
restricted to the same subset of nouns as the other IN-cases, see Example (18e))

the Terminative cases do not adhere exactly to the semantic rules laid out at the beginning of this section. That is, the Interterminative is not used with nouns denoting liquids, masses, groups, or with plural nouns, but is used exclusively with nouns denoting points in time and periods (see Example 18a). Personal pronouns and nouns referring to humans expectedly take the Adterminative case (18b), and all other nouns can take either the Terminative or the Adterminative case (18c, 18d). A noun in the Superterminative case has not been attested.

(18)    a.    *goneb sağ j-a-r        ai        t'q'ujsinlu-č pxi-it't'*
              mind fit J-be-IMPF DEICT last-OBL     five-ten
              **c'ut-e-lomciⁿ.**
              **minute-OBL-INTERTERM**
              'Her mind was clear up until her last fifteen minutes.'          (E224-26)

        b.    *ħatx=da        seⁿ        voħ v-aq-iⁿ        ħal, qeⁿ* **so-gomciⁿ**
              in_front=from 1SG.GEN boy M.SG-take-AOR up   then **1SG-ADTERM**
              *v-eʔ-eⁿ.*
              M.SG-come-AOR
              'First he lifted my boy up, then he came up to me.'          (E060-18)

        c.    *ħal lil-n-atx              o      sak'ist'o* **ʒir-e-mciⁿ.**
              up  walk.IPFV-AOR-1PL.ERG DIST Sakisto  **base-OBL-TERM**
              'We walked up to the foot of that Sakisto.'          (E197-16)

        d.    **juq'-gomciⁿ**        *ʕarč'iⁿ k'oc'l-i  j-at'-er.*
              **middle-ADTERM** black   braid-PL J-lie_around-IMPF
              'Black braids were hanging up to her waist.'          (KK011-2121)

        e.    *o-bi*        **t'batn-imciⁿ**        *b-ax-enŏ*                *b-ux=aʔ*
              DIST-PL **Tbatana-INTERM** M.PL-go.PFV-PTCP.AOR M.PL-back=EMPH
              *b-erc'-iⁿ.*
              M.PL-turn-AOR
              'Having gone up until Tbatana, they turned back.' (Desheriev 1953: 72)

The Apudlative case is used to signal a general movement towards a reference point (19), whereas the Apudablative case signifies a general movement away from a reference point, as in (20).

(19)    *nips*    **sinatl-e-guiħ**        *v-ax-eⁿ.*
        straight **light-OBL-APUDLAT** M.SG-go-AOR
        'He went directly towards the light.'          (WS001-12.30)

(20) **kuirc'l-e-xiⁿ**      d-aǧ-o-tx      aħo=e.
     **wedding-OBL-APUDABL** D-come-NPST-1PL down=and
     'We are coming down from the wedding.'                    (E157-9)

The Apudessive case (often called comitative case) is used to express the meaning 'with, near, alongside' and is often found with nouns denoting humans (21a), although not necessarily (21b). It is formed by suffixing -cin to the Oblique stem (surfacing as -ciⁿ in word-final position).

(21) a. **badr-i-ciⁿ**      osi   lejp'c'-ra-ħ=e.
        **child-PL-APUDESS** there play.IPFV-IMPF-2SG=and
        'You used to play there with the children.'            (E130-8)

    b. at-c'iⁿ            bo    duq-čui-š-v          **maq-ciⁿ**
       become_soft-PRIV garlic many-OBL-PL-ERG **bread-APUDESS**
       čamli-š   leħ-ŏ.
       tasty-ADV eat_alongside-NPST
       'Many peoply like eating raw garlic with their bread.' (Lit.: Many
       people tastily put uncrushed garlic alongside bread.')   (KK001-0057)

The Tsova-Tush Contact case is formed with the suffix -x and specifies the point of contact of a given action, such as 'hit' (22a). It is also used as the complement of some verbs, such as 'fear' (22b) and 'ask', and as the standard of comparison (22c). A verbal noun in the Contact case can be used to form causal clauses (see Section 6.4.4).

(22) a. vorł-eʔ   ħar-e-ⁿ   qer   dev-i-n      **korti-x.**
        seven-INCL mill-OBL-GEN stone demon-PL-DAT **head.OBL-CONT**
        b-iš-b-i-eⁿ.
        B.SG-strike-B.SG-TR-AOR
        'He hit the demons on their head with all seven millstones.' (Lit.: 'He
        hit all seven millstones onto the demon's head.')       (WS001-13.4)

    b. sicx-xorš-ale-čŏ    **hav-e-x**        qerł-i-sŏ.
       heat-malaria-ADJZ-OBL **climate-OBL-CONT** fear-NPST-1SG.NOM
       'I am afraid of a malaria climate.'                       (KK035-5515)

    c. mit'ŏ **k'ot'-e-x**    čaq hallu-vx   v-a.
       Mito **Kote-OBL-CONT** far quiet-CMP M.SG-be
       'Mito is far more peaceful than Kote.'                    (KK035-5520)

If we consider Table 3.2 again, we can clearly see that there is no dedicated form to signal the "neutral" Lative. That is, there is no Lative case suffix for nouns that do not belong to one of the three semantic subsets described above (animates, liquids/masses, empty spaces). Tsova-Tush fills this apparent lacuna in different ways, using three distinct strategies. The first strategy uses a zero-marked Oblique nominal stem with lative semantics, which morphologically would be the expected outcome, since the exponents of both the Lative and the "neutral" series of spatial markers are zero. See Example (23) for this strategy, which can be considered archaic, only attested with very few nouns (e.g. *lamu* 'mountain(s)', *bare* 'valley', *c'eni* 'house'). Not only is a zero ending the expected form from a structuralist point of view, it is also typologically very common to find a zero-ending Lative for words that occur most frequently in spatial cases (Haspelmath 2019).

Note that the Essive cases, too, often do not carry an overt marker. This, however, is a phonological process, rather than a morphological fact. Compare the Nominative, Essive and Lative cases of the noun *bar* 'valley' in Table 3.3. See Sections 1.4.3.3 and 2.3 for the diachronic aspects of the phonological processes.

Table 3.3: Similar case markers

|  | Morphemes |  | Surface form | |
| --- | --- | --- | --- | --- |
|  |  |  | Pre-1980 | Contemporary |
| Nominative | *bar-∅* valley-NOM | → | *bar* | *bar* |
| Lative | *bar-e-∅* valley-OBL-LAT | → | *barĕ* | *bar* |
| Essive | *bar-e-ħ* valley-OBL-ESS | → | *bareħ* | *bare* |

(23)  a. **laumŭ**       *d-ot'-uš*    *k'ak'al en-e-ħ*        *daħ*
       **mountain.LAT** D-go-SIMUL walnut shadow-OBL-ESS PV
       *tiv-n-atx.*
       rest-AOR-1PL.ERG
       'When we were going to the mountains, we rested in the shadow of a walnut tree.'                    (KK005-1273)

b. *lamu-ħ*        *lac'-aⁿ*   *v-ol-inŏ*              *ʕuv*
mountain-ESS hurt-INF M.SG-begin-PTCP.AOR shepherd
***bar-ĕ***        *aħ*   *v-ik'-eⁿ*.
**valley-OBL(LAT)** down M.SG-take-AOR
'They took a shepherd that had fallen ill in the mountain down to the
valley.'                                                    (KK001-0359)

Another strategy is using the Allative case from the AD-series in the "neutral"
series, as in (24).

(24)   a. *lap'*   ***k'edl-e-gŏ***   *daħ ott-b-i-eⁿ*.
ladder **wall-OBL-ALL** PV   place-B.SG-TR-AOR
'They put a ladder up against the wall.'                (KK004-1115)

   b. ***q'ajrps-e-gŏ***       *dok' ep'c'-ŏ     seⁿ*.
**watermelon-OBL-ALL** heart reach-NPST 1SG.GEN
'I'm yearning for watermelon.' (Lit. 'My heart is reaching towards
watermelon.')                                          (KK004-1155)

   c. ***ak'ošk'-i-g***        *j-ex-n-as*.
**small_window-PL-ALL** F.SG-go.PFV-AOR-1SG.ERG
'I went up to the small windows.'                      (E098-7)

The third and most common strategy, however, is using the "neutral" Essive
case *-ħ* as the "neutral" Lative, for which see Example (25).

(25)   a. *k'alinin-e-reⁿ*   *d-ağ-or*   ***barnaul-e***.
Kalinino-OBL-ABL D-come-IMPF **Barnaul-OBL(ESS)**
'They were coming to Barnaul from Kalinino.'           (E275-42)

   b. *eq*    ***koco-ħ***    *ʕarč'iⁿ veⁿ   d-ajtt-ŭ*.
PROX.OBL **wine_jar-ESS** black   wine D-be_poured-NPST
'The red wine is being poured into this wine jar.'     (KK001-0052)

   c. *j-ax-eⁿ*       *o   ħaš-e-ⁿ*       ***matt-e***.
F.SG-go.PFV-AOR DIST guest-OBL-GEN **bed-OBL(ESS)**
'She went to that guest's bed.'                        (E179-92)

Parallels to this third strategy as seen in Example (25), i.e. using the Essive
case in a lative function, can be seen in the following examples, where other
Essive cases are used in a lative function. In (26a), the Inessive *t'batni* is used,
as opposed to the Illative *t'batin*, while in (26b), the Interessive *xilo* is attested,
where an Interlative *xilŏ* is expected.

(26)  a.  *c'q'e ičğar   gogl-e-s     v-ik'-en-es*
          once Ichoant Gogale- OBL-ERG M.SG-take.ANIM-AOR-1SG.ERG
          ***t'batn-i.***
          **Tbatana-INESS**
          'Once, Gogale Ichoant took me to Tbatana.'        (E288-116)

     b.  *karcx-olen=aʔ        č  u **xi-lo**        v-oɫ-i$^n$.*
          clothes-ADJZ=EMPH in **water-INTERESS** M.SG-put-AOR
          'They put him into the water with his clothes on.'      (E309-56)

This lative function of otherwise Essive cases accounts for 10 percent of all instances of the Interessive, Inessive and Superessive cases in the ECLING corpus, which represents the largest source of contemporary colloquial Tsova-Tush. This use is not observed in the subcorpora that feature earlier stages of Tsova-Tush (IT, AS and KK). In Georgian, the spatial cases (which are traditionally analysed as postpositions) show similarities with the apparent essive/lative merger in Tsova-Tush. In Georgian, there is no formal distinction between the essive and the lative function of the case endings *-ši* 'in', *-tan* 'near' and *-ze* 'on'. Compare Example (27), where the Georgian IN-Locative (27a, 27b) and SUPER-Locative (27c, 27d) cases show both an essive (27a, 27c) and a lative (27b, 27d) function.

(27)   Georgian

     a.  *me-rv-e     tavis    **bağ-ši**   q'vavil-eb-s   rc'q'avs.*
          ORD-eight-ORD REFL.POSS **garden-IN** flower-PL-DAT s/he_waters_sth
          'The eighth one waters the flowers in his/her own garden.'
                                                     (GNC: E. Akhvlediani)

     b.  *čveulebriv sabavšvo  **bağ-ši**    miviq'vanet.*
          as_usual   children's **garden-IN** we_took_sb
          'As usual, we took him/her/them to the kindergarten.'
                                                     (GNC: E. Akhvlediani)

     c.  ***mic'a-ze**     vart    tu mic'-is    kveš.*
          **ground-SUPER** we_are or ground-GEN under
          'We are on the ground or under it.'        (GNC: O. Chiladze)

     d.  ***mic'a-ze**     da-ğvr-ili       zet-i=vit    tu mazut-i=vit.*
          **ground-SUPER** PV-pour-PTCP.AOR oil-NOM=like or petrol-NOM=like
          'spilled onto the ground like oil or petrol'      (GNC: O. Chiladze)

Since essive cases with lative semantics have not been found in Chechen and Ingush, and since this feature is a recent development in Tsova-Tush, it can be

best described as an instance of contact-induced change due to contact with Georgian.

### 3.3.4 Oblique stems and declension classes

Tsova-Tush features several declension classes, distinguished mainly by their formation of the Oblique stem. The Oblique stem is the stem to which all case endings other than the Nominative are attached. In some declension classes, such as those containing most nouns ending in -*u* and -*o*, there is no morphological distinction between Nominative and Oblique. In these instances, whatever formal difference is observed between the Nominative and Oblique stems (e.g. *mouqŭ* and *maqu-* in Table 3.4) is caused purely by phonological processes, as presented in Section 2.3. The only morphologically irregular aspect of this paradigm is the formation of the Genitive and Dative cases, which are discussed in Section 3.3.2 above.

Table 3.4: Tsova-Tush *o-* and *u-*stems

|  | *o*-stems Morphemes | 'chair' Surface | *u*-stems Morphemes | 'razor' Surface |
|---|---|---|---|---|
| Nominative | *čak'o* | *čak'ŏ* | *maqu* | *mouqŭ* |
| Ergative/Instrumental | *čak'o-v* | *čak'ov* | *maqu-v* | *maquv* |
| Genitive | *čak'ui-n* | *čak'ui$^n$* | *maqui-n* | *maqui$^n$* |
| Dative | *čak'ui-n(i)* | *čak'uin* | *maqui-n(i)* | *maquin* |
| Spatial (Contact) | *čak'o-x* | *čak'ox* | *maqu-x* | *maqux* |

Most nouns ending in a consonant form the Oblique stem by adding the vowel -*e*, as in Table 3.5. Nouns historically ending in -*e* also belong to this class, since -*e* is dropped without a trace word-finally (although still written as -*ě* in some sources).

Some nouns display an inflectional pattern with a combination of C-stem and *u*-stem behaviour: their Nominative ends in a consonant and the Oblique stem is formed by adding -*u* (see Table 3.6).

Many inherited Tsova-Tush nouns have a declension paradigm that features ablaut of the second vowel of the root (see Table 3.7), while others have a paradigm that features ablaut of both the first and second vowel of the root (see Table 3.8)

Table 3.5: Tsova-Tush C- and *e*-stems

|  | C-stems Morphemes | 'rheumatism' Surface | *e*-stems Morphemes | 'calf' Surface |
|---|---|---|---|---|
| Nominative | *an* | *a$^n$* | *as(e)* | *as* |
| Ergative/Instrumental | *an-e-v* | *anev* | *as(-)e-v* | *asev* |
| Genitive | *an-e-n* | *ane$^n$* | *as(-)e-n* | *ase$^n$* |
| Dative | *an-e-n* | *anen* | *as(-)e-n* | *asen* |
| Spatial (Contact) | *an-e-x* | *anex* | *as(-)e-x* | *asex* |

Table 3.6: Tsova-Tush C-/*u*-stems

|  | C/*u*-stems Morphemes | 'silver' Surface | Morphemes | 'mountain' Surface |
|---|---|---|---|---|
| Nominative | *t'ateb* | *t'ateb* | *lam* | *lam* |
| Ergative/Instrumental | *t'atebu-v* | *t'atbuv* | *lamu-v* | *lamuv* |
| Genitive | *t'atebu-n* | *t'atbu$^n$* | *lamu-n* | *lamu$^n$* |
| Dative | *t'atebu-n* | *t'atbun* | *lamu-n* | *lamun* |
| Spatial (Contact) | *t'atebu-x* | *t'atbux* | *lamu-x* | *lamux* |

Table 3.7: Tsova-Tush ablauting declension 1

|  | Morphemes | 'bread' Surface | Morphemes | 'head' Surface |
|---|---|---|---|---|
| Nominative | *maqi* | *mejq* | *korto* | *kortŏ* |
| Ergative/Instrumental | *maqo-v* | *maqov* | *korti-v* | *kortiv* |
| Genitive | *maqo-n* | *maqo$^n$* | *korti-n* | *korti$^n$* |
| Dative | *maqo-n* | *maqon* | *korti-n* | *kortin* |
| Spatial (Contact) | *maqo-x* | *maqox* | *korti-x* | *kortix* |

Table 3.8: Tsova-Tush ablauting declension 2

|  | Morphemes | 'heart' Surface | Morphemes | 'sister-in-law' Surface |
|---|---|---|---|---|
| Nominative | *dok'* | *dok'* | *nus* | *nus* |
| Ergative/Instrumental | *dak'a-v* | *dak'av* | *nasi-s* | *nasis* |
| Genitive | *dak'i-n* | *dak'i$^n$* | *nasi-n* | *nasi$^n$* |
| Dative | *dak'a-n* | *dak'an* | *nasi-n* | *nasin* |
| Spatial (Contact) | *dak'o-x* | *dak'ox* | *nasi-x* | *nasix* |

The most common pattern is a Nominative in $C_1 i/u/o C_2$, Oblique in $C_1 a C_2 i/u/o$. For more examples of ablauting nouns (both with first vowels and second vowels) see Hauk & Harris (forthcoming: 9), Desheriev (1953: 68), Mikeladze (2011: 107) for further synchronic description and see Schrijver (2021) for their historical development.

### 3.3.5 Morphological adaptation of borrowed nouns

#### 3.3.5.1 Declension class

Georgian nouns end in either a vowel *a, e, o, u*, or in a consonant, in which case the noun takes a Nominative case suffix *-i* in Georgian. Examples include *anteba* 'inflammation', *q'ava* 'coffee', *mepe* 'king', *cixe* 'fortress', *ǯado* 'magic', *q'aq'ačo* 'poppy', *alču* 'knucklebone (game)', *ru* 'channel', *bal-i* 'cherry', *pandur-i* 'panduri (musical instrument)'.

Georgian nouns are borrowed into Tsova-Tush in their stem-form only, that is, consonant-ending nouns are borrowed without the Nominative marker *-i*. Georgian nouns ending in *u* or *o* are inflected like Tsova-Tush regular *u/o*-stem nouns, as seen in Table 3.4, without a morphological distinction between Nominative and Oblique stem (see Table 3.9).[11]

Georgian nouns ending in a consonant are borrowed into the regular consonant-ending declension (see Table 3.5). Since final *-e* and *-a* are regularly deleted word-finally (see Section 2.3), there is no formal distinction between *a/e*-stems and consonant stems (see Table 3.10).

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[11]Monosyllabic nouns in *u* are written with an additional ending *-v* in the Nominative in Kadagidze & Kadagidze (1984). Since word-final *-v* is pronounced as a bilabial [w], this can also be seen as a type of monosyllabic lengthening.

Table 3.9: Georgian borrowings in *-o* or *-u*

| from Georgian | *o*-stems | | *u*-stems | |
|---|---|---|---|---|
| | *žado* 'magic' | *q'aq'ačo* 'poppy' | *alču* 'knucklebone' | *ru* 'channel' |
| Nominative | *žadŏ* | *q'aq'ačŏ* | *alčŭ* | *ruv* |
| Ergative/Instrumental | *žadov* | *q'aq'čov* | *alčuv* | *ruv* |
| Genitive | *žadui$^n$* | *q'aq'čui$^n$* | *alčui$^n$* | *rui$^n$* |
| Dative | *žaduin* | *q'aq'čuin* | *alčuin* | *ruin* |
| Spatial (Contact) | *žadox* | *q'aq'čox* | *alčux* | *rux* |

Table 3.10: Georgian borrowings in a consonant, *-e* or *-a*

| from Georgian | C-stems | | *e*-stems | *a*-stems |
|---|---|---|---|---|
| | *bal-i* 'cherry' | *pandur-i* 'panduri' | *cixe* 'fortress' | *q'ava* 'coffee' |
| Nominative | *bal* | *pandur* | *cix* | *q'av* |
| Ergative/Instrumental | *balev* | *pejndrev* | *cixev* | *q'avev* |
| Genitive | *bale$^n$* | *pendre$^n$* | *cixe$^n$* | *q'ave$^n$* |
| Dative | *balen* | *pendren* | *cixen* | *q'aven* |
| Spatial (Contact) | *balex* | *pendrex* | *cixex* | *q'avex* |

A minority of Georgian consonant-ending nouns are borrowed into the C/*u*-declension (see Table 3.6). This pattern is no longer productive, and later loans are borrowed into the consonant declension (Table 3.10). The fact that the borrowing of nouns into the C/*u*-declension is no longer possible, combined with the fact that *geps, gepsu-* is an old loan (cf. Old Georgian *msgeps-i* 'week', not found in the modern standard language, or any of the dialects) gives reason to assume that these C/*u*-declension borrowings are older.

All Georgian loans take the plural marker *-i*. Examples include *možğr-i* 'priests' (Georgian *možğor-i*), *souxr-i* 'servants' (Georgian *msaxur-i*), *edgl-i* 'places' (Georgian *adgil-i*), *ak'azm-i* 'hand-looms' (Georgian *ak'azma*), *bat'-i* 'geese' (Georgian *bat'-i*).

Table 3.11: Georgian borrowings with rare *u*-declension

| from Georgian | C/*u*-stems *angariš-i* 'account, bill' | *msgeps-i* 'week' | *saat-i* 'hour' | *žang-i* 'rust' |
|---|---|---|---|---|
| Nominative | *angriš* | *geps* | *saat* | *žang* |
| Ergative/Instrumental | *engršuv* | *gepsuv* | *satuv* | *žanguv* |
| Genitive | *engršu$^n$* | *gepsu$^n$* | *satu$^n$* | *žangu$^n$* |
| Dative | *engršun* | *gepsun* | *satun* | *žangun* |
| Spatial (Contact) | *engršux* | *gepsux* | *satux* | *žangux* |

Only six nouns[12] have been found that form their plurals along a different model. It concerns monosyllabic nouns with a root vowel *i* or *u*, that form their plural with root ablaut and a suffix *-bi*, along the model of Tsova-Tush *durk', dark'-bi* 'bucket'; *ğrut', ğrat'-bi* 'hole'; *č'uk', č'ak'-bi* 'drinking horn'; *k'uč', k'ač'-bi* 'hill'. The 6 loans are *ʒirk', ʒark'-bi* 'tree stump' (Georgian *ʒirk'v-i*); *ʒir, ʒar-bi* 'root, base' (Georgian *ʒir-i*); *čxir, čxar-bi* 'stick' (Georgian *čxir-i*); *kud, kad-bi* 'hat' (Georgian *kud-i*); *k'unʒ, k'anʒ-bi* 'tree stump' (Georgian *k'unʒ-i*); *vir, var-bi* 'donkey' (Georgian *vir-i*). The fact that both 'hat' and 'donkey' are also borrowed in Vainakh (Chechen *kuj, kujn-aš* (without ablaut) 'hat' and *vir, varr-aš* (with ablaut) 'donkey') gives reason to assume that these are old borrowings, and (some of them) can perhaps even be dated to Proto-Nakh times.

A small number of Georgian nominal borrowings ending in *-a* receive the ending *-aʔo* in Tsova-Tush. This has been identified as a diminutive suffix (Kadagidze 1987), that is no longer productive. It can also be seen in the forms *vaš-l-aʔŏ* from *vašo* 'brother', *jaš-l-aʔŏ* from *jašo* 'sister', and *šič-l-aʔŏ* from *šiče* 'mother's sister's child', as well as from a small selection of Tsova-Tush vocabulary that has either no clear Georgian equivalent, or has noticeably innovated. See Table 3.12.

Kadagidze (1987) identified 43 clear loanwords in *-a* from Georgian receiving the ending *-aʔo* in Tsova-Tush. The vast majority of these nouns can be said to be compatible with diminutive semantics, as presented in Table 3.13 (small plants (1a); small birds, young animals, insects (1b); terms of endearment for animals (1c); small household items (1d); derived diminutives (1e); other small objects (1f)). For a small number of nouns, the diminutive semantics is relatively opaque (see (2)).

---

[12]More might be found.

Table 3.12: Tsova-Tush nouns with the *-aʔo* diminutive suffix (adapted from Kadagidze 1987: 213)

| | | |
|---|---|---|
| *asaʔo* | 'calf, heifer' | cf. *ase* 'calf' |
| *ʒrolaʔo* | 'metal tip, arrowhead' | |
| *ejtaʔo* | 'godparent' | |
| *burdlaʔo* | 'scarecrow' | cf. Georgian *burdo* 'straw' |
| *gagaʔo* | 'belly' | cf. *gogo* 'round' |
| *daxaʔo* | 'snowcock' | |
| *k'ok'amzik'aʔo* | 'spinning top' | |
| *k'ark'araʔo* | 'jaw, chin' | cf. *k'ark'arui* 'beard' |
| *q'uq'naʔo* | 'bugle, hunting horn' | cf. Pshav Georgian *q'uq'uni* 'sound' |
| *kejžberaʔo* | 'spider' | cf. Georgian *kaži* 'evil spirit', *beri* 'old' |
| *gugaʔo* | 'puppet, doll' | |
| *ujržk'aʔo* | 'inside of khinkali' | |
| *cicaʔo* | 'flying insect' | |

The fact that not all nouns show diminutive semantics leads Kadagidze (1987) to speculate whether this suffix was used productively to incorporate Georgian nouns ending in *-a*, but this seems unwarranted, given that (a) a fair number of Georgian nouns that do not end in *-a* also receive this suffix (see Table 3.13(3)), and (b) most nouns in *-a* are borrowed without any additional morphology, as shown in Table 3.10. Furthermore, the ending *-aʔo* seems to replace the ancient Georgian diminutive suffix *-ak'-i*[13] (see Table 3.13(4)).

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[13]Which, one could speculate, could be the origin of the *-aʔo* suffix, although more research is needed. *-ak'-i* exists in Old Georgian, but is already being replaced with *-aj* in the Old Georgian text corpus (Jost Gippert, p.c.). However, many relics remain in Modern Georgian, e.g.: *bagir-i* 'thick cable', *bagir-ak'-i* 'thin cable'; *bazma* 'oil lamp', *bazm-ak'-i* 'candlestick, lamp'; *balta* 'clasp, buckle', *balt-ak'-i* 'small clasp'; *birtv-i* 'ball; kernel, core', *birtv-ak'-i* 'kernel'; *galia* '(bird)cage', *gali-ak'-i* 'small cage' (Rayfield (2006) contains many more pairs). Tush Georgian, which contains hundreds of nouns ending in *-aʔĭ* (Tsotsanidze 2002), could be the direct donor of this suffix, but the final vowel in the Tsova-Tush suffix *-aʔo* would remain unexplained.

Table 3.13: Borrowed nouns with the *-aʔo* diminutive suffix (adapted from Kadagidze (1987))

|  | Noun |  | from Georgian |
|---|---|---|---|
| (1a) | *bambaʔo* | 'cotton' | *bamba* |
|  | *p'it'naʔo* | 'mint' | *p'it'na* |
|  | *samq'uraʔo* | 'clover' | *samq'ura* |
|  | *duidglaʔo* | 'elder(berry)' | *didgula* |
|  | *bejq'laʔo* | 'young tree' | *baq'ila* |
|  | *ʒirxvnaʔo* | 'burdock' | *ʒirxvena* |
| (1b) | *gogbič'aʔo* | 'oriole' | *bič'o-gogia* |
|  | *t'uiraʔo* | 'lark' | *t'orola* |
|  | *q'odlaʔo* | 'woodpecker' | *k'odala* |
|  | *c'ic'k'naʔo* | 'greenfinch' | *c'ic'k'ana* |
|  | *vejraʔo* | 'hen not yet in lay' | *varia* |
|  | *guišaʔo* | 'small dog' | *gošia* |
|  | *bejč'aʔo* | 'young hare' | *bač'ia* |
|  | *č'ič'q'naʔo* | 'young fish' | *č'ič'q'ina* |
|  | *ank'raʔo* | 'grass-snake' | *ank'ara* |
|  | *bost'naʔo* | 'mole cricket' | *bost'ana* |
|  | *k'ejlaʔo* | 'locust' | *k'alia* |
|  | *c'urblaʔo* | 'leech' | *c'urbela* |
|  | *napt'aʔo* | 'roach' | *napot'a* |
|  | *kočraʔo* | 'moth' | *kočora* |
|  | *enʒlaʔo* | 'crocus' | *enʒela* |
|  | *q'urblaʔo* | 'earwig' | *q'urbela* |
| (1c) | *lurʒaʔo* | 'dark grey horse' | *lurʒa* |
|  | *k'udaʔo* | 'tail-less sheep' | *k'uda* |
|  | *q'uraʔo* | 'one-eared, earless' | *q'ura* |
| (1d) | *dumaʔo* | 'sheep's fat tail' | *duma* |
|  | *čurčxlaʔo* | 'churchkhela' | *čurčxela* |
|  | *tatraʔo* | 'tatara'[14] | *tatara* |
|  | *t'apaʔo* | 'frying pan' | *tap'a* |
|  | *q'alq'alaʔo* | 'jug with narrow neck' | *q'arq'ara* |
|  | *bejdaʔo* | 'bowl' | *badia* |
|  | *čarkaʔo* | 'small wine jar' | *čareka* |

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[14]Boiled grape juice thickened with wheat flour

|       | Noun          |                                   | from Georgian           |
|-------|---------------|-----------------------------------|-------------------------|
| (1e)  | *č'alaʔo*     | 'small riverside copse'           | *č'ala*[15]             |
|       | *k'uink'laʔo* | 'yoke prop at front of ox-cart'   | *k'onk'ila*[16]         |
|       | *bibaʔo*      | 'midwife'                         | *bebia* 'grandmother'   |
| (1f)  | *k'altaʔo*    | '(coat/dress) hem, skirt, tails'  | *k'alta*                |
|       | *xuxlaʔo*     | 'hut, hovel'                      | *xuxula*                |
| (2)   | *mušaʔo*      | 'worker'                          | *muša*                  |
|       | *čoqaʔo*      | 'outer tunic, Caucasian coat'     | *čoxa*                  |
|       | *qeldaʔo*     | '2-litre jar'                     | *xelada*                |
|       | *birk'aʔo*    | 'carnival mummer'                 | *berik'a*               |
|       | *k'op'laʔo*   | 'Kopala' (pagan god)              | *k'op'ala*              |
| (3)   | *st'ejplaʔo*  | 'carrot'                          | *st'apilo*              |
|       | *dindglaʔo*   | 'beeswax'                         | *dindgeli*              |
|       | *k'ač'k'ač'aʔo* | 'magpie'                        | *k'ač'k'ač'i*           |
|       | *mercxlaʔo*   | 'swallow'                         | *mercxali*              |
|       | *bolk'aʔo*    | 'radish'                          | *bolok'i*               |
| (4)   | *ešmaʔo*      | 'devil'                           | *ešmak'i*               |
|       | *xoršaʔo*     | 'malaria'                         | *xoršak'i*              |
|       | *sarsaraʔo*   | 'little bustard'                  | *sarsarak'i*            |

### 3.3.5.2 Gender assignment

*This section is largely based on Wichers Schreur (2021).*

For gender agreement in the noun phrase and the labels used in this work, see Section 3.5.1, for verbs indexing gender, see Section 4.2.

Before discussing the gender assignment (i.e. the rules that determine which noun goes into which gender category) of loanwords, a brief overview of gender assignment of native words is provided here. Only genders M and F show clear semantic rules, in that only nouns denoting male rationals (i.e. humans, supernatural beings, personified animals) are assigned to gender M, and only those that denote female rationals are assigned to gender F. All other nouns are assigned to one of the three "neuter" genders. Semantic preferences do play a role in determining which noun goes where, as can be seen from Table 3.14.

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[15] Also borrowed as *č'al* 'riverside copse'.

[16] Also borrowed as *k'onk'il*.

Table 3.14: Semantics of "neuter" genders (from Wichers Schreur (2021: 24))

| J | D | B |
|---|---|---|
| most weather phenomena | | winds, storms |
| fruit growing in bunches | | |
| huge fruit | most plants and trees | |
| weak, decrepit cattle | | |
| most small animals, young | 'horse' | most horses, 'horse'[a] |
| small stinging/biting insects | most other insects | |
| building materials | gems and metals | most rocks, boulders, dirt |
| holes | cracks | most scraps and splinters |
| firearms | most bladed weapons | |
| logs, blocks | paper items | |
| animal straps, reins | horse gear | |
| drums | | string instruments |
| most jugs | most sacks, bags | chests, boxes |
| most functional buildings | most houses and shelters | |
| pastry | drinks | |
| | headscarves | hats |
| | | abstract nouns denoting bad feelings |
| human sounds | non-human sounds | most language utterances |
| groups of people | rationals (unspecified gender) | |
| administrative units | | |
| most diseases | | |
| | | month names |

[a] *doⁿ*, the most frequent word for 'horse' as well as words for 'foal', 'stallion', 'mare' have gender B, while *ulaq'*, another word for 'horse' has gender D.

It has to be taken into account that this table shows only approximately 15% of all nouns from Kadagidze & Kadagidze (1984). Most semantic domains feature nouns in all three classes, such as birds, 30 of which have gender D, 4 have J, and 13 have B. Similarly, with nouns denoting sources or bodies of water, 8 have gender J, 6 have B, while the word *xi* 'water, source, river' has gender D). Also, some nouns cannot be reliably grouped into a semantic class at all.

Besides semantic rules, some morphological rules, mostly derivational processes, can trigger a certain gender assigment of some nouns. Nouns denoting abstract concepts with the derivational suffix *-ol* (usually deadjectival) are mostly assigned to the J gender. Examples include *mossol* 'badness, evil' from *mossi$^n$* 'bad', *ğelol* 'weakness, from *ğeli$^n$* 'weak'. Deadjectival abstract nouns in *-a* are assigned to the D gender, such as *ʕejrč'na* 'blackness', from *ʕarč'i$^n$* 'black' and *k'ʕuik'rna* 'depth' from *k'ʕok'ru$^n$* 'deep'. Furthermore, all verbal nouns (suffixed by *-ar*) are assigned to the D gender. Interestingly, abstract nouns in *-ob*, as well as nouns which feature the merged suffix *-lob* are divided between genders D and J.

Phonology plays a part in gender assignment, albeit a modest one (see Bellamy & Wichers Schreur 2021). In Tsova-Tush, nouns that have *d, j* or *b* as their first phone have a greater-than-chance probability of being assigned to the gender corresponding to these consonants. Out of all nouns in the dictionary (Kadagidze & Kadagidze 1984), approximately 60–65% of those starting in *b* are in gender B, with similar percentages for *d*-nouns in D gender and j-nouns in J gender. This can be seen as a case of fossilised class marking in nouns, varyingly called overt inherent gender, head class, head gender, source gender and autogender (cf. Nichols 2011: 147). Alternatively, the phenomenon is analysed as a case of alliterative concord (Corbett 1991: 117), where the assignment of a noun to a gender is triggered by the phonology of the word. In Tsova-Tush, the two explanations can exist side by side: overt inherent gender can be used in diachronic context, namely the first consonant of a given noun can be described as a fossilised class marker (which can happen to be deverbal, as in Tsova-Tush *daq'o* 'corpse' from a root *\*d-aq'* meaning 'die' (Nichols 2003b: 258)), while synchronically, the concept of alliterative concord can help us understand the principle according to which the first phone of a noun triggers an assignment rule in the lexicon of a given speaker.

Borrowed nouns generally show the same interplay of patterns with regards to gender assignment. All nouns denoting humans with a known sex are assigned to either M or F. All other nouns are divided between J, D and B (with very few exceptions). In the majority of cases, Georgian translation equivalents of native Tsova-Tush nouns (ending up as (near-)synonyms after having been borrowed)

are assigned the same gender as the original word. Examples include *k'ut* 'muscle' from Georgian *k'unti*, which has gender D, just as the native Tsova-Tush *k'art*; *ožax* 'family' (Georgian *ožaxi*) and *kulpat* 'family' both are in gender J; and so are *doħa* 'spring' and *gazapxuila* 'spring', the latter being a borrowing from Georgian *gazapxuli*. Semantically related words, often with a metonymic or hyponymic relation to a native Tsova-Tush word, are assigned similarly. For example, all borrowed nouns denoting anything made of paper are assigned to gender D, analogous to the native word *žagno* 'book, letter' (cf. Chechen *žajna* 'book'). Similarly, most flowers are assigned gender D on the basis of the native noun *bubuk'* 'flower'.

Phonological features of initial consonants also play a role here. 47% of borrowed nouns starting with *b-* are assigned to gender B, which is significant if one compares this with, for example, borrowed nouns in *t'-* (18% in B), *k-* (22%), or *ž-* (4%). Unfortunately, the same pattern cannot be seen in the J gender, since Georgian does not have a phoneme *j-* /j/ - the closest phonetic alternative would be the sequence /i/ + vowel. However, only 6 nouns with this cluster are borrowed and from these, it can be seen that Tsova-Tush adapts this sequence as /ij/ + vowel, e.g. *ijanvar* (B gender) from Georgian *ianvari* 'January'.

It is striking that the B gender receives significantly fewer borrowings than genders D and J. If we again base ourselves on Kadagidze & Kadagidze (1984), genders D and J receive 518 and 505 borrowings respectively, while B receives only 236 borrowings. The relatively low number of loanwords might indicate that productive gender assignment to this class has stopped. Four arguments could support this claim:

1. Semantically, many loans in gender B denote archaic concepts. The words in class B denoting the most recent innovation in technology or culture are *pit'oⁿ* 'carriage' from Georgian *paet'oni*, and *sap'irc'omal* 'gunpowder' from Georgian *sap'irc'amali*.[17] All words denoting more recent technology, weapons, vehicles, documents, etc. are in genders D or J.

2. We find some cases of borrowing in class B that can alternatively demand agreement marking of another gender: *purn* 'bread oven' (from Georgian *purne*) is listed in Kadagidze & Kadagidze (1984) as having both J and B agreement. Similarly, both *c'ic'k'naʔŏ* 'greenfinch' (from Georgian

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[17]The modern word for 'gunpowder' is *topis c'amali*. The word *sap'irc'amali*, although not attested in Georgian directly, must have been an archaic (possibly dialectal) form, as seen by the attested derived *sap'irisc'amle* 'small case for gunpowder', which is also borrowed into Tsova-Tush.

*c'ic'k'ana* assigned to B and D) and *t'lap'ŏ* 'mud' (from Georgian *t'lap'o* assigned to B and J) show fluctuation in their agreement. A possible interpretation of this is that these nouns are "leaving" the archaic class B for a more productive one.

3. The few derivational processes that produce nouns (those discussed above) create nouns that are assigned to genders D and J exclusively. Stated more generally, no single noun in class B is the result of Tsova-Tush-internal derivation.

4. Borrowed nouns that show a clear semantic analogy to native nouns in gender B often are still assigned to another gender, for example: *švriv* 'oats' (D) (from Georgian *švria*), but native *cu* 'oatmeal' (B) (cf. Chechen *sula* 'oats'); *bojt'i* 'billy-goat' (D) (from Georgian *bot'i* 'billy-goat'), but native *bʕok'* 'billy-goat' (B); *nezv* 'ewe' (D) (from Georgian *nezvi* 'ewe'), but native *uistx* 'ewe' (B); *ulaq'* 'horse' (J) (Georgian *ulaq'i* 'stallion'), but native *do$^n$* 'horse' (B); *k'enč'* 'pebble' (J) (from Georgian *k'enč'i* 'pebble'), but native *k'urk'um* 'pebble' (B).

In contrast to the observation that the B gender seems to be a closed class, Bellamy & Wichers Schreur (2021) clearly demonstrate that the B gender is available to Tsova-Tush speakers in code-switched nominal constructions, presumed to be the source of many borrowings. Further research is necessary to reconcile this observation with the arguments enumerated above.

It has already been made clear that phonology plays only a modest role in guiding gender assignment, mostly due to the fact that semantic preferences disturb the clear phonological distribution, or vice versa, phonological constraints provide exceptions to otherwise clear semantic clusters. As an example, let us take Tsova-Tush bird names (Table 3.15).

Tsova-Tush *ħac'uk'* 'bird' (cf. Chechen *ħoza* 'bird', Ingush *ħazalg$^j$* 'bird') belongs to class D, as do the nouns denoting 'owl', 'snowcock', 'quail', 'white wagtail', and 'stork'. On this basis, most borrowed bird names (24 in total) are assigned gender D. The four words denoting young birds can additionally be explained on the basis of Tsova-Tush *bader* 'child' which is also in gender D. The exceptions in class J are easily accounted for: the borrowed nouns for 'vulture', 'great bustard' and 'kite (bird of prey)' are assigned gender J with *c'ʕ(v)era$^n$* 'crane' as a basis. Size is clearly the semantic link here, although it has to be noted that 'stork' and 'pelican' are in the "rest class" D. As for birds in gender B, we find some indications that these borrowings might be old: *q'oʔ* 'crow' from Georgian

Table 3.15: Gender assignment of Tsova-Tush bird names

| D native | borrowed | | J native | borrowed |
|---|---|---|---|---|
| owl | eagle | rosy starling | crane | black vulture |
| snowcock | goose | lark | | great bustard |
| quail | nightingale[a] | chicken, hen | | kite |
| white wagtail | golden oriole | corncrake | | |
| stork | pelican | woodpecker | | |
| bird | eagle-owl | falcon | | |
| | turkey | blackbird | | |
| | duck | starling | | |
| | swallow | jay | | |
| | sparrow-hawk | little bustard | | |
| | merlin | greenfinch | | |
| | black grouse | mistle-thrush | | |
| | | young corvid | | |
| | | baby owl | | |
| | | turkey chick | | |
| | | duckling | | |

| B native | borrowed |
|---|---|
| raven | crow |
| pigeon | wood pigeon |
| | turtle dove |
| cuckoo | hoopoe |
| | nightingale |
| | siskin |
| | greenfinch[b] |
| | pheasant |
| | partridge |

[a]Kadagidze & Kadagidze 1984 classifies *bulbulaʔŏ* as both D and B gender.
[b]Kadagidze & Kadagidze 1984 classifies *c'ic'k'naʔŏ* as both D and B gender.

*q'vavi* 'crow' shows a phonologically irregular correspondence of Georgian final *-v* corresponding with Tsova-Tush *-ʔ*, which we do not find in more recent loans.[18] Besides 'crow', *č'ilq'oʔ* 'rook' (from Georgian *č'ilq'vav-i*) has also been assigned to B on the basis of native *ħaǧar* 'raven' (cf. Chechen, Ingush *ħaǧra*). Similarly, the borrowed 'wood pigeon', 'turtle dove' are in B on the basis of *qauqŭ* 'pigeon' (cf. Chechen, Ingush *qoqa* 'pidgeon'). Six borrowed bird names in gender B remain after we substract the aforementioned four birds. One of them, *bulbul* 'nightingale', can be explained by the fact that it starts with a *b-*. This word could then have functioned as a "Trojan horse" (Corbett 1991), that is, it could have established, together with the corvids and the pigeons, a small semantic cluster on the basis of which other birds have been assigned to gender B, before its effects wore out and B gender assignment rules became unproductive. At this point, it has to be noted that in most other East Caucasian languages, all non-human animates (i.e. animals) are assigned gender B (van den Berg 2005: 156), a situation which can be assumed to go back to Proto-East-Caucasian.

It is also possible that the basis for a given semantic analogy was lost. All Tsova-Tush nouns denoting small stinging or biting insects (*k'el* 'wasp', *put'k'ar* 'bee', *k'oǧŏ* 'mosquito', *t'k'ip'* 'tick') are in gender J, while all other borrowed nouns denoting insects are in class D. What is more, these four insects are all borrowed from Georgian, while the only native noun in gender J that comes close to being an insect is *qaup'ŭ* 'worm'. The four Georgian nouns must have been assigned to gender J on the basis of one or more native Tsova-Tush synonyms having this gender. It is clear that these synonyms (before having been replaced by the Georgian items) belonged to gender J, as is shown by their Vainakh semantic equivalents Chechen *čyrk* 'mosquito', Ingush *kamār* 'mosquito' (from Russian *komar*) and Chechen *zʕuga* 'wasp', all of which have gender J (Matsiev 1961).

## 3.4 Modifiers

### 3.4.1 Demonstratives

Demonstratives can modify nouns,[19] and involve a three-way contrast in terms of distance from the speaker: proximal *e*, medial *is* and distal *o*.[20] The likeness of Tsova-Tush medial *is* (from *\*icx*, and also found as Chechen *is* and Ingush *iz*)

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[18]Cf. *sov* 'vulture' from Georgian *svavi*, but also *niav* 'breeze' and *tavtav* 'ear of wheat', from Georgan *niavi* and *tavtavi*. In theory, Georgian *q'vav-i* could be explained as a loan from Proto-Nakh *\*q'Vvaʔ*.

[19]And are thus sometimes called demonstrative adjectives in this function.

[20]A further proximal demonstrative *i* and distal *(h)as* are becoming obsolete.

and the Georgian distal pronoun *is* is coincidental. See Section 3.7.2 for demonstratives used as pronouns.

(28)  a.  ***e   do$^n$   sačukar b-a.***
       PROX horse gift    B.SG-be
       'this horse is a gift.'                   (BH023-16.1)

    b.  " *čangašvili    v-ik'-a-t,            " ał-i$^n$...*
         Changashvili M.SG-take.ANIM-IMP-PL   say-AOR

       - " *so$^n$     co  v-ec'   **is**  st'ak' " ał-i$^n$.*
         1SG.DAT NEG M.SG-want MED man   say-AOR

      '"Take Changashvili," he said...
      - "I don't want this/that man [that you propose]," he said.'    (E167-64)

    c.  *ču lat'-d-i-en-es      o   daš-ni.*
       PV add-D-TR-AOR-1SG.ERG DIST word-PL
      'I added those words.'                     (MM202-1.57)

As can be seen from Example (28b), the medial demonstrative is often used to point to an entity near, or associated with the addressee. Hence, the second speaker in (28b) uses the medial demonstrative to refer to the man that was talked about by the first speaker.

Demonstratives can also be used anaphorically, as in (29), where the first clause introduces the girl (*joħ*), while the second clause refers back to her using the distal demonstrative *o*. The same demonstrative is used for the fox, since it is the protagonist of the story, and is referred to many times. The same function could also be analysed as marking definiteness, as opposed to the indefinite function of the numeral *cħa* 'one' (see Section 3.4.2).

(29)  *oqar-go            cħa lamzur  joħ j-a-nor=e,         o   joħ*
     DIST.PL.OBL-ADESS one beautiful girl F.SG-be-NW.REM=and DIST girl
     *moc'onad-j-el-noer     o   cok'l-e-n.*
     like-F.SG-INTR-NW.REM DIST fox-OBL-DAT
     'They had (it is told) a beautiful daughter, and the fox liked (it is told) that girl.'                                   (E153-30)

Demonstratives show rudimentary case agreement with the nouns they modify, see Section 3.5. Demonstratives can be used as pronouns in noun-less noun phrases, see Section 3.7. See Section 3.7.2 for a comparison with Georgian and Vainakh demonstratives.

### 3.4.2 Numerals

Numerals precede the head noun. Table 3.16 shows the formation of cardinal numerals (Hauk & Harris forthcoming).

Table 3.16: Tsova-Tush cardinal numerals

| | | | |
|---|---|---|---|
| 1 cħa | 11 cħait't' | 21 t'q'a cħa | 40 šauzt'q'(a) |
| 2 ši | 12 šiit't' | 22 t'q'a ši | 50 šauzt'q'a it't' |
| 3 qo | 13 qoit't' | 23 t'q'a qo | 60 qouzt'q'(a) |
| 4 d-ʕivʔ | 14 d-ʕevʔet't' | 24 t'q'a d-ʕivʔ | 70 qouzt'q'a it't' |
| 5 pxi | 15 pxiit't' | ⋮ | 80 d-ʕevʔuzt'q'(a) |
| 6 jetx | 16 jetxet't' | 30 t'q'a it't' | 90 d-ʕevʔuzt'q'a it't' |
| 7 vorɫ | 17 vorɫet't' | 31 t'q'a cħait't' | 100 pxauzt'q'(a) |
| 8 barɫ | 18 barɫet't' | 32 t'q'a šiit't' | 101 pxauzt'q'a cħa |
| 9 iss | 19 t'q'exc' | 33 t'q'a qoit't' | 102 pxauzt'q'a ši |
| 10 it't' | 20 t'q'a | 34 t'q'a d-ʕevʔet't' | 1000 atas |

As is clear from Table 3.16, and as is found in most East Caucasian and Kartvelian languages, Tsova-Tush features a vigesimal system, i.e. numbers above twenty are constructed from the largest possible factor of twenty, followed by a numeral 'one' to 'nineteen'. Hence, *qouzt'q'a šiit't'* '72' is constructed from 3 x 20 + 12. The numerals *šauzt'q'a* 'fourty', *qouzt'q'a* 'sixty', *d-ʕevʔuzt'q'a* 'eighty' and *pxauzt'q'a* 'hundred' show regular vowel apocope, except when another numeral follows, which enables the possibility of analysing these numerals as compound words (apocope would only occur word-finally). The vigesimal system in principle continues after one hundred, to four hundred and beyond (Kadagidze & Kadagidze 1984 list *t'q'auztq'* 'four hundred' (20 × 20) and *t'q'auzt'q'a pxauzt'q'* 'five hundred' (20 × 20 + 5 × 20)), although in contemporary Tsova-Tush, numbers after one hundred are most often borrowed from Georgian. Hence, when referring to a year, most Tsova-Tush speakers indicate the century in Georgian, and the lower number (1 to 99) in Tsova-Tush (see Gippert 2008: 173). See Example (30), where '1900' is referred to with the Georgian *at-as cxra-as* 'ten-hundred nine-hundred'.

(30)    *j-a-s*          *dabadbad-j-ēl-n*          *{ atas*      *cxraas }*
     F.SG-be-1SG.NOM be_born-F.SG-INTR-PTCP.AOR **thousand nine_hundred**
     *t'q'a*     *pxiit't'*    *šar-e.*
     twenty fifteen year-OBL(ESS)
     'I was born in the year 1935.'                           (E208-2)

The numeral *cħa* 'one' can be used as an indefinite article. See Example (31a), where *cħa* is used to indicate that the noun phrase is indefinite, and (31b), where the numeral is used to introduce a character in the story that was not previously mentioned.

(31)   a. ***cħa** k'ac'k'o$^n$ ʕexk'-e-$^n$   wun-ax   d-a, ab-a$^n$   j-a*
          **one** small   iron-OBL-GEN what-INDF D-be sew-INF J-be
          *oqui-$^n$    sakm.*
          DIST.OBL-GEN task
          'It is a small iron thing, its duty is to sew.'              (E042-178)

       b. *oqar-go       **cħa** lamzur  joħ j-a-nor=e,        o   joħ*
          DIST.PL.OBL-ADESS **one** beautiful girl F.SG-be-NW.REM=and DIST girl
          *moc'onad-j-el-noer    o   cok'l-e-n.*
          like-F.SG-INTR-NW.REM DIST fox-OBL-DAT
          'They had (it is told) a beautiful daughter, and the fox liked (it is told) that girl.'              (E153-30)

This use of the numeral 'one' is attested in Chechen, Ingush and in Georgian, but recent descriptions are lacking (but see Lomtatidze 1962).

See Section 3.7.2 for the anaphoric use of demonstratives in Example (31b). The numerals 'one', 'two', and 'three' show rudimentary case agreement with the nouns they modify, while the numeral 'four' (and its derivatives) show gender agreement (see Section 3.5). Numerals can be used as heads in noun-less noun phrases (see Section 3.7.4).

Besides cardinal numerals (see Example (32a)), Tsova-Tush features various derivational suffixes to form other types of numerals which can be used to modify nouns.[21] See Table 3.17 for these derivations, compared against their counterparts in Georgian (Aronson 1991: 265) and Vainakh (Nichols 2011: 197, Nichols 1994a: 53). Note that the distributive is formed by reduplicating the first consonant of the numeral. Hence, we find *cħa-c* 'one each' (Example (32f)). For the numeral 3, the distributive *qo-q* 'three each' (Example (32e)) is homophonous with the approximative *qo-q* 'about three'.

(32)   a. ***jetx** badr-a$^n$    badr-i      d-a so-go.*
          **six**   child-GEN.PL child-NOM.PL D-be 1SG-ADESS
          'I have six grandchildren.'              (E208-79)

       b. *mais šari-$^n$    **pxi-lǐe$^n$** butt   b-a.*
          May year.OBL-GEN **five-ORD** month B.SG-be
          'May is the fifth month of the year.'              (KK013-2495)

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[21]Another suffix *-c'* is used to form multiplicatives, which are used adverbially.

Table 3.17: Tsova-Tush derived numerals

| Type | Example | Translation | Suffix | Georgian | Vainakh |
|------|---------|-------------|--------|----------|---------|
| Ordinal | (32b) | 'Xth' | *-l(o)ǧen* | *me- -e* | *-l(a)ǧ(a)* |
| Restrictive | (32c) | 'only X' | *-k'* | | |
| Collective | (32d) | 'all X' | *-k'eʔ* | *-ve* | *-qqie, -ʔie* |
| Distributive | (32e,32f) | 'X each' | reduplication | redupl. | redupl. |
| Approximative | (32g) | 'about X' | *-q* | *-iode* | |

   c. ***ši-k'***      *cark' j-a-ħer*     *babui-goħ,*      *qeⁿ wux*
       **two-RSTRCT** tooth J-be-COND.AOR grandfather-ADESS then what.NOM
       *č'ir*     *b-a-r.*
       trouble B.SG-be-IMPF
       'If grandfather had only two teeth, then what would be the problem?'
                                                 (KK026-4424)

   d. ***ši-k'eʔ***    *kok' ħal b-ak'-iⁿ*      *o*    *seⁿ*     *biʒ-i-go.*
       **two-INCL** leg  PV  B.SG-burn-AOR DIST 1SG.GEN uncle-OBL-ADESS
       'Both my uncle's legs were burnt.'                      (E151-37)

   e. ***qo-q***       *manat qajč-ŭ šuⁿ.*
       **three-DISTR** rouble fall_to 2PL.DAT
       'You guys are allotted three roubles each.'             (KK033-5454)

   f. *bacbur*      *do-i-v*      ***cħa-c***     *baq'ŏ d-∅-or.*
       Tsova_Tush horse-PL-ERG **one-DISTR** foal   D-give_birth-IMPF
       'Tsova-Tush horses used to give birth to one foal each.'    (E008-16)

   g. *pxauzt'q' šar-e-x*       *ħatxě **ši-q***      *žagn qet-inǐ*
       hundred year-OBL-CONT ago **two-APPROX** book know-PTCP.NPST
       *st'ak' bedeⁿ co*    *v-a-r*       *vaj-loħ.*
       man   except NEG M.SG-be-IMPF 1PL.INCL-INTERESS
       'A hundred years ago, there weren't any among us who were
       knowledgeable of books, but about two.'          (KK017-3192)

The plural form of a noun is used when its referent is plural, unless it is quantified by a number or other quantity expression, in which case it is in the singular (see Example (32)). Verbal agreement is with the gender of the head noun, not with the referent: in constructions that feature a verb which inflects for gender (33), the quantified noun requires singular agreement on the verb.

(33)  *šar-go      ši   joħ **j**-a-nor      **j**-al-in.*
      REFL-ADESS two girl **F.SG**-be-NW.REM **F.SG**-loose-PTCP.AOR
      'She herself had apparently lost two girls.'                (E29-13)

The use of a plural noun modified by a numeral (and subsequent plural gender agreement on the verb) is, however, attested with animates. (34).

(34)  *pxi **jažar**    **d**-a-ra-txŏ.*
      five **sister.PL** **F.PL**-be-AOR-1PL.EXCL
      'We were five sisters.'                                    (E170-14)

### 3.4.3 Quantifiers

Tsova-Tush features the following set of quantifiers, used in the same way as numerals, i.e. they modify nouns and cannot co-occur with numerals in the same noun phrase. Additionally, they show a similar agreement pattern to cardinal numerals higher than '3' (see Section 3.5), that is, they do not agree in case or number (and only *d-aniʔ* agrees in gender). They include *q'ovel* 'every, all' (35a), borrowed from Georgian *q'oveli* 'every, any, each, all'; *duq* 'much, many' (35b); *mełmi, mełax* 'several' (35c); *me$^n$* 'some' (35d); *d-aniʔ* 'all' (35e); *wumaʔ* 'all' (35f).

(35)  a.  ***q'ovel** j-aqqo$^n$ sakm k'ack'ui-čo-rna j-ebl-l-a!*
          **every** J-big   work small-OBL-ABL J-begin-INTR-NPST
          'Every big work starts from small ones.'              (MM218-1.38)

      b.  *bac-bi-go           zorejš **duq**    moʒǧvr-i b-a-r.*
          Tsova_Tush-PL-ADESS very   **many** priest-PL M.PL-be-IMPF
          'The Tsova-Tush had very many priests.'               (E014-34)

      c.  *daħ d-ebl-o-čŏ          deni      ʕurde$^n$         kikoʔ **mełmi***
          PV  D-put-PTCP.NPST-OBL day.OBL(ESS) in_the_morning early **several**
          *st'ak' saplav axk'-a$^n$ ǧ-o.*
          man   grave dig-INF go-NPST
          'On the day of the burial, very early, several men go to dig the grave.'
                                                                 (EK023-2.9)

      d.  ***me$^n$** majqĭ arl-c'i$^n$       j-is-e$^n$      txo-goħ.*
          **some** bread smash-PRIV.ADJZ J-stay-AOR 1PL.EXCL-ADESS
          'We had some whole pieces of bread left.'             (KK001-0168)

      e.  ***d-aniʔ** survil-i  ħal srulba-d-∅-or    badr-i-n.*
          **D-all**   wish-PL PV fulfill-D-TR-IMPF child-PL-DAT
          'He fulfilled all wishes for the children.'           (E038-37.2)

f. *do-i-n=mak=aʔ*      *xabž-ene-tx*            ***wumaʔ***
   horse-PL-DAT=on=EMPH sit_down-AOR.SEQ-1PL.EXCL.ERG **all**
   *nax.*
   people
   'We all mounted the horses.' (Lit. 'All people we mounted the horses.')
   (EK019-5.15)

It has to be noted that *wumaʔ* 'all' and *d-aniʔ* 'all' are in fact rarely used as modifiers within the noun phrase. They are more commonly found as pronouns (36) or adverbs (37).[22]

(36) a. *nipsi-čŏ*      *st'ak'-o-x*    ***wumaʔ*** *teš-ĕ.*
        straight-OBL man-OBL-CONT **all**     believe-NPST
        'Everyone believes a righteous man.'            (KK014-3008)

   b. *haʔ,* ***d-aniʔ*** *teg-d-Ø-or!*
      yes  **D-all**  do.IPFV-D-TR-IMPF
      'Yes, s/he did everything!'                        (E038-31)

(37) a. *e*    *žagnu-j* ***wumaʔ*** *seⁿ*      *d-a.*
        PROX book-PL **all**     1SG.GEN D-be
        'These books are all mine.'                      (KK006-1426)

   b. *e*    *pešk'r-i*    ***d-aniʔ*** *ʕer-d-av-iⁿ*            *vaš-bi-gŏ*
      PROX youngster-PL **D-all**    be_spoiled-D-LV-AOR RECP-PL-ALL
      *ħeps-uš.*
      look-SIMUL
      'These boys are all good for nothing, mimicking each other.'
      (KK006-1397)

No quantifiers, except perhaps *duq*, show any case or number agreement whatsoever, and thus behave like numerals higher than '3'. Only the quantifier *d-aniʔ*, (originally *d-a-ni-ʔ* 'D-be-PTCP.NPST-EMPH') agrees in gender with its head.

### 3.4.4 Adjectives

Most adjectives inherited from Proto-Nakh end in any of the five vowels plus a nasal stop *n* (which drops and nasalises the preceding vowel in word-final position), such as *at't'aⁿ* 'easy', *ğazeⁿ* 'good', *arliⁿ* 'left', *komoⁿ* 'male (animal)', *laxuⁿ*

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[22]Perhaps best described as floating quantifiers (Gerdts 1987, Miyagawa 2006).

'low'. The ending *-Vⁿ* bears a striking resemblance to the Genitive of nouns (see Section 3.6.1).

Tsova-Tush exhibits many suffixes that derive adjectives from nouns, such as *-(a)ren, -ğen, -lon, -lun, -lin*, e.g. *pst'uinğeⁿ* 'female', from *pst'uinŏ* 'woman'.

Ten adjectives show gender agreement, 2 show number agreement, while all show rudimentary case agreement. See Section 3.5.

Nakh languages feature comparative and superlative constructions using affixes on the adjective (Desheriev 1963: 452), in contrast to Daghestanian languages, that usually only mark the standard of comparison (the noun against which something is compared, see e.g. Lezgian (Haspelmath 1993: 432)). Comparative adjectives can be formed synthetically with the suffix *-(iv)xu* (38). As can be seen from Example (38b), the Tsova-Tush contact case (*-x*) is used to signal the standard of comparison.

(38) a. *bulaq' k'ʕok'ar-b-i-n-as*    *me*    **ğaz-ivx**    *xi*
well    deepen-B.SG-TR-AOR-1SG.ERG  SUBORD  **good-CMP**  water
*d-ał-u-lŏ.*
D-go_out-NPST-SBJV
'I deepened the well, so that better water would come out.'

                                                                 (KK011-2183)

    b. *alazaⁿ*  *cer-e-ħ*    *bat'-a-x*    **j-aqqou-vx**
Alazani  edge-OBL-ESS  goose-OBL.PL-CONT  **J-big-CMP**
*savt-i*    *ʕa-j-axk'-er.*
great_bustard-PL  sit-J-LV.PL-IMPF
'On the banks of the Alazani were sitting great bustards bigger than geese.'                                        (KK019-3292)

The superlative is formed by adding *-č'* to the comparative (Example (39a)) or the positive stem (39b).

(39) a. *ninŏ* **k'ac'k'o-xuč'** *badr-e-x*    *elanĕ c'-e.*
Nino  **small-SUPERL**  child-OBL-CONT  Elane  be_called-NPST
'Nino's youngest child is called Elane.'             (KK011-2017)

    b. *doš* **d-aqqon-č'** *gerc'*  *d-a admian-goħ.*
word  **D-big-SUPERL**  weapon  D-be  person-ADESS
'The word is man's biggest weapon.'             (KK004-1191)

Additionally, the meaning 'slightly' can be added to an adjective by means of the enclitic *=k'aʔ* (40).

(40)  a. **k'ʕok'ruⁿ=k'aʔ** *j-a-ħer*      *e*     *ormŏ, duq   k'or*
    **deep=slightly**   J-be-COND.AOR PROX hole   much charcoal
    *bak'-b-i-en-b-a-ra-s.*
    extract-B.SG-TR-PTCP.AOR-B.SG-be-IMPF-1SG.NOM
    'If the hole had been a little deep(er), I would have extracted more
    charcoal.'                                          (KK011-2106)

  b. **ubral=k'aʔ**     *araq'  d-ał-eⁿ*         *soⁿ.*
    **simple=slightly** vodka D-go_out-AOR 1SG.DAT
    'I ended up with slightly ordinary vodka.'          (E209-15)

However, a common alternative to the synthetic forms above are analytically
formed comparatives using *upr(o)*, borrowed from Georgian *upro* 'more' (41).

(41)  a. **upr  duq** *maq-iš  c'era-d-i-en*          *d-a-r.*
    **more many** song-PL write-B.PL-TR-PTCP.AOR B.PL-be-IMPF
    'S/he could have written more songs.'                  (E171-11)

  b. *soⁿ*     *c'ona-l-a*      **upr   mac'riⁿ** *mač'ar.*
    1SG.DAT like-INTR-NPST **more sweet**    wine.
    'I like sweeter wine.'                               (BH024-31.1)

  c. *lamu*         **upr  ğazeⁿ** *dažar d-a.*
    mountain(ESS) **more good**  grass D-be
    'In the mountains, there is better grass.'            (E043-53)

Analytically formed superlatives using inherited *ħamaxeʔ* 'most' (42) are more
common than the synthetic forms in (39). This form is grammaticalised from
*ħama-x=eʔ* 'than all' (< 'who.OBL-CON=EMPH').

(42)  a. *kalk-i*    **ħamaxeʔ** *laq-ivx*    *adgil.*
    city-INESS **most**    high-CMP place
    'The highest position in the city'                    (E171-15)

  b. *čağmarto-ⁿ*         **ħamaxeʔ** *b-aqqu-xŭ*   *pħe*    *omlo   j-a.*
    Chaghma_Tush-GEN **most**    B.SG-big-CMP village Omalo J-be
    'Omalo is the biggest village of the Chaghma-Tush.'   (KK027-4537)

  c. *uqar*        *gor-e-lo,*        **ħamaxeʔ** *d-aqqoⁿ* *gor d-a o*
    DIST.PL.OBL clan-OBL-INTERESS **most**    D-big    clan D-be DIST
    *cisk'rob-iⁿ.*
    Tsiskarishvili-GEN.PL
    'Among their clan(s), the biggest clan is that of the Tsiskarishvilis.'
                                                         (E287-10)

d. *k'att-e-ħ      aln-iħ        **ħamaxeʔ zoraⁿ** sicx j-a.*
July-OBL-ESS Alvani-INESS **most      severe** heat J-be
'In Alvani, the most severe heat is in July.'          (KK011-1934)

Modern standard Georgian forms its comparatives (43a) and superlatives (43b) analytically (Vogt 1971: 236). Old Georgian, however, used circumfixes of the form *xu- -o/-e(is)* to form comparatives (Gippert 2000), such as *xu-did-ejs-i* 'bigger'. These forms have shifted in function and are now used as a secondary, archaic superlative in Modern Georgian (cf. *u-did-es-i* 'very big, biggest', from *did-i* 'big').

(43)   Modern Georgian

a. *somx-isgan     me-or-e,      **upro did-i**    saxl-i*
Armenian-ABL ORD-two-ORD **more big-AGR** house-NOM
*iq'ida.*
s/he_bought_it
'S/he bought a second, bigger house from an Armenian.'
(GNC: Ch. Amirejebi)

b. *am         čven-s        kveq'ana-ši k'anon-i   **q'vela-ze iap-i***
PROX.OBL 1PL.POSS-OBL country-IN law-NOM **all-SUPER cheap-AGR**
*sakonel-i=a.*
cattle-NOM=COP
'In this country of mine, the law is the cheapest cattle.'
(GNC: Ch. Amirejebi)

Compare Table 3.18, where the Tsova-Tush degrees of comparison are shown besides the Ingush (Nichols 2011: 219), Chechen (Nichols 1994a: 30) and Georgian (Vogt 1971: 236). As for the comparative, it is clear that the borrowed analytic construction with *upro* 'more' is competing with the original Nakh comparative marker *-xu* in Tsova-Tush. As for the superlative, it is at this point uncertain whether the superlative suffix *-č'* is the original Nakh formant. Since Chechen and Ingush display analytic constructions as well (but different ones to Tsova-Tush), it is also uncertain whether the superlative was originally formed analytically or synthetically. It is clear, however, that the specific Tsova-Tush superlative marker *ħamaxeʔ* is a calque from Georgian *q'velaze*: both mean 'than all'. Note that in all four languages, the superlative can be formed from both a positive and a comparative stem. Compare Examples (42a) and (42b), where the superlative marker is used in combination with an adjective already marked with the comparative, whereas in Examples (42c) and (42d), the superlative is used in combination with an uninflected adjective.

Table 3.18: Synthetic and analytic degrees of comparison in Nakh and Georgian

|  | 'big' | 'bigger' | 'biggest' | |
|---|---|---|---|---|
| Ingush | d-oaqqa | d-oaqqa-ğ | eggara d-oaqqa | eggara d-oaqqağ |
| Chechen | d-oqqa | d-oqqa-x | uggar d-oqqa | uggar d-oqqax |
|  |  | d-aqqu-x | d-aqqon-č' | d-aqqo-xuč' |
| Tsova-Tush | d-aqqo$^n$ | upr d-aqqo$^n$ | ħama-x=eʔ d-aqqo$^n$ | ħama-x=eʔ d-aqqux |
| Georgian | did-i | upro did-i | q'vela-ze did-i | q'vela-ze upro did-i |

The analytic superlative construction is not found in the oldest Tsova-Tush sources, but is attested from the mid-20th century onward (see Examples (44)). The analytic comparative form with borrowed *upro* is only found in the more contemporary sources. Sources from before 1985 use the synthetic comparative *-xu*.

(44)  a.  *k'ui-š*      *q'arc'e$^n$*    *tut*      *tut-i-loħ*        **ħamaxeʔ**
        white-ADV variegated mulberry mulberry-PL-INTERLAT **SUPERL**
        *čamli$^n$ j-a.*
        tasty   J-be
        'The white mulberry is the tastiest among the mulberries.'

                                                                        (KK008-1711)

    b.  *ħamaxeʔ sabu-xŭ*     *xalx*   *bze-n*    *č'irba-l-a.*
        SUPERL   exceeding-CMP people chaff-DAT need-INTR-NPST
        'Most people need chaff.'                                       (YD009-13.1)

The data is best explained by assuming a borrowing scenario where Tsova-Tush calqued the analytic superlative construction and directly borrowed the comparative marker *upro* from Georgian. Note that these events likely happened at different stages: based on our textual material, the calquing of the superlative construction happened sometime between 1850 and 1950, whereas the borrowing of comparative *upro* happened after 1950.

### 3.4.5 Borrowed modifiers

Adjectives are freely borrowed from Georgian. The dictionary of Kadagidze & Kadagidze (1984) features 149 Georgian and 95 native underived adjectives. A representative sample (WOLD[23], Haspelmath & Tadmor 2009), however, shows

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[23]https://wold.clld.org/

only 13 borrowed adjectives versus 122 native adjectives (many of which are derived from verbs or nouns, see Wichers Schreur (2021)). The stark difference between these two samples can be attributed to language use: the WOLD sample aims to capture all frequently used concepts expressed by adjectives, while the dictionary aims to be exhaustive and lists many more Georgian adjectives as a result.

Simple, underived Georgian adjectives are borrowed similarly to Georgian nouns, i.e. in the stem form, without the nominative marker *-i*, for example *blant'* 'sticky' (Georgian *blant'-i*). If the Georgian adjective ends in a vowel, Apocope applies as it does to native forms (see Section 2.3), such as in *ašk'ar* 'obvious' (Georgian *ašk'ara*), *laq'* 'rotten, spoiled' (Georgian *laq'e*), *toxlŏ* 'soft-boiled' (Georgian *toxlo*).

Borrowed adjectives that contain Georgian derivational morphology can be adopted wholesale, or the derivational affixes can be replaced by native morphology. Thus, we find privative adjectives containing the Georgian circumfix *u- -o*: *ubarakŏ* 'fruitless, unrewarding' (Georgian *u-barak-o*), *uk'anonŏ* 'lawless' (Georgian *u-k'anon-o*) next to forms with the native privative marker *-c'in* : *gunb-e-c'i$^n$* 'having a bad mood' (Georgian *u-guneb-o*), *meml-e-c'i$^n$* 'landless' (Georgian *u-mamul-o*). The same can be observed for the Georgian denominal suffix *-ian* 'having X'. We find wholesale borrowings (e.g. *nemse$^n$* 'honest, conscientious' (Georgian *namus-ian-i*), *k'uize$^n$* 'hunchbacked' (Georgian *k'uz-ian-i*)), as well as replacement of the Georgian suffix by native *-aren* (e.g. *čedn-are$^n$* 'fern-covered' (Georgian *čadun-ian-i*), *k'uižr-ale$^n$* (with R-dissimilation, see Section 2.4.1) 'callous, with callus' (Georgian *k'užr(-eb)-ian-i*).

Several adjectives borrowed from Georgian have received an ending *-on*. They are *xširo$^n$/qširo$^n$* 'frequent' (Northeastern Georgian *qšir-i*, Standard Georgian *xšir-i*), *xabro$^n$* 'greedy, stingy' (Georgian *xarb-i*), *ʒviro$^n$* 'expensive' (Georgian *ʒvir-i*), *parso$^n$* 'useful, proper' (Georgian *parsag-i, parsak'a*). Many of these adjectives betray a greater age than the endingless borrowings described above: *qširo$^n$* has an initial consonant *q* no longer found in Modern Standard Georgian; *xabro$^n$* shows metathesis which is absent in more recent loans (cf. *darbaz* 'hall' from Georgian *darbaz-i*); and *parso$^n$* seems to be borrowed from an unattested Georgian form *\*pars-*, which formed the basis of the Georgian formation *pars-ak'-a* 'good, useful'.[24] It is therefore assumed that these adjectives were borrowed at an earlier stage. After having received their *-on* ending, they were fully integrated into the agreement system, receiving the ending *-čo* when the head noun is in a non-Nominative case, see Example (45).

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[24]Compare e.g. Old Georgian *dan-ak'-i* and *dana*, both meaning 'knife'.

(45) ***xabro-čŏ*** *st'ak'o-n* *ħaš* *co* *d-ec'-ĕ.*
 **stingy-OBL** man.OBL-DAT guest NEG D-like-NPST
 'A stingy man does not like guests.' (KK032-5081)

The Georgian adjectivising suffix *-ur* seems to have been borrowed into Tsova-Tush, but its productivity is limited. It is found in borrowed adjectives (*st'erilur* 'sterile' (Georgian *st'erilur-i*), *kimiur* 'chemical' (Georgian *kimiur-i*) and many others) and the suffix is often found deriving adjectives from ethnonyms. Many of these are borrowed from Georgian entirely (e.g. *lek'ur* 'Daghestani' (Georgian *lek'-ur-i*), *kist'ur* 'Kisti' (Georgian *kist'-ur-i*)), but some are based on native Tsova-Tush stems, such as *pxe-ur* 'Khevsur'[25] (cf. Georgian *xevsur-ul-i*), *k'ox-ur* 'Georgian' (cf. Georgian *k'ax-ur-i* 'Kakhetian'), *nemc-ur* 'German' (from Russian *nemec*, cf. Georgian *german-ul-i*), and crucially *bacb-ur* 'Tsova-Tush'. Thus, one can conclude that the suffix *-ur* has very limited productivity, deriving adjectives from ethnonyms that are not already borrowed from Georgian, of which the four adjectives above might be the only examples.[26] Adjectives containing the suffix *-ur* do not agree in case, see Section 3.5.2.

Besides adjectives, only one other modifier is borrowed: *q'ovel* 'every' (Georgian *q'ovel-i*), see Section 3.4.3.

## 3.5 Agreement

Tsova-Tush shows gender, case and (albeit marginal) number agreement of modifiers with their head. The exact same patterns (gender agreement of a limited number of adjectives and of the numeral 'four'; a distinction between Nominative and Oblique forms of the adjective, demonstrative and of the numerals 'one', 'two' and 'three'; and the adjectives 'big' and 'small' showing number agreement) are found in the other Nakh languages Ingush and Chechen. Georgian, on the other hand, does not have grammatical gender, does not show number agreement on modifiers, and features an entirely different system of case agreement (see for example Hewitt 1995: 45–60).

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[25]Potentially a borrowing of Georgian *pxouri* 'Pshav-Khevsur'.

[26]One exception is Tsova-Tush *lamzur* 'beautiful' (cf. Georgian *lamaz-i*), which must be an old borrowing from a Northeastern Georgian dialect, although it is absent from the standard dictionaries and corpora of Tush, Khevsur, Pshav and Mokhevi dialects.

### 3.5.1 Gender agreement

In Tsova-Tush, 11 underived adjectives, one underived numeral, and one underived quantifier inflect for gender.[27] These words are listed in Table 3.19, where *d-* stands for any gender prefix. Additionally, all participles that are derived from verbs that inflect for gender, keep this agreement pattern as participles.

Table 3.19: Underived modifiers inflecting for gender

| | |
|---|---|
| *d-avi$^n$* | 'light' |
| *d-ase$^n$* | 'empty' |
| *d-apxe$^n$* | 'hot' |
| *d-aq'i$^n$* | 'dry' |
| *d-acu$^n$* | 'short' |
| *d-ac'i$^n$* | 'heavy' |
| *d-arst'i$^n$* | 'fat' |
| *d-axxe$^n$* | 'long' |
| *d-aqqo$^n$* | 'big' |
| *d-ut'q'i$^n$* | 'thin' |
| *d-uq'i$^n$* | 'thick, dense, frequent' |
| *d-ʕivʔ* | 'four' |
| *d-aniʔ* | 'all, everyone' |

All adjectives are inherited from Proto-Nakh, as indicated by their Vainakh cognates,[28] and are usually reconstructed for Proto-East-Caucasian, including the prefixal gender slot. The numeral 'four' is also reconstructed for Proto-East-Caucasian as containing a gender slot, which some languages have retained, and some have fossilised. *d-aniʔ* 'all' seems to be derived from the Present Participle of the verb 'be' *d-ani* (*dejn* after Apocope and Umlaut (see Section 2.3)).

All the items in Table 3.19 take one of four gender prefixes to agree with their head noun in one of five genders. Three of these genders (M, F, B) require different prefixes for singular and plural, which leads some scholars to describe this type of agreement as gender-number agreement. The five genders and the prefixes they require on the agreement target are listed in Table 3.20, along with the

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[27]Besides one preverb, and approximately a third of all underived verbs.

[28]See Chechen *d-ajn* 'light', *d-ēsa* 'empty', *d-ouxa* 'warm', *d-eq'a* 'dry', *d-ōca* 'short', *d-eza* 'heavy', *d-erstana* 'fat', *d-ēxa* 'long', *d-oqqa* 'big', *d-ut'q'a* 'thin', *d-uq'a* 'thick, dense'. Chechen also features *d-erzina* 'naked' (compare Tsova-Tush *d-arc'inŏ* 'id.'), *d-ōraxa* 'cheap', *d-yzna* 'full' (compare Tsova-Tush *d-uc'inŏ*). The Tsova-Tush forms are Past Participles.

corresponding glosses used in this work. In much work on Nakh languages, apart from M for masculine and F for feminine, the labels for the genders are based on their marker in the singular. This contrasts with the tradition of labelling gender in Daghestanian languages, which uses Roman numerals (where the same Roman numeral can refer to a different set of agreement affixes in different languages).

Some 30 nouns show one of three agreement patterns that are different from any of these five genders (see Holisky & Gagua 1994: 163, Corbett 1991: 170–172). Alternatively, these 3 agreement patterns can be said to constitute three more genders, which enables the claim that Tsova-Tush has in fact 8 genders (see e.g. Chrelashvili 1967, Hauk & Harris forthcoming). Deciding which of these analyses (5 or 8 genders) is more appropriate falls beyond the scope of this work.

For gender assignment, i.e. the rules that dictate which nouns belong to which gender, and for the adaptation of Georgian loanwords using these rules, see Wichers Schreur (2021) and Section 3.3.5.2.

Table 3.20: Tsova-Tush genders

| Gender | SG | PL | Glosses | |
|:------:|:--:|:--:|:-------:|:------:|
| M | *v-* | *b-* | M.SG | M.PL |
| F | *j-* | *d-* | F.SG | F.PL |
| B | *b-* | *d-* | B.SG | B.PL |
| D | *d-* | *d-* | D | |
| J | *j-* | *j-* | J | |
| Bb | *b-* | *b-* | B | B |
| Bj | *b-* | *j-* | B | J |
| Dj | *d-* | *j-* | D | J |

Example (46) shows gender agreement on adjectives (46a, 46b), the numeral 'four' (46c), and the quantifier *d-aniʔ* 'all' (46d).

(46)  a. [*cħa **b-aqqoⁿ** pst'u*] *b-a-r.*
one **B.SG-big** ox(B) B.SG-be-IMPF
'There was one big ox.'                                     (E153-23)

   b. *k'eč' lark'-ar* [*žorejš **j-ac'iⁿ** sakm*]    *j-a.*
wool shear-VN very   **J-heavy** business(J) J-be
'Sheep-shearing is very hard work.'                          (E006-87)

   c. [***d-ʕivʔ** bader*]    *ħal d-aq-d-i-en-es.*
**D-four** child(D) PV D-raise-D-TR-AOR-1SG.ERG
'I have raised four children.'                               (E130-32)

d. [***b-aniʔ** žab*]    =e,   *cħa doⁿ,   t'q'a   qo    sa    d-ik'-eⁿ*
   **B.SG-all** cattle(B) =and one horse twenty three soul D-take.ANIM-AOR
   *txo-go.*
   1PL.EXCL-ADESS
   'All the cattle and one horse, twenty three heads they took from us.'
   (E041-42)

### 3.5.2 Case agreement

Tsova-Tush shows rudimentary case agreement of adjectives (see Examples (47a, 47b)), ordinal numerals (47c, 47d)[29] and participles (see Section 6.3) with their head noun. These modifiers appear in their bare form when modifying nouns in the Nominative (Examples (47a, 47c)), but receive the suffix -*čo* when they modify a noun in any other case (47b, 47d). Note that the final -*n* in adjectives drops before *č*, not nasalising the preceding vowel.

(47)   a. *k'mat'-xiⁿ    **pšeliⁿ** xi    žura-l-ar.*
          cliff-APUDABL **cold**   water seep-INTR-IMPF
          'Cold water was seeping from the cliff.'          (KK017-3211)

       b. *ħal d-aq-o-etx        o    k'arak, **pšeli-č**  xi-l          ču*
          up  D-take-NPST-1PL.ERG DIST butter **cold-OBL** water-INTERLAT in
          *d-oł-o-tx.*
          d-put-NPST-1PL
          'We take the butter out [and] put it in cold water.'          (E019-80)

       c. *giorgi-s    krist'ad-v-i-eⁿ        seⁿ    **ši-lğeⁿ**   voħ.*
          Giorgi-ERG baptise-M.SG-TR-AOR 1SG.GEN **two-ORD** boy
          'Giorgi baptised my second son.'          (E220-10)

       d. *je  **ši-lğe-čo**    deni-ħ      v-eʔ-eⁿ           ošt'iʔ saq'dr-i.*
          and **two-ORD-OBL** day.OBL-ESS M.SG-come.IPFV-AOR again temple-ILL
          'And on the second day, he came to the temple again.'          (AS003-1.2)

Simple, underived borrowed adjectives do not agree in case like native adjectives. Thus, in Example (48), the adjective *ubralŏ* 'simple' (from Georgian *ubralo*) does not receive the suffix -*čo*, even though the head noun is in a non-Nominative case.

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[29]Original orthography of (47d): e šilġeċo deniḥ wee ošti saqdri.

(48)  **ubralŏ** *st'eme-n=mak=daħ*      *dok' co d-ec'-ĕ*      *ħoⁿ*
      **simple** thing.OBL-DAT=on=from heart NEG D-must-NPST 2SG.DAT
      *lek-d-al-aⁿ.*
      throw.IPFV-D-INTR-INF
      'You should not be heartbroken due to simple things.'      (KK021-3663)

Adjectives formed with the derivational morpheme *-ur* (which is of Georgian
origin, see Section 3.4.5) also do not add the Oblique marker *-čo* when the head
noun is non-Nominative (Desheriev 1953: 13), as in (49b, 49d).[30]

(49)  a. *oqriⁿ*      *badr-i-n*    **bacbur**    *mot't'*    *co qet.*
         DIST.PL.GEN child-PL-DAT **Tsova_Tush** language NEG know
         'Their children don't know Tsova-Tush.'      (E118-15)

      b. **bacbur**    *že-v*      *cħa čuix d-∅-o.*
         **Tsova_Tush** sheep-ERG one lamb D-give_birth-NPST
         'Tsova-Tush sheep give birth to (only) one lamb.'      (E002-27)

      c. *daħ d-ot'-eⁿ*    **k'oxur**    *mat't'a-n=mak.*
         PV  D-go.IPFV-AOR **Georgian** language.OBL-DAT=on
         'They changed over to the Georgian language.'      (E019-149)

      d. **k'oxur**    *mot't'*    *uišt'=aj=či*    *qet*      *šun=a.*
         **Georgian** language so.DIST=ADD=AFF know(NPST) 2PL.DAT=EMPH
         'We know the Georgian language just as well.'      (MM371-1.5)

Demonstrative adjectives, too, inflect for case. The Nominative and Oblique
stems are shown in Table 3.21, although Nominative demonstratives are some-
times also found with non-Nominative nouns.

Table 3.21: Nominative and Oblique demonstrative adjectives

|            | Proximal | Medial | Distal |
|------------|----------|--------|--------|
| Nominative | e        | is     | o      |
| Oblique    | eq       | icx    | oq     |

Finally, the same distinction is found in the numerals '1', '2' and '3', for which
see Table 3.22.

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[30]Exception to this rule is *lamzur* 'beautiful', which does take the Oblique marker. The ending
  of *lamzur*, however, is synchronically not a derivational suffix.

Table 3.22: Nominative and Oblique numerals

|  | 'one' | 'two' | 'three' |
|---|---|---|---|
| Nominative | cħa | ši | qo |
| Oblique | cħani | šin | qa |

No numeral higher than '3' and no quantifier agrees in case with its head noun. Personal and reflexive pronouns used as modifiers seem to make a Nominative-Oblique distinction as well, for which see Table 3.23 in Section 3.6.1.

### 3.5.3 Number agreement

Only two adjectives agree in number with their head noun. These are *k'ac'k'o$^n$* 'small' (see Examples (50a,50b)) and *d-aqqo$^n$* 'big' (Examples (50c,50d)), which have plural forms *k'ac'ka$^n$* and *d-aqqa$^n$*, respectively. One possible historical explanation for the fact that only these two adjectives show this type of agreement can be found in the origin of 'small'. This adjective, *k'ac'k'o$^n$*, is in fact historically a derivation of *k'aȝak'* 'a little bit'.[31] The origin of the adjectival *-a$^n$* suffix can be compared directly to the Genitive plural noun suffix *-a$^n$*. The plural *d-aqqa$^n$* 'big' must then have arisen analogically to *k'ac'k'a$^n$*.

(50)  a.  **k'ac'k'a$^n$** *badr-i*      *ma, tejlz-a-x*              *ču*
          **little.PL**   children-PL but, saddle_bag-OBL.PL-CONT PV
          *xabž-d-i-noer.*
          sit_down-D-TR-NW.REM.SEQ
          'The little children, however, were apparently put in saddle-bags.'
                                                              (MM122-2.13)

      b.  *uiš*      *zorajši v-ec'-er*      *txo*        **k'ac'k'aj-čŏ**
          SO.DIST very    M.SG-love-IMPF 1PL.EXCL.DAT **little.PL-OBL**
          *badr-i-n*      *ik'i, me*      ...
          child-PL-DAT Iki   SUBORD [...]
          'We little children loved Iki so much, that [...].'          (MM208-1.9)

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[31]Compare the variant form *k'ic'k'o$^n$* 'little', from the more common form of the word for 'a little bit', *k'aȝik'*.

c. *ai ošruⁿ **d-aqqaⁿ** pħarč d-a-r kikoʔ*
look such.DIST **B.PL-big.PL** dog.PL B.PL-be-IMPF early
*bac-bi-go.*
Tsova_Tush-PL-ADESS
'Look, such big dogs the Tsova-Tush used to have in the old days.'

(E011-17)

d. ***b-aqqej-čŏ** važar-gŏ lajv-nor: ...*
**M.PL-big.PL-OBL** brother.PL-ALL tell-NW.REM [...]
'He told his older brothers: [...].' (MM407-1.5)

No other modifier, including other adjectives, agrees in number with their head noun. The same form of the demonstrative (51a, 51b) or adjective (51c, 51d) is used, whether plural (51a, 51c) or singular (51b, 51d).

(51) a. *txo-go **e** sxal-i wumaʔ d-a-r.*
1PL.EXCL-ADESS **PROX** pear-PL all D-be-IMPF
'We had all these pears.' (E015-24)

b. ***e** qor mac'riⁿ b-a-r=e.*
**PROX** apple sweet B.SG-be-IMPF=and
'This apple is sweet.' (E015-52)

c. *c'egeⁿ **lamzur** qor-i d-a xabž-d-i-enŏ.*
red **beautiful** apple-PL B.PL-be sit_down-B.PL-TR-PTCP.AOR
'Beautiful red apples had been put (here: skewered).' (EK021-3.7)

d. *daxaʔŏ lamu-ⁿ **lamzur** ħac'uk' d-a.*
snowcock mountain-GEN **beautiful** bird D-be
'A snowcock is a beautiful mountain bird.' (KK004-1099)

## 3.6 Complex noun phrases

In Tsova-Tush, nouns can be modified by other noun phrases by means of the Genitive, as well as juxtaposition of uninflected nouns.

### 3.6.1 Genitive modification

In Genitive constructions, the modifier (being the dependent) is marked with the Genitive case, while the head noun shows no marking to indicate the Genitive relation. See Section 3.3.1 for the formation of the Genitive. Modifying nouns in

the Genitive generally precede the head noun, as in (52). No formal distinction is made between possession (52a, 52b), materials (52c), kinship (52d) or part-whole relations (52e).

(52) a. *šaroⁿ*     *dak'lav,*   *moħ d-aqqoⁿ d-ec'-er*    *xiɫ-a*     *seⁿ*
       REFL.EMPH think.PFV how D-big    D-must-IMPF be.PFV-INF 1SG.GEN
       **babui-ⁿ**        *pardul.*
       **grandfather-GEN** barn
       'Imagine, how big my grandfather's barn must have been.'
                                                         (WS001-11.11)

      b. *c'ʕerkoⁿ*  **st'ak'i-ⁿ**     *tataⁿ xac'-eⁿ*    *soⁿ.*
         suddenly **man.OBL-GEN** voice hear-AOR 1SG.DAT
         'Suddenly, I heard a man's voice.'                          (E060-16)

      c. *is*          *cent'r-e*      **ʕaixk'-e-ⁿ**     *st'olba*
         there.MED center-OBL(ESS) **iron-OBL-GEN** pole
         *amarto-l-aera-lŏ*     *laq-iš.*
         erect-INTR-IMPF-SBJV high-ADV
         'There in the center, an iron pole was erected up high.'     (E115-46)

      d. *qa*      **badr-e-ⁿ**     *ajtaʔŏ*     *v-a-sŏ.*
         three.OBL **child-OBL-GEN** godparent M.SG-be-1SG.NOM
         'I am a godfather to three children.'                             (E001-61)

      e. **gutn-e-ⁿ**    *c'ʕop' st'en-ax-čo-x*          *uill-d-is-eⁿ.*
         **plow-OBL-GEN** tip    what.OBL-INDF-OBL-CONT stick-D-stay-AOR
         'The tip of the plow got stuck in something.'         (WS001-10.4)

Genitives of personal, reflexive and demonstrative pronouns also behave in the same way syntactically, namely, they precede the head noun. Hauk & Harris (forthcoming) claim that the personal and reflexive pronouns in the Genitive show case agreement, where the nasalisation is dropped when the head noun is in a non-Nominative case, see Table 3.23. Although many counterexamples have been found, this claim seems to hold statistically, as in Examples (53a–53d). Genitives of demonstrative pronouns make no such distinction (53e–53f).

(53) a. *macn-e*   **ħeⁿ**    *herc'ŏ so-ciⁿ*       *d-a-r=ici,*      *daħ*
       when-REL **2SG.GEN** pot    1SG-APUDESS D-be-IMPF=SUBORD, PV
       *čul-d-al-in=ĕ.*
       get_pregnant-D-INTR-AOR=and
       'When your pot was with me, it got pregnant.'         (EK057-4.1)

Table 3.23: Tsova-Tush pronouns in the Genitive case

| | Demonstrative | | | Personal | | Reflexive | |
|---|---|---|---|---|---|---|---|
| | PROX | MED | DIST | NOM | OBL | NOM | OBL |
| 1SG | | | | se$^n$ | se | sai$^n$ | sai, se |
| 2SG | | | | ħe$^n$ | ħe | ħai$^n$ | ħai, ħe |
| 3SG | equi$^n$ | icxui$^n$ | oqui$^n$ | | | šari$^n$ | šer |
| 1PL.INCL | | | | vai$^n$ | ve | vai$^n$ | ve |
| 1PL.EXCL | | | | txe$^n$ | txe | txai$^n$ | txe |
| 2PL | | | | šu$^n$ | šu | šui$^n$ | šui |
| 3PL | eqri$^n$ | icxri$^n$ | oqri$^n$ | | | šui$^n$ | šui |

b. **ħe**    *vaš-e-$^n$*    *korc'il*   *maca$^n$ d-a=jnǒ.*
    **2SG.GEN.OBL** brother-OBL-GEN wedding when   D-be=QUOT
    '"When is your brother's wedding?"'            (EK059-2.4)

c. *o*   **sai$^n$**     *do$^n$*   *iorǧ*   *do$^n$*   *b-a-r.*
    DIST **1SG.REFL.GEN** horse palfrey horse B.SG-be-IMPF
    'My own horse was a palfrey.'            (EK015-2.1)

d. *as*    **saj**       *v-ec'-r-e-x=a*
    1SG.ERG **1SG.REFL.GEN.OBL** M.SG-love-VN-OBL-CONT=EMPH
    *ħerč-in=a.*
    embrace-AOR=EMPH
    'I embraced my lover.'            (EK028-6.1)

e. **equi-$^n$**     *dip'lom*   *daco-d-i-n-e-s.*
    **MED.OBL-GEN** diploma defend-D-TR-AOR-SEQ-1SG.ERG
    Lit.:'I defended the diploma in it, and…'            (E096-10)

f. **equi-$^n$**     *dad-e-n*     *qet-ra-lo=e.*
    **PROX.OBL-GEN** father-OBL-DAT know-IMPF-SBJV=and
    'His father knew it.'            (E206-93)

If a Genitive noun modifies a noun phrase that names a quantity, measure or container, the Genitive modifier follows this noun, as in (54a,b). The Genitive modifier in these instances is the controller in terms of gender, since agreement on the verb is with the gender of the Genitive noun, not of the noun that signifies the measure or container. See Example (54a), where the noun phrase has assumed

gender J (indicated in the verbal agreement slot) from the Genitive of *šur* 'milk', while *herc'ŏ* is gender D. Similarly, in (54b), the noun phrase *ši butt vade^n* takes on gender J from *vad* 'time (limit)' and not from *butt* 'month', which is gender B.

(54)  a. [ *cħa herc'ŏ **šur-e-^n*** ]      *daħ maxk'-**j**-i-n-atx.*
          one pot(D) **milk(J)-OBL-GEN** PV   pour-J-TR-AOR-1PL.ERG
          'We poured one pot of milk [out into sth].'          (KK004-1115)

      b. *t'ateb  d-ux   d-erc'-d-Ø-a^n*   [ *ši   butt   **vad-e-^n*** ]
          money D-back D-turn-D-TR-INF    two month(B) **time(J)-OBL-GEN**
          ***j*-ajł-n-as.**
          J-give-AOR-1SG.ERG
          'I gave [sb] two months time to return the money.'     (KK006-1370)

### 3.6.2 Modification using uninflected nouns

In Tsova-Tush, nouns that are not inflected for case can be used to modify other nouns. These modifying nouns always precede the head noun. Several examples can be seen in (55).

(55)  a. ***alaza^n*** *cer-e-ħ*      *bat'-a-x*          *j-aqqou-vx*
          **Alazani** edge-OBL-ESS goose-OBL.PL-CONT J-big-CMP
          *savt-i*            *ʕa-j-axk'-er.*
          great_bustard-PL sit-J-LV.PL-IMPF
          'On the banks of the Alazani are sitting great bustards bigger than geese.'          (KK019-3292)

      b. *aklm-a-^n*       *j-aqqo^n karva^n j-ot'-ur* ***širva^n***
          camel-OBL.PL-GEN J-big    caravan J-go-IMPF **Shirvan**
          *duz-e-ğ=aħŏ.*
          grassland-OBL-TRANS=through
          'A big camel caravan was going through the Shirvan steppe.'
          (KK023-3948)

      c. ***k'ak'al*** *nač'uč'-i-loħ*      *t'um   lex-o-s.*
          **walnut** shell-PL-INTERESS kernel search.IPFV-NPST-1SG.NOM
          'I am looking for a kernel among the walnut shells.'     (KK014-2981)

      d. ***bağ***  *bolo-ħ psa  b-iv-ur      so-goħ.*
          **garden** end-ESS barley B.SG-sow-IMPF 1SG-ADESS
          'At the end of my garden, barley was being sown.'     (KK002-0550)

These modifying nouns all appear in the Oblique stem, but without case morphology, as exemplified by the examples in (56). It seems fitting, therefore, to analyse all examples in (55) as instances of Oblique stems, too. These nouns simply have an Oblique suffix *-e* which is deleted word-finally, resulting in a situation where the Nominative and the caseless Oblique stem are formally identical.

(56)  a. ***att***    *leš-e-n=mak*    *sov-i*    *ʕe-j-axk'-er.*
       **cow.OBL** corpse-OBL-DAT=on vulture-PL sit-J-LV.PL-IMPF
       'Vultures were sitting on top of the cow cadaver.'        (KK038-5715)

    b. *zoraj-čŏ*  ***st'ajk'ĭ***  *tur-e-v*    *zoraj-šĭ*    *tet'-ŏ.*
       brave-OBL **man.OBL** sword-OBL-ERG powerful-ADV cut.IPFV-NPST
       'A brave man's sword cuts strongly.'        (KK007-1479)

The constructions seen in Examples (55) and (56) show superficial similarities with noun compounding, which is rarely found in Tsova-Tush. Example (57), however, shows that other modifiers can appear between the head and the bare noun modifier. More research is needed to explain which types of nouns can be used as uninflected nominal modifiers, and what the functional difference is to Genitive modifiers.

(57)  ***ninŏ*** *k'ac'k'o-xu-č'*    *badr-e-x*    *elanĕ c'-e.*
     **Nino** small-CMP-SUPERL child-OBL-CONT Elane be_called-NPST
     'Nino's youngest child is called Elane.'        (KK011-2017)

### 3.6.3 Conjoined nouns

A noun phrase may also consist of conjoined nouns. The additive particle *=ae*/*=a* is suffixed to each noun.

(58)  a. *mor-i* ***picr-i-ğ=aĕ,***    ***svet'-i-ğ=aĕ***    *daħ j-arl-i$^n$.*
       log-PL **plank-PL-TRANS=ADD** **pole-PL-TRANS=ADD** PV  J-cut-AOR
       'They cut the logs into planks and poles.'        (KK004-1115)

    b. ***as-i=aĕ,***    ***du-j=aĕ***    *xi=mak    daħ*
       **calf-PL=ADD** **horse.OBL-PL=ADD** water=on PV
       *d-ik'-a-lĕ.*
       D-take.ANIM-IMP-HORT
       'Please take the calves and the horses for water.'        (KK004-1115)

c. *k'edlo-x    taru-j    let-d-∅-o=e,            mak ma*
   wall-CONT shelf-PL assemble-D-TR-NPST=and on   CONTR
   **herc'-elč=ae̯** *qen-i*   **bung-i=ae̯**    *d-exk'-ŏ.*
   **pot-PL=ADD**  other-PL **dish-PL=ADD** D-put-NPST
   'They nail the shelves to the wall and put the pots and the other
   dishes on top.'                                    (KK008-1545)

When all conjoined nouns have the masculine gender, agreement with the
(gender-inflecting) verb is with the masculine plural. See Example (59a), where
the verb *teg-b-i-r-as* has masculine plural gender, referring to the horse seller and
the horse buyer. If one or more of the conjoined nouns have a non-masculine
gender, the verb shows agreement with a default gender D, as in (59b–59c), even
if all conjoined nouns belong to gender J (59d). When two or more nouns of the
feminine gender are conjoined, the agreement marker *d-* is used too, which can
be interpreted as the feminine plural marker, or the default D gender (Holisky &
Gagua 1994: 191).

(59)  a. *do$^n$*  **b-exk'-ujn=ae̯,**            *do$^n$*
         horse **B.SG-sell-PTCP.NPST=ADD** horse
         **ev-b-∅-ujn=ae̯**            *maxi-x*
         **buy-B.SG-TR-PTCP-AOR=ADD** price.OBL-CONT
         *teg-b-i-r-as.*
         settle_with-**M.PL**-TR-IMPF-1SG.ERG
         'I settled on a price with the horse seller and the horse buyer.'
                                                        (KK008-1573)

      b. *qe$^n$, moħ-e* **ʒog=ae̯**    **nax=ae̯**      *d-ag-in=c,*           [...].
         then, how-REL **herd(J)=ADD** **people(D)=ADD** D-see-AOR=SUBORD
         'Then, as it saw the herd and the people, [...].'   (MM411-1.24)

      c. *ta$^n$*    *ma*  **adam=ae̯,**   **ev=ae̯,**   *ev-e-$^n$*
         alongside CONTR **Adam(M)=ADD** **Eva(F)=ADD** Eva-OBL-GEN
         **vašo=ae̯,**        *leŏ, badrulob-e=doli$^n$*    *čhan-ǧ*
         **brother(M)=ADD** Leo childhood-OBL=after one.OBL-TRANS
         *d-aq-l-ar.*
         **D**-grow_up-INTR-IMPF
         'Meanwhile, Adam, Eva, and Eva's brother Leo grew up together.'
                                                        (MM414-1.13)

d. *o    gutan=aě,    ħara=aě    ħen=i    d-ejł-nor?*
DIST plough(J)=ADD mill(J)=ADD 2SG.GEN=Q D-appear-NW.REM
'That plough and that mill, are they yours?' [Lit. 'do they apparently
appear to be yours?']                                    (MM406-1.27)

## 3.7 Other noun phrases

Noun phrases can also be headed by personal, demonstrative, or reflexive pro-
nouns. Additionally, noun phrases can appear without a head, where the case
marking attaches directly to the Oblique stem of the adjective, participle or nu-
meral.

### 3.7.1 Personal pronouns

Apart from the Ergative, personal pronouns take the same case endings as nouns.
They can take all grammatical cases, except the Instrumental, and can take all
spatial cases except the IN-series. The AD-series is the most common spatial case
with pronouns. Additionally, plural pronouns can take the INTER-series of spa-
tial cases, with the meaning 'among'. See Section 3.3.1 for the functional mean-
ing of each case form. In contrast to the nominal domain, the Dative case *-n*
does nasalise the preceding vowel in all personal pronouns except the 1st per-
son plural inclusive. Table 3.24 shows the personal pronouns in their underlying
morphological form. Of the spatial cases, only the most frequently attested are
given.

### 3.7.2 Demonstrative pronouns

Demonstratives used as pronouns can take all case forms. Demonstratives in
the singular referring to humans take the Ergative ending *-s*, those referring to
non-humans take *-v*. Plural demonstratives in the Ergative are equivalent to the
Oblique plural stem.

The Tsova-Tush distal demonstrative pronoun can function as a deictically
neutral third person personal pronoun, as in (60a,b).

(60)    a. *qe$^n$ saxił-uš    mič-ax    j-ax-e$^n$         o.*
then dawn-SIMUL where-INDF F.SG-go.PFV-AOR DIST
'Then, at daybreak, she went out somewhere.'              (E179-100)

Table 3.24: Inflection of the personal pronouns

|  | 1sg | 2sg | 1pl.excl | 1pl.incl | 2pl |
|---|---|---|---|---|---|
| Nominative | so | ħo | txo | vej | šu |
| Ergative | as | aħ | atx | vej | ejš |
| Genitive | sen | ħen | txen | vej-n | šun |
| Dative | son | ħon | txon | vej-n(i) | šun |
| Allative | so-go | ħo-go | txo-go | vej-go | šu-go |
| Adessive | so-go-ħ | ħo-go-ħ | txo-go-ħ | vej-go-ħ | šu-go-ħ |
| Adablative | so-go-ren | ħo-go-ren | txo-go-ren | vej-go-ren | šu-go-ren |
| Interlative |  |  | txo-lo | vej-lo | šu-lo |
| Interessive |  |  | txo-lo-ħ | vej-lo-ħ | šu-lo-ħ |
| Interablative |  |  | txo-lo-ren | vej-lo-ren | šu-lo-ren |
| Contact | so-x | ħo-x | txo-x | vej-x | šu-x |
| Translative | so-ğ | ħo-ğ | txo-ğ | vej-ğ | šu-ğ |
| Apudessive | so-cin | ħo-cin | txo-cin | vej-cin | šu-cin |

Table 3.25: Inflection of the demonstrative pronouns

|  | prox.sg | med.sg | dist.sg | prox.pl | med.pl | dist.pl |
|---|---|---|---|---|---|---|
| Nominative | e | is | o | ebi | ipsi | obi |
| Ergative | equ-s, -v | icxu-s, -v | oqu-s, -v | eqar | icxar | oqar |
| Contact | equ-x | icxu-x | oqu-x | eqar-x | icxar-x | oqar-x |
| Genitive | equi-n | icxui-n | oqui-n | eqrin | icxrin | oqrin |
| Other cases | equi- | icxui- | oqui- | eqar- | icxar- | oqar- |

b. **o**   ma    j-ux      j-erc'-iⁿ       šer      maxk'ar-n daħ
   DIST CONTR F.SG-back F.SG-turn-AOR REFL.POSS girl.PL-DAT PV
   *j-ax-en=e.*
   F.SG-go-AOR=and
   'She, however, returned to her girls.'                 (E179-124.1)

Modern Georgian shows a similar three-way deictic distinction in demonstratives: we find proximal *es*, medial *eg* and distal *is* (for a detailed account, see Martirosovi 1964). The same configuration is already attested in Old Georgian, where we find the pronouns *ese, ege, igi*, respectively (*isi* being an alternative variant to *igi* found from the 10th century onward (Gippert forthcoming)). Whereas in Old Georgian, any of the three demonstrative could function as a 3rd person pronoun (Gippert forthcoming), in Modern Georgian, the distal demonstrative *is* is used as the default 3rd person pronoun (the medial and proximal are only used when multiple 3rd person entities need to be distinguished deictically) (Fähnrich 2012: 599). See Example (61).

(61)   Standard Modern Georgian
       *magram gana parnaoz-i    ak-amde   tvaltmakcobda?    ara, **is***
       but      Q    Parnaoz-NOM here-TERM s/he_was_deceptive no,  DIST
       *ak-amde    ibrzoda.*
       here-TERM s/he_battled
       'But was Parnaoz really deceitful until now? No, he fought before.'
                                                           (GNC: O. Chiladze)

The other Nakh languages, Chechen and Ingush, also feature a three-way deictic distinction in demonstratives. In these languages, however, the demonstrative pronoun *iz/iz*, which is cognate with the Tsova-Tush medial, functions as a personal pronoun (Nichols 2011: 174, 179, 1994a: 34), see Example (62).

(62)   Ingush
       *Qoana     ħo   v-ol-ča        qi      juxa  v-oağ-arg*
       tomorrow 2SG M.SG-be.PTCP-OBL any_more again M.SG-come-FUT
       *v-ā-c     **iz**.*
       M.SG-be-NEG 3SG
       'He won't come back to your place again tomorrow.'     (Dumézil 1936)

It is therefore likely that Tsova-Tush developed the third person pronoun function of the distal demonstrative under the influence of Georgian. This must have

happened after Georgian itself grammaticalised the distal demonstrative as a default 3rd person pronoun, which presumably happened in the modern Georgian period. In all Tsova-Tush sources, including the ones from the 19th century, the distal demonstrative is used as a 3rd person pronoun.

Demonstrative pronouns can also be used in a resumptive function, as in (63), where the relative clause between square brackets is resumed by the distal demonstrative *o*. See Section 6.3 for relative clauses.

(63)  [ *ħan-e*      *d-ʕev-in=c*      *se$^n$*      *mamal* ] ***o***   *l-iba-t*
      who.ERG-REL D-kill-AOR=SUBORD 1SG.GEN rooster   DIST give-IMP-PL
      *son=en.*
      1SG.DAT=QUOT
      '"Who(ever) killed my rooster, let them give **it** to me."'          (E153-22)

### 3.7.3 Negative pronouns

Noun phrases can also be headed by negative pronouns, as described by Anker (forthcoming), Mikeladze (2011: 202). The negative pronouns are historically derived from negated indefinite pronouns: *comena* 'nobody' (< *co+men+a* NEG+ 'somebody' + EMPH), Oblique form *coħan*<CASE>*a*, and *com* 'nothing' (< *co+wum* NEG + 'something'), Oblique form *cost'en*<CASE>*a.*

The most common way of forming a clause with a negative pronoun is in an otherwise positive clause, as in (64a,b).

(64)  a.  *isev*   ***comena*** *d-ec-er*      *d-aʔ-it-a$^n$*      *oqu-s.*
          there.LAT **nobody**  D-must-IMPF D-come-CAUS-INF DIST.OBL-ERG
          'She wasn't allowed to let anybody enter there.'          (E181-143)

      b.  ***coħan<n>a***      *xajc'-nor*      *txe*      *pħarči-$^n$*      *ax-ar.*
          **nobody.OBL<DAT>** hear-NW.REM 1PL.GEN.OBL dog.PL-GEN bark-VN
          'Nobody heard our dog's barking.'   (Mikeladze 2011: 202, taken from
          Anker (forthcoming), glossing is mine)

According to Mikeladze (2011: 202), the construction in (64a,b) represents a structural copy from Georgian, see e.g. Example (65).

(65)  Modern Georgian
      *mis-i*      *xma* ***aravis*** *gaegona.*
      3SG.POSS-AGR voice **nobody** s/he_heard_it
      'No one heard her voice.'          (GNC: Ch. Amirejibi)

In Georgian, a clausal negator can also occur in combination with a negative pronoun (see Example (66)), a construction which is also copied in Tsova-Tush, see (67).

(66)   Modern Georgian
       *maga-s*       ***aravin  ar***   *ipikrebda.*
       MED.OBL-DAT **nobody NEG** s/he_would_think_it
       'Nobody would think that.'                          (GNC: I. Chavchavadze)

(67)   a.  *oq*         *deni=doli$^n$*     *o*    *st'ak' din*  ***cohan<n>a***   ***co***
           DIST.OBL day.OBL=after DIST man   alive **nobody<DAT> NEG**
           *v-ag-in-v-a.*
           M.SG-see-PTCP.PST-M.SG-be
           'From that day on nobody saw that man alive.'         (E113-119)

       b.  ***cohan<n>a***        ***co*** *xajc'-nor*     *txe*        *pharči-$^n$*
           **nobody.OBL<DAT> NEG** hear-NW.REM 1PL.GEN.OBL dog.PL-GEN
           *ax-ar.*
           bark-VN
           'Nobody heard our dog's barking.'     (Mikeladze 2011: 202, taken from
           Anker (forthcoming), glossing is mine)

According to Mikeladze (2011: 202), the original Tsova-Tush pattern consists of an indefinite pronoun plus clausal negation, see (68a,b), as the same construction is also found in the other Nakh languages, such as Ingush (69).

(68)   a.  ***co*** *xaʔ-it-r-as*           ***hame-g=ē...***
           **NEG** hear-CAUS-IMPF-1SG.ERG **somebody-ALL=and**
           'I didn't inform anybody.'                          (E169-12)

       b.  ***hama-s***     ***co*** *ał-in-d-a*              - "..."
           **somebody-ERG NEG** say.PFV-PTCP.PST-D-be
           'Nobody said: "..."'                               (E307-40)

       c.  ***hame-n***       ***co*** *xajc'-nor*     *txe*        *pharči-$^n$*     *ax-ar.*
           **somebody-DAT NEG** hear-NW.REM 1PL.GEN.OBL dog.PL-GEN bark-VN
           'Nobody heard our dog's barking.'     (Mikeladze 2011: 202, taken from
           Anker (forthcoming), glossing is mine)

(69)   Ingush
       *taxan balxa*   ***sag***   ***ha-v-e-nʒar.***
       today work.LAT **person PV-M.SG-come-NEG.PST**
       'Nobody came to work today.'                          (Nichols 2011: 696)

Clausal negation in Tsova-Tush remains the same throughout the historical stages: the negator *co* is positioned directly before the finite verb (*ma* for imperatives). In the 19th-century Tsova-Tush sources, none of the three negative constructions (negative pronoun, negative pronoun with clausal negation, indefinite pronoun with clausal negation) are found, probably due to the small corpus sizes. In the 20th-century sources (KK, YD), we find 50 instances of a construction with a negative pronoun as in Example (64), and 8 instances of a negative pronoun with an additional clausal negator *co*. No examples of the clausal negator with an indefinite pronoun, like in Example (68), were found. In contemporary Tsova-Tush, we also find constructions with a negative pronoun, approximately 50% with clausal negation, 50% without. Only extremely rarely do we find the supposedly 'old' construction with an indefinite pronoun and clausal negation: in fact, the examples in (68) might be the only ones. Still, based on our evidence from the other Nakh languages, this construction can indeed be considered the original one.

### 3.7.4 Headless noun phrases

Noun phrases can appear without a head noun, where any case marking attaches directly to the Oblique stem of the modifier. This Oblique stem is formed by suffixing the Oblique marker *-čo* to the base stem. The Nominative plural is formed with the productive marker *-i*, whereas the Oblique plural is marked by *-ši*, where the *i* is dropped, triggering umlaut on the preceding vowel, see Table 3.26. Note that the Dative does not trigger umlaut as it does on nouns (see Section 3.3.2). At least two nouns, *pst'uinŏ* 'woman' (Oblique stem *pst'uinčo-*) and *želre$^n$* 'sheep' (Oblique stem *želrečo-*) form their Oblique singular cases using the suffix -čo.[32]

Table 3.26: Inflection of substantivised modifiers

|  | SG | PL |
|---|---|---|
| Nominative | -∅ | -i |
| Ergative | -čo-v | -čui-š-v |
| Dative | -čo-n | -čui-š-n |
| Other cases | -čo- | -čui-š- |

Modifiers that can appear without a head include all those that, when used attributively, display a nominative-Oblique distinction using the Oblique marker

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[32]Compare *pst'u* 'wife' and *že* 'sheep' (collective), whence *že-lo-ren* 'from among the sheep'.

-*čo* (see Section 3.5.2), i.e. adjectives (70a), ordinal numerals (70b)[33] and participles (70c). See Section 6.3.1 for noun phrases with participial relative clauses.

(70)   a.   *ğosxet-iⁿ*        *zorajš **q'ajn-čo-n**.*
           be_happy-AOR  very   **old-OBL-DAT**
           'The old [person] was very happy.'                                 (EK053-2.7)

     b.   *latt-iⁿ*        *ix-aⁿ*      *cħa **ši-lǧe-čo-x***        *v-ac'-uš.*
           stand-AOR  go-INF  one **two-ORD-OBL-CONT** M.SG-follow-SIMUL
           'They stood up to go, the one following the other.'
                                                                                  (AS003-1.10)

     c.   *oqui-ⁿ*        *j-aqqui-čŏ važk'acb-e-ⁿ*        *ambuj=a   j-eʔ-eⁿ*
           DIST.OBL-GEN J-big-OBL  bravery-OBL-GEN story=ADD J-bring-AOR
           *b-ux*       ***b-erc'-in-čui-š-v**.*
           M.PL-back **M.PL-turn-PTCP.AOR-OBL-PL-ERG**
           'Those that returned brought the story of his great bravery.'
                                                                                  (MM117-2.20)

Furthermore, some modifiers that do not feature the Oblique suffix -*čo* when used attributively, do so when substantivised, such as the quantifier *duq* (71a–71b), and Genitive personal pronouns (71c–71d).

(71)   a.   *dasavlet-e-ħ=a*        ***duq-i**      b-a-r.*
           west-OBL-ESS=ADD **many-PL** M.PL-be-IMPF
           'In the west, there were many of them, too.'                    (E146-37)

     b.   *at-c'iⁿ*        *bo   **duq-čuj-š-v***        *maq-ciⁿ*        *čamli-š*
           pound-PRIV garlic **many-OBL-PL-ERG** bread-APUDESS tasty-ADV
           *leħ-ŏ.*
           bring-NPST
           'Many [people] put raw garlic with their bread for the taste.'
                                                                                  (KK001-0057)

     c.   *du-j*        *xaxk'-inˇe*      ***txe-čo-n***        *ħatxě   co*
           horse.OBL-PL gallop-AOR.SEQ **1PL.GEN-OBL-DAT** in_front NEG
           *b-aɬ-mak'-iⁿ.*
           B.SG-go_out-POT-AOR
           'The horses were galloping, and ours couldn't go in front.'
                                                                                  (KK008-1735)

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[33]Original orthography of (70b): laťi ixa cħa šilǧeċox waçuṡ.

d. *bak'*    *ħal b-ust'-b-al-ině,*    ***šu-čo-x***
paddock PV B.SG-measure-B.SG-INTR-AOR.SEQ **2PL.GEN-OBL-CONT**
*ešuš-x=k'aʔ*    *b-ał-eⁿ.*
less-CMP=a_little B.SG-go_out-AOR
'The paddock was measured, and it turned out [to be] a little smaller
than yours.'                                                    (KK036-5563)

No productive way of substantivising Tsova-Tush nouns in the Genitive or in
a spatial case have been attested. Tsova-Tush features many nominalising deriva-
tional suffixes, which fall beyond the scope of this work.

## 3.8 Summary

In terms of basic description, this chapter has provided new insight into the fol-
lowing domains:

1. Most spatial cases (all except the APUD-series) involve a two-slot system,
   very similar to a typical Daghestanian system of spatial cases, see Sec-
   tion 3.3.3.

2. Although many details remain to be investigated, an attempt at distinguish-
   ing different nominal declension classes has been made, see Section 3.3.4.

3. Although much remains unclear, a modification construction is investi-
   gated where an endingless noun in the Oblique form can modify another
   noun, see Section 3.6.2.

In terms of structural language contact, this chapter has shown the follow-
ing parallels between Tsova-Tush and Georgian, which are most likely to be at-
tributed to influence of the latter on the former. Note that in the case of the
first three features, the native Tsova-Tush equivalent is maintained alongside
the contact-induced innovation.

1. In a significant number of instances of nouns in the Essive, Interessive,
   Inessive and Superessive, these Essive cases are used with a lative function.
   This use is not attested in other Nakh languages, but is regular in Georgian,
   where the lative-essive distinction is not overtly expressed on nouns at all,
   see Section 3.3.3

2. Alongside its original synthetic variant, Tsova-Tush features an analytic construction to express the comparative of adjectives. Not only is this analytic construction absent in Ingush and Chechen and obligatory in Georgian, the exact comparative morph *upro* is borrowed from Georgian into Tsova-Tush. Furthermore, although the superlative construction in Chechen and Ingush is also analytic, the specific morph used to express the superlative in Tsova-Tush, *ħamaxeʔ*, is a calque from Georgian *q'velaze*, see Section 3.4.4.

3. Tsova-Tush numerals higher than one hundred are usually borrowed from Georgian, see Section 3.4.2.

4. As opposed to the medial demonstrative in Chechen and Ingush, the Tsova-Tush distal demonstrative *o* is used as a deictically neutral third person personal pronoun. This is exactly parallel to its Georgian counterpart *is*, see Section 3.7.2.

5. Phrases with a negative pronoun are formed in the same way as their Georgian counterparts, as opposed to the original construction (found in the other Nakh languages), consisting of an indefinite pronoun and clausal negation, see Section 3.7.3.

In terms of loanword adaptation, this chapter has shown that:

1. Georgian nouns are borrowed into the consonant declension class, except words ending in -*u* or -*o*, which are borrowed into the *u*-class and *o*-class respectively, see Section 3.3.5.1.

2. The gender of loanwords is determined by the same interplay of phonological and semantic criteria that assign gender to native words, see Section 3.3.5.2 and Wichers Schreur 2021.

3. Adjectives are borrowed frequently, and do not show case agreement as native adjectives do, see Section 3.4.5.

4. A set of older nominal loans are borrowed into the C/*u*-declension (Section 3.3.5.1), and a set of older borrowed adjectives receive a Tsova-Tush adjective ending -*on*, integrating them more closely into the native grammar, as they do receive the Oblique marker -*čo* to signal case agreement (Section 3.4.5).

# 4 Verbal inflection

## 4.1 Introduction

In this chapter, the inflectional categories of Tsova-Tush verbs will be discussed. Tsova-Tush finite verb forms inflect for gender, person, number, tense, aspect, mood and evidentiality.[1] All verbs inflect for TAME and person, but only different subsets of verbs allow gender and number. Additionally, due to the fact that some verbs lack the distinction between a Perfective and an Imperfective stem (see Section 4.3), these verbs thereby also lack certain tense and aspect distinctions. The categories mentioned above can be expressed by various morphological means. Gender is expressed by prefixes (Section 4.2), the aspect of the root is expressed by means of infixing and ablaut (Section 4.3), while TAME categories (Section 4.5) and person marking (Section 4.8) are all marked by suffixes. Number (more specifically, argument plurality), on the other hand, is marked (1) indirectly through gender marking, but only for the M, F and B genders; (2) indirectly through person marking, but only in the 1st and 2nd person; (3) directly through stem suppletion (see Section 4.4), but only in a handful of verbs; and (4) directly through a dedicated plural suffix, but only in imperative moods (see Section 4.9). Although preverbs often occur before the verb root, they are not considered affixes since the negative particle *co* can intervene, and since preverbs can sometimes take sentence-final position.

Two features are discussed in the context of contact-induced language change: the development of subject agreement suffixes (Section 4.8), and the borrowing of a suffix *-t* signalling the plurality of a speech act participant subject (Section 4.9).

Table 4.1 gives all verbal affix slots of the Tsova-Tush simplex finite verb (for complex verbs, see Section 5.4.1).

---

[1] In this work, voice and valency operations are considered to be derivational (see Section 5).

Table 4.1: Verb slots

| −2 | −1 | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|
| Preverb= | Gender- | Stem | -TAME | -PL | -SUBORD/AFF | -Subj.Pers. | =Obj.Pers |
| | | | | | -Q | | |
| | | | | | -SEQ | | |

−2: A preverb can be cliticised to the root to signal direction, aspect, lexical semantics or telicity (Holisky & Gagua 1994: 184).[2]

−1: Four possible gender prefixes can refer to 10 possible gender-number values and agree with the Nominative argument of a two-place verb, or with the sole argument of a one-place verb (be it in the Nominative or Ergative case). See Section 4.2.

0: The stem[3] is used to mark a two-way aspect distinction (used to distinguish the Present from the Future, or single-action from pluractional verbs) in approximately 160 verbs (Section 4.3). In 15 verbs, stem suppletion marks the plurality of one of the verbal arguments (Section 4.4).

1: Tsova-Tush distinguishes three tense values (past, present, future), two aspect values (perfective vs. imperfective), five moods (Indicative/neutral, Subjunctive, Imperative, Conditional, Iamitive) and two evidential values (Witnessed/neutral vs. Non-Witnessed). See Section 4.5.

2: In some verb forms, a suffix *-t* can mark argument plurality (Section 4.9).

3: The suffix *-ici* can be used to signal that the verb is part of a subordinate clause (Section 6), and is also, though rarely, used in main clauses to mark the Affirmative.[4] The suffix *-i* is a question suffix.[5] The suffix *-e* is a Sequential suffix, discussed in Section 6.6.

---

[2]An investigation into the precise function of the preverbs, and their comparison with Georgian and Vainakh preverbs, remains to be carried out.

[3]In Caucasian linguistics, the term "root" is often used to refer to the monoconsonantal East Caucasian verb root. Hence, in this work, the term "stem" is used. (The Tsova-Tush inherited verbal stems often consist of a root plus a grammaticalised Proto-East-Caucasian preverb.)

[4]Which is hitherto poorly understood and will not be pursued in this work.

[5]This is most often treated as a clitic, since it attaches to any part of speech. It will not be discussed further in this work.

4:  Speech act participant (i.e. first or second person) subject indices are suffixed
     to the Tsova-Tush verb and are marked for case (Nominative or Ergative),
     see Section 4.8.

5:  Speech act participant object pronouns can be cliticised to the verb form and
     are marked for case (Nominative, Dative, Contact or Allative).

## 4.2 Gender

Tsova-Tush, like its immediate Nakh relatives Chechen and Ingush, is a language with grammatical gender, sometimes called noun class (Gagua 1952). All East Caucasian languages except for three Lezgic languages (Udi, Lezgian and Aghul) have gender, while the feature is completely absent in Georgian and its Kartvelian sister languages. A gender is defined as a category of nouns, whose membership is reflected by agreement markers attached to other sentence elements, called agreement targets (Corbett 1991: 146–147). In Tsova-Tush, approximately one third of all underived simple verbs inflect for gender.[6] Similarly to some adjectives (see Section 3.4.4), these verbs take one of four gender prefixes to agree with a noun phrase in the same clause. For verbs, this noun phrase is the subject of an intransitive verb, or the object of a transitive verb, typically marked by the Nominative case (but see the discussion on page 125 for exceptions). Three of these genders (M, F, B) require different prefixes for singular and plural, which leads some scholars to describe this type of agreement as gender-number agreement. In much work on Nakh languages, apart from M for masculine and F for feminine, the labels for the genders are based on their marker in the singular. This contrasts with the tradition of labeling gender in Daghestanian languages, which uses Roman numerals (where the same Roman numeral can refer to a different set of agreement affixes in different languages). The five genders and the prefixes they require on the agreement target are listed in Table 4.2, along with the corresponding glosses used in this work. Some 30 nouns show one of three agreement patterns that differ from those of any of these five genders (see Holisky & Gagua 1994: 163, Corbett 1991: 170–172, Wichers Schreur 2021).

   Of all underived verbs, only those that begin with a vowel or ʕ can agree in gender, but not every verb that meets these conditions shows gender marking (Hauk & Harris forthcoming, Harris 2009: 278). It is impossible to predict which verbs feature gender marking, as can be seen from Table 4.3, taken from Hauk & Harris (forthcoming).

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[6]One preverb, one underived numeral, one underived quantifier, and 10 underived adjectives also inflect for gender (see Section 3.5).

Table 4.2: Tsova-Tush genders

| Gender | SG | PL | Glossing | |
|--------|-----|-----|---------|---------|
| M | *v-* | *b-* | M.SG | M.PL |
| F | *j-* | *d-* | F.SG | F.PL |
| B | *b-* | *d-* | B.SG | B.PL |
| D | *d-* | *d-* | D | |
| J | *j-* | *j-* | J | |

Table 4.3: Tsova-Tush verbs with and without gender marking

| | | | |
|---|---|---|---|
| *d-ałar* | 'give' | *ałar* | 'say' |
| *d-ettar* | 'pour' | *ettar* | 'stand, stay' |
| *d-oc'ar* | 'tie' | *oc'ar* | 'pull, move' |

In Example (1), the verb forms *bar* 'was' and *bałi$^n$* 'gave away' agree in gender with the Nominative noun *pst'u* 'ox', which is gender B, and therefore show a *b-* in their designated prefix slots. Note that *pst'u* 'ox' functions as the subject of the intransitive verb 'be' and as the object of the transitive verb 'give'.

(1)  *cħa b-aqqo$^n$ pst'u **b-a-r**,    daħ=a    **b-ał-i$^n$**.*
     one B.SG-big ox(B) **B.SG**-be-IMPF away=ADD **B.SG**-give.PFV-AOR
     'There was one big ox and they gave it away.'          (E153-23)

Tsova-Tush verb forms can contain multiple gender markers, all cross-referencing the same argument, due to (1) the fact that evidentiality is marked by a grammaticalised auxiliary verb *d-a* 'be' (see Section 4.7), (2) the fact that Tsova-Tush features valency derivation by light verbs inflecting for gender (see Section 5), and (3) the fact that Tsova-Tush features some verbal compounds consisting of two gender-inflecting verbs (see Example (2)[7]). This phenomenon, called multiple or exuberant exponence, is described extensively by Harris (2008a, 2009) and Harris & Samuel (2011).

(2)  *osi-ħ    **d-av-d-ak'-d-i-e$^n$**    šari$^n$    koneb,*
     there-ESS **D-lose-D-burn-D-TR-AOR** REFL.POSS property(D)
     *v-ax-eš    moiš.*
     M.SG-live-SIMUL badly
     'There, he squandered his fortune, living badly.'       (AS006-1.3)

Example (3) shows how the verb *d-axar* 'leave' interacts with nouns having different genders.

---

[7]Original orthography of (2): osiḥ dawdakdie šari ḱoneb, waxeš moiš.

(3)  a. *vašŏ*       *v-ax-e$^n$*     / *važar*    *b-ax-e$^n$*
      brother.NOM M.SG-leave-AOR  brother.NOM.PL M.PL-leave-AOR

    b. *jašŏ*    *j-ax-e$^n$*    / *jažar*    *d-ax-e$^n$*
      sister.NOM F.SG-leave-AOR  sister.NOM.PL F.PL-leave-AOR

    c. *pħu*    *b-ax-e$^n$*    / *pħarč*    *d-ax-e$^n$*
      dog.NOM B.SG-leave-AOR  dog.PL.NOM B.PL-leave-AOR

    d. *bader*    *d-ax-e$^n$*    / *badr-i*    *d-ax-e$^n$*
      child.NOM D-leave-AOR  child-PL.NOM D-leave-AOR

    e. *sov*    *j-ax-e$^n$*    / *sov-i*    *j-ax-e$^n$*
      vulture.NOM J-leave-AOR  vulture-PL.NOM J-leave-AOR
      'The brother(s)/sister(s)/dog(s)/child/children/vulture(s) left.
                        (adapted from Holisky & Gagua (1994: 177))

For gender assignment, i.e. the rules that dictate which nouns belong to which gender, and for the adaptation of Georgian loanwords using these rules, see Wichers Schreur (2021) and Section 3.3.5.2.

As mentioned, the gender-inflecting verbs mark the gender of the noun that functions as the subject of an intransitive verb or the object of a transitive verb, which, Tsova-Tush being a language with ergative alignment, is usually marked by the Nominative case. However, as shown by Holisky (1987), intransitive subjects of the first and second person can be marked by the Ergative case. This occurs in one of the following conditions:

1. The intransitive verb belongs to a class that allows variable marking in first and second person subjects, where an Ergative subject signals a greater amount of volition and agency than a Nominative subject. Depending on the semantics of the verb, the volitional (Ergative) or the less volitional (Nominative) subject is more common, or both are attested in equal measure. These verbs include: some verbs of communication (mostly ERG); some verbs of motion (mostly ERG); verbs of falling, rolling, slipping; changes of state; locative statives, and others.[8] See Example (4a), where the verb *d-erc'ar* 'turn' takes an Ergative first person singular subject. Or:

2. The intransitive verb belongs to a class that requires its subject to be marked by the Ergative. These verbs include all verbs of motion or communication (other than those that show variable marking), as well as approximately 28 other verbs. See Example (4b).

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[8]The full list can be found as an appendix to Holisky (1987).

Additionally, Holisky has identified 6 verbs that show morphological similarities with transitive verbs and require Ergative subjects in all three persons. They exclusively occur without a direct object, and are therefore treated syntactically as intransitives by Holisky (see Example (4c), and see Section 5.2.1).

Thus, these two categories of verbs allow (in the case of variable subject marking) or require (in the case of obligatory Ergative subject marking) gender marking to agree with a verbal argument marked with the Ergative case.

(4)  a.  *oqar-n*      **v-irc'-n-as**      *v-ux=ajnŏ.*
         DIST.PL.OBL-DAT **M.SG-turn-AOR-1SG.ERG** M.SG-back=QUOT
         'I returned for them.' (i.e. 'I chose to return for them.')      (EK005-4.7)

     b.  *inc  širk-ileⁿ*      *v-aǧ-o-s,*      **v-uit'-as**
         now Shiraki-ELAT M.SG-come-NPST-1SG.ERG **M.SG-go(NPST)-1SG.ERG**
         *tinit      lam-na-x.*
         Tianet.ILL mountain-OBL.PL-CONT
         'Now I am coming from Shiraki, and I'm going to the Tianeti mountains.'      (E040-20)

     c.  *šin      šar-e      k'olekt'iv-e      **mušeba(d)-d-i-n-as***
         two.OBL year-OBL(ESS) collective-OBL(ESS) **work-D-TR-AOR-1SG.ERG**
         *[...] osi-ħ=a      moc'inav j-a-ra-s.*
             there-ESS=ADD leader    F.SG-be-IMPF-1SG.NOM
         'I worked in a collective for two years, I was a leader there too.'      (E116-17)

In Tsova-Tush, the D gender is used in cases where so-called neutral gender agreement is required (see Corbett 1991: 205). That is, when an agreement target is 'forced' to agree with an item that lacks gender, or that is unspecified in terms of gender, a default gender D is used. This is seen in three scenarios:

1.  The speaker does not know the gender of a human referent, or chooses to leave it unspecified. In Example (5a), the headless modifier *d-aqq-čo-v* 'big' refers to any member of the Tsova-Tush clan, regardless of gender, and therefore marks the neutral gender D. The verb *do* 'calls' agrees in gender with the Nominative argument *ganq'op* 'relative', which is a human noun, which would trigger M or F agreement. The speaker, however, chooses to leave the gender unspecified, triggering D agreement.

2.  A word agrees with two or more nouns that have different genders (5b); or

3.  Agreement is with a clause (5c).[9]

---

[9]Original orthography of (5c): Dagi cruen, me chain uirwas dakardie itt baḥ okrui.

(5)  a.  *bac-bi-v*              *cħajnĭ*  *gor-le-čui-š-v*        *- st'ak'o-v,*
     Tsova_Tush-PL-ERG one.OBL clan-ADJZ-OBL-PL-ERG   man.OBL-ERG
     *pst'uin-čo-v,*     **d**-*aqq-čo-v,*   *k'ac'k'-čo-v*  *vašba-x*
     woman-OBL-ERG **D**-big-OBL-ERG small-OBL-ERG RECP-CONT
     *ganq'op*        **d**-∅-*o.*
     relative(M/F) **D**-call-NPST
     'The Tsova-Tush, [being all] of one clan, [whether they be] man,
     woman, old, young, call each other relatives.'          (KK003-0693)

  b.  *taⁿ*        *ma*   **adam**=**aě**,    **ev**=**aě**,    *ev-e-ⁿ*
     alongside CONTR **Adam(M)=ADD Eva(F)=ADD** Eva-OBL-GEN
     **vašo**=**aě**,       *leŏ,* *badrulob-e=doliⁿ*       *cħan-ğ*
     **brother(M)=ADD** Leo childhood-OBL(ESS)=after one.OBL-TRANS
     **d**-*aq-l-ar.*
     **D**-grow_up-INTR-IMPF
     'Meanwhile, Adam, Eva, and Eva's brother Leo grew up together.'
                                                             (MM414-1.13)

  c.  **d**-*ag-iⁿ*    *cru-e-n,*      [ *me*   *cħajn*   *uirv-a-s*
     **D**-see-AOR rogue-OBL-DAT SUBORD one.OBL Jew-OBL-ERG
     *dak'ar-d-i-eⁿ*    *it't' baħ*       *okrui-ⁿ* ].
     count-D-TR-AOR ten 100_pieces gold-GEN
     'The rogue saw that a Jewish man was counting a thousand gold
     pieces.'                                               (AS008-11.3)

## 4.3 Aspect of the verbal stem

Approximately 160 verb stems (one third of verbal stems, excluding derivations
and loans) appear in two different variants, traditionally labeled as Perfective
and Imperfective stems (Desheriev 1953: 149, Gagua 1962, Holisky & Gagua 1994:
179). Imperfective stems are generally derived historically from Perfective ones,
although no productive process is observed. The distinction is made through
various morphological means:

1.  Ablaut: The vowel in the Perfective stem changes to *-e-* to form the Imper-
    fective stem.

    • 78 verbs: *a - e*

        *maɬar* (PFV) – *meɬar* (IPFV) 'drink'

- 36 verbs: *o - e*

    *xop't'ar* (PFV) – *xep't'ar* (IPFV) 'suck, slurp'

- 4 verbs: *i - e*

    *lič'ar* (PFV) – *leč'ar* (IPFV) 'peel, scrape'

- 17 verbs: vowel (14 of which are *o*) - *e*. Additionally, an infix *-b-* is added. The *-b-* infix only occurs before *c', s, ž, x, l*[10] and assimilates in voice and airstream mechanism to the following consonant.

    *tox-d-ar* (PFV) – *tepx-d-ar* (IPFV) 'strike'

    *d-ožar* (PFV) – *d-ebž-ar* (IPFV) 'fall'

    *d-oc'ar* (PFV) – *d-ep'c'-ar* (IPFV) 'tie up'

- 9 verbs: *a - e*. Additionally, the Imperfective stem is marked by a gender prefix (the reverse pattern compared to the verbs under point 2 below).

    *aħar* (PFV) – *d-eħar* (IPFV) 'steal'

    *ak'ar* (PFV) – *d-ek'ar* (IPFV) 'fall'

    *aqar* (PFV) – *d-eqar* (IPFV) 'pay for'

    *aq'ar* (PFV) – *d-eq'ar* (IPFV) 'divide'

    *axk'ar* (PFV) – *d-exk'ar* (IPFV) 'tie up'

2. Gender marking: The presence of a gender prefix marks the Perfective stem (the reverse pattern from the 9 verbs presented directly above).

    - 1 verb: Presence of gender marking marks Perfective. Additionally, the Imperfective is marked by an ablaut grade *-e-*.

        *d-at'ar* (PFV) - *et'ar* (IPFV) 'crack, break'

    - 2 verbs: Presence of gender marking marks Perfective. Additionally, the Perfective is marked by an ablaut grade *-e-* (the reverse of the general pattern shown under point 1).

        *d-ʕep'-d-ar* (PFV) - *ʕap'-d-ar* (IPFV) 'lock up'

        *d-ʕevar* (PFV) - *ʕavar* (IPFV) 'kill'

---

[10]Several other verbs (with a greater variety of root consonants) show a petrified infix *-b-* which has been spread to the Perfective stem, leaving only ablaut as a distinctive marker, e.g. *xop't'ar* (PFV) / *xep't'ar* (IPFV) 'suck, slurp'.

- 2 verbs: Presence of gender marking marks Perfective, replacing the initial consonant of the Perfective.

    *d-erc'ar* (PFV) - *ħerc'ar* (IPFV) 'turn, return'

    *d-ekar* (PFV) - *qekar* (IPFV) 'call'

- 2 verbs: Presence of gender marking marks Perfective, replacing the initial consonant of the Perfective. Additionally, the Imperfective root is marked by an *-e-* vowel.

    *d-ʕogar* (PFV) - *q'ʕegar* (IPFV) 'break'

    *d-ałar* (PFV) - *tełar* (IPFV) 'give'

3. Other pairs

    - 3 verbs: Irregular pairs

        *d-uq'ar* (PFV) - *ap'q'ar* (IPFV) 'drive into, stick into'

        *d-agar* (PFV) - *guar* (IPFV) 'see'

        *gu-d-aqar* (PFV) - *gu-d-axar* (IPFV) 'show'

    - 8 verbs: Suppletion

        *ałar* (PFV) - *lev-d-ar* (IPFV) 'say'

        *d-isar* (PFV) - *meq'ar* (IPFV) 'stay'

        *d-ʕaʔar* (PFV) - *ak'-d-ar* (IPFV) 'light, kindle'

        *qallar* (PFV) - *d-aq'ar* (IPFV) 'eat'

        *d-ettar* (PFV) - *d-iš-d-ar* (IPFV) 'hit, strike'

        *d-axar* (PFV) - *d-ot'ar* (IPFV) 'go'

        *d-aʔar* (PFV) - *d-ağar* (IPFV) 'come'

        *eqqar* (PFV) - *letxar* (IPFV) 'jump, leap, dance'

Verbs borrowed from Georgian can distinguish between Perfective and Imperfective stems using an inflectional pattern (the affixation of a preverb) that has been borrowed along with the lexical item (see Section 5.5 for more information on the adaptation of Georgian verbs). Which Georgian preverb is chosen is determined lexically. Hence, a fourth way of marking perfectivity can be identified. For more detail, see Section 5.5.

4. Preverbs (productive): Both Perfective and Imperfective members of a Georgian verb pair are borrowed.

> *agrilbad-d-ar* (PFV) - *grilbad-d-ar* (IPFV) 'cool'
>
> *dat'anžod-d-ar* (PFV) - *t'anžod-d-ar* (IPFV) 'torture'
>
> *gamarglod-d-ar* (PFV) - *marglod-d-ar* (IPFV) 'weed, hoe'
>
> *šerisxod-d-ar* (PFV) - *risxod-d-ar* (IPFV) 'invoke wrath on'
>
> *moc'amlod-d-ar* (PFV) - *c'amlod-d-ar* (IPFV) 'apply poison/pesticide on'

In some instances, the use of an additional Tsova-Tush preverb can be observed, such as in *daħ daxat'od-d-ar* (PFV) vs. *xat'od-d-ar* (IPFV) 'paint'. This use has been claimed to spread to native Tsova-Tush verbs (Tetradze 2017, who cites a single example: *ču ottar* (PFV) vs. *ettar* (IPFV) 'stand'). However, a purely locational function of the preverb cannot be excluded. Furthermore, the verbs that can occur with a Tsova-Tush preverb can do so with both the Perfective or Imperfective verb stem. The exact function of these preverbs (in terms of aspect, telicity, spatial direction, and lexical semantics) needs to be investigated separately, which falls beyond the scope of this work.

The distinction between the two verb stems serves multiple functions. The Present form of the verb is based on the Imperfective verb stem, whereas the Future is based on the Perfective stem (see Section 4.5 for the inflection of these forms). In the Aorist (the primary past tense), however, the perfectivity distinction is primarily one of pluractionality (Holisky & Gagua 1994, Holisky 1985, contrary to Gagua 1962, Schiefner 1859: 52); Aorist forms based on the Perfective stem denote single-action events, whereas those based on the Imperfective stem refer to multiple actions. See Section 4.5 for usage examples. Analyses of Chechen (Yu 2003) and Ingush (Nichols 2011: 313–318) provide comparative evidence for this verbal category. It is important to note that only approximately 160 verb stems, which constitute around a third of all underived verbs, make a Perfective-Imperfective distinction. This means that for the majority of verbs, pluractional semantics in the past, or the difference between present and future tense, is not expressed overtly.

## 4.4 Argument plurality

The category of plurality can be indicated indirectly by gender marking (in the M, F and B genders, see Section 4.2), by person marking (in the 1st and 2nd person, see Section 4.8), and directly by the suffix *-t* (in the imperative moods, see Section 4.5.2). Additionally, at least 15 verbs (counting valency derivations as different verbs, but not historically derived imperfectives) show a number distinction using stem suppletion (see Desheriev 1953: 150, Holisky & Gagua 1994: 178). As is clear from Table 4.4 (1), one recognisable pattern consists of replacing the root consonant with *-xk'-* (clearly an ancient root meaning 'move (PL)'). Other replacements of the root consonant (2), as well as ablaut (3) and suppletion (4), are observed.

Examples (6) and (7) illustrate the fact that different verbal stems are used depending on the number of the Nominative argument. Example (6) shows a Nominative object 'claw(s)', which triggers two distinct suppletive verbs 'put'.[11] Similarly, in (7), the verb 'come' shows a plural and a singular form, depending on the Nominative subject.

(6)  a.  *k'ot'i-v      daxk'i-n        mʕajrĭ **oll-b-i-eⁿ**.*
        cat.OBL-ERG mouse.OBL-DAT claw   **put.PFV.SG-B.SG-TR-AOR**
        'The cat puts its claw on the mouse.'                  (KK013-2885)

     b.  *k'ot'i-v      daxk'i-n        mʕar-elč **oxk'-j-i-eⁿ**.*
        cat.OBL-ERG mouse.OBL-DAT claw-PL  **put.PFV.PL-J-TR-AOR**
        'The cat puts its claws on the mouse.'                 (KK013-2885)

(7)  a.  *mercxlaʔu-i so    **d-axk'-eⁿ**        j-apxe-čŏ*
        swallow-PL hither **D-come.PFV.PL-AOR** J-warm-OBL
        *kveq'n-a-xiⁿ.*
        country-OBL.PL-APUDABL
        'The swallows are coming [back] from warm countries.'   (E024-6)

     b.  *qeⁿ  laqši-ǧ=da        cħa kuir  **d-aǧ-o=e**.*
        then high_up-TRANS=from one hawk **D-come.IPFV.SG-NPST**=and
        'Then a hawk comes down from high up.'                  (E179-36)

---

[11]Note that *mʕajrĭ* 'claw' is one of a small number of nouns that trigger an agreement pattern that does not fit any of the 5 genders: *b-* in singular, *j-* in plural.

Table 4.4: Tsova-Tush verbs with suppletive plural stems

| Singular | | Plural | | |
|---|---|---|---|---|
| **PFV** | **IPFV** | **PFV** | **IPFV** | |
| (1)  root *xk'* | | | | |
| d-illar | d-eblar | d-ixk'ar | d-exk'ar | 'put down, lay down' |
| d-ollar | d-eblar | d-oxk'ar | d-exk'ar | 'put, put inside' |
| ollar | eblar | oxk'ar | exk'ar | 'put, pour, skewer' |
| oll-d-ar | ebl-d-ar | oxk'-d-ar | exk'-d-ar | 'put on, set' |
| tillar | teblar | tixk'ar | texk'ar | 'stoke up (firewood)' |
| lallar | lellar | laxk'ar | lexk'ar | 'drive, herd'[a] |
| qollar | qeblar | qoxk'ar | qexk'ar | 'hang' (INTR) |
| qoll-d-ar | qebl-d-ar | qoxk'-d-ar | qexk'-d-ar | 'hang' (TR) |
| qoc'ar | qep'c'ar | qoxk'ar | qexk'ar | 'be hung up, be loaded' |
| qoc'-d-ar | qep'c'-d-ar | qoxk'-d-ar | qexk'-d-ar | 'pack, load, hang up' |
| d-aʔar | d-ağar[b] | d-axk'ar | d-exk'ar | 'come' |
| (2)  other roots | | | | |
| xaʔar | xeʔar | xabžar | xebžar | 'sit down' |
| xoʔ-d-ar | xeʔ-d-ar | xobžar | xebžar | 'squeeze in, find room' |
| ħač'ar | ħeč'ar | ħapsar | ħepsar | 'look to, look after' |
| (3)  ablaut | | | | |
| qosar | qepsar | qasar | qepsar | 'throw, shoot, hurl' |
| (4)  suppletion | | | | |
| eqqar | | letxar | | 'jump'[c] |

[a]Only found in Schiefner (1856: 53) and Desheriev (1953: 133), singular not known by contemporary speakers.

[b]also *d-eʔar*

[c]At this point it is not clear whether the pair *eqqar : letxar* exhibits a distinction in perfectivity (i.e. event plurality) or argument plurality, or both.

## 4.5 Synthetic TAME forms

The subsequent sections will give a form-to-function description of all finite synthetic (i.e. single-word) forms of Tsova-Tush verbs (see also Chrelashvili 1984, Holisky & Gagua 1994: 179–182). The following subsections will be divided by mood: Indicative (Section 4.5.1), Imperative (Section 4.5.2), Subjunctive (Section 4.5.3) and Iamitive (Section 4.5.5). Section 4.7 will provide a description of synthetic evidential forms. All Tsova-Tush finite verb forms are summarised in Appendix A, in Table A.1.

### 4.5.1 Indicative

Tsova-Tush exhibits four primary tenses, which are formed synthetically, are non-modal and are neutral in terms of evidentiality. They are the Non-Past (some verbs distinguish between a Present and a Future), the Imperfect, the Aorist, and the Remote Past, see Table 4.5.

Table 4.5: Tsova-Tush basic indicative finite verb forms

|  | Morphemes | Glossing | Surface form |
|---|---|---|---|
| Non-Past (Present) | *tet'-o* | cut.IPFV-NPST | *tet'ŏ* |
| Non-Past (Future) | *tit'-o* | cut.PFV-NPST | *tit'ŏ* |
| Imperfect | *tet'-ora* | cut.IPFV-IMPRF | *tet'or* |
|  | *tit'-ora* | cut.PFV-IMPRF | *tit'or* |
| Aorist | *tet'-in* | cut.IPFV-AOR | *tet'i$^n$* |
|  | *tit'-en* | cut.PFV-AOR | *tit'e$^n$* |
| Remote Past | *tet'-ira* | cut.IPFV-REM | *tet'ir* |
|  | *tit'-era* | cut.PFV-REM | *tit'er* |

#### 4.5.1.1 Present

The Tsova-Tush Present is formed by adding one of the five vowels to an Imperfective verbal stem (the vowel *a* is only used for the verb 'be' and the light verb which derives intransitives (see Section 5.4.2)). Which verb chooses which vowel is determined lexically. The vowels are glossed as NPST (Non-Past), since they are used to form the Future as well. Table 4.6 shows the formation of the Present (3rd person forms). Since the Non-Past vowels occur at the end of the word in 3rd person forms, regular vowel apocope and other phonological processes occur, for which see Section 2.3 and Outtier (1999).

Table 4.6: Tsova-Tush Present formation

| Morphemes | Glossing | Surface form |
|---|---|---|
| *d-∅-a* | D-be.IPFV-NPST[a] | *da* |
| *lel-e* | walk.IPFV-NPST | *lel* |
| *lev-i* | speak.IPFV-NPST | *liv* |
| *ix-o* | pass.IPFV-NPST | *ixŏ* |
| *d-ał-u* | D-appear.IPFV-NPST | *dejłŭ* |

[a]Throughout this work, the glossing *d-a* 'D-be' is used.

The Tsova-Tush Present can be used to signal both durative and punctual events, as well as refer to general truths, see Example (8).[12] In order to convey a habitual meaning, Tsova-Tush uses an auxiliary verb *latar* with an infinitive, not a simple Present. Note that many verbs do not distinguish between a Perfective and an Imperfective stem (see Section 4.3). For these verbs, the Present is homophonous with the Future.

(8)  *bned*      *ix-oš*         *lac'mar  ağ*   **d-ebž-ĕ.**
     epilepsy  come.IPFV-SIMUL patient  down  **D-fall.IPFV-NPST**
     'A patient is falling down as an epileptic fit comes to him/her.' (durative) or:
     'As an epileptic fit comes to him/her, the patient falls down.' (punctual) or:
     'When an epileptic fit comes to him/her, a patient falls down.' (general truth)                                                                    (KK002-0540)

A minority of verbs lose their gender marker and first vowel in the Present/Future (and TAME forms based on this stem). Examples are *d-alar* 'give', PRS/FUT *lo*; *d-alar* 'die', PRS/FUT *la*; *d-agar* 'see', PRS/FUT *gu*; *d-axar* 'go.PFV', FUT (suppletive) *ğo*. All verbs that have the detransitive derivational suffix *-d-al* (see Section 5.4.2) have a Present/Future in *la*, e.g. *d-epx-d-alar* 'heat up (INTR.IPFV)', PRS *depxla*.

### 4.5.1.2 Future

The Tsova-Tush Future is formed by adding one of four vowels (*e, i, o, u*) to a Perfective verbal stem. Table 4.7 shows several examples of the Future (3rd person forms).

[12]For Example (8), note that a noun referring to a human with unspecified gender receives gender D.

Table 4.7: Tsova-Tush Future formation

| Morphemes | Glossing | Surface form |
|-----------|----------|--------------|
| *sart'-e* | curse.PFV-NPST | *sart'* |
| *ał-o* | speak.PFV-NPST | *ałŏ* |
| *xił-u* | be.PFV-NPST | *xiłŭ* |

Many verbs do not distinguish between a Perfective and an Imperfective stem (see Section 4.3). For these verbs, the Present is homophonous with the Future (see Example (9)). Example (10) illustrates the use of the Tsova-Tush Future.

(9)  *tung   xi-x        **j-uic'-ŭ**.*
     flagon water-CONT J-**be_filled-NPST**
     'The flagon will be filled with water.' Or: 'The flagon is being filled with water.'                                                 (KK021-3735)

(10) *ʕunal e   **xił-ŭ**       ħo-goħ=ejn.*
     salary PROX **be.PFV-NPST** 2SG-ADESS=QUOT
     'This is the salary you will have (they said).'              (E113-20)

### 4.5.1.3 Imperfect

The Tsova-Tush Imperfect has historically been formed by adding a suffix *-ra* to the stem with a Non-Past vowel. From a synchronic point of view, the Imperfect suffixes are thus *-ara, -era, -ira, -ora, -ura*. Table 4.8 shows the formation of the Imperfect for selected verbs.

The Tsova-Tush Imperfect can be formed from both Imperfective stems (above the line in Table 4.8) and Perfective stems (below the line), and is used to convey events in the past tense with durative aspect. This aspectual difference between Imperfective and Perfective past tense forms has been defined in terms of pluractionality (Holisky & Gagua 1994: 179). See Example (11), featuring an Imperfective verb stem *d-aq'-* 'eat', which is used to refer to multiple events of eating. Compare this with Example (12), which uses a verb root *qall-* 'eat', the Perfective counterpart to Imperfective *d-aq'-*. The verb forms in (12), however, are still inflected for the Imperfect TAME form. We must therefore interpret these clauses as having past tense, durative aspect, but referencing a single action. Research into the exact parameters of pluractionality in Tsova-Tush, such as combinability with certain adverbs, remains outstanding.

Table 4.8: Tsova-Tush Imperfect formation

| Morphemes | Glossing | Surface form |
|---|---|---|
| *d-∅-ara*[a] | D-be.IPFV-IMPRF | *dar* |
| *lel-era* | walk.IPFV-IMPRF | *leler* |
| *lev-ira* | speak.IPFV-IMPRF | *levir* |
| *ix-ora* | pass.IPFV-IMPRF | *ixor* |
| *d-ał-ura* | D-appear.IPFV-IMPRF | *dałur* |
| *sart'-era* | curse.PFV-IMPRF | *sart'er* |
| *ał-ora* | speak.PFV-IMPRF | *ałor* |
| *xił-ura* | be.PFV-IMPRF | *xiłur* |

---

[a]Throughout this work, the conventional glossing *d-a-ra* 'D-be.IPFV-IMPRF' is used.

(11) a. *babo-s     lebiv  k'os-ren=daħ        **b-aq'-or**.*
grandfather-ERG beans large_bowl-ABL=from **B.SG-eat.IPFV-IMPF**
'Grandpa was eating beans out of a big bowl (multiple times).'

(KK011-2115)

b. *oqar      **d-aq'-or**=a        meł-or,        duqeč*
DIST.PL.ERG **D-eat.IPFV-IMPF**=ADD drink.IPFV-IMPF long.OBL
*xan-e        d-ax-er.*
time-OBL(ESS) D-live-IMPF
'And they ate and drank and lived for a long time.' [i.e. 'happily ever after']        (WS001-14.10)

(12) a. *xan-c'-ol-i          co  j-a-ħer,        cħan-ğ        k'ac'k'o^n*
time-PRIV-ABSTR-PL NEG J-be-COND.PST one.OBL-TRANS small
*majqǐ **qall-or**        vaj.*
bread **eat.PFV-IMPF** 1PL.INCL
'If we didn't have such a lack of time, we could be eating a bit of bread together.' [i.e. for a while, but in one sitting]        (KK032-5111)

b. *daħ d-ik'-oer                čujxǐ, ħalo=o  **qall-or**.*
PV  D-take(ANIM)-IMPF.SEQ lamb PV=ADD **eat.PFV-IMPF**
'It [a bear] took the lamb and ate it.' [i.e. for a while, but in one sitting]        (MM215-1.14)

### 4.5.1.4 Aorist

The Tsova-Tush Aorist (also called the preterite, or simple past) is formed by suffixing *-en* or *-in* to the verbal root.[13] Which of the two suffixes is taken by a given verbal root is determined lexically. See Table 4.9 for the Aorist formation of selected verbs. There is no strict correlation between the choice of the Non-Past suffix and the Aorist suffix.

Table 4.9: Tsova-Tush Aorist formation

| Morphemes | Glossing | Surface form | Compare NPST-vowel |
|---|---|---|---|
| *lel-in* | walk.IPFV-AOR | *leli$^n$* | *-e* |
| *lev-in* | speak.IPFV-AOR | *levi$^n$* | *-i* |
| *ix-en* | pass.IPFV-AOR | *ixe$^n$* | *-o* |
| *d-aɬ-en* | D-appear.IPFV-AOR | *daɬe$^n$* | *-u* |
| *sart'-in* | curse.PFV-AOR | *sart'i$^n$* | *-e* |
| *aɬ-in* | speak.PFV-AOR | *aɬi$^n$* | *-o* |
| *xiɬ-en* | be.PFV-AOR | *xiɬe$^n$* | *-u* |

The Aorist expresses a default, non-durative past tense. An Aorist formed from a Perfective stem expresses a single-action event (Example (13a)), whereas one formed from an Imperfective root is pluractional (13b).

(13)  a. *qen=geʔ    vedr   **d-aɬ-i$^n$**,      aħ     d-ax-en,*
         then=EMPH bucket **D-give.PFV-AOR** down D-go.PFV-AOR(SEQ)

      *oqu-s        xi   maɬ-en=e.*
      DIST.OBL-ERG water drink.PFV-AOR=and

      'Then they gave him a bucket, he went down and drank some water, and [...].'                                                     (E153-73)

   b. *oqu-s        ču v-ik'-e=sŏ,          majqĭ **teɬ-i$^n$***
      DIST.OBL-ERG PV M.SG-bring-AOR=1SG.NOM bread **give.IPFV-AOR**

      *so$^n$,      ħal v-ik'-en=sŏ           dukn-i, navt   so ec-i$^n$*
      1SG.DAT PV  M.SG-bring-AOR=1SG.NOM inn-ILL petrol PV buy.PFV-AOR

      *so$^n$.*
      1SG.DAT

      'He took me along, fed me (repeatedly), brought me to an inn, and bought me some petrol.'                                        (EK058 3.15)

---

[13]As discussed in Section 2.3, word-final nasal stops drop, nasalising the preceding vowel.

### 4.5.1.5 Remote Past

The Tsova-Tush Remote Past has historically been formed by adding a suffix *-ra* to the Aorist stem. From a synchronic point of view, the Remote Past suffixes are *-era, -ira.* The full use of the Remote Past is hitherto poorly understood, but the examples under (14) suggest a past-before-past tense.

(14)   a.  *qe$^n$ moħ-e dada-s*     **aɬ-ir**,     *b-axk'-e$^n$*
           then how-REL father.OBL-ERG **say.PFV-REM** M.PL-come.PFV.PL-AOR
           *qo vašo lax-a$^n$ cħan-ğ o k'roč', ganğaʔ co*
           three brother find.PFV-INF one.OBL-TRANS DIST chest indeed NEG
           *xet-i$^n$.*
           find-AOR
           'Then, as their father had told them, the three brothers went together to look for the chest, and indeed they didn't find it.'    (AS009-1.7)

     b.  *gvia$^n$ j-ox-j-i-er,*     *macn-e c'in šenbad-j-∅-or.*
           late J-destroy-J-TR-REM when-REL new build-J-TR-IMPF
           'Later they (had) destroyed it, when they were building the new [school].'    (E090-8)

## 4.5.2 Imperative

Tsova-Tush features various verb forms related to commands, suggestions, exhortations and wishes. The Hortative is always inclusive plural (although a distinction between two or more participants is made). An exclusive plural hortative is not attested, whereas a singular hortative or voluntative meaning is expressed by the Non-Past Subjunctive. A Simple Imperative, Polite Imperative and an Optative are found, but no dedicated jussive. The Imperative verb forms are characterised by allowing the plural suffix *-t* (see Section 4.9). Note that the Perfective/Imperfective aspect of the verbal root has been poorly investigated in non-indicative forms. Therefore, the exact semantics (pluractional or otherwise) of this aspectual distinction is unknown.

### 4.5.2.1 Hortative

The Hortative is formed by a verb in the Present or Future, and postposing the inclusive 1st person plural pronoun. This construction results in the meaning 'Let's verb (you and me)', see Example (15a). By adding a plural marker *-t* to the verb stem, more than two people are implied. The Hortative can be formed from

Table 4.10: Tsova-Tush imperative verb forms

|  | Morphemes | Glossing | Surface form |
|---|---|---|---|
| **Hortative** | | | |
|  | *tet'-o(-t) vej* | cut.IPFV-NPST(-PL) 1PL.INCL | *tet'ǒ vej / tet'ot vej* |
|  | *tit'-o(-t) vej* | cut.PFV-NPST(-PL) 1PL.INCL | *tit'ǒ vej / tit'ot vej* |
| **Simple Imperative** | | | |
|  | *tet'-a(-t)* | cut.IPFV-IMP(-PL) | *tet' / tet'at* |
|  | *tit'-a(-t)* | cut.PFV-IMP(-PL) | *tit' / tit'at* |
| **Polite Imperative** | | | |
|  | *tet'-a-le(-t)* | cut.IPFV-IMP-POL(-PL) | *tet'al / tet'alet* |
|  | *tit'-a-le(-t)* | cut.PFV-IMP-POL(-PL) | *tit'al / tit'alet* |
| **Optative** | | | |
|  | *tet'-a-la(-t)* | cut.IPFV-IMP-OPT(-PL) | *tet'al / tet'alat* |
|  | *tit'-a-la(-t)* | cut.PFV-IMP-OPT(-PL) | *tit'al / tit'alat* |

both Imperfective (15b) and Perfective (15c) stems. Note that *ǧ* 'go' is a verb that loses its gender marker and first vowel in the Present/Future, as described above, under the Present tense.

(15)  a.  *gana      čav,    **ǧ-o**      **vaj**,    mič-e*
          INTERJECTION Chava, **go.PFV-NPST 1PL.INCL** where-REL(ESS)
          *b-ixk'-n-a             don.*
          B.SG-tie.IPFV-AOR-2SG.ERG horse
          'Alright Chava, let's go to where you tied your horse.'  (E022-9)

      b.  *o-bi     co   d-aǧ-o-ħe,          ħa   **ix-o-t***
          DIST-PL NEG D-come.IPFV-NPST-COND then **go.IPFV-NPST-PL**
          **vaj**.
          **1PL.INCL**
          'When they're not coming, then let's leave.'  (KK036-5534)

      c.  *gari      inc  ču **xabž-u-t**            **vej**    - mejq*
          INTERJECTION now PV **sit_down.PFV.PL-NPST-PL 1PL.INCL**   bread
          **qał-o-t**         **vej**=*en.*
          **eat.PFV-NPST-PL 1PL.INCL**=QUOT
          'Well, let's sit down now and eat some bread (they said).'  (E179-23)

### 4.5.2.2 Simple Imperative

The Tsova-Tush Simple Imperative is formed by suffixing *-a* to a verbal root. Since *-a* will undergo apocope without a trace when it is the last segment of a word (see Example (16a)[14]), the *-a* vowel will only surface when it is followed by other phonetic material in the same word, such as a plural marker (Example (16b)), a politeness marker, or an enclitic. The Imperative can be formed from both Imperfective and Perfective stems, and is used to express requests, demands, and orders.

(16)  a.  ***tit'***       *qel,*    ***aɬ,***        *ħain*    *pst'u j-a*    *ħo?*
          **cut.PFV(IMP)** custom **say.PFV(IMP)** who.GEN wife F.SG-be 2SG
          'Decide, tell us, whose wife are you?'                    (AS008-10.7)

      b.  *mott **ot'-a-t**        ču, equj-n      bed*
          bed  **spread.PFV-IMP-PL** PV PROX.OBL-DAT separately
          ***ot'-a-t***        *aɬ-in=e.*
          **spread.PFV-IMP-PL** say.PFV-AOR=and
          'Make your beds, make (a bed) separately for her, they said.' (E179-86)

A minority of Perfective verbs form the Imperative using a vowel + *ba*. This vowel may or may not be the same as the vowel used to form the Present/Future. Table 4.11 gives examples of Imperative formation of Imperfective stems, of Perfective stems, and of Perfective stems irregularly using the *-ba* suffix.

As seen in Example (16b), the Imperative can receive a plural marker *-t*, as is true for the Polite Imperative and the Optative.

### 4.5.2.3 Polite Imperative

The Polite Imperative is formed by adding the suffix *-le* to an Imperative stem, and is used to express polite requests. The suffix *-t* is added to indicate a plural addressee.

(17)  a.  *gariel cħa c'in ambui **j-epc-a-l**       equi-g=en.*
          HORT one new story  **J-tell.IPFV-IMP-POL** PROX.OBL-ALL=QUOT
          'Come on, please tell him one new story.'                (E182-225)

      b.  *buisŭ    **gag-d-∅-eb-le-t**       so=en,        ču*
          at_night **care_for-D-TR-IMP-POL-PL** 1SG.NOM=QUOT in
          *d-ik'-e$^n$.*
          D-take.ANIM-AOR
          '"Please host me overnight," [said the fox], and they took him in.'
                                                                   (E153-25)

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[14]Original orthography of (16a): ɬit xel, aḷ, ħain bstu ja ħo?

Table 4.11: Tsova-Tush Imperative formation

| Morphemes | Glossing | Surface form | Compare NPST-vowel |
|---|---|---|---|
| *lel-a* | walk.IPFV-IMP | *lel* | *-e* |
| *lev-a* | speak.IPFV-IMP | *lev* | *-i* |
| *ix-a* | pass.IPFV-IMP | *ix* | *-o* |
| *d-ał-a* | D-appear.IPFV-IMP | *dał* | *-u* |
| *sart'-a* | curse.PFV-IMP | *sart'* | *-e* |
| *ał-a* | speak.PFV-IMP | *ał* | *-o* |
| *xił-a* | be.PFV-IMP | *xił* | *-u* |
| *d-i-eba* | D-do.PFV-IMP | *deb/dib* | *-o* |
| *l-iba*[a] | give.PFV-IMP | *lib* | *-o* |
| *ğ-oba* | go.PFV-IMP | *ğob* | *-o* |
| *ħ-oba* | bring.PFV-IMP | *ħob* | *-o* |

---

[a]Note that *d-ałar / lo* 'give', *ğo* 'go' and *d-ahar / ħo* 'bring, take' are verbs that lose their gender marker and first vowel in the Present, Future and Imperfect.

#### 4.5.2.4 Optative

The Optative is formed by adding the suffix *-la* to the Imperative stem, and is used for wishes, curses and blessings (Holisky & Gagua 1994: 181–182). It seems to be available for all persons. Examples include the first person (inclusive) in Example (18a), second person (18b) and the third person (18c). Note that the Optative and the Polite Imperative are homophonous in the singular.

(18)  a.  *šar-e        samotx-i   **d-∅-eba-la-t**        ve=en.*
         year-OBL(ESS) paradise-PL **D-do.PFV-IMP-OPT-PL** 1PL.INCL=QUOT
         'This year, let's perform "Paradises" (they said).'          (E225-17)

    b.  *ğaz-iš    **xił-a-la-ħo=e**        duq-xan-e*
         good-ADV **be.PFV-IMP-OPT-2SG.NOM**=and much-time-OBL(ESS)
         ***j-ax-a-la-ħ.***
         **F.SG-live-IMP-OPT-2SG.NOM**
         'May you be well and live a long time.'     (Holisky & Gagua 1994: 182)

    c.  *ħo-x      bede^n mama      **tox-a-l**        so^n.*
         2SG-CONT except nobody.PROH **hit.PFV-IMP-OPT** 1SG.DAT
         'May nobody hit me except for you.'                    (E249-71)

### 4.5.3 Subjunctive

Tsova-Tush features two Subjunctive TAME forms, i.e. forms with the primary function of finite subordination, formed by the suffix *-lo*. The Tsova-Tush Subjunctive is analysed as finite since (1) it combines with person indexing markers, (2) it can be used in matrix clauses, (3) subordinate clauses that feature Subjunctive verbs are introduced by conjunctions. Finite subordination is rare in East Caucasian (most subordination is non-finite), but subjunctive forms do occur in Chechen (Komen 2007) and Ingush (Nichols 2011: 289), which both feature suffixes containing an *-l-*, although there is no complete cognacy.[15] Georgian also features several Subjunctive forms, the one functionally closest to the Tsova-Tush being called 2nd Subjunctive, or Optative in most grammars. An in-depth comparison between the use of the several subjunctives in Tsova-Tush, Georgian, Chechen and Ingush falls beyond the scope of this work, but see Section 6.4.2 for a side-by-side comparison of Georgian and Tsova-Tush purpose clauses, both featuring a form labelled Subjunctive.

Table 4.12: Tsova-Tush Subjunctive verb forms

|  | Morphemes | Glossing | Surface form |
|---|---|---|---|
| Non-Past Subjunctive | *tet'-o-lo* | cut.IPFV-NPST-SBJV | *tet'olǒ* |
|  | *tit'-o-lo* | cut.PFV-NPST-SBJV | *tit'olǒ* |
| Past Subjunctive | *tet'-ora-lo* | cut.IPFV-IMPRF-SBJV | *tet'ralǒ* |
|  | *tit'-ora-lo* | cut.PFV-IMPRF-SBJV | *tit'ralǒ* |

#### 4.5.3.1 Non-Past Subjunctive

The Present Subjunctive is formed by adding the suffix *-lo* to the Present, while the Future Subjunctive is formed by adding the same suffix to the Future. In matrix clauses, both forms are used to express uncertainty: in interrogative sentences, they express a meaning 'I wonder' (19a, 19b), often with an indefinite particle *=ak'* elsewhere in the clause. In declarative sentences, however, Non-Past Subjunctive forms convey a sense of longing: 'if only' (19c).[16]

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[15]The Ingush Subjunctive is in *-algʲa*, and the Chechen in *-ila*.

[16]In Georgian, both the meaning 'I wonder' and 'if only' are captured with the particle *net'a(vi)*.

(19)   a. *e      qer=ak'      ħan-n      **b-a-l**      b-iɫ-eno?*
          PROX stone=INDF who.OBL-DAT **B.SG-be-SBJV** B.SG-put.PFV-PTCP.PST
          '(I wonder) for whom this stone was laid down?'          (E058-13)

       b. *so      co   j-aɫ-mak'=e,      wux=k'*
          hither NEG F.SG-go_out-POT(NPST)=and what=INDF
          ***d-∅-o-lo-s.***
          **D-do.PFV-NPST-SBJV-1SG.ERG**
          'She cannot come out, what(ever) should I do?'          (E179-35)

       c. *ħal k'i      **aɫ-lo-s**      ħo-g=uin.*
          PV  CONTR **say.PFV(NPST)-SBJV-1SG.ERG** 2SG-ALL=QUOT
          'If only I could say it to you (s/he said).'          (E175-33)

In subordinate clauses with the conjunction *me*, Non-Past Subjunctive forms are used to form purpose clauses, as discussed in Section 6.4.2. See Example (20), which illustrates the Subjunctive in a subordinate clause.

(20) *čuxu-j šui$^n$      nan-i-gore$^n$      čaq d-ec   xiɫ-a$^n$,      me*
     lamb-PL REFL.POSS.PL mother-PL-ADABL far  D-must be.PFV-INF SUBORD
     *vašba$^n$ daħ **d-ic-d-∅-o-lǒ**.*
     RECP   PV **D-forget-D-TR-NPST-SBJV**
     'The lambs must be apart from their mothers so that they forget each other.'          (E002-35)

Note that, as with imperatives, further investigations into the Perfective/Imperfective aspect of the verbal stem with subjunctive forms are beyond the scope of this work. Therefore, the exact semantics (pluractional or otherwise) of this aspectual distinction is unknown.

### 4.5.3.2  Past Subjunctive

The Past Subjunctive is formed by adding the suffix *-lo* to the Imperfect, and presents the same semantics as the Present/Future Subjunctive: (1) a dubitative in question sentences (21a), (2) a potential in declarative sentences (21b), and (3) a purposive in subordinate clauses with the conjunction *me* (21c).

(21)   a. *ipsi    cħa-ğ=i      **b-a-ra-l**?*
          MED.PL one-TRANS=Q **M.PL-be-IMPF-SBJV**
          'I wonder whether they were together?'          (E242-25)

b. *madel    moʔ **b-a-ra-l**         c'q'e t'q'o=a,      t'batina*
   blessing just **B.SG-be-IMPF-SBJV** once again=EMPH Tbatana
   *bħark'-e-n    j-ag-an=a.*
   eye-OBL-DAT J-see-INF=EMPH
   'It would be a real blessing to see Tbatana once again.'        (E058-27)

c. *nažt'r-e-n     gargax qel-or     xolme me,     buisev   daħ co*
   shack-OBL-DAT near    bring-IMPF HAB   SUBORD at_night PV   NEG
   ***aħ-ra-lŏ***         *q'ačǧu-i-v.*
   **steal.IPFV-IMPF-SBJV** brigand-PL-ERG
   'They used to bring them near their houses, so that the bandits would
   not steal them.'                                     (E008-17)

However, the most common use of the Past Subjunctive is to express an un-
witnessed past tense, as discussed in Section 4.7.

### 4.5.4 Conditional

Tsova-Tush features four Conditional verb forms, which can be either Past or
Non-Past, and either Witnessed or Non-Witnessed. The Non-Witnessed Remote
Conditional is the primary means to express a counterfactual conditional clause.
Within Tsova-Tush, the Conditional verb forms are best analysed as being fi-
nite, as (1) they co-occur with the morph *-ra*, which, outside of the Conditional,
only combines with finite forms, and (2) they can co-occur with person marking,
which none of the non-finite forms (converbs, participles, Verbal Noun, Infini-
tive, all described in Section 6.2) can. Thus, morphologically, these verb forms
behave like other finite forms presented in this chapter, but syntactically, they
are converbs, as they are the head of an adjunct clause that does not contain a
conjunction.

#### 4.5.4.1 Non-Past Conditional

The Non-Past Conditional is formed by adding the suffix *-ħe* to the Present/Fu-
ture stem.[17] It is used to form conditional adjunct clauses. For a full discussion
of conditional clauses, see Section 6.4.3.

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[17]Original orthography of (22b): Халахетинойахь сẽ йашŏ, алъал окхуиго хала ма хетал.

Table 4.13: Tsova-Tush Conditional verb forms

| Morphemes | Glossing | Surface form |
|---|---|---|
| Non-Past Conditional | | |
| *tet'-o-ħe* | cut.IPFV-NPST-COND | *tet'oħ* |
| *tit'-o-ħe* | cut.PFV-NPST-COND | *tit'oħ* |
| Past Conditional | | |
| *tet'-oħera* | cut.IPFV-COND.PST | *tet'oħer* |
| *tit'-oħera* | cut.PFV-COND.PST | *tit'oħer* |
| Non-Witnessed Aorist Cond. | | |
| *tet'-ino-ħe* | cut.IPFV-NW.AOR-COND | *tit'noħ* |
| *tit'-eno-ħe* | cut.PFV-NW.AOR-COND | *tit'noħ* |
| Non-Witnessed Remote Cond. | | |
| *tet'-inoħera* | cut.IPFV-NW.REM.COND | *tit'noħer* |
| *tit'-enoħera* | cut.PFV-NW.REM.COND | *tit'noħer* |

(22)  a. *o-bi      co   **d-ağ-o-ħe**,              ħa  ix-o-t*
         DIST-PL NEG **D-come.IPFV-NPST-COND** then go.IPFV-NPST-PL
         *vaj.*
         1PL.INCL
         'If they're not coming, let's go.'                    (KK036-5534)

      b. *xala-xet-ino        **j-a-ħ**      se$^n$    jašŏ,*
         harmful-deem-PTCP.PST **F.SG-be-COND** 1SG.GEN sister
         *ał-a-l            oqui-go    xala    ma    xet-a-l.*
         speak.PFV-IMP-POL DIST.OBL-ALL harmful PROH deem-IMP-POL
         'If your sister is offended, please tell her not to be offended.'
                                                             (YD001-49.1)

### 4.5.4.2 Past Conditional

The Past Conditional is historically formed by adding the suffix *-ra* to the Non-Past Conditional. In this work, the entire morpheme complex *-V-ħe-ra* will be glossed COND.PST. The Past Conditional is used in conditional clauses that are shifted to the past tense, such as in (23)[18], and hence acquire temporal, rather than conditional semantics (and can be translated with 'whenever').

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[18]Original orthography of (23a): Бу́итıбагıчуишв дахьохьер бéдē стıéин (вух) барле хı́лъў цо хеэр.

(23) a. *b-uit'-b-ağ-ču-iš-v*
M.PL-go.IPFV-M.PL-come.IPFV(PTCP.NPST)-OBL-PL-ERG
***d-aħ-oħer*** *bedeⁿ, pst'e-i-n* *wux bar-leⁿ*
D-bring.PFV-COND.PST except woman-PL-DAT what valley-ABL
*xił-ŭ* *co xeʔ-er.*
be.PFV-NPST NEG know-IMPF
'Except if people going back and forth would bring [news], the
women didn't know what was happening in the valley.' (YD002-4.1)

b. *bader balk'on-makreⁿ* *aħŏ* ***teps-l-aħer,*** *eħat=a*
child balcony-SUPERABL down **fall.IPFV-INTR-COND.PST** then=EMPH
*co šeʒleba-l-ar* *dada-s* *o ħalŏ ec-ar.*
NEG be_able-INTR-IMPF father-ERG DIST up take.PFV-VN
'Whenever a child was falling off a balcony, the father wasn't able to
catch it.' (MM226-1.2)

### 4.5.4.3 Non-Witnessed Aorist Conditional

The Non-Witnessed Aorist Conditional is formed by adding the conditional suf-
fix *-ħe* to the Non-Witnessed Aorist (for which see Section 4.7). Its function is
straightforward: to express a conditional clause, where the speaker of the utter-
ance has gained knowledge of the event only indirectly. See Example (24).

(24) a. *oqu-x* *at't'aj-š* ***tiš-no-ħe-ħ*** *me*
DIST.OBL-CONT easy-ADV **believe-NW.AOR-COND-2SG** SUBORD
*herc'ni-v* *bader d-∅-or,* *oqu-x* *wux=ajno=g* *co*
pot.OBL-ERG child D-make-IMPF DIST.OBL-CONT what=BEN=INDF NEG
*teš-e-ħ* *me* *ħeⁿ* *herc'ŏ bader d-∅-oš* *daħ*
believe-NPST-2SG SUBORD 2SG.GEN pot child D-make-SIMUL PV
*l-ar.*
die-IMPF
'If you (apparently) believe [so] easily that a pot has given birth to a
child, why wouldn't you believe that your pot died while giving
birth?' (EK057-9.1)

b. ***xit-no-ħ*** *mk'itxvel-e-n,* *ħan-x=a*
**find-NW.AOR-COND** reader-OBL-DAT who.OBL-CONT=EMPH
*j-∅-o-s* *ambui, liv-as.*
J-do.PFV-NPST-1SG.ERG story say.IPFV-1SG.ERG
'If the reader (apparently) finds out who I'm talking about, I tell them.'
(MM412-1.136)

c. *baq'eʔ j-aqqoⁿ gamocd čabarbad-j-i-eⁿ k'acobrioba-s*
truly J-big   exam   pass-J-TR-AOR mankind-ERG
*st'alinizm-e        (čabarbad-j-i-no-ħ!).*
Stalinism-OBL(ESS) **pass-J-TR-NW.AOR-COND**
'Mankind has passed a truly big exam in Stalinism (if indeed it turns
out it did pass it!).'                                    (MM415-1.104)

### 4.5.4.4 Non-Witnessed Remote Conditional

The Non-Witnessed Remote Conditional is formed by adding the suffix *-ra* to the
Non-Witnessed Aorist Conditional. It is used to form counterfactual conditional
clauses, see Example (25). The verbal form in the matrix clause is a periphrastic
tense, as discussed in Section 4.6.

(25)  a. *o    kotm-i=a,     gagn-i=a    co  **xiɬ-noħer***
DIST chicken-PL=ADD egg-PL=ADD NEG **be.PFV-NW.REM.COND**
*txo-go,    albat    macu-x       d-av-in-d-a-ra-tx.*
1PL-ADESS probably hunger.OBL-CONT D-die-PTCP.PST-D-be-IMPF-1PL
'If we didn't have these chickens and eggs, we would probably die
from starvation.'                                    (E039-84)

b. *o    din  **v-is-noħer**        so-g   ħal*
DIST alive **M.SG-stay-NW.REM.COND** 1SG-ALL PV
*ʕam-d-∅-it-en-d-a-r          oqu-s.*
learn-D-TR-CAUS-PTCP.PST-D-be-IMPF DIST.OBL-ERG
'If he had stayed alive, he would have helped me study.'    (E122-15)

## 4.5.5 Iamitive

In Tsova-Tush, the verbal suffix *-ge* expresses the notion of 'already'. In this work,
the term Iamitive will be used for these forms.[19] This term has been introduced
recently to describe a type of independent markers that were previously analysed
as markers of the perfect tense-aspect, or as instances of a lexeme 'already'. Ols-
son (2013) argues that iamitive is a better fit for these markers since they indicate
the notion of a "new situation" that holds after a transition (which iamitives have
in common with 'already'), but also denote the consequences that this situation
has at reference time for the participants in the speech event (which iamitives
have in common with the perfect). Additionally, these iamitives are said to have

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[19]Thanks to Timur Maisak and Anastasia Panova for bringing this term to my attention.

a high frequency in texts and to appear in natural development contexts, e.g., 'it is already rotten' or 'I am already married' (Olsson 2013, Dahl & Wälchli 2016).[20] In this work, however, the term iamitive will be defined slightly differently. Here, the Tsova-Tush Iamitive has high semantic overlap with 'already' in English and other languages, and little to no overlap with perfects (for the Tsova-Tush Perfect, see Section 4.6). The reason the term Iamitive is nevertheless used, and not the simple gloss 'already', is the fact that *-ge* is a bound suffix, not an independent word. The most frequent occurrence of the Tsova-Tush Iamitive is in negative sentences, where it denotes the semantics of 'not anymore', a common type of polarity (Löbner 1989, van der Auwera 1993).

Table 4.14: Tsova-Tush Iamitive verb forms

|  | Morphemes | Glossing | Surface form |
|---|---|---|---|
| Non-Past Iamitive | *tet'-o-ge* | cut.IPFV-NPST-IAM | *tet'og* |
|  | *tit'-o-ge* | cut.PFV-NPST-IAM | *tit'og* |
| Past Iamitive | *tet'-ogera* | cut.IPFV-IAM.PST | *tet'oger* |
|  | *tit'-ogera* | cut.PFV-IAM.PST | *tit'oger* |

### 4.5.5.1 Non-Past Iamitive

The Non-Past Iamitive is formed by adding the suffix *-ge* to the Non-Past. With the verb *d-a* 'be', a reduplicated form of the suffix, *-gege*, is found most often. In interrogative sentences, it expresses uncertainty (Example (26a)), similar to the Subjunctive. In declarative sentences it is used to convey a meaning 'already' (Examples (26a)[21], (26b)). However, its most common use is in negated contexts, where it expresses a meaning 'not anymore' (27).[22]

(26)   a.   *mič*   ***ğ-o-ge-s,***                         *q'ain=a*   ***v-a-gge-sǒ.***
        where **go.PFV-NPST-IAM-1SG.ERG** old=EMPH **M.SG-be-IAM-1SG.NOM**
        'Where should I go, I'm already [so] old.'                    (YD001-19.2)

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[20] Although use of the term has been deemed by some to be superfluous (Krajinović 2019).

[21] Original orthography of (26a): Мич гюгес, къаина ваггесǒ.

[22] With Example (27), note that *k'aloš* 'galosh' belongs to an inquorate gender that triggers *b-* in both singular and plural, see Section 4.2.

b.  *so        j-aqqoⁿ **j-a-gĕ**,      čxindur=aĕ   ħal*
    1SG.NOM F.SG-big **F.SG-be-IAM** stocking=ADD PV

    *d-∅-o-s,         bak'-e-ħ        jol=aĕ   ħal*
    D-make-NPST-1SG.ERG paddock-OBL-ESS hay=ADD PV

    *j-i-n-as.*
    J-do.PFV-AOR-1SG.ERG

    'I am already old; I make socks, and I have done the hay in the field.'

    (KK036-5563)

(27)  a.  *ħaps-eⁿ         - tavtav    ese      co   **b-a-g**.*
          look.PL.PFV-AOR   wheat_ear here(ESS) NEG **B.SG-be-IAM**

          'They looked around; the wheat ear is no longer here.'     (E153-11)

      b.  *k'aloš-i   duq-čui-š-v      co   **b-epx-o-gĕ**.*
          galosh-PL many-OBL-PL-ERG NEG **B-wear-NPST-IAM**

          'Not many people wear galoshes anymore.'            (KK011-1952)

### 4.5.5.2 Past Iamitive

The Past Iamitive is formed by adding the suffix *-ra* to the Non-Past Iamitive. It is used in similar contexts to the Non-Past Iamitive, but with a shift to the past tense: like in the Non-Past, it can have a dubitative meaning in interrogative sentences (28a), a meaning 'almost' (with or without an actual adverb meaning 'almost') (28b, 28c), and a meaning 'not anymore' in negative sentences (28d).

(28)  a.  *wux **d-∅-oger**,       cok'l-e-n    i    joħ daħa*
          what **D-do.PFV-IAM.PST** fox-OBL-DAT MED girl PV

          *j-ał-iⁿ.*
          F.SG-give.PFV-AOR

          'What were they supposed to do, so they gave that girl to the fox.'

          (E153-46)

      b.  *cħajnčone korti-x        dik' **d-iš-d-∅-oger**.*
          almost    head.OBL-CONT axe **D-strike-D-TR-IAM.PST**

          'S/he almost struck [somebody] on the head with an axe.' (EK053-4.11)

      c.  *o    xeⁿ ħal **dagležad-b-∅-oger**,        nast'*
          DIST tree PV **uproot.PFV-B.SG-TR-IAM.PST** with_difficulty

          *č'ağ-v-al-iⁿ.*
          strong-M.SG-INTR-AOR

          'He almost uprooted the tree, he hardly stayed upright.'     (E181-267)

   d. *doⁿ   ħal co   g-uger,        dačo lark'-i g-ur.*
      horse PV   NEG **be_visible-IAM.PST** only ear-PL be_visible-IMPF
      'The horse was not visible anymore, only its ears were visible.'

                                            (EK058-3.8)

### 4.5.5.3 Other Iamitives

Various other formations with the Iamitive morpheme *-ge* are found. These forms are rarely used, and their full functional scope is still poorly understood. Example (29a) shows a verb form with both Iamitive and Subjunctive morphemes, conveying the meaning 'if only', which alternatively could have been expressed by a simplex Subjunctive form. Examples (29b) and (29c) show forms containing the morpheme *-ge* with the meaning 'not anymore', with a Non-Witnessed Aorist (29b) and a Non-Witnessed Remote Past (29c).

(29)  a. *so     v-ap'c'-ge-l                k'i    ħoⁿ*
      1SG.NOM **M.SG-recognise(NPST)-IAM-SBJV** CONTR 2SG.DAT
      *q'an-v-al-in.*
      old-M.SG-INTR-PTCP.PST
      'If you could only recognise me, having gotten old.'        (E239-8)

    b. *giorgi-ⁿ    joħ co   j-abc'-mak'-in-gě          txoⁿ.*
      Giorgi-GEN girl NEG **F.SG-discern-POT-NW.AOR-IAM** 1PL.DAT
      'We (apparently) couldn't discern Giorgi's daughter anymore.'

                                            (KK001-0014)

    c. *cħa v-ejt'-noer       šarn, t'q'uiħ=a     co*
      one M.SG-run-NW.REM away behind=EMPH NEG
      *v-oc'-v-ejl-noger.*
      **M.SG-follow-M.SG-INTR-NW.REM.IAM**
      'One (apparently) ran off, he (apparently) stopped following him.'

                                            (E144-10)

## 4.6 Periphrastic TAME forms

The four main periphrastic verb constructions in Tsova-Tush are in this work labelled Perfect, Pluperfect, Non-Witnessed Perfect, the Non-Witnessed Pluperfect. They consist of a Past Participle and an inflected form of *d-a* 'be'. In Tsova-Tush, the negative particle *co* must immediately precede the finite verb. The negator *co* very often stands before the entire verbal complex of the Participle + 'be' (Anker

forthcoming), even though most examples in this work, for instance (30a, 30b, 40, 41), show a construction ['be' (intervening material) PARTICIPLE]. Therefore, I tentatively analyse these as periphrastic constructions undergoing a process of univerbation. See Table 4.15 for the periphrastic verb forms, where surface forms are presented in their most advanced stage, i.e. with the order PARTICIPLE+'be', and univerbated (even though the reverse order is also found). The Non-Witnessed periphrastic forms are discussed in Section 4.7.

Table 4.15: Tsova-Tush periphrastic verb forms

| Morphemes | Glossing | Surface form |
|---|---|---|
| **Perfect** | | |
| *tet'-ino d-a* | cut.IPFV-PTCP.PST D-be | *tet'inda* |
| *tit'-eno d-a* | cut.PFV-PTCP.PST D-be | *tit'enda* |
| **Pluperfect** | | |
| *tet'-ino d-a-ra* | cut.IPFV-PTCP.PST D-be-IMPRF | *tet'indar* |
| *tit'-eno d-a-ra* | cut.PFV-PTCP.PST D-be-IMPRF | *tit'endar* |
| **Non-Witnessed Perfect** | | |
| *tet'-ino d-a-no* | cut.IPFV-PTCP.PST D-be-NW.AOR | *tet'indanŏ* |
| *tit'-eno d-a-no* | cut.PFV-PTCP.PST D-be-NW.AOR | *tit'endanŏ* |
| **Non-Witnessed Pluperfect** | | |
| *tet'-ino d-a-nora* | cut.IPFV-PTCP.PST D-be-NW.REM | *tet'indanor* |
| *tit'-eno d-a-nora* | cut.PFV-PTCP.PST D-be-NW.REM | *tit'endanor* |

### 4.6.1 Perfect

The Perfect is formed by a Past Participle together with a form of the verb 'be' in the Present. The Tsova-Tush Perfect displays all the meanings typologically associated with perfects (Comrie 1985: 24, Plungian 2016, Verhees 2019), i.e. resultative/current relevance (30a), experiential (30b) and indirect (non-witnessed) evidentiality (30c).

(30) a. *daħ **b-a** **b-al-in**,    č'q'emp' b-a    tit'-en.*
       PV  B.SG-be B.SG-die-PTCP.PST throat   B.SG-be cut.PFV-PTCP.PST
       'It has died, it has its throat cut.'                              (E153-38)

b. *ši   baq' d-i-en              vir      co*
two foal  D-give_birth-PTCP.PST donkey NEG
**xac'-d-al-in-d-a**           *bac-bi-go.*
**hear-D-INTR-PTCP.PST-D-be** Tsova_Tush-PL-ADESS
'The Tsova-Tush have never heard of a donkey having given birth to
two foals.'                                            (E010 18)

c. *tavtav     ese       co  b-a-g,     maml-e-v      **b-a***
wheat_ear here(ESS) NEG B.SG-be-IAM rooster-OBL-ERG **B.SG-be**
**qall-in**=*en.*
**eat.PFV-PTCP.PST**=QUOT
'The wheat ear is no longer there; the rooster must have eaten it.'
                                                       (E153-11)

### 4.6.2 Pluperfect

The Pluperfect is formed by a Past Participle together with a form of the verb
'be' in the Imperfect. This tense-aspect form expresses counterfactual semantics,
and is used most often in matrix clauses alongside a Non-Witnessed Aorist Con-
ditional in the conditional clause, for which see Example (31).

(31) a. *o      kotm-i=a,       gagn-i=a    co  xiɬ-noħer*
DIST chicken-PL=ADD egg-PL=ADD NEG be.PFV-NW.REM.COND
*txo-go,    albat    macu-x      **d-av-in-d-a-ra-tx**.*
1PL-ADESS probably hunger-CONT **D-die-PTCP.PST-D-be-IMPF-1PL**
'If we didn't have chickens and eggs, we probably would have died
from starvation.'                                    (E039-84)

b. *upr duq maq-iš      **c'era-d-i-en-d-a-r**,*
more many song.OBL-PL **write-B.PL-TR-PTCP.NPST-B.PL-be-IMPF**
*upr  ğaz-iš    **c'era-d-i-en-d-a-r**.*
more good-ADV **write-B.PL-TR-PTCP.NPST-B.PL-be-IMPF**
'S/he could have written more songs, better ones.'      (E171-11)

   It is important to note that in Georgian, a similarly constructed verb form,
also called Pluperfect, is also used in counterfactual conditional clauses. For in-
transitive verbs, but not for other verbs, this verb form is formed historically
by combining a past participle with a past form of the verb 'be'. Synchronically,
however, this is a single verb form, as the first person subject marking is pre-
fixed to the beginning of the verb form (hence *v-q'opiliq'avi*, where *v-* is the

first person marking, historically from *q'opili* 'been' + *viq'avi* 'I was'). In Georgian, however, this form is used in the subordinate conditional clause, while the matrix verb is expressed by a form that in Georgian linguistics is traditionally called the Conditional (see Example (32)). Additionally, this way of forming a Georgian Pluperfect, namely using a Past Participle and a verb 'be', is only used with intransitive verbs of Class II (see Section 5.2.4.1). Thus, the counterfactual conditional constructions are sufficiently different in Tsova-Tush and Georgian that it is unwarranted to assume any Georgian influence here.

(32)   Standard Modern Georgian
       *ak    rom    **vq'opiliq'avi**, ver=c      me   vušvelidi.*
       here SUBORD **I_had_been**   NEG.POT=ADD 1SG I_would_have_helped.
       'If I had been here, I wouldn't have been able to help either.'
                                                      (GNC: M. Javakhishvili)

## 4.7 Evidentiality

### 4.7.1 Introduction

Like in most East Caucasian languages, Tsova-Tush features verb forms that convey evidential semantics. As opposed to some languages, where several evidential values can be identified (such as visual, non-visual, inferential, or hearsay), East Caucasian languages typically feature a small number of evidential forms that (1) have the general, unspecified value 'non-witnessed', (2) contrast with unmarked 'witnessed' forms, and (3) usually consist of a non-finite form in combination with an auxiliary verb (Verhees 2019, Forker 2018). Tsova-Tush features six distinct finite verb forms that convey non-witnessed (i.e. indirect evidential) semantics. All Tsova-Tush finite indicative verb forms have a corresponding evidential form, all of which are listed in Table 4.16. Additionally, the Past Subjunctive most often exhibits evidential semantics.

Note that, as with non-indicative forms, the Perfective/Imperfective aspect of the verbal stem has been poorly investigated in non-witnessed forms. Therefore, the exact semantics (pluractional or otherwise) of this aspectual distinction is unknown. Non-witnessed verbal forms are usually translated with '(apparently)' in brackets to clearly signal the indirect evidentiality, even though better English translations would be possible.

Table 4.16: Tsova-Tush Evidential suffixes. Some lexical verbs choose *e* for every *i* in this table.

|            | Neutral     | Non-Witnessed  |
|------------|-------------|----------------|
| Non-Past   | -V          | -V-d-ano       |
| Imperfect  | -Vra        | -V-d-anora     |
| Aorist     | -in         | -ino           |
| Remote     | -ira        | -inora         |
| Perfect    | -ino d-a    | -ino d-a-no    |
| Pluperfect | -ino d-a-ra | -ino d-a-nora  |

### 4.7.2 Formation of Evidential forms

#### 4.7.2.1 Non-Witnessed Non-Past

The Non-Witnessed Non-Past is historically formed by a Non-Past verb form followed by the verb form *d-a* 'be' with a suffix *-no*. The fact that this construction is now completely grammaticalised into a single word has been proven by Harris (2009). This verb form principally conveys a present or future tense with non-witnessed evidentiality, as is illustrated in Example (33).

(33)  a.  *ʕalin    komoⁿ axr-i           duq-ux    **d-auv-d-anŏ***
          in_winter male   shearling_lamb-PL many-CMP D-die-D-NW.NPST
          *pst'ujn-čŏ   axr-a-x.*
          female-OBL shearling_lamb-OBL.PL-CONT
          'In the winter, more male shearling lambs (apparently) die than
          female ones.'                                    (KK001-0333)

    b.  *t'aranin   **v-uit'-v-anŏ***          *mot'ocik'let'-e-v,   t'q'uiħ*
          Taranina M.SG-go.IPFV-M.SG-NW.NPST motorcycle-OBL-INS behind
          *ši   st'ak' ʕe-v-ağ-v-anŏ.*
          two man   **sit-M.SG-LV.SG-M.SG-NW.NPST**
          'Taranina is driving a motorcycle and two men are sitting behind
          him.' [beginning of a joke]                      (EK065-1.1)

In more contemporary Tsova-Tush, however, a non-witnessed past tense is the most common reading, see Example (34).

(34)  a.  *ši   saldat čuħ   **v-iš-v-anŏ***                  *kox-e.*
          two soldier inside M.SG-lie_down-M.SG-NW.NPST hut-OBL(ESS)
          'Two soldiers (apparently) lay inside the hut.'   (E147-139)

b. *c'q'e cħajn    ʕurdeⁿ          rusudaⁿ dada-s       wun-ax*
   once one.OBL in_morning Rusudan father.OBL-ERG what-INDF
   ***tego-d-anŏ         osi      k'rant'-mak.***
   **do.IPFV-D-NW.NPST** there(ESS) tap-SUPERLAT
   'One morning, Rusudan's father was (apparently) doing something
   with the tap.'                                          (MM107-3.4)

### 4.7.2.2  Non-Witnessed Imperfect

The Non-Witnessed Imperfect is historically formed by a Non-Past verb form
followed by the verb form *d-a* 'be' with a suffix *-nora*. This verb form conveys
past tense, durative aspect and non-witnessed evidentiality, as is illustrated in
Example (35).

(35)  a. *c'q'e ši   ʕu   **v-uit'-v-anor=e,**                      pħe*
         once two shepherd **M.SG-go.IMPF-M.SG-NW.IMPF**=and village(LAT)
         *ču b-epl-iš            cħana-n     dak'-d-eʔ-nor,*
         in M.PL-move.IPFV-SIMUL one.OBL-DAT heart-D-come-NW.REM
         *me       [...].*
         SUBORD [...]
         'Once, two shepherds were (apparently) on the move, and when they
         entered a village, one remembered that [he had baptised a child
         there].                                          (E058-35)

      b. *važar      o    k'urs-i-mak       b-axk'-eⁿ        - osi*
         brother.PL DIST course-PL-SUPERLAT M.PL-go.PFV.PL-AOR   there(ESS)
         ***ʕam-d-∅-o-d-anor.***
         **learn-D-TR-NPST-D-NW.IMPF**
         '[Two] brothers went to those courses; they were (apparently)
         studying there.'                                  (E092-18)

### 4.7.2.3  Past Subjunctive

As mentioned in Section 4.5.3, the Past Subjunctive, besides its actual subjunctive
function, is mostly used as a Non-Witnessed Past, see Example (36). These forms
are used as the primary means to express a past event with durative aspect that
has not been witnessed directly by the speaker.

*4 Verbal inflection*

(36)  a. *ai     o     q'arpuz,   xil=a     bazir     nʕejʔ*
      DEICT DIST watermelon fruit=ADD bazaar.ILL out

      ***qeħ-ra-lǒ,***     *kalik=a*    *daħ **qeħ-ra-lǒ,***     *uis*
      **carry.IPFV-IMPF-SBJV** city.ILL=ADD PV **carry.IPFV-IMPF-SBJV** there

      *daħ **d-exk'-ra-lǒ,***     *t'atb-i*    ***teg-d-∅-ora-lǒ.***
      PV **D-sell.IPFV-IMPF-SBJV** money-PL **make.IMPF-D-TR-IMPF-SBJV**

      'Those watermelons, that fruit they (apparently) took outside to the markets, too, they brought it to Tbilisi, there they sold it, they made money there.'        (E014-15)

    b. *ʕurdeⁿ*     *ħejps-če*   *- o*  *žğar=en*    *karcxu-i*
      in_the_morning look.PL.PFV-ANTE DIST jingling=QUOT clothes-PL

      *ħal korti-x*    ***d-at'-ra-lǒ.***
      PV head.OBL-CONT **D-lie-IMPF-SBJV**

      'When they saw him in the morning, those jingling garments were (apparently) on his head.'       (E156-13)

The Past Subjunctive seems to be used most often to express background durative past events in certain narratives. These narratives, such as folk tales or legends, are made up entirely of non-witnessed verb forms (Wichers Schreur & Verhees in preparation). See Example (37), where main events that drive the plot are represented by the Non-Witnessed Remote Past (for which see below on page 157), and backgrounded information is given in the Past Subjunctive.

(37)  a. *cok'al **d-uit'-ra-l,***     ***d-uit'-ra-l,***
      fox **D-go.IPFV-IMPF-SBJV D-go.IPFV-IMPF-SBJV**

      ***d-uit'-ra-lo=e,***    *naq'a*    *tavtav*   *xit-nor.*
      **D-go.IPFV-IMPF-SBJV**=and road.OBL(ESS) wheat_ear find-NW.REM

      'A fox was walking, walking, walking along, and on the road he found an ear (of wheat).'      (E153-4)

    b. *ma c'ʕerkoⁿ   daħ v-ic-v-ejl-nor*      *wux*
      but suddenly PV M.SG-forget-M.SG-INTR-NW.REM what

      *c'-er*    *o*  *nejtlmam-e-x.*   *nejtlmama-x*
      be_called-IMPF DIST godfather-OBL-CONT godfather.OBL-CONT

      *xoxoba*   ***c'-era-l.***
      Khokhoba **be_called-IMPF-SBJV**

      'But suddenly he forgot the godfather's name. The godfather's name was Khokhoba/"Pheasant".'     (E058-43,44)

### 4.7.2.4 Non-Witnessed Aorist

The Non-Witnessed Aorist has historically been formed by suffixing *-no* to the Aorist stem. Synchronically, the suffixes are thus *-ino* and *-eno*. Note that this formation is homophonous with the Past Participle (see Section 6.3.1). For the verb 'be', the suffix *-no* is attached to the verbal root directly (see Example (38b). The Non-Witnessed Aorist is relatively rare, and seems to be almost completely replaced by other non-witnessed forms, possibly due to it being homophonous with the Past Participle.

(38)  a.  *vʕalaʔ    co  **xarc-v-ajl-no-ħ**,           uišt'n=eʔ*
          completely NEG **change.PFV-M.SG-INTR-NW.AOR-2SG** SO.DIST=EMPH
          *v-a-ħŏ.*
          M.SG-be-2SG.NOM
          'You (apparently) haven't changed at all, you are exactly the same.'
          (KK021-3686)

      b.  *moliⁿ     č'ʕaǧoⁿ bacav    **v-a-n**        joħ.*
          what_kind strong  Tsova_Tush **M.SG-be-NW.AOR** girl
          'What a strong Tsova-Tush he (apparently) was, woman.'    (E173-82)

### 4.7.2.5 Non-Witnessed Remote Past

The Non-Witnessed Remote Past is formed by suffixing *-ra* to the Non-Witnessed Aorist. It is the primary TAME form used as a narrative tense in fairy tales, legends, or history, as illustrated in Example (39).

(39)  a.  *lek'-i          ušt'   **b-av-b-i-nor**          daħ me,*
          Daghestanian-PL SO.DIST **M.PL-kill-M.PL-TR-NW.REM** PV  SUBORD
          *vaš-bi-gŏ    ħaps-aⁿ      dro  co  **j-a-nor**.*
          RECP-PL-ALL look.PFV.PL-INF time NEG **J-be-NW.REM**
          'He killed the Daghestanians so [fast] that they didn't have time to look at each other.'          (E144-9)

      b.  *o  joħ **moc'onad-j-el-nor**     o    cok'l-e-n,*
          DIST girl **like-F.SG-INTR-NW.REM** DIST fox-OBL-DAT
          ***dak'lev-nor***      me,   garat as   is  joħ šarn*
          **think.PFV-NW.REM** SUBORD wait  1SG.ERG MED girl away
          *j-ik'-o-s              šu-goħ=en.*
          F.SG-take.ANIM.PFV-NPST-1SG.ERG 2PL-ADESS=QUOT
          'The fox liked that girl [and] he thought: "Wait, I will take this girl away from you people."'          (E153-31)

### 4.7.2.6 Non-Witnessed Perfect

The Non-Witnessed Perfect is formed by a Past Participle together with a form of the verb 'be' in the Non-Witnessed Aorist. It is used as a Perfect (i.e. resultative/current relevance or experiential), but with explicit non-witnessed evidentiality:

(40)  a.  *duq že d-av-d-i-nor.      e    moq eħat **b-a-n***
      many sheep D-die-D-TR-NW.REM PROX song then **B.SG-be-NW.AOR**
      ***aɬ-in:***
      **say.PFV-PTCP.PST**
      'Many sheep were (apparently) killed [by the frost]. This song was (apparently) composed in those days:' [The song itself follows]

      (E032-2)

   b.  *xalx  liv          men,  saneb loum-rena    **d-a-n***
      people say.IPFV(NPST) SUBORD trinity mountain-ABL **D-be-NW.AOR**
      *aħ    **d-eʔ-enu**=jnŏ.*
      down **D-bring-PTCP.PST**=QUOT
      'People say that the trinity [icon] was (apparently) brought down from the mountains.'  (E017-24)

### 4.7.2.7 Non-Witnessed Pluperfect

The Non-Witnessed Pluperfect is formed by a Past Participle together with a form of the verb 'be' in the Non-Witnessed Remote past. It is used as a Pluperfect (i.e. a past-before-past), but with explicit non-witnessed evidentiality (see Example (41)).

(41)  *išt'eⁿ     ese      **d-a-nor**       ʕexk' **d-iš-d-i-en**.*
      such.PROX here(ESS) **D-be-NW.REM** iron  **D-strike-D-TR-PTCP.PST**
      'Right here he must have been hit by iron.'  (E041-66)

### 4.7.3 Georgian influence

An in-depth analysis of the use of the different Tsova-Tush evidential forms will be provided in Wichers Schreur & Verhees (in preparation). The main conclusions of this article are:

1. The origin of evidentiality as a category in Tsova-Tush is not likely to be due to Georgian influence. Evidentiality as a category is a very common

feature of all languages of the Caucasus, from all families (Friedman 1996, 2000). The use of a perfect-like form (past participle + 'be') to express non-witnessed evidential semantics is common in Kartvelian as well as in several East Caucasian languages (Forker 2018, Verhees 2019).

2. The increase in use of the Tsova-Tush Perfect as the main Non-Witnessed evidential form can perhaps be attributed to Georgian influence. In East Georgian dialects (Kakhetian, Tush), as well as in Standard Georgian, the expression of non-witnessed evidentiality (and other marked status types, such as admirative and dubitative) is primarily through the use of the perfect (Boeder 2000). Actual proof of contact-induced change, however, is difficult here, since the other Nakh languages Chechen and Ingush feature similar verb formations with similar semantics (perfect, resultative, evidential).

## 4.8 Person marking

In Tsova-Tush, verbs show agreement with a first or second person subject, marked by a suffix corresponding to a personal pronoun (Gagua 1952) (see Section 3.7.1 for personal pronouns). The development of person marking has been described extensively by Kojima (2019), on which large parts of this section are based.

### 4.8.1 Description

Tsova-Tush indicates the clausal 1st or 2nd person subject by suffixing morphemes to the verb form, following TAME marking. The third person is unmarked (or marked by the absence of overt marking), nor is the 1st person plural inclusive marked on the verb. Since Tsova-Tush features a particular version of an ergative alignment system (see Section 5.2), markers that are formally identical to personal pronouns in the Ergative are suffixed to all transitive verbs. They are also suffixed to intransitive verbs that require an Ergative subject in 1st and 2nd person, and to intransitive verbs that allow 1st or 2nd person Ergative subjects when expressing a high degree of volition or control. See Table 4.17 for two verbs requiring Ergative subject marking in 1st and 2nd person. Here, the intransitive verb *d-ot'ar* 'go (IPFV)' and the transitive verb *aɬar* 'say (PFV)' are given in the three most frequently occuring tense-aspect forms, Non-Past (see Section 4.5.1 for this tense label), Imperfect and Aorist. The verb *d-ot'ar* 'go' is given with a neutral gender marker *d-* as a place holder. As can be seen from the

table, the Non-Past vowel *-u* is regularly syncopated in the penultimate syllable (see Section 2.3). This process, however, does not occur with verbs that have the Non-Past vowel *-o*, such as *ałar* 'say'.[23] Note that the two verbs in Table 4.17 differ by the choice of Non-Past vowel, irrespective of the aspect of the verbal stem (see Section 4.5.1).

Table 4.17: Tsova-Tush Ergative person marking

|  | 'go.IPFV' | | 'say.PFV' | |
|---|---|---|---|---|
|  | Morphemes | Surface form | Morphemes | Surface form |
| *Non-Past* | | | | |
| 1SG | *d-ot'-u-as* | *duit'as* | *ał-o-as* | *ałos* |
| 2SG | *d-ot'-u-ah* | *duit'a* | *ał-o-ah* | *ało* |
| 1PL(EXCL) | *d-ot'-u-atx* | *duit'atx* | *ał-o-atx* | *ałotx* |
| 2PL | *d-ot'-u-ejš* | *duit'ejš* | *ał-o-ejš* | *ałuiš* |
| 3 | *d-ot'-u* | *duit'ŭ* | *ał-o* | *ałŏ* |
| *Imperfect* | | | | |
| 1SG | *d-ot'-ura-as* | *duit'ras* | *ał-ora-as* | *ałras* |
| 2SG | *d-ot'-ura-ah* | *duit'ra* | *ał-ora-ah* | *ałra* |
| 1PL(EXCL) | *d-ot'-ura-atx* | *duit'ratx* | *ał-ora-atx* | *ałratx* |
| 2PL | *d-ot'-ura-ejš* | *duit'rejš* | *ał-ora-ejš* | *ałrejš* |
| 3 | *d-ot'-ura* | *dot'ur* | *ał-ora* | *ałor* |
| *Aorist* | | | | |
| 1SG | *d-ot'-in-as* | *duit'nas* | *ał-in-as* | *ejłnas* |
| 2SG | *d-ot'-in-ah* | *duit'na* | *ał-in-ah* | *ejłna* |
| 1PL(EXCL) | *d-ot'-in-atx* | *duit'natx* | *ał-in-atx* | *ejłnatx* |
| 2PL | *d-ot'-in-ejš* | *duit'nejš* | *ał-in-ejš* | *ejłnejš* |
| 3 | *d-ot'-in* | *dot'i$^n$* | *ał-in* | *ałi$^n$* |

Intransitive verbs that do not allow for Ergative subjects must and intransitive verbs that allow for variable marking may add a suffix identical to a personal pronoun in the Nominative to the verbal TAME inflected stem. See Table 4.18, where the verb *lattar* 'stand' (which allows for variable marking) is given in the three

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[23]The vowel sequence *o-a* in *ał-o-as* first contracted to *o*, removing the condition for the syncope rule to apply. No such merger takes place with the vowels *u-a* in *d-ot'-u-as*, hence the vowel *u* is regularly syncopated, triggering i-umlaut, see Section 2.3.

most common tense-aspect forms. Note that final *-ŏ* and *-ŭ* (both phonetically [w]) can alternatively be dropped in rapid speech, erasing the overt distinction between Nominative and Ergative marking in the Imperfect. Compare for example *lattras* (< *latt-era-so*) and *ałras* (< *ał-ora-as*). In contrast to the Ergative marking in Table 4.17, verbs with Nominative person marking do not differ according to the choice of Non-Past vowel.

Table 4.18: Tsova-Tush Nominative person marking

| | 'stand' | |
|---|---|---|
| | Morphemes | Surface form |
| *Present* | | |
| 1SG | *latt-e-so* | *lattesŏ* |
| 2SG | *latt-e-ħo* | *latteħŏ* |
| 1PL(EXCL) | *latt-e-txo* | *lattetxŏ* |
| 2PL | *latt-e-šu* | *lattišŭ* |
| 3 | *latt-e* | *latt* |
| *Imperfect* | | |
| 1SG | *latt-era-so* | *lattrasŏ* |
| 2SG | *latt-era-ħo* | *lattraħŏ* |
| 1PL(EXCL) | *latt-era-txo* | *lattratxŏ* |
| 2PL | *latt-era-šu* | *lattrejšŭ* |
| 3 | *latt-era* | *latter* |
| *Aorist* | | |
| 1SG | *latt-in-so* | *latti$^n$sŏ* |
| 2SG | *latt-in-ħo* | *latti$^n$ħŏ* |
| 1PL(EXCL) | *latt-in-txo* | *latti$^n$txŏ* |
| 2PL | *latt-in-šu* | *latti$^n$šŭ* |
| 3 | *latt-in* | *latti$^n$* |

The fact that these cross-reference markers are part of the verb form and no longer pronouns is clearly shown by Harris (2009), and the fact that they are not clitic pronouns is shown by Harris (2011) and Kojima (2019). In short:

- The verb-pronoun complex is clearly one phonological word, as the phonological rules (Nasalisation, Apocope, Syncope) apply to the whole complex, not to the TAME form and the pronoun individually (Harris 2009: 281–284).

Hence we find the surface form *duit'nas* (and not *dot'iⁿ as*) from *d-ot'-in-as*, and *lattesŏ* (and not *latt so*) from *latt-e-so*.

- The Ergative and Nominative agreement markers occur exclusively with verbs; they feature an arbitrary gap — the first person inclusive does not agree; and verbs with person agreement are treated syntactically as single words, not affix groups. All these criteria indicate that the markers are affixes, not clitics. The only counterargument is the placement of the question clitic *=i*, which occurs between the verbal form and the agreement marker (Harris 2011: 141–144).

- The agreement markers are obligatory when expressing the 1st or 2nd person, and can occur in combination with free pronouns (Kojima 2019: 285). Thus, *so vasŏ* 'I am' and *as vuit'as* are grammatical, whereas \**so va* and \**as vuit'ŭ* are not (anymore).

In Tsova-Tush, pronominal direct objects in the Nominative case, as well as Oblique (indirect) objects in the Dative, Allative or Contact case, can be cliticised to the verb form. These clitics do form a part of the phonological word, as is best exemplified by the Nominative object pronoun. In Example (42b), the vowel of the object pronoun *so* 'me' is reduced when cliticised, but the Non-Past vowel is not. However, the cliticisation is optional, as shown by Example (42a), and cliticised pronouns cannot occur in combination with free pronouns (42c).

(42)   a.   *oqu-s         so       v-ik'-ŏ.*
            DIST.OBL-ERG 1SG.NOM M.SG-take.ANIM-NPST
            'S/he takes me (somewhere).'                              (Kojima 2019: 286)

       b.   *oqu-s         v-ik'-o=so.*
            DIST.OBL-ERG M.SG-take.ANIM-NPST=1SG.NOM
            'S/he takes me (somewhere).'                              (Kojima 2019: 286)

       c.   \**oqu-s        so       v-ik'-o=so.*
            DIST.OBL-ERG 1SG.NOM M.SG-take.ANIM-NPST=1SG.NOM
            'S/he takes me (somewhere).'                              (Kojima 2019: 287)

Example (43) shows pronouns in the Dative, Allative and Contact case cliticised to the verb form.

(43)   a.   *niq' co*    **b-ał-iⁿ=soⁿ.**
            road NEG **B.SG-give.PFV-AOR=1SG.DAT**
            'They didn't give me a road.'                            (E171-20)

b. *uis       c'era-l-a=en,      **ał-iⁿ=so-g**.*
   there(LAT) write-INTR-NPST=QUOT **say.PFV-AOR=1SG-ALL**
   '"There it is written," he told me.'                    (E305-4)

c. *inc o-bi    d-ağ-ŏ,      d-aq'-ar **d-ex=so-x**.*
   now DIST-PL D-come-NPST D-eat-VN **D-ask(NPST)=1SG-CONT**
   'They come and ask me for food.'                    (WS001-12.36)

Kojima (2019) argues that Nominative objects form a closer phonological bond with the verb form than objects in Oblique cases. When a Nominative object pronoun is cliticised to a verb form, the phonological rules (in this case apocope) do not apply on the last vowel of the TAME form, but instead apply to the object pronoun itself (see Example (42b)), whereas these rules do apply in verb forms with an Oblique object (43): the Aorist ending *-in* is realised as *-iⁿ* in (43a) and (43b), and the Non-Past vowel *-o* is deleted in (43c). However, in an alternative analysis, nasalisation also occurs word-internally (see Section 2.3), and the Non-Past vowel *-o* has been elided as a result of syncope, since it would be in the penultimate syllable. Hence, the Oblique object pronouns can be said to be equal to the Nominative object pronouns in terms of the degree of cliticisation. That is, all object pronouns are part of the same phonological word as the verb itself, but none are affixes.

A cliticised direct or indirect object pronoun can be attached to a verb that already has subject person marking, although this is rare (see Example (44)).

(44) *as       t'q'oʔ l-o-s=ħoⁿ              krtam=en*
     1SG.ERG again give.PFV-NPST-**1SG.ERG=2SG.DAT** bribe=QUOT
     *so-guiħ       ał-iⁿ.*
     1SG-APUDLAT say.PFV-AOR
     '"I will give you another bribe, to my benefit," he said.'     (WS001-11.14)

Lastly, Dative subjects of experiential verbs can also cliticise to the verb, and behave in the same way as Dative indirect objects: no additional free pronoun can be used in combination with the verb-pronoun complex (see Example (45)).

(45) *seⁿ       bader, **g-u=soⁿ**          me       ğazeⁿ st'ak' v-a-ħ.*
     1SG.GEN child  **see-NPST=1SG.DAT** SUBORD good man   M.SG-be-2SG.NOM
     'My child, I see that you are a good man.'                    (WS001-10.11)

### 4.8.2 Development

In texts from the middle of the 19th century, represented by subcorpora IT and AS in this work, 1st and 2nd person subject pronouns can be cliticised to the

verb (Schiefner 1856: 55–56, Kojima 2019: 280–283). The pronouns following the verb as clitics are optional, and do not occur in combination with free pronouns preceding the verb. In Example (46), which is one narrative sequence, we see (semantically) free variation between free pronouns preceding the verb (46a)[24], (46c)[25] and pronouns cliticised to the end of verbs (46b)[26]. No single example of a verb with both a free and a cliticised pronoun has been found in subcorpora IT or AS. Hence, at this stage, they are cliticised pronominal arguments, and not agreement markers (Kojima 2019: 283).

(46)  a. ***so***    *ma v-ail-n*    ***v-oit'-u***
        **1sg.nom** but **m.sg**-die-**ptcp.pst** **m.sg-go-npst**
        *mac-l-e-x!*
        hungry-**nmlz-obl-cont**
        'But I am starving!'                                    (AS006-1.6)

      b. ***qett-v-e-s,***              ***ğ-o-s***              *sai$^n$*
        **stand_up-npst-seq-1sg.erg**   **go.pfv-npst-1sg.erg**   1sg.gen
        *dad-e-go*    *je* ***aɬ-o-s***              *oqu-go:*    *dad!*
        father-**obl-all** and **say.ipfv-npst-1sg.erg** **dist.obl-all** father
        'I will stand up, go to my father and say to him: "Father!"' (AS006-1.7)

      c. ***as***    ***b-i-e$^n$***    *q'a dal-n*    *ħatxe.*
        **1sg.erg** **b.sg-do.pfv-aor** sin God-**dat** in_front_of
        '"I have sinned before God."'                          (AS006-1.8)

By the middle of the 20th century, the situation has changed. Texts from this period (subcorpora YD and KK) still show variation between verbs with (Example (47b)[27]) and without (47c)[28] cliticised personal pronouns, but at this time, agreement marking in combination with a free pronoun is attested, albeit rare (Desheriev 1953: 84, Kojima 2019: 284). See Example (47a)[29]. Chrelashvili (1982) considers personal marking optional but observes it is very prevalent in Tsova-Tush spoken by younger speakers. If a verb is inflected without person marking, a personal pronoun in the 1st or 2nd person is obligatory, whereas if person marking is used, the pronoun is optional. Hence, subject agreement marking in this period is possible, but not obligatory.

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[24]Original orthography of (46a): so ma wain woitu maclex!
[25]Original orthography of (46c): as bie qa Daln ħatxe.
[26]Original orthography of (46b): x̱etwes, ġos sai dadego e aḷos ox̱ugo: « dad!
[27]Original orthography of (47b): „Марши буисва хьон, Сандро!" − ливас.
[28]Original orthography of (47c): Атхǒ пхьор дакъи.
[29]Original orthography of (47a): Атхо навтỹ ламп дьаи'натхǒ, стюл мак хаибжнатхǒ.

(47) a. ***atxǒ*** *navtu-ⁿ* *lamp* **d-ʕaiʔ-n-atxǒ,**
1PL.ERG kerosene-GEN lamp D-light.PFV-AOR-1PL.ERG
*st'ol-mak* ***xaibž-n-atxǒ.***
table-SUPERLAT sit_down.PFV.PL-AOR-1PL.ERG
'We lit a kerosene lamp, and sat down at the table.'

(YD005-27.1)

b. *"maršiⁿ buisv-a ħon, sandro!"* - ***liv-as.***
peaceful at_night-NMLZ 2SG.DAT Sandro say.IPFV(NPST)-1SG.ERG
'"Good night, Sandro!" I said.'

(YD005-31.2)

c. ***atxǒ*** *pħor* **d-aq'-iⁿ.**
1PL.ERG dinner D-eat.PFV-AOR
'We had dinner.' (YD005-24.1)

As described above in Section 4.8.1, person agreement in 1st and 2nd person is now obligatory in contemporary Tsova-Tush (represented by subcorpora E, MM and recent fieldwork). A free personal pronoun can be present for emphasis[30] (48a) or absent (48b).

(48) a. ***as=i*** **b-ʕiv-n-as=en.**
1SG.ERG=Q B.SG-kill-AOR-1SG.ERG=QUOT
'"Was I the one who killed it?" / "Did I kill it?"' (E091-45)

b. *d-ʕivʔ šar-e* **gag-b-i-n-as.**
D-four year-OBL(ESS) care_for-B.SG-TR-AOR-1SG.ERG
'I have cared for it for four years.' (E027-19)

### 4.8.3 Georgian, Vainakh and Daghestanian

The Georgian verb can mark the grammatical subject, direct object and indirect object (Aronson 1991: 244–247), although indirect object agreement is often viewed as derivational (Gérardin 2022). See Table 4.19, taken from Vogt (1971: 85) below, for the subject and direct object agreement markers.

Even though Georgian features a split ergative alignment system, person agreement marking follows an accusative pattern (Aronson 1991: 267). That is, the same agreement marker is used to cross-reference the subject, irrespective of the transitivity or tense-aspect form of the verb, see Example (49).

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[30]The exact nature of this emphasis (contrastive focus, introduction of theme, or other) has yet to be investigated more thoroughly.

Table 4.19: Georgian person agreement affixes

| | | Object | | | | | |
|---|---|---|---|---|---|---|---|
| | | 1SG | 2SG | 3SG | 1PL | 2PL | 3pl |
| Subject | 1SG | | *g-* | *v-* | | *g-* *-t* | *v-* |
| | 2SG | *m-* | | *(h-)* | *gv-* | | *(h-)* |
| | 3SG | *m-* *-s* | *g-* *-s* | *-s* | *gv-* *-s* | *g-* *-s* | *-s* |
| | 1PL | | *g-* *-t* | *v-* *-t* | | *g-* *-t* | *v-* *-t* |
| | 2PL | *m-* *-t* | | *(h-) -t* | *gv-* *-t* | | *(h-) -t* |
| | 3pl | *m-* *-en* | *g-* *-en* | *-en* | *gv-* *-en* | *g-* *-en* | *-en* |

(49)  Modern Georgian

  a.  ***v**-k'vdebi // mo-**v**-k'vdi*
      'I die'       'I died'

  b.  ***v**-k'lav // mo-**v**-k'ali*          (adapted from Kojima 2019: 291)
      'I kill'      'I killed'

In several Chechen dialects, some verbs show person agreement using root ablaut. The same is true for one Ingush verb, see Example (50) (Nichols 2011: 439, 1994b: 103), which is the only verb in Ingush with person agreement.

(50)  Ingush

  a.  *āz        jāx*
      1SG.ERG say(PRS)
      'I say'

  b.  *cuo       joax*
      3SG.ERG say(3:PRS)
      'S/he says'

Some dialects of Chechen allow for cliticisation of personal pronouns to the finite verb form (Imnaishvili 1968: 210–213). This, however, does not equal person marking, since the cliticisation is optional, and not compatible with a corresponding free pronoun in the same clause (Kojima 2019: 279).

Although most East Caucasian languages do not feature person agreement marking at all, it is possible to find instances, or at least elements, of personal

agreement in every subgroup of the family (Helmbrecht 1996: 131). These agreement patterns show considerable variety, which leads to the general assumption that the development of person marking is a secondary process which happened individually in the different languages. In some languages, person agreement shows a clear origin in free personal pronouns (besides Tsova-Tush also Tabasaran and Udi (Helmbrecht 1996: 143)). See Example (51).

(51) Udi (Vartashen)
   ***zu*** *bu-**zu** jaq' va doğriluğ va kar-x-esun.*
   **1sg** be-**1sg** way and truth and live-lv-vn2
   'I am the way and the truth and the life.' (John 14:6, Schulze 2011)

Instances of person marking in other languages (Lak, various Dargic languages, Akhwakh, Zaqatala Avar) betray fewer clues as to their origin. Interestingly, of languages with pronoun-based person marking, it has been claimed that this type of agreement has developed through language contact: Tabasaran in contact with Southern Dargwa, and (Old) Udi in contact with Old Armenian and/or Iranian languages (Schulze 2011). In contrast, in languages where person marking has an origin other than personal pronouns (Akhwakh (Creissels 2008), Dargic person-marking clitics (Sumbatova 2011)), language contact is claimed to not be a viable explanation.

### 4.8.4 Discussion

Tsova-Tush has developed person marking on the verb, being the only Nakh language to have done so. Subject personal pronouns, whether they are Nominative or Ergative, have cliticised to the verb, and have become agreement markers over the course of the past 200 years. Nominative direct objects and Oblique direct and indirect objects may cliticise to the end of verb forms but have not become agreement markers: their cliticisation is optional and does not occur in combination with the same pronoun preceding the verb. It is extremely likely that the development of person agreement in Tsova-Tush is due to Georgian influence. What is expressed by a single verb form in Georgian is coded by 1st or 2nd person subject agreement marking in Tsova-Tush, with an optional direct or indirect object cliticised personal pronoun (Kojima 2019).

Recall that Tsova-Tush also features another cross-reference marking system: gender. As observed by Chrelashvili (1982), if we compare Tsova-Tush verbs of the type *d-ust'-o-s* 'd-measure-npst-1sg.erg / I measure it' with Georgian *m-xat'-av-s* 'o1sg-paint-npst-s3sg / he paints me', we find identical structures: object-root-subject. However, this similarity might be accidental: in Georgian only the

3rd person subject cross-reference marker is suffixed (the 1st and 2nd person subject markers are prefixed), and in Tsova-Tush only 1st and 2nd person subject markers exist.

With respect to a 3rd person cross-reference marker, Desheriev (1953: 85) explains the lack of such a suffix in Tsova-Tush by pointing to the fact that the 3rd person Nominative singular pronoun is *o*, which would have (or has) assimilated with the vocalic ending of most verbs. However, this hypothesis does not explain why a 3rd person Ergative *oqus* is not found either, nor is a 3rd person plural pronoun (NOM *obi*, ERG *oqar*). Instead, we can observe from other Caucasian languages, as well as from cross-linguistic data, that person agreement marking that exclusively marks speech act participants is not rare. See for instance Dargic languages that only mark 1st and 2nd person (Mehweb only marks 1st person) (Magometov 1962, Helmbrecht 1996: 138, Sumbatova 2011). This conforms perfectly to the established hierarchy of person marking 1>2>3 (Givón 1976: 152, Croft 1988: 162 as cited in Helmbrecht 1996: 128). An explanation for this cross-linguistic observation has been stated in terms of frequency asymmetry: 3rd persons are (presumably) more frequent in discourse than speech-act participants (Haspelmath 2021). Hence, there is no need for an (ad hoc) language-internal explanation for the absence of a 3rd person cross-reference marker in Tsova-Tush, as it already conforms to typological tendencies.

## 4.9 Suffixal number marking

As discussed in Section 4.5.2, a marker *-t* is added to a tense-aspect form of the verb to indicate argument plurality in imperative TAME forms, including the Imperative, Polite Imperative, and Optative. Furthermore, the Hortative is formed by adding the same plural marker and the inclusive 1st person plural pronoun *vej*, but this hortative construction plus *-t* is only used when referring to more than two participants.

There are, however, more contexts in which the plural marker *-t* occurs: in the indicative TAME forms when the subject is 1st person plural inclusive, see Example (52).

(52)  a. *išt'*      *b-ec'-e-**t***         ***vej***     *mokcevad-b-al-a$^n$,*       *dah̨*
         SO.PROX M.PL-need-NPST-**PL**  **1PL.INCL** behave.PFV-M.PL-INTR-INF PV

         *b-ec'-e-**t***           ***vej***     *gantavisuplebad-b-al-a$^n$.*
         M.PL-need-NPST-**PL**   **1PL.INCL** liberate.PFV-M.PL-INTR-INF

         'This is how we must behave, we must free ourselves!'        (E146-41)

b. *joħ daħ j-aq-o-**t***     ***vaj***     *ał-i$^n$.*
girl PV F.SG-take.PFV-NPST-**PL** **1PL.INCL** say.PFV-AOR
'We will take your girl, they said.'       (E153-53)

c. *qečnari$^n$ iš*     *xec'-če*     *daħ at'ar-d-al-in-**t***
strange voice hear.PFV-ANTE PV become_silent-D-INTR-AOR-**PL**
***ve.***
**1PL.INCL**
'Upon hearing a strange sound, we fell silent.'     (BH046-23.1)

Furthermore, the *-t* suffix is attested when the verb involves the 1st person inclusive pronoun as a direct or indirect object, see Example (53).

(53) a. *ve*            *dad-i-v*     *b-is-b-aq-in-**t***
1PL.INCL.POSS.OBL father-PL-ERG M.PL-rescue-M.PL-LV-AOR-**PL**
***ve***     *mastxo-xi$^n$.*
**1PL.INCL** enemy-APUDABL
'Our fathers protected us from the enemy.'     (BH021-3.1)

b. *qe$^n$ maia j-eʔ-en-**t***     ***ve-n.***
then Maia F.SG-come-AOR-**PL** **1PL.INCL-DAT**
'Then Maia approached us.'       (E171-47)

Note that forms inflected for 1st person plural exclusive (as seen in Section 4.8) do not feature the plural marker. The distribution is therefore clear: *-t* is used

1. in plural Imperative TAME forms, which by default are 2nd person

2. in verb forms where one of the arguments is a 1st person plural inclusive pronoun, except in the Hortative with exactly two participants.

The suffix is already attested in the earliest sources (subcorpora AS and IT), with the same distribution, see Example (54).[31,32]

(54) a. *lat-e-**t***     ***vai***     *d-aq'-an*     *keipad-b-al-an=e.*
begin-NPST-**PL** **1PL.INCL** D-eat.PFV-INF feast-M.PL-INTR-INF=and
'Let's start eating and feasting!'       (AS006-1.14)

b. *teł*   *ğ-o*     *vai*     *xat't'-o vai*     *bst'uin-čo-x.*
prefer go-NPST 1PL.INCL ask-NPST 1PL.INCL woman-OBL-CONT
'Let us (two) rather go and ask the woman.'     (AS008-10.4)

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[31]Original orthography of (54a): lałeł wai daqan k̇eiṗadbalane.
[32]Original orthography of (54b): łeḷ ġo wai xato wai bstuinċox.

Chechen and Ingush do not feature the same or a similar suffixal number marker, but instead feature argument number marking by apophony of the verbal root vowel, similar to the Tsova-Tush system (see Section 4.4).

As seen in Table 4.19, Georgian also features a suffix *-t*. This suffix is usually glossed as plural, but, as can be seen from the table, is only used in 1st and 2nd person forms.[33]

It has to be noted that the suffix *-t* in Georgian is used for all TAME forms. Georgian also does not feature a clusivity distinction in 1st person plural pronouns. However, both form and function of Tsova-Tush *-t* and Georgian *-t* are sufficiently similar to claim that this must be a borrowed morpheme.

## 4.10 Summary

In terms of basic description, this chapter has provided new insight into the following domains:

1. Tsova-Tush features a verbal category of Iamitive, since it uses a bound morpheme signifying the meaning 'already' in positive clauses and 'anymore' in negative clauses, see Section 4.5.5.

2. Although more investigation is warranted, the Tsova-Tush Conditional is a morphologically finite form (since it combines with the morph *-ra* and allows person marking) that is syntactically non-finite (i.e. it behaves as a converb), see Section 4.5.4.

3. It was already known that the verb form in *-ralo* indicated imperfective aspect and non-witnessed evidentiality (it is labeled Imperfect Reported in Holisky & Gagua (1994: 180)). We know now that this form is in fact the Past Subjunctive (since it can exhibit subjunctive semantics in other contexts), which has taken on an additional function of background imperfective in narratives that are entirely non-witnessed, see Section 4.7.2.

In terms of structural language contact, this chapter has shown the following parallels between Tsova-Tush and Georgian, only some of which are likely to be attributable to the latter's influence on the former.

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[33]However, Georgian does feature so-called "inverse" forms where the subject is cross-referenced by (direct or indirect) object agreement marking and vice versa. These include most experiential verbs, as well as transitive verbs in the Perfect and Pluperfect TAME forms. In these forms, the suffix *-t* can refer to 3rd persons. Hence, in the form *u-nd-a-t* IO3-want-S3SG-PL 'they want it', the *-t* indicates the plurality of the 3rd person subject (which is marked by the indirect object marker).

1. The Georgian influence on the domain of evidentiality falls beyond the scope of this work and will be further explored in Wichers Schreur & Verhees (in preparation). Preliminarily, we can say that the origin of evidentiality as a category in Tsova-Tush is not likely to be due to Georgian influence, but that the increase in use of the Tsova-Tush Perfect as the main Non-Witnessed evidential form can perhaps be attributed to contact with Georgian.

2. Even though both languages make use of a verb form labelled PLUPERFECT, the counter-factual conditional constructions are sufficiently different in Tsova-Tush and Georgian that it is unwarranted to assume any Georgian influence here.

3. Tsova-Tush has developed a system of subject person agreement marking, and it is thus able to express the same information as a single Georgian polypersonal finite verb form by combining gender marking with person marking.

In terms of matter borrowing, this chapter has shown that:

1. Tsova-Tush has borrowed the Georgian strategy of distinguishing perfective and imperfective verb forms by means of a preverb, along with the borrowed verbs themselves, see Section 4.3.

2. Tsova-Tush has borrowed the suffix *-t* to convey plurality in imperatives and in forms involving a 1st person plural inclusive pronoun. This represents a rare case of a bound morpheme being borrowed, as opposed to the numerous accounts of pattern borrowing found in the rest of this work, see Section 4.9.

# 5 Valency, valency derivation, and complex verbs

## 5.1 Introduction

In this chapter, several topics surrounding verbal morphosyntax and derivation are discussed. In Section 5.2, all basic valency patterns in Tsova-Tush are presented, with a more in-depth discussion of intransitive subjects in the Ergative in Section 5.2.1.2. Section 5.3 discusses several types of complex verbs, in particular constructions involving a light verb (Sections 5.3.1 and 5.3.2.1). Valency derivation (that makes use of exactly those light verbs or other suffixes historically derived from verbs) is discussed in Section 5.4.

In terms of contact-induced change, two main topics are addressed. For the first, the aforementioned occurrence of Ergative subjects with intransitive verbs, it will be concluded that a Georgian influence is not warranted as an explanation of this phenomenon (Section 5.2.4). The second topic concerns the incorporation of verbs borrowed from Georgian. The general pattern is described in Section 5.5.1, while the incorporation of a special type of Georgian intransitive verb (with transitive morphology and Ergative case marking in the Aorist) into Tsova-Tush is discussed separately, in Section 5.5.2.

## 5.2 Valency and alignment

A Tsova-Tush verb usually governs only one valency pattern (i.e. is not labile (Holisky & Gagua 1994: 193)), which is stable in all tense-aspect forms. The most common case forms for argument marking are the Ergative, the Nominative and the Dative (Chrelashvili 1987), although the Allative and Contact cases can be used for Oblique objects. Thus, Tsova-Tush case marking of arguments is largely similar to other East Caucasian languages (Forker 2017), the exception being Ergative marking on certain intransitive subjects. Note that the following overview considers simple, underived verbs only. For derived and otherwise complex verbs, see Sections 5.3 and 5.4.

### 5.2.1 Single-argument verbs

#### 5.2.1.1 Nominative argument

Most monovalent verbs expressing states and changes of state take a subject in the Nominative[1], see Example (1). This construction represents the basic intransitive clause type.

(1)　a.　*t'q'uiħ qejc'　　　j-acu$^n$　muǧ.*
　　　　behind hang(NPST) J-short tail.**NOM**
　　　　'A short tail hangs behind.'　　　　　　　　　　　　　　(E064-23)

　　　b.　*ošt'iʔ laumǔ　　d-ax-c'i$^n$　　　　　d-is-e$^n$.*
　　　　again mountain.LAT D-go-PRIV.ADJZ.**NOM** D-stay-AOR
　　　　'Again, those that didn't go to the mountains stayed behind.'
　　　　　　　　　　　　　　　　　　　　　　　　　　(KK015-3120)

　　　c.　*že　　　daħ=i d-av-i$^n$?*
　　　　sheep.**NOM** PV=Q D-be_killed-AOR
　　　　'Were the sheep slaughtered?'　　　　　　　　　　　(EK009-7.1)

Two-argument verbs that most often occur with an Ergative agent and a Nominative patient (see 5.2.2) can occur without an agent to express impersonal semantics, see Example (2). See Creissels (2014b), Forker (2017) for this type of P-lability in other East Caucasian languages.

(2)　a.　*žange-čŏ nek'-e-v　　ditx　　tit'-e$^n$.*
　　　　rusty-OBL knife-OBL-INS meat.**NOM** cut.PFV-AOR
　　　　'They cut the meat with a rusty knife.' or: 'The meat was cut with a rusty knife.'　　　　　　　　　　　　　　　　(KK033-5485)

　　　b.　*matx-mak　　j-arž-j-∅-a$^n$　　　nʕajʔ qeħ-i$^n$　　barg.*
　　　　sun-SUPERLAT J-unfold-J-TR-INF outside carry.IPFV-AOR luggage.**NOM**
　　　　'They took the luggage outside to splay it out in the sun.' or: 'The luggage was taken outside […]'　　　　　　　　　　(KK002-0432)

#### 5.2.1.2 Ergative argument

As shown by Holisky (1987) (but see already Schiefner 1859, Holisky 1984: 73), intransitive subjects of the first and second person can be marked by the Ergative case. This occurs in one of the following conditions:

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[1]The label Nominative is preferred over Absolutive in most Caucasological works.

1. The intransitive verb belongs to a class that allows variable marking in first and second person subjects, where an Ergative subject signals a greater amount of volition and/or agency than a Nominative subject. Depending on the semantics of the verb, the volitional (Ergative) or the less-volitional (Nominative) subject is more common, or both are attested in equal measure. These verbs include: changes of state, verbs of falling, rolling, slipping, locative statives, some verbs of motion (mostly ERG), some verbs of communication (mostly ERG), and others. In Example (3), the verb *virc'nas* (*v-erc'-in-as*) features a gender marker that refers to the Ergative argument. That is, in this example, the intransitive verb *d-erc'-* 'turn' regularly agrees in gender with its intransitive subject, but because of the variability in case marking that the verb *d-erc'-* 'turn' allows (a Nominative argument would have expressed a less volitional subject), the 1st person subject of this verb is marked by the Ergative case. This results in an exception to the general pattern in East Caucasian languages that gender marking on the verb exclusively cross-references the Nominative argument in the clause.

   (3)  *oqar-n*　　　　　　**v-irc'-n-as**　　　　　　*v-ux=ajnŏ.*
        DIST.PL.OBL-DAT **M.SG-turn-AOR-1SG.ERG** M.SG-back=QUOT
        'I returned for them.' (i.e. 'I chose to return for them.')　(EK005-4.7)

2. Alternatively, the intransitive verb belongs to a class that *requires* its subject to be marked by the Ergative. These verbs include all verbs of motion or communication (other than those that show variable marking), as well as approximately 28 other verbs. See Example (4). Note that in this example, too, the gender marker cross-references an argument coded with the Ergative because of the restrictions that the verb *d-ot'-* imposes on its intransitive subject in first or second person.

   (4)  *inc  širk-ile[n]*　　　*v-ağ-o-s,*
        now Shiraki-ELAT M.SG-come-NPST-1SG.ERG
        **v-uit'-as**　　　　　*tinit*　　　*lam-na-x.*
        **M.SG-go(NPST)-1SG.ERG** Tianeti.ILL mountain-OBL.PL-CONT
        'Now I am coming from Shiraki, and I'm going to the Tianeti mountains.'　　　　　　　　　　　　　　　　　(E040-20)

3. Additionally, Holisky (1987) has identified 6 verbs that show morphological similarities with transitive verbs and require Ergative subjects in all three

persons. However, they exclusively occur without a direct object, and are therefore treated syntactically as intransitives by Holisky (see Example (5)).

(5)  *šin*      *šar-e*        *k'olekt'iv-e*
     two.OBL year-OBL(ESS) collective-OBL(ESS)
     ***mušeba(d)-d-i-n-as***     *[...] osi-ħ=a*      *moc'inav*
     work-D-TR-AOR-1SG.ERG       there-ESS=ADD leader
     *j-a-ra-s.*
     F.SG-be-IMPF-1SG.NOM
     'I worked in a collective for two years, I was a leader there too.'
     (E116-17)

In (5), a different type of gender cross-referencing is observed. The verb *mušebadinas* 'I worked' occurs with a gender marker *d-*, whereas the first-person subject is feminine, as seen by the subsequent verb *jaras* 'I was'. Hence, if the verb *mušebad-d-ar* patterned like the verbs in Examples (3–4), we would expect a form *mušebadjinas*, with a feminine marker *j-*. Instead, we find a gender marker *d-* not referring to any object. Thus, this verb (and the 5 other verbs identified by Holisky 1987) shows regular transitive morphology (*mušebadinas* carries a transitive morpheme *-i-*[2]), whilst never being attested with an object. See Section 5.5 for a more in-depth treatment of this phenomenon, which occurs with certain verbs borrowed from Georgian.

Consider again the 6 verbs of which Holisky (1987) claims they have an intransitive Ergative subject in all three persons, see Table 5.1.

Even though Holisky (1984: 188–189) groups these verbs together, we in fact see a striking variety of valency patterns. Out of these 6, *mušeba(d)-d-ar* 'work' and *gamarʒba(d)-d-ar* 'be victorious', both borrowed from Georgian, indeed have only a single Ergative argument in all persons. Similarly, the verb *naidreba(d)-d-ar* 'hunt' is also borrowed from Georgian along with its valency construction: an Ergative subject and an Oblique (SUPER-locative) object. The verb *toxar/tepxar* 'hit, beat' is in fact not a single-argument, but a three-argument verb (with the instrument/body part in the Nominative and the goal/point of contact in the Contact case, see 5.2.3). *ħač'q'ar/ħeč'q'ar* 'pinch (of shoes)' is a regular two-argument

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[2]See Section 5.5 for the adaptation of Georgian verbs such as this one.

Table 5.1: Intransitive verbs with a single argument in the Ergative case
in all persons according to Holisky (1984: 188–189)

| | |
|---|---|
| *mušeba(d)-d-ar* | 'work' |
| *gamarǯba(d)-d-ar* | 'be victorious' |
| *naidreba(d)-d-ar* | 'hunt' |
| *toxar/tepxar* | 'hit, beat' |
| *ħač'q'ar/ħeč'q'ar* | 'pinch (of shoes)' |
| *curi ħaqar* | 'swim' |

verb with the meanings 'seize, grab, catch; press, wring out', but occurs without an object with the meaning 'pinch (of shoes)'. This leaves *curi ħaqar* 'swim', which consists of the two-argument verb *ħaqar* (which in isolation means 'smear, wipe'), and the element *curi*[3], which has no meaning in isolation, but functions as a direct object in the construction *curi ħaqar* 'swim'. Hence, all real single-argument verbs with an Ergative subject in all persons are borrowed from Georgian, and will be discussed in Section 5.5.

In sum, we can identify at least 4 verb types, categorised by a decreasing level of prototypical intransitivity, seen in Table 5.2. All these verbs demand a single argument, but in terms of gender cross-referencing, all but type IV verbs agree in gender with their subject. In terms of the case that this subject is required to have, only type I is prototypically intransitive; all other types allow variable marking or require the Ergative.

Table 5.2: Tsova-Tush intransitive verb categories. Arg: Arguments, prod.: productive.

| | | Prototypically intransitive in terms of | | | |
|---|---|---|---|---|---|
| | Arg. | Gender | Case | Number[a] | Examples |
| I | yes (1) | yes (agrees with S) | yes (ɴᴏᴍ) | 31 + prod. | *d-aq'-d-alar* 'dry up' |
| II | yes (1) | yes (agrees with S) | no (variable) | 124 | *d-erc'ar* 'turn' |
| III | yes (1) | yes (agrees with S) | no (ᴇʀɢ) | 78 | *d-ot'ar* 'go' |
| IV | yes (1) | no (fixed ᴅ-gender) | no (ᴇʀɢ) | prod. (GE) | *mušeba(d)-d-ar* 'work' |

[a](Holisky 1987)

[3]Borrowed from Georgian *cur-* 'swim'. The ending *-i* needs further investigation.

No alignment pattern with a single ergative argument is found in Chechen or Ingush. See Section 5.2.4 for a comparison with Georgian.

### 5.2.2 Two-argument verbs

#### 5.2.2.1 Ergative + Nominative

Most two-argument verbs require their subject to be in the Ergative, and the direct object in the Nominative, see Example (6). This construction represents the basic transitive clause type.

(6) a. *kikoʔ txo-goħ    lek'-i-v          že        d-ik'-er.*
       early 1PL-ADESS Daghestanian-PL-**ERG** sheep.**NOM** D-take.ANIM-IMPF
       'In the olden days, Daghestanians used to take our sheep.'

       (KK009-1789)

   b. *co   d-aq'-or       oqu-s       o-bi       ħalŏ.*
       NEG D-eat.IPFV-IMPF DIST.OBL-**ERG** DIST-PL.**NOM** PV
       'She didn't eat those things.'                          (E179-82)

#### 5.2.2.2 Nominative + Oblique

Many verbs show a valency pattern with a Nominative subject and an object in an Oblique case, such as Contact case (7a, 7b), Dative (7c, 7d) or Allative (8). These verbs are analysed as two-place intransitives with an (indirect) object in an Oblique case (Holisky & Gagua 1994: 193), i.e. they represent an extended intransitive clause type (Dixon & Aikhenvald 2000).

(7) a. *cxovrb-e-x=a        deniʔ qečnerat  lat-e-s=a.*
       life-OBL-**CONT**=EMPH fully  differently fight-NPST-1SG.**NOM**=EMPH
       'I fight life [i.e. I struggle with life] in a completely different way.'

       (E046-12)

   b. *o      šer      korti-x=a        dak'liv.*
       DIST.**NOM** REFL.POSS head.OBL-**CONT**=ADD think.IPFV(NPST)
       'He thinks about himself as well.'                       (E002-47)

   c. *kist'   qet-i$^n$     oqui-nĭ,    psarl-xan-e.*
       Kist.**NOM** attack-AOR DIST.OBL-**DAT** evening-time-OBL(ESS)
       'The Kist attacked him in the evening.'                  (EK006-2.4)

   d. *qe$^n$ axmit'-re$^n$    gamgebel lat'-e$^n$    txo$^n$   zorejš,*
       then Akhmeta-ELAT leader.**NOM** help.PFV-AOR 1PL.**DAT** very
       'Then the leader from Akhmeta helped us a lot.'          (E041-76)

### 5.2.2.3 Ergative + Oblique

Some extended intransitive verbs, similar to some regular intransitive verbs, can also appear with an Ergative subject, although relatively few such valency patterns with an Ergative subject and an Oblique object are found (Holisky & Gagua 1994: 195, who don't give examples). One example is the verb *ħač'ar/ħeč'ar* 'look', which, besides a Lative (usually Allative) object, requires an Ergative subject in the 1st or 2nd person (see Example (8a)), similar to monovalent verbs of type III as seen in Section 5.2.1. In the 3rd person, a Nominative subject is required (8b).

(8)  a.  *saj*                        *badr-e-g=sa$^n$*              *ħič'-as*
         1SG.POSS.EMPH.OBL child-OBL-ALL=like look.IPFV(NPST)-1SG.**ERG**
         *ħo-gŏ.*
         2SG-**ALL**
         'I look at you like [I look] at my own child.'              (MM116 2.18)

  b.  *o*      *joħ*      *oqui-g*        *ħič'.*
      DIST girl.**NOM** DIST.OBL-**ALL** look.IPFV(NPST)
      'That girl looks at him.'                                          (E182-99)

### 5.2.2.4 Dative + Nominative

Many experiential verbs show a valency pattern with a Dative subject/experiencer and a Nominative object/stimulus. Examples include the verbs 'see' (9a), 'want' (9b), 'find' (9c) and 'know' (9d).

(9)  a.  *važa ħe$^n$*    *arc'iv*    *txa*    *g-u*          *so$^n$.*
         Vazha 2SG.GEN eagle.**NOM** today see.PFV-NPST 1SG.**DAT**
         'Vazha, I see your eagle now.'                                   (E207-8)

  b.  *aznaurob*      *le?*              *so$^n$.*
      nobility.**NOM** want.IPFV(NPST) 1SG.**DAT**
      'I want nobility.'                                               (EK053-3.14)

  c.  *oqu-s*        *d-av-d-i-enŏ*              *žagnŏ*      *so$^n$*    *ħal xet-i$^n$.*
      DIST.OBL-ERG d-loose-d-TR-PTCP.PST book.**NOM** 1SG.**DAT** PV find-AOR
      'I found the book that s/he lost.'                             (KK001-0036)

  d.  *ħan-n*         *qet*      *šun*      *bacbur?*
      who.OBL-**DAT** know(NPST) 2PL.DAT Tsova_Tush.**NOM**
      'Who amongst you knows Tsova-Tush?                             (BH064-38.1)

### 5.2.3 Three-argument verbs

#### 5.2.3.1 Ergative + Nominative + Oblique

Most three-place verbs feature a subject in the Ergative case, a direct object in the Nominative case, and an indirect object in an Oblique case. These verbs represent the extended transitive clause type (Dixon & Aikhenvald 2000, Forker 2017). An indirect object that refers to a recipient is usually marked by the Dative case, such as with the verb 'give' in Example (10a).[4] With speech verbs such as 'tell' (Example (10b)), addressees are marked by the Allative case. The verb 'ask, demand' requires its indirect object to be in the Contact case (10c). With verbs of shooting, hitting, etc., the instrument (be it an implement or a body part) is in the Nominative, and the goal (i.e. the person or object being hit or shot) is in the Contact case (Example 10d). This argument mapping for such verbs (which typically include 'hit', 'shoot', 'touch'), i.e. the instrument of the action being expressed as a direct object, and the undergoer appearing in the dative or a spatial case, is found in most, if not all, Kartvelian and East Caucasian languages (Klimov 1978: 58–59).

(10)  a. *busu-busu  ma        d-al-in-čo-ⁿ              dad-i-v*
         night-night however D-die-PTCP.PST-OBL-GEN patron-PL-**ERG**
         *nax-n     majqĭ   teł-ŏ.*
         people-**DAT** bread.**NOM** give.IPFV-NPST
         'But at night, the family of the deceased give bread to the people.'
                                                                   (EK023-2.7)

      b. *jaša-s    jažar-gŏ,  važar-gŏ    pal-i*
         sister-**ERG** sister.PL-**ALL** brother.PL-**ALL** tale-PL.**NOM**
         *d-epc-or.*
         B.PL-tell.IPFV-IMPF
         'The sister was telling stories to her siblings.'          (KK010-1873)

      c. *ħan-e      b-ex-in-čĭ              so-x      doⁿ,*
         who.**ERG**-REL B.SG-ask-AOR-SUBORD 1SG-**CONT** horse.**NOM**
         *oqui-n      b-ajł-n-as.*
         DIST.OBL-DAT B.SG-give.PFV-AOR-1SG.ERG
         'Who(ever) asked a horse from me, I gave [it] to him/her.'
                                                                   (KK013-2697)

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[4]Nakh languages do not feature an alienability distinction in recipients (see e.g. Nichols 2011: 592), like most Daghestanian languages do.

d. *top=a        tox-iⁿ        oqu-s        gak'o-x.*
gun.**NOM**=**EMPH** hit.**PFV**-**AOR** **DIST**.**OBL**-**ERG** stomach-**CONT**
'S/he shot [him/her] in the stomach.' (Lit. 'S/he shot the gun into the
stomach.')                                                  (EK059-2.9)

### 5.2.4 Comparison with Georgian

#### 5.2.4.1 Introduction to Georgian valency and alignment

The Georgian language is famous for its intricate system of grammatical case
marking (see e.g. Harris 1982, 1981). The main grammatical cases, Nominative,
Ergative and Dative, are all used as subjects, depending on the verb class and the
TAM form of the verb. Example (11) illustrates this phenomenon.

(11)    Modern Georgian

a. *glex-**i**        tesavs        simind-**s**.*
peasant-**NOM** s/he_sows_it corn-**DAT**
'The peasant is sowing corn.'

b. *glex-**ma**        datesa        simind-**i**.*
peasant-**ERG** s/he_sowed_it corn-**NOM**
'The peasant sowed corn.'

c. *glex-**s**        dautesavs        simind-**i**.*
peasant-**DAT** s/he_has_sown_it corn-**NOM**
'The peasant has sown corn.'          (All from Harris 1981: 1)

Georgian has 4 verb classes. The morphological criteria for distinguishing
these classes are summed up in Table 5.3 (after Harris 1981: 260).

Table 5.3: Georgian verb classes (PV = preverb)

|                              | Class 1 | Class 2   | Class 3     | Class 4    |
|------------------------------|---------|-----------|-------------|------------|
| FUT/AOR formed with          | PV      | PV / *e-* | *i-* (*-eb*) | *e-*       |
| Subject marker in FUT, 3SG/3PL | *-s/-en* | *-a/-an*  | *-s/-en*    | *-a*/various |
| Subject marker in AOR, 3PL    | *-es*   | *-nen*    | *-es*       | as SG      |

Roughly[5], Class 1 consists of transitive verbs, Class 2 of so-called "inactive"
intransitive verbs, Class 3 of so-called 'active', agentive, atelic intransitive verbs

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[5]But see Harris (1981) for exceptions.

(see Holisky 1981), and Class 4 of verbs of cognition, emotion and possession. Table 5.4 gives several examples per class (taken from Harris 1981: 261–267). Since in this work (following Harris 1981, but differing slightly from traditional Georgian grammatical description) the verb classes are defined purely on morphological grounds (Table 5.3), some exceptions do exist, such as intransitive verbs 'yawn', 'cough' in Class 1 and transitives like 'answer somebody' in Class 3.

Table 5.4: Examples of Georgian verb classes (Here and in the following tables, 'sb' is 'somebody' and 'sth' is 'something'.)

| Class 1 | Class 2 | Class 3 | Class 4 |
|---|---|---|---|
| 'heat sth' | 'be' | 'dance' | 'love' |
| 'bake sth' | 'fall' | 'play' | 'like' |
| 'rip sth' | 'remain' | 'quarrel' | 'forget' |
| 'break sth off' | 'be spread out' | 'fight' | 'have' |
| 'bend sth' | 'be locked' | 'cry' | 'can' |
| 'write sth' | 'become white' | 'talk' | 'find sth difficult' |
| 'wash sth' | 'become king' | 'run' | 'be afraid of sth' |
| 'sow sth' | 'begin' | 'roll' | 'be hurt by sth' |
| 'yawn' | 'grow up' | 'turn' | 'be hungry' |
| 'cough' | 'begin to play' | 'answer sb' | 'feel sleepy' |

It is important to note that verbs of different classes can be formed from the same root. The root *-c'q'-*, for example, can appear as a Class 1 verb *daic'q'ebs* 's/he/it will begin something (transitive)', and as a Class 2 verb *daic'q'eba* 's/he/it will begin (intransitive)'. These verbs clearly have a derivational relationship, although it is not always straightforward to know which form is derived from which. Additionally, Class 1 verbs and Class 2 verbs can be derived from almost any adjective and many nouns.

Georgian Series, i.e. groups of related TAM forms, are defined by several criteria. Morphologically, Series I is characterised by a so-called "thematic suffix".[6] These suffixes (*-eb, -en, -ev, -av, -i, -ob, -am*) are attached directly to the verb root, and do not appear in Series II. More clearly, however, the Series are shown by different alignment patterns (shown in Table 5.5), where Class 1 verbs take a Nominative Subject and a Dative object in Series I (Present, Imperfect, Future, Conditional and two Subjunctives), an Ergative subject and a Nominative object

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[6]A handful of "root verbs", verbs without a thematic suffix in Series I, also exists.

in Series II (Aorist and Optative), and a Dative subject and Nominative object in Series III (Perfect, Pluperfect and Perfect Subjunctive).

Table 5.5: Georgian alignment patterns

|  | Class 1 | | Class 2 | Class 3 | Class 4 | |
|---|---|---|---|---|---|---|
|  | S | O | S | S | S | O |
| TAM series I | NOM | DAT | NOM | NOM | DAT | NOM |
| TAM series II | ERG | NOM | NOM | ERG | DAT | NOM |
| TAM series III | DAT | NOM | NOM | DAT | DAT | NOM |

Valency can be altered on Georgian verbs by adding a vowel (*a, e, i, u*) directly before the verb root. These vowels can form indirect reflexives and various applicatives. Additionally, Georgian can form morphological causatives, all of which belong to Class 1. None of these will be discussed further here (see Vogt 1971: 118–162, Gérardin 2022, Hewitt 1995: 170–204 for a detailed description).

If we compare Tables 5.3, 5.4 and 5.5, we see that Class 3 verbs share many properties with Class 1 verbs, in terms of morphology (same person marking for subjects), semantics (agentive) and alignment pattern (a three-way split ergativity, contrary to Class 2 and 4).

Furthermore, if we look at the alignment patterns for Series II, we find a similar system to that of Tsova-Tush verbs. That is, in both languages we find a basic transitive pattern with Ergative subjects and Nominative objects (similar to Georgian Class 1, see also Section 5.2.2), a basic intransitive pattern with Nominative subjects (similar to Georgian Class 2) as well as a class of intransitive verbs with Ergative subjects (similar to Georgian Class 3, see Section 5.2.1), and a class of experience verbs with Dative subjects and Nominative objects (Class 4, see Section 5.2.2). Where verb types of Class 1, 2 and 4 are very common in almost all languages of the Caucasus, including in Chechen and Ingush, Class 3 verbs are relatively rare, and deserve a closer look.

### 5.2.4.2 A closer comparison

As seen in Sections 4.2 and 5.2.4, both Georgian and Tsova-Tush feature a class of single-argument verbs that allow (or require) an Ergative subject. However, one needs to look at what verbs actually belong to this class in both Tsova-Tush and Georgian. Below, the individual verbs in both languages are compared, relying heavily on work by Dee Ann Holisky, who has researched these types of verbs

in both Georgian (Holisky 1981) and Tsova-Tush (Holisky 1987), from which the data below is taken. All Tsova-Tush non-borrowed verbs without a preverb that Holisky classifies as having a usual or required Ergative subject will be discussed. I will discuss groups of verbs based on semantic criteria, starting with verbs of motion, and adding the Georgian translation given by Kadagidze & Kadagidze (1984) in the Future tense.

Table 5.6: Tsova-Tush motion verbs and their Georgian counterparts. ERG(NOM) = "Ergative is the norm, Nominative is possible, but unusual or rare", according to Holisky (1987).

| Tsova-Tush | S-Marking | English | Georgian | S-Marking |
|---|---|---|---|---|
| *d-aržar* | ERG(NOM) | 'spread oneself out' | *gaišleba* | NOM |
| *d-eħ-d-alar* | ERG(NOM) | 'sneak' | *miep'areba* | NOM |
| *tatt-d-alar/tett-d-alar* | ERG(NOM) | 'inch forward' | *miic'eva* | NOM |
| *k'arčar/k'erčar* | ERG(NOM) | 'roll around' | *gagordeba* | NOM |
| *lak-d-alar/lek-d-alar* | ERG(NOM) | 'rush' | *movardeba* | NOM |
| *d-oc'-d-alar/d-ebc'd-alar* | ERG(NOM) | 'follow' | *aedevneba* | NOM |
| *d-ałar/ixar* | ERG | 'go' | *ava, miva* | NOM |
| *d-at'ar/it'ar* | ERG | 'run' | *gaikceva* | NOM |
| *d-axar/d-ot'ar* | ERG | 'leave, go' | *c'ava* | NOM |
| *d-aʔar/d-ağar* | ERG | 'come' | *mova* | NOM |
| *egar* | ERG | 'enter, mix' | *šeereva* | NOM |
| *eqqar/letxar* | ERG | 'jump' | **xt'is** | ERG |
| *taqar/teqar* | ERG | 'crawl' | *gaetreva* | NOM |
| *lalar/lelar* | ERG | 'walk' | *dadis* | NOM |
| *ottar/ettar* | ERG | 'stand up' | *dadgeba* | NOM |
| *d-ołar/deplar* | ERG | 'crawl, squeeze' | *šeʒvreba* | NOM |
| *qačar* | ERG | 'reach, arrive' | **miağc'evs** | ERG[a] |
| *ħet'ar* | ERG | 'run' | *gaikceva* | NOM |

[a]labile verb

Judging from Table 5.6, Tsova-Tush single-argument motion verbs with Ergative subjects mostly correspond to Georgian Class 2 verbs (which have a Nominative subject, as seen in the rightmost column), with two exceptions (bolded in the table), *xt'is* 'jump' and *miağc'evs* 'reach, arrive' (the latter also occurs with an object). However, Holisky (1981: 111) cites many Georgian Class 3 verbs of motion. They include: *goravs* 'roll', *curavs* 'swim, slide', *seirnobs* 'walk, stroll', *cocavs* 'crawl, climb', *srialebs* 'slide, slip, slither', *kris* 'rush'.

Turning to verbs of sound and expression, it is clear from Table 5.7 that most Tsova-Tush verbs of this type correspond to Georgian verbs that have s single

argument in the Ergative. Exceptions are *čumdeba* 'fall silent', which is a Class 2 verb, and *iʒaxebs* 'call' and *ambobs* 'talk, say', which are Class 1 verbs (and thus are transitive).

Table 5.7: Tsova-Tush expression verbs and their Georgian counterparts

| Tsova-Tush | S-Marking | English | Georgian | S-Marking |
|---|---|---|---|---|
| *d-adar* | ERG | 'swear' | *ipicebs* | ERG |
| *d-atxar* | ERG | 'cry' | *t'iris* | ERG |
| *at'ar* | ERG | 'fall silent' | *čumdeba* | NOM |
| *axar* | ERG | 'bark' | *q'eps* | ERG |
| *d-elar* | ERG | 'laugh' | *icinis* | ERG |
| *d-ekar/qekar* | ERG | 'call' | *iʒaxebs* | ERG[a] |
| *tarsar/tersar* | ERG | 'neigh' | *ič'ixvinebs* | ERG |
| *lavar/levar* | ERG | 'talk, say' | *ambobs* | ERG[a] |
| *sart'ar/sert'ar* | ERG | 'curse' | *c'q'evlis* | ERG |
| *duğar* | ERG | 'scream, cry' | *q'viris* | ERG |
| *kat'ar* | ERG | 'complain' | *čivis* | ERG |

[a]transitive verb

As seen from Table 5.8, from the 21 intransitive Tsova-Tush verbs that have no semantics related to motion or expression, but do require or prefer an Ergative subject, only five correspond to a Georgian Class 3 verb: *ibanavebs* 'wash' (the translation of both Tsova-Tush *d-itt-d-alar* and *d-il-d-alar*), *imat'ebs* 'add', *icxovrebs* 'live', *ipikrebs* 'think' (which can occur with an object) and *itamašebs* 'play'. Other than these Class 3 and two Class 1 verbs (*mosc'evs* 'suck', *šexedavs* 'look'), most Tsova-Tush verbs in Table 5.8 correspond to Georgian Class 2 verbs, i.e. verbs with Nominative subject marking throughout the TAM system.

In trying to answer the question whether the creation of a class of Tsova-Tush intransitive verbs with (possible or obligatory) Ergative subjects was influenced by Georgian at all, using the data in Tables 5.6–5.8, I draw the conservative conclusion that Georgian influence is not warranted as an explanation of this type of verb. Only verbs of utterance show a clear correlation between Tsova-Tush and Georgian case marking, whereas most Tsova-Tush verbs of motion and verbs with other semantics correspond to Georgian Class 2 verbs, i.e. Georgian verbs with a Nominative subject in all TAM forms.

Table 5.8: Other Tsova-Tush verbs and their Georgian counterparts (ERG(NOM) = 'Ergative is the norm, nominative is possible, but unusual or rare', according to Holisky (1987))

| Tsova-Tush | S-Marking | English | Georgian | S-Marking |
|---|---|---|---|---|
| *d-exk'-d-alar/axk'-d-alar* | ERG (NOM) | 'get stuck' | *miebmeba* | NOM |
| *d-itt-d-alar* | ERG (NOM) | 'take a bath' | *ibanavebs* | ERG |
| *d-il-d-alar* | ERG (NOM) | 'get washed' | *ibanavebs* | ERG |
| *lat'ar* | ERG (NOM) | 'add to' | *imat'ebs* | ERG |
| *d-ol-d-alar/d-ebl-d-alar* | ERG (NOM) | 'begin' | *daic'q'eba* | NOM |
| *kott-d-alar* | ERG (NOM) | 'be worried' | *šec'uxeba* | NOM |
| *c'am-d-alar/c'em-d-alar* | ERG (NOM) | 'get clean' | *daic'mindeba* | NOM |
| *ħarčar/ħerčar* | ERG (NOM) | 'surround' | *moexveva* | NOM |
| *cer-d-aɬar* | ERG | 'finish' | *gatavdeba* | NOM |
| *d-arc'-d-alar* | ERG | 'get undressed' | *gat'it'vldeba* | NOM |
| *d-axar* | ERG | 'live' | *icxovrebs* | ERG |
| *d-aqar* | ERG | 'suck, nurse' | *mosc'evs* | ERG[a] |
| *dak'-d-aɬar* | ERG | 'figure out' | *mixvdeba* | NOM |
| *dak'lavar* | ERG | 'think' | *ipikrebs* | ERG[b] |
| *tešar* | ERG | 'believe' | *ežereba* | NOM |
| *txil-d-alar* | ERG | 'be careful' | *gaprtxildeba* | NOM |
| *latar/letar* | ERG | 'fight' | *eč'ideaveba* | NOM |
| *lap'c'ar* | ERG | 'play' | *itamašebs* | ERG |
| *lat'ar/let'ar* | ERG | 'help' | *miešveleba* | NOM |
| *qap't'ar/qep't'ar* | ERG | 'reach' | *misc'vdeba* | NOM |
| *ħač'ar/ħapsar* | ERG | 'look (SG/PL)' | *šexedavs* | ERG[a] |

[a]transitive verb

[b]labile verb

Additionally, there are three crucial differences between the sets of verbs in Tsova-Tush and Georgian.

1. Tsova-Tush allows both Nominative and Ergative subjects for some verbs, whereas Georgian requires Ergative subjects for all Class 3 verbs.

2. Tsova-Tush only requires/allows 1st and 2nd person subjects to be in the Ergative for this type of verb. In Georgian, all three persons are required to be in the Ergative, although 1st and 2nd person pronouns do not distinguish Nominative, Ergative or Dative case. Thus, Ergative case marking on intransitive subjects can only be observed with 1st and 2nd person in Tsova-Tush, and only with 3rd person in Georgian.

3. In Georgian, single-argument verbs require an Ergative subject when they belong to Class 3, that is, when they exhibit the morphological features described above in Section 5.2.4.1. In other words, the Georgian rule is based on morphosyntax.[7] In Tsova-Tush, single-argument verbs require a 1st or 2nd person Ergative subject if that subject is stereotypically agentive (that is, when the subject is acting in control and voluntarily, see Section 5.2.1.2 above), which is a rule based directly on semantics (Holisky 1987).

This means that the origin of Tsova-Tush variable case marking on intransitive subjects remains an open question. In some languages like Udi (Harris 2010) or Ingush, intransitive subjects marked with the Ergative case can relatively clearly be attributed to a historical process of noun incorporation. See for example Ingush *nabj-u* 's/he sleeps', historically from *d-u* 's/he does' with gender marker *j-* referencing the incorporated noun *nab* 'sleep' (Nichols 2008, Forker 2017). In Tsova-Tush, however, this pathway is unlikely. From the verbs in Tables 5.6–5.8, only three are noun-incorporating: *cer-d-ałar* 'finish' from 'boundary' + 'go out', *dak'-d-ałar* 'figure out', from 'heart' + 'go out', and *dak'-lavar* 'think', from 'heart' + 'speak'. Even with these complex verbs (see Section 5.3), the original verb is an intransitive verb of motion or expression, not a transitive one.

Since Ergative marking on subjects of monovalent verbs often occurs through elision of frequently occurring objects (such as 'eat (food)'), one could imagine such a type of A-lability to be the basis of Tsova-Tush verbs of expression, with the elision of objects (the expression or utterance) causing erstwhile transitive verbs to become intransitive with retention of the Ergative marking. However, A-lability is shown to be very rare in languages of the Caucasus.

Many Georgian class 3 verbs are themselves also borrowed into Tsova-Tush, for which see Section 5.5.2.

## 5.3 Complex verbs

Besides simple verbs, Tsova-Tush features many complex verbs, consisting of at least two recognisable parts. Before we can shed some light on Tsova-Tush verbal derivation, it is helpful to gain a general understanding of complex verbs in Tsova-Tush. In this work, I distinguish four types of complex verbs: (1) compound verbs containing a light verb (Section 5.3.2.1, of which some contain a fossilised

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[7]Although, in fact, some monovalent Class 1 verbs exist, such as *daiʒinebs* 'sleep', *gaiǧviʒebs* 'wake up', *daisvenebs* 'take a rest'. I thank an anonymous reviewer for this important qualification.

gender marker, see Section 5.3.2.2), (2) Dvandva compound verbs, (3) reduplicating verbs and (4) verbs containing the suffixes *-d-i* or *-d-al*. Before investigating complex verbs themselves, it is useful to take a look at a specific type of complex predicate, the light verb construction.

### 5.3.1 Light verb construction

Light verb constructions are idiomatic expressions consisting of a verb and a nominal object. They are verbal constructions, where the combined meaning is more than the sum of its parts. Most nominal and verbal components can be found independently as well, for example *bak b-ałar* 'come to an agreement' ('mouth' + 'give'), *bek'i b-ar* 'joke' ('joke' + 'do') *bexk' b-aqar* 'accuse' ('fault' + 'take'), *botx b-ar* 'work' ('work' + 'do'), *gon j-ałar* 'be startled' ('mind' + 'rush'), *mʕaʔŏ j-ałar* 'butt' ('horn' + 'give'). Others, however, are not found independently, such as *baram b-aqar* 'go through, make path' (*baram* + 'take'), *bad joğar* 'trap with net' ('net' + *d-oğar*[8]), where *baram* and *d-oğar* do not have an independent meaning.

The fact that these constructions are syntactically equivalent to any other transitive predicative construction is shown by (1) the fact that the negative particle *co*, interrogatives and preverbs can be inserted between the nominal and the verbal element (Example (12a)), (2) the possibility of changing the OV order (Example (12b)), and (3) the fact that the gender marker on the verb cross-references the nominal element of the construction, not another argument.

(12)  a.  *as*　　　*k'nat-a-x*　　　　***bexk'**=a*　　*moħ*
　　　　1SG.ERG boy-OBL.PL-CONT **fault(B)**=EMPH how
　　　　***b-aq-o-s?***
　　　　**B.SG-take-NPST-1SG.ERG**
　　　　'How can (lit. do) I reproach the boys?'　　　　　　　　(E032-3)

　　　b.  *at't'a-v*　　*qe-čŏ*　　*as-e-n*　　***teł-ŏ***　　　　***mʕaʔŏ.***
　　　　cow.OBL-ERG other-OBL calf-OBL-DAT **give.IPFV-NPST horn**
　　　　'A cow head-butts an unknown calf.'　　　　　　　　(MM422-1.1)

The verbal element of this type of predicative construction can be classified as so-called light verbs (in the sense of Jespersen 1954: 117–118). A Tsova-Tush light verb is a verb that is semantically bleached when combined with another element in a predicative construction (or in a compound, see Section 5.3.2.1). In

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[8]*d-oğar* is additionaly only found in *k'ur boğar* 'blacken with smoke' (from 'smoke') and *c'e joğar* 'name, nominate' (from 'name').

fact, the term "light" here refers to the fact that these verbs, in their combination with certain lexical material, are referentially extremely broad in terms of their semantics. For a list of the most common light verbs, see Table 5.9.

Tsova-Tush light verbs are distinct from auxiliary verbs. Auxiliary verbs, often with modal semantics, occur in combination with an Infinitive form of the main verb (as in Example (13), and have defective inflection (i.e. they do not occur in all tense-aspect forms (see Holisky 1994).

(13)  a. *lamu       že     aħ **d-ec'**   d-ett-a$^n$.*
         mountain.ESS sheep PV **D-must** D-milk-INF
         'In the mountains, the sheep must be milked.'              (E002-31)

      b. *kiko? bac-bi      širik      ix-a$^n$     **lat-er***
         early Tsova_Tush-PL Shiraki.ILL go.IPFV-INF **HAB-IMPF**
         *že-v=a?.*
         sheep-INS=EMPH
         'Earlier, the Tsova-Tush would go to Shiraki with their sheep.'
                                                                    (E058-33)

### 5.3.2 Complex verbs containing a light verb

The same set of light verbs as discussed above in Section 5.3.1 can be used to form compound verbs. These verbs consist of a first element (usually non-verbal) bearing the lexical semantic information, and a light verb, to which all verbal inflection is attached.

#### 5.3.2.1 Basic pattern

In Table 5.9, the most common compounds containing a light verb are listed. Notice that some lexical components (*bʕar*, *ʕa*, *ǧos*) do not have an independent meaning.

All verbs containing a light verb can be shown to be single words, evidenced by the fact that negative particles, preverbs and interrogatives come before the entire compound, not immediately before the light verb, (see Example (14)). Furthermore, the gender marker on the light verb, if present, cross-references an external argument, not the lexical component itself, as in (14a) where the gender marker *v-* cross-references the Nominative subject, which is masculine, not the lexical component of the verb *dak'*, which is D gender.

Table 5.9: Common light verb compounds. (N) = Noun; (GE) = borrowed from Georgian)

| Light verb | | Example | | Lexical component |
|---|---|---|---|---|
| *d-ot'ar* | 'go' | *aq'r-d-ot'ar* | 'bend down' | *aq'r* 'supine' |
| *d-(i)-ar* | 'do' | *bʕar-d-ar* | 'meet' | *bʕar*[a] |
| *d-isar* | 'stay' | *bad-d-isar* | 'be left as orphan' | *badŏ* 'orphan' |
| *d-axar* | 'go' | *bʕar-d-axar* | 'meet' | *bʕar* |
| *d-ałar* | 'appear, go out' | *dak'-d-ałar* | 'realise' | *dak'-* 'heart' |
| *d-aqar* | 'take' | *dak'-d-aqar* | 'bring to mind' | *dak'-* 'heart' |
| *d-ağar* | 'come' | *ʕa-d-ağar* | 'sit'[b] | *ʕa* |
| *ałar* | 'say' | *auħałar* | 'cough' | *auħ* (onomat.) |
| *xiłar* | 'be' | *ağazxiłar* | 'be used' | *ağaz* 'suitable' |
| *ixar* | 'go' | *zaq'q'ixar* | 'crack' | *zaq'q'* 'crack (N)' |
| | | *ʕepixar* | 'be ashamed' | *ʕep* 'shame' |
| *tasar* | 'drop, leave' | *gontasar* | 'bring to senses' | *gon* 'mind' (GE) |
| *lavar* | 'speak' | *dak'lavar* | 'think' | *dak'-* 'heart' |
| *xetar* | 'find, deem, think' | *bek'xetar* | 'be surprised' | *bek'* 'wonder' |
| | | *ğosxetar* | 'be glad' | *ğos* |
| | | *č'irxetar* | 'be lazy' | *č'ir* 'trouble' (GE) |

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[a]But compare *bʕark'* 'eye'.

[b]Note that despite the light verb being a verb of motion, the compound does not mean '(go and) sit down', but stative 'sit'.

(14)   a.   *moħ co   dak'-v-ał-en-v-a-ra-s*                           *txa=lomci*ⁿ?
            how NEG heart-M.SG-LV-PTCP.PST-M.SG-be-IMPF-1SG.NOM today=until
            'How have I never remembered it until today?'                 (MM417-1.46)

       b.   *co   bʕarix-or          so*ⁿ.
            NEG meet.IPFV-IMPF 1SG.DAT
            'I didn't meet her.'                                        (E255-24)

### 5.3.2.2 With a fossilised gender marker

In a minority of compound verbs containing a light verb, the gender marker is fossilised. These compounds have also fully fused and are single words, as shown by the placement of the negative particle, interrogative or the preverb before the noun-verb complex (see Example (15)). However, if the verbal part of the compound verb had a gender marker, this prefix is now frozen and unchanging, resulting in a compound where the noun or onomatopeia in question is completely

incorporated. As such, in Example (15), the original construction *k'eč j-aq-o* 'boil-ing(J) J-take-NPST' is now fused into a single intransitive verb, where the gender marker *j-* does not reference any external argument anymore. Examples are presented in Table 5.10.

(15)  *moħ-e    k'i    ħal **k'eč'jaq**-uj-c*              *oqu-s    mak*
      how-REL CONTR PV **come_to_boil**-NPST-SUBORD DIST-ERG on.PV
      *k'alt'         j-ebl-ŏ.*
      cottage_cheese J-begin.IPFV-NPST
      'When it begins to boil, upon its surface the curds appear.'        (E007-49)

Table 5.10: Fossilised light verb compounds

| Light verb | | Example | | Lexical component |
|---|---|---|---|---|
| *d-(i)ar* | 'do' | *aⁿhdar* | 'moan, groan' | (onomat.) |
| | | *buudar* | 'buzz, hum, drone' | (onomat.) |
| | | *t'laq'dar* | 'rumble, growl' | (onomat.) |
| | | *buħdar* | 'throw a fight' | 'fight' |
| | | *bʕark'bar* | 'put the evil eye' | 'eye' |
| | | *dadoldar* | 'protect, patronise' | 'ownership, propriety' |
| | | *tešombar* | 'give assent, agree' | 'believe, faith' |
| *d-aʔar* | 'come' | *xsnildaʔar* | 'break Lent' | 'Lent' (GE) |
| *d-ałar* | 'give' | *bakbałar* | 'come to an agreement' | 'heart' |
| *d-aqar* | 'take' | *k'eč'jaqar* | 'bring to a boil' | *k'eč'* |

Note that the distinction between the complex verb containing a light verb in Table 5.9 and those in Table 5.10 is only relevant for verbs that have gender marking. Only when a gender marker is present, and this gender marker is not fossilised, but is cross-referencing an external argument, can we speak of a synchronically complex verb. This type, exemplified in (14a), can be characterised as having a bipartite stem: a verb with inflection splitting the stem in two. The East Caucasian family is known for the widespread occurrence of bipartite verbal stems (Nichols 2003a), and these, although more frequent in other members of the family, can be found in Tsova-Tush as well.

### 5.3.3 Dvandva compound verbs

Dvandva compound verbs are verbs that consist of two verbal stems, whose combined meaning is the sum of the semantics of both stems. These verbs can be analysed as verbal *dvandva* (i.e. copulative/coordinating) compounds (for an analogue in Greek, see Nicholas & Joseph 2009), and possibly go back to earlier serial verb constructions. Examples include *at'xalar* 'die out, fade away' (*at'ar* 'become silent', *xalar* 'fade'), *d-uit'-d-ağar* 'go back and forth' (*d-ot'ar* 'go', *d-ağar* 'come'), *qall-mał ar* 'eat and drink' (*qallar* 'eat', *mał ar* 'drink'), see Example (16).

(16)  **qall-mał-**-eně,　　　 *supr daħ d-ox-d-i-eně.*
　　　 eat.**pfv**-drink.**pfv**-AOR.SEQ feast PV　D-destroy-D-TR-AOR.SEQ
　　　 'They ate and drank and messed up the banquet.'　　　　(MM335-1.7)

### 5.3.4 Reduplicating verbs

Reduplicating verbs consist of a verbal stem and a second element that is identical to this stem but for the first segment, which is replaced by another consonant, for example *tak'-sak'ar* 'patch up' (from *tak'ar* 'sew'), *t'at'-šat'-d-alar* 'become a little moist' (from *t'at'-d-alar* 'become moist'), *d-opx-sopx-d-ar* 'adorn, decorate' (from *d-opx-d-ar* 'dress') and *kak'-lak'-d-ar* 'stir, mix up' (from *kak'-d-ar* 'mix'). Since the second parts of these verbs (*sak'-, šat'-, sopx-, lak'-*) do not exist as independent verbs, they are synchronically classed as reduplicating.

(17)  *lebiv* **kak'-lak'-b-∅-eba-t,**　　　*coħě bux-e-x　čudu*
　　　 beans **stir-REDUPL-B.SG-TR-IMP-PL** if_not base-OBL-CONT PV
　　　 *lajt-b-is-ŭ.*
　　　 fix-B.SG-LV-NPST
　　　 'Stir the beans around, otherwise they will stick to the bottom.'
　　　　　　　　　　　　　　　　　　　　　　　(KK023-3932)

### 5.3.5 Suffixes *-d-i, -d-al*

Superficially similar to compounds containing a light verb are derived verbs containing the suffixes *-d-i* or *d-al*, where *-d-* is any gender marker. Although very similar to the light verb compounds seen in Section 5.3.2.1, the elements *-d-i* and *-d-al* are in this work analysed as synchronically suffixes (Holisky & Gagua 1994, Harris 2009: 185), for two reasons:

1. An independent verb *d-alar* does not exist.[9] The suffix *-d-i* is formally identical to the light verb *d-i* (Verbal Noun *d-ar*) that also exists as an independent verb 'do'. However, since the suffixes *-d-i* and *-d-al* derive pairs of verbs (see below in Section 5.3.5.1), I assume the same level of grammaticalisation for both suffixes.

2. Light verb compounds are unproductive, whereas verb pairs containing the suffixes *-d-i, -d-al* are to a large extent productive (see below for deadjectival verbs), and can even be derived from light verb compounds (e.g. *gontas-d-alar* 'come to one's senses', from *gon(-)tasar* 'bring to one's senses', from *gon* 'intellect' + *tas-* 'drop, leave, throw').

### 5.3.5.1 Deadjectival verbs

Both transitive and intransitive verbs can be derived from all native Tsova-Tush adjectives, see Table 5.11. All adjectives lose their ending *-Vn* if they have it, and some require an additional suffix *-ar*. Note that the absence of the ending *-Vn* is not an instance of phonological reduction, but a historical morphological alternation: the loss of high vowels *i, u* does not trigger umlaut on the preceding vowel. All formations that add *-ar* are listed under (a) in Table 5.11, whereas all other deadjectival verbal derivation behaves as in the examples under (b). The origin of the morph *-ar* is unknown.[10]

### 5.3.5.2 Other complex verbs in *-d-i, -d-al*

The suffixes *-d-i* and *-d-al*, as well as the light verb *d-isar* 'stay', can be used in valency derivations based on verbal stems, see Sections 5.4.2 and 5.4.3. Productivity is relative: *d-isar* is only found with 8 verb stems (see Table 5.13), and although *-d-i* and *-d-al* are used to incorporate all verbs borrowed from Georgian (see Section 5.5), they cannot be used to derive new verbs from any native verbal stem. As can be seen from Section 5.4.3, more transitive verbs are derived from intransitive ones than vice versa, as is typical for western East Caucasian languages (Nichols 2013a).

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[9]The verb *d-alar* 'die', Imperfect *lar* is semantically too far removed, and is not likely to be cognate; the verb *d-alar*, Imperfect *d-alir* 'be held' is part of another inflection class, and therefore also not likely to be cognate.

[10]It could be connected to the denominal adjectivising suffix *-aren* (e.g. *lavare^n* 'snowy' from *lav* 'snow'), but if it were related, the same suffix would be expected on the adjective, that is, one would expect *\*ğazare^n* 'good', *ğazar-d-ar* 'make good'. Instead, we find *ğaze^n* 'good', without the suffix.

Table 5.11: Tsova-Tush equipollent derivation from adjectives

(a)

| Intransitive | | Transitive | | Adjective | |
|---|---|---|---|---|---|
| *baxar-d-alar* | 'grow rich' | *baxar-d-ar* | 'enrich' | *bax* | 'rich' |
| *duqar-d-alar* | 'increase' | *duqar-d-ar* | 'increase' | *duq* | 'many' |
| *tišar-d-alar* | 'age' | *tišar-d-ar* | 'age' | *tišin* | 'old' |
| *k'ac'k'ar-d-alar* | 'become smaller' | *k'ac'k'ar-d-ar* | 'make smaller' | *k'ac'k'on* | 'small' |
| *mosar-d-alar* | 'go bad' | *mosar-d-ar* | 'make bad' | *mossin* | 'bad' |
| *učar-d-alar* | 'get dark' | *učar-d-ar* | 'darken' | *učin* | 'dark' |
| *ğazar-d-alar* | 'become good' | *ğazar-d-ar* | 'make good' | *ğazen* | 'good' |
| *c'inar-d-alar* | 'become new' | *c'inar-d-ar* | 'renew' | *c'in* | 'new' |
| *vadar-d-alar* | 'be angry' | *vadar-d-ar* | 'make angry' | *vadon* | 'harmful, bad' |

(b)

| Intransitive | | Transitive | | Adjective | |
|---|---|---|---|---|---|
| *ap-d-alar* | 'become green' | *ap-d-ar* | 'make green' | *apen* | 'green' |
| *d-aq'-d-alar* | 'dry out' | *d-aq'-d-ar* | 'dry' | *d-aq'in* | 'dry' |
| *d-aq-d-alar* | 'grow' | *d-aq-d-ar* | 'raise' | *d-aqqon* | 'big' |
| *k'ap'rš-d-alar* | 'become yellow' | *k'ap'rš-d-ar* | 'make yellow' | *k'ap'raš* | 'yellow' |
| *k'ʕav-d-alar* | 'become lame' | *k'ʕav-d-ar* | 'make lame' | *k'ʕaven* | 'lame' |

## 5.4 Valency derivation

### 5.4.1 Introduction

East Caucasian languages are known to have little to no grammatical voice systems (e.g. Comrie 2000), and Tsova-Tush is no different in this respect. It does, however, have lexical derivations that change valency. One, described in Section 5.4.2, is the suffix *-d-al*. This suffix detransitivises transitive verbs, producing mostly anticausative verbs. The second derivation, described in Section 5.4.3, is the suffix *-d-i* (which is formally identical to the light verb *d-ar* (see Section 5.3.1 above), and the verb *d-ar* 'do'). *-d-i* is a transitivising suffix, producing causative or other transitive verbs. Since both suffixes are also used to derive verbs from nominal, adjectival and borrowed verbal stems that do not show any valency, *-d-al* receives the basic label INTR in this work, and *-d-i* the basic label TR. Both suffixes produce lexical derivations, and are by no means productive: not every underived intransitive verb has a derived transitive counterpart, or vice versa.

Clearly, the verbs containing the valency-changing suffixes *-d-i* or *-d-al* bear a strong resemblance to the light verb compounds of the type *bʕar-d-ar* 'meet',

*dak'-lavar* 'think' described in Section 5.3.2.1. Nevertheless, although the Tsova-Tush suffixes *-d-al* and *-d-i* must have undoubtedly grammaticalised from the same type of light verb construction, they are synchronically derivational suffixes. This analysis, as mentioned above in Section 5.3.5, is supported by the following two facts:

1. An independent verb *d-alar* does not exist. The independent existence of a light verb is a defining characteristic of light verbs, at least by authors such as Wohlgemuth (2009: 106).[11] The suffix *-d-i* is formally identical to the light verb *d-i* (Verbal Noun *d-ar*) that also exists as an independent verb 'do'. However, since the suffixes *-d-i* and *-d-al* derive pairs of verbs (see Section 5.3.5.1 for deadjectival verbs, and Section 5.4.4 for deverbal verbs), I assume the same level of grammaticalisation for both suffixes.

2. Light verb compounds are unproductive, whereas verb pairs containing the suffixes *-d-i, -d-al* are to a large extent productive (see Section 5.3.5.1 for deadjectival verbs), and can even be derived from light verb compounds (e.g. *gontas-d-alar* 'come to one's senses', from *gon(-)tasar* 'bring to one's senses', from *gon* 'intellect' + *tas-* 'drop, leave, throw').

In addition to these two basic constructions, Tsova-Tush features a highly productive causative suffix *-it*, which can combine with all verbs, described in Section 5.4.5. Due to its complete productivity, it could be considered inflectional rather than derivational. Regardless, it is a primary way of changing valency, and thus it is described here.

Although not strictly changing valency, the productive suffix *-mak'*, creating Potential verbs, is described in Section 5.4.7.

### 5.4.2  Detransitive

Suffixing *-d-al* to the verbal stem creates single-argument (usually anticausative) verbs. Once added to inherently two-argument verbs, the Ergative argument is dropped. Gender agreement is with the single Nominative argument. Table 5.12 illustrates several of the 19 verb pairs in Kadagidze & Kadagidze (1984) that consist of an intransitive verb derived from a transitive verb. Two verbs (*d-ott-d-alar* 'get rough, agitated' and *ħot't'-d-alar* 'approach') do not have a transitive

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[11]In descriptions of East Caucasian languages, however, the term light verb is often used for the second part of a verbal compound, which is clearly verbal in morphology and origin, but does not exist as an independent lexical item.

counterpart. The suffix *-d-al* is rarely added to already intransitive verbs, and cannot be suffixed to transitive verbs which carry the suffix *-d-i* (see below in Section 5.4.3).

Table 5.12: Tsova-Tush detransitive derivation

| Transitive | | Intransitive | |
|---|---|---|---|
| *atar* | 'pound, thresh' | *at-d-alar* | 'become soft' |
| *gontasar* | 'bring sb to one's senses' | *gontas-d-alar* | 'come to one's senses' |
| *d-ałar* | 'give' | *d-ał-d-alar* | 'be given to sb' |
| *etʼar* | 'spread out' | *etʼ-d-alar* | 'be spread out' |
| *qʼ(ʕ)egar* | 'break sth' | *qʼ(ʕ)eg-d-alar* | 'break' |

Examples (18) and (19) show how the transitive verbs *d-ʕogar/qʼegar* 'break' and *d-ottar/d-ettar* 'pour' serve as the basis for detransitive derivation using the suffix *-d-al*. The transitive verbs show subjects in the Ergative and objects in the Nominative, whereas the derived verbs allow only one Nominative argument.

(18)  a. *cħajn   mercxlaʔo-s  pʼʕaⁿ      b-ʕog-iⁿ.*
         one.OBL swallow-ERG wing.NOM b.SG-break.PFV-AOR
         'One swallow broke its wing.'                                    (E024-2)

    b. *urm-e-goħ       ši-kʼeʔ   borbol      b-ʕog-**b-al**-iⁿ.*
         cart-OBL-ADESS two-INCL wheel.NOM b.SG-break.PFV-**B.SG-INTR**-AOR
         'Both wheels of the cart broke.'                            (KK002-0554)

(19)  a. *ču ši-qo     tʼapaʔŏ kir-e-ⁿ          ču=a*
         in two-three pan.NOM whey-OBL-GEN in=EMPH
         *b-ett-o-s.*
         b.SG-pour.IPFV-NPST-1SG.ERG
         'I pour two or three pans of whey inside.'                  (EK045-28.2)

    b. *veⁿ      kat-ba-x              d-ott-d-**al**-iⁿ.*
         wine.NOM wineskin-OBL.PL-CONT D-pour.PFV-D-**INTR**-AOR
         'The wine was poured into wineskins.'                       (KK015-3051)

Some archaic derivation is found with the light verb *d-isar* 'stay', see Table 5.13, which lists all attested constructions. The umlaut that accompanies the derivation is historical and not the result of a synchronic phonological process.

Table 5.13: Unproductive valency pairs

| Derived verb | | Derivational base | |
|---|---|---|---|
| *tuiħ-d-isar* | 'go to sleep' | *toħar* | 'sleep' (intr) |
| *qejc'-d-isar* | 'grip, clutch' | *qac'ar* | 'hang' (stat) |
| *ejp'q'-d-isar* | 'sink, get bogged down' | *ap'q'ar* | 'stick, drive into' (tr) |
| *uill-d-isar* | 'touch'; 'pester' | *ollar* | 'lay, put' (tr) |
| *uixk'-d-isar* | 'touch'; 'pester' (pl) | *oxk'ar* | 'lay, put' (tr pl) |
| *ħejč'-d-isar* | 'stare' | *ħač'ar* | 'look' (exp) |
| *d-ʕip'-d-isar* | 'get stuck, remain' | *d-ʕep'-d-ar* | 'lock up' (tr) |
| *lejtt-d-isar* | 'fall (from old age/fatigue) | *lattar* | 'stand' (intr) |

### 5.4.3 Transitive

Suffixing *-d-i* to the verbal stem creates two-argument verbs (see Desheriev 1953: 130, Chrelashvili 1990). If added to inherently single-argument verbs, an Ergative argument is added. Table 5.14 illustrates some of the 70 verb pairs found in Kadagidze & Kadagidze (1984) that consist of a transitive verb derived from an intransitive verb.

Note that *d-i-* is also a free verb 'do, make'. The stem *-i-* is elided in the Present (and all forms historically derived from it) and the Verbal Noun/citation form *d-ar*. The suffix *-d-i* cannot be added to intransitive verbs that have the suffix *-d-al* (see Section 5.4.2 above).

Table 5.14: Tsova-Tush transitive derivation

| Intransitive | | Transitive | |
|---|---|---|---|
| *d-elar* | 'laugh' | *d-el-d-ar* | 'make laugh' |
| *qexk'ar* | '(come to) boil' | *qexk'-d-ar* | '(bring to) boil' |
| *lepsar* | 'be/get dry' | *leps-d-ar* | 'dry' |
| *qerłar* | 'fear' | *qerł-d-ar* | 'frighten' |
| *d-erc'ar* | 'turn' | *d-erc'-d-ar* | 'turn sb/sth' |
| *d-ebžar* | 'fall' | *d-ebž-d-ar* | 'cause to fall' |

Examples (20) and (21) show transitive verbs in *d-i-* derived from intransitive verbs *d-ožar/d-ebžar* 'fall' and *lapsar/lepsar* 'dry'. The intransitive verbs show a single Nominative subject, whereas with derived transitive verbs, subjects are in the Ergative and objects in Nominative.

(20)  a. *t'ariel     c'ʕerkoⁿ aħo  v-ož-eⁿ        soⁿ     ħatx.*
Tariel.NOM suddenly down M.SG-fall.PFV-AOR 1SG.DAT in_front
'Tariel suddenly fell down in front of me.'                    (E041-22)

b. *dasa-gŏ        b-ax-en-čŏ           nax-v       d-aqqaⁿ*
firewood.OBL-ALL M.PL-go-PTCP.PST-OBL people-ERG D-big.PL
*k'ajrcxl-i        d-ebž-d-i-eⁿ.*
hornbeam-PL.NOM D-fall.IPFV-**D-TR**-AOR
'The people that went [to look] for firewood felled big hornbeams.'
(KK005-1239)

(21)  a. *dinĭ  čuv       daħ laps-iⁿ       seⁿ     txa-bus.*
whole innards.NOM PV   dry.PFV-AOR 1SG.GEN today-night
'All of the [animal] intestines dried out last night [to my benefit].
(EK008-19.1)

b. *matxo-v kajrcxĭ      ħal laps-d-i-eⁿ.*
sun-ERG clothes.NOM PV   dry.PFV-**D-TR**-AOR
'The sun dried the clothes.'                    (KK036-5563)

A small number of verb pairs exist with a transitive verb derived from another transitive verb, all of which are given in Table 5.15. Each derived verb has idiosyncratic argument marking and functions range considerably (causative, applicative, intensive), which will not be discussed further here.

### 5.4.4 Equipollent

Some verbs serve as the basis for both transitive and detransitive derivation. All of these verbs, many of which are stative, are given in Table 5.16.

Verbs borrowed from Georgian also make use of equipollent derivation using both derivational suffixes, see Section 5.5.

Table 5.15: Tsova-Tush transitive derivation from a transitive base

| Transitive | | Derived trans. | |
|---|---|---|---|
| *d-ekar* | 'call, summon' | *d-ek-d-ar* | 'make sb call; plead' |
| *toxar* | 'hit, strike' | *tox-d-ar* | 'shake' |
| *lacar* | 'grab, hold' | *lac-d-ar* | 'get hold of, arrest' |
| *lac'ar* | 'hurt' | *lac'-d-ar* | 'hurt sth' |
| *ollar* | 'lay, put' | *oll-d-ar* | 'put on, place on' |
| *ħaqar* | 'smear, sweep' | *ħaq-d-ar* | 'smear, knead, rub' |
| *ħot't'ar* | 'drive, stick, put, force into' | *ħot't'-d-ar* | 'drive, stick, put, force into' |
| *maɫar* | 'drink' | *maɫ-d-ar* | 'make sb drink' |

Table 5.16: Tsova-Tush equipollent derivation from verbs

| Intransitive | | Transitive | | Source | |
|---|---|---|---|---|---|
| *ak'-d-al-ar* | 'catch fire' | *ak'-d-ar* | 'set afire' | *ak'ar* | 'burn' (stat) |
| *d-arž-d-alar* | 'open up' | *d-arž-d-ar* | 'open up' | *d-aržar* | 'be spread' (stat) |
| *d-apx-d-alar* | 'get undressed' | *d-apx-d-ar* | 'undress' | *d-apxar* | 'wear' (stat) |
| *tag-d-alar* | 'be done' | *tag-d-ar* | 'do' | *tagar* | 'suit' (stat) |
| *tarɫ-d-alar* | 'adapt' | *tarɫ-d-ar* | 'liken' | *tarɫar* | 'be similar to' (stat) |
| *qac'-d-al-ar* | 'hang' | *qac'-d-ar* | 'hang (up)' | *qac'ar* | 'hang' (stat) |
| *d-oss-d-alar* | 'go down' | *d-oss-d-ar* | 'bring down' | *d-ossar* | 'descend' (intr) |
| *ħarč-d-alar* | 'be wrapped' | *ħarč-d-ar* | 'wrap' | *ħarčar* | 'embrace' (intr) |
| *ʕam-d-alar* | 'study' | *ʕam-d-ar* | 'study sth' | *ʕamar* | 'get used to' (intr) |
| *d-opx-d-alar* | 'get dressed' | *d-opx-d-ar* | 'dress' | *d-opxar* | 'wear' (tr) |
| *xarc-d-alar* | 'change' | *xarc-d-ar* | 'change' | *xarcar* | 'exchange' (tr) |
| *xac'-d-alar* | 'be heard' | *xac'-d-ar* | 'mention' | *xac'ar* | 'hear' (exp) |
| *qoc'-d-alar* | 'hang' | *qoc'-d-ar* | 'hang up' | *qoc'ar* | 'load' (tr) |
| *ʕop-d-alar* | 'hide' | *ʕop-d-ar* | 'cover' | *ʕopar* | 'cover' (tr) |

### 5.4.5 Causative

The suffix *-it* can attach to any verbal stem to form a causative (see Gagua 1987). The suffix is completely productive and derives a verb meaning 'make sb X, force sb to X, let sb X, give possibility to X'. The suffix is historically related to the verb *d-itar* 'let, leave', but this verb is not simply added to the verbal stem, as is e.g. *d-i-* 'do', as explained above in Section 5.4.3. The gender marker of the original verb *d-itar* is not kept in the suffix, and the suffix can be added to derived verbs with the suffixes *d-i-* or (albeit rarely) *d-al-*.[12] Several examples are given in Table 5.17.

Table 5.17: Tsova-Tush causative derivation

| Base verb | | Causative | |
|---|---|---|---|
| *tit'ar* (tr) | 'cut' | *tit'itar* | 'make/let sb cut' |
| *d-eq'ar* (tr) | 'divide' | *d-eq'itar* | 'make/let sb divide' |
| *xit'-d-ar* (tr) | 'break sth' | *xit'-d-itar* | 'make/let sb break sth' |
| *ʕam-d-ar* (tr) | 'learn' | *ʕam-d-itar* | 'teach' |
| *d-ałar* (intr) | 'go out' | *d-ałitar* | 'release' |
| *xiłar* (intr) | 'be, become' | *xiłitar* | 'make/let sth be' |
| *d-eħ-d-alar* (intr) | 'sneak' | *d-eħ-d-alitar* | 'make/let sb sneak' |

By adding the suffix *-it* to an intransitive verb, the original subject of the intransitive verb becomes an object, and a new agent subject in the Ergative is added (see Example 22).

(22)   a.   *bʕa        nax      ix-ŏ        ʕurde$^n$    latinŏ*
          alltogether people.NOM go.IPFV-NPST morning starting
          *psarlo-mci$^n$.*
          evening-TERM
          'People are always going around from morning to night.'   (EK023-2.6)

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[12]One can hypothesise that either (1) the verb *d-itar* grammaticalised differently and to a greater extent than the other derivational suffixes; (2) the suffix *-it* is in fact not derived from *d-itar* 'leave, let', but the verb *d-itar* is underlyingly *d-i-it-ar* 'D-do-CAUS-VN' and is itself a derived verb; or (3) the underived verb *d-itar* 'let' was first suffixed to underived verbs only, which gave rise to the opposition "stem-*d-∅-ar* (derived transitive verb)" vs. "stem-*d-it-ar* (derived causative verb)". Verb-*d-it-ar* was subsequently re-analysed as verb-*d-∅-it-ar*, isolating the morpheme *-it* which could then be applied directly to underived verbs too.

b. *macme*    *nʕeiʔ ix-**it**-o-tx*                 *že,*      *čuxu-i=a*
when.REL out   go.IPFV-**CAUS**-NPST-1PL.ERG sheep.NOM lamb-PL=ADD
*nʕeiʔ xec-o-tx.*
out   release-NPST-1PL.ERG

'When we let the sheep go out, we release the lambs too.'    (E043-141)

This derivational pattern can be described as canonically causative according to criteria set up by Dixon (2010b: 240). At this point, the exact semantic distinctions between the causative in *-it* and the transitivising suffix *-d-i* (which is syntactically exactly parallel and can also have causative semantics) have not been studied, but it seems clear that *-it* is extremely productive, and *-d-i* occurs on a limited number of morphological bases.

When the suffix *-it* is added to a transitive verb, the original Ergative subject becomes the causee, which in Tsova-Tush is expressed with the Allative case. Morover, a causer in the Ergative case is added (Example (23)).

(23)    a. *ǧazi-š*      *gag-j-∅-o-s*                 *ħo.*
good-ADV look_after-F.SG-TR-NPST-1SG.ERG 2SG.NOM

'I will take good care of you.'                      (EK056-2.36)

b. *do$^n$*       *naq'bist'-e-gǒ*   *gag-b-∅-**it**-o-s.*
horse.NOM friend-OBL-ALL look_after-B.SG-TR-**CAUS**-NPST-1SG.ERG

'I let a friend look after [my] horse.'             (KK003-0662)

### 5.4.6 Other valency alternations

Only two labile verbs have been found: *axk'ar* 'be tied up' (stative), 'tie up' (tr) and *d-ivar* 'sow, plant', 'be sown, planted'. Two known verb pairs show a valency relation by suppletion: *d-alar* 'die', *ʕavar* 'kill' and *qallar* 'eat', *teɫar* 'feed' (also 'give' (IPFV)).

Two verbs are derived from the experiential verb *d-agar/guar* 'see': *gu-d-aqar* 'show' and *gu-d-aɫar* 'appear', which are derived using the verbs *d-aqar* 'take' and *d-aɫar* 'go out'. Various complex verbs consisting of a (synchronically) non-verbal root plus a light verb (often a verb of motion) are discussed in Section 5.3.

### 5.4.7 Modal derivation

The suffix *-mak'* is added to any verbal stem to derive verbs with the meaning 'be able to', see Example (24). Derived verbs of this type are labelled Potential[13] (compare e.g. Comrie et al. 2015), and demand subjects in the Dative case.

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[13]Not to be confused with the term "Potentialis" from classical languages, denoting a modal form that indicates possibility/probability of an event.

(24)  a. *txoⁿ*       *psarluj-n*     *xi*      *co*   *d-oʔ-**mak'**-in=e.*
         1PL.DAT evening-DAT water NEG D-bring-**POT**-AOR=and
         'We couldn't bring water tonight.'                                    (E153-63)

   b. *mak*       *qaxk'-uš*      *do-i-n*            *o*
      on_top hang.PL-SIMUL horse.OBL-PL-DAT DIST
      *lav-e-loǧ=da*                          *daħ co*   *d-et'-**mak'**-ě,*   *ču*
      snow-OBL-INTERTRANS=through PV   NEG D-run-**POT**-NPST PV
      *ploba-l-a.*
      sink-INTR-NPST
      'When they are loaded, the horses cannot run through that snow,
      they sink.'                                                             (EK005-15.1)

   c. *oqui-n*    *magram ħatteʔ*      *d-abc'-**mak'**-iⁿ,*      *me*
      DIST-DAT but        immediately D-recognise-**POT**-AOR SUBORD
      *ešm-i*    *lev-d-∅-or.*
      devil-PL be.NW-D-TR-IMPF
      'He could see immediately that they must be devils.'      (Kojima 2009)

Morover, *mak'ar* is also a freestanding verb meaning 'be able'.

(25)  *so*       ***mak'**-eš*  *v-a,*    *soⁿ*      *wumaʔ **mak'**-ě*  *: že-x*
      1SG.NOM **can**-SIMUL M.SG-be 1SG.DAT all       **can**-NPST sheep-CONT
      *v-ac'-ar,*              *že*  *d-ett-ar,* *že*  *lerk'-ar.*
      M.SG-follow.IPFV-VN sheep D-milk-VN sheep shear.IPFV-VN
      'I am able! I can [do it] all: herding sheep, milking sheep, shearing sheep.
                                                                             (KK013-2505)

## 5.5 Morphosyntax of borrowed verbs

Even though Tsova-Tush does not need overt morphology to signal transitive or
intransitive verbs (see Section 5.2), it obligatorily uses the intransitive *-d-al* and
transitive *-d-i* suffixes to incorporate Georgian borrowed verbs (Harris 2008b).
The dictionary of Kadagidze & Kadagidze (1984) features approximately 300 na-
tive Tsova-Tush verb roots, 1,500 derived roots from native elements (using all
of the derivation and compounding methods found in this chapter, as well as
with preverbs), and approximately 500 borrowed verbs. Additionally, since all
Tsova-Tush speakers are fluent in Georgian, they are able to insert single verbs as
code-switches (see Section 1.4.1 for the distinction between code-switching and
borrowing, and see Ritchie & Bhatia (1999) and Bandi-Rao & den Dikken (2014)

for similar code-switching constructions).[14] In Tsova-Tush, these single-word insertions morphosyntactically behave identically to borrowing. See Table 5.18 for several examples.

Table 5.18: Georgian verbal borrowings

| Verb | | from Georgian |
|------|------|------|
| *ak'lebad-d-ar* | 'devastate, tear down' | *ak'leba* |
| *garidbad-d-alar* | 'move away, leave' | *garideba* |
| *dabzarod-d-alar* | 'burst, crack' | *dabzarva* |
| *toxnad-d-ar* | 'hoe' | *toxna* |
| *nelbad-d-ar* | 'digest, stomach' | *neleba* |
| *pxek'ad-d-ar* | 'scrape, plane, grate' | *pxek'a* |
| *ǯǧabnad-d-ar* | 'scrawl, scribble' | *ǯǧabna* |

### 5.5.1 Basic pattern

As can be seen from Table 5.18, verbal borrowings consist of two parts: a Georgian part ending in *-d* and one of two Tsova-Tush valency suffixes *-d-i* (Verbal Noun *d-ar*, see Section 5.4.3) or *-d-al*. The Georgian part will be discussed first.

In Georgian, Verbal Nouns are used as action nouns and as non-finite complements to several modal, phasal, and other auxiliary verbs. Most Verbal Nouns consist of several morphs: a preverb, a verb stem, a thematic marker (ᴛᴍ), and a Verbal Noun suffix *-a*, see Table 5.19. Some verbs do not require a preverb, and some verbs do not require a thematic marker.

As can be seen from Table 5.19, the presence of a Georgian preverb marks perfectivity. See Example (26), where in (26a) *bzarva* 'crack' is an imperfective verb denoting a prolonged event, whereas in (26b), *dabzarva* 'crack' denotes an immediate event. Sometimes, the presence or absence of a preverb marks an (added) distinction in lexical semantics: *msaxur-eb-a* 'service, employ', *da-msaxur-eb-a* 'earn, achieve'; *t'ar-eb-a* 'carry sth, bear; let sth through, pass', *ga-t'ar-eb-a* 'let sth through, pass'. The presence or absence of a Thematic Marker is determined lexically (see e.g. Hewitt (1995) for an overview).

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[14]The mechanism used for code-switching is predestined to be used productively and thus lead to the conventionalisation of forms that are accommodated in such a way. The distinction between code-switching and loan words lies in the conventionalisation on a community level, something that has not been systematically investigated in this work.

Table 5.19: Georgian Verbal Nouns

| Preverb | Stem | -TM | -VN | |
|---------|------|-----|-----|---|
| *a-* | *k'l* | *-eb* | *-a* | *ak'leba* 'devastate, tear down' (PFV) |
| *ga-* | *rid* | *-eb* | *-a* | *garideba* 'move away, leave' (PFV) |
| *da-* | *bzar* | *-v* | *-a* | *dabzarva* 'burst, crack' (PFV) |
| | *toxn* | | *-a* | *toxna* 'hoe' (IPFV) |
| | *nel* | *-eb* | *-a* | *neleba* 'digest, stomach' (IPFV) |
| | *mq'n* | *-ob* | *-a* | *mq'noba* 'graft, bud, implant' (IPFV) |
| *da-* | *rb* | *-ev* | *-a* | *darbeva* 'ravage' (PFV) |
| | * žğabn* | | *-a* | *žğabna* 'scrawl, scribble' (IPFV) |

(26)   Modern Georgian

     a. *da mxolod p'irvel-i ic'q'ebs* **bzar-v-a-s.**
       and only   first-NOM s/he_started **crack-TM-VN-DAT**
       'And only the first one started to crack.'　　(GNC: I. Brodski)

     b. *"dalas-s" ar uč'irs* 　 *met'ok-is* 　 *k'edl-is*
       Dallas-DAT NEG s/he_has_problem opponent-GEN wall-GEN
       **da-bzar-v-a.**
       **PV-crack-TM-VN**
       'Dallas has no problem in cracking the opponent's wall.'　　(GRC)

As can be seen from Example (26a), Verbal Nouns inflect like regular nouns and thus bear case marking. In Old Georgian, Verbal Nouns very often appear in the Adverbial case indicating an aim or purpose, approximately like an infinitive in many Indo-European languages (Gippert forthcoming, Kobaidze & Vamling 1997). See Example (27), with Verbal Nouns indicating an adjunct purpose clause in (27a) and a complement clause to a phasal verb in (27b).

(27)   Old Georgian

     a. *uzaxebdes* 　 *xuro-j* 　 *igi mč'edel-sa mas*
       s/he_should_call architect-NOM DIST smith-DAT DEF.DAT
       *č'ed-ad,* 　 *k'wer-v-ad,* 　 *uro-jsa* 　 *cem-ad,*
       **forge-VN.ADVB pound-TM-VN.ADVB** hammer-GEN **give-VN.ADVB**
       *da-mšč'wal-v-ad,* 　 *ağ-mart-eb-ad,* 　 *da-dgm-ad,*
       **PV-nail-TM-VN.ADVB PV-erect-TM-VN.ADVB PV-mount-VN.ADVB**

> *da* **da-mt'k'ic-eb-ad**, *rajta    ara  šeirq'ios.*
> and **PV-fix-TM-VN.ADVB** so_that NEG s/he_would_move
> 'The architect should call the smith to forge, pound, hammer, nail,
> erect, mount, and fix it so that it will not be moved.'
>
> <div align="right">(Is. 41.7, from Gippert forthcoming)</div>

b. *vic'q'o*      **txr-ob-ad**       *tkwen-da, saq'warel-no,    k'ar...*
I_will_begin **tell-TM-VN.ADVB** 2PL-ADVB beloved-PL.VOC door
'I will begin to tell you all, my beloved, of the Door.'

<div align="right">(Ioane Sabanisdze, 'Life of St. Abo', dated at 786)</div>

In Old Georgian, Verbal Nouns in the Adverbial case were frequently combined with the copula or verbs like *-c-* 'give' to denote a possibility, necessity or causation. Examples include *da-dgm-ad iq'o* (PV-put-VN.ADVB it_was) 'it (crown) was to be put on'; *da-dgm-ad sca* (PV-put-VN.ADVB he_gave) 'he caused them to mount it (coffin)' (Gippert forthcoming). These light verb-like constructions were also used to derive verbs from adjectival and nominal stems, such as *uzrunvel-q'opa* 'warrant' ('carefree-do'), *tavisupal-kmna* 'liberate' ('free-make'), *natl-is-cema* 'baptise' ('light-GEN-give'), *natl-is-ǧeba* 'be baptised' ('light-GEN-take'). As noted by Gippert (forthcoming), these constructions were, at least in the earliest period, not completely univerbised, with both parts inflecting independently in accordance with their syntactic status. Unlike Tsova-Tush, Old Georgian did not form complex verbs of the template verb-VN-ADVB+'do'. This type of light verb construction is also common in Tsova-Tush, but it has to be noted that most Caucasian languages (of multiple families) make use of light verbs and light verb-like constructions (Nichols 2003a; for a case study of Tsez, see Comrie 2000). For an Ingush parallel to Tsova-Tush verb incorporation, see *diktovat' du* 'dictate', from Russian *diktovat'* 'id.' (Nichols 2011: 337).

Constructions with a Verbal Noun in the Adverbial case, as seen in Example (27), are frequently attested in Old Georgian, but are absent in Standard Modern Georgian. They are found occasionally in Tush Georgian, see the first verb in Example (28). Modern Georgian uses a Future Participle in these constructions, which is also the default strategy in Tush Georgian, see the second verb in Example (28).

(28)  Tush Georgian
*mo-di,       šen c'a-di       q'oran-o,   **c'a-ǧ-eb-a-d***
hither-go.IMP 2SG away-go.IMP raven-VOC **away-take-TM-VN.ADVB**
*ambav-isa=o,   gada-di       buxurta-šia*
story-GEN=QUOT across-go.IMP Bukhurta-IN

> **sa-tkm-el-ad**             *samʒimr-isa=o.*
> **PTCP.FUT-say-PTCP.FUT-ADVB** condolences-GEN=QUOT
>
> 'Alright, go forth, raven, to take away this story. Go over to Bukhurta[15] to say [my] condolences.'                                   (GA021-1.40)

It is clearly this form, i.e. the Georgian Verbal Noun in the Adverbial case, that constituted the input in Tsova-Tush borrowed verb constructions. This can be compared directly to other languages that borrow a verbal noun form (also called masdar), as summarised by Wohlgemuth (2009: 84). See for instance Example (29) from Bezhta (Khalilov 2004: 101), where we find a similar construction with a Georgian Verbal Noun (from Georgian *ga-carc-v-a/ga-ʒarc-v-a* 'rob') and a light verb of the borrowing language.

(29)    Bezhta
        *gacarsa*      *b-ow-al*
        defeudalise B.SG-do-INF
        'defeudalise'         (Khalilov 2004: 101, as cited in Wohlgemuth 2009: 85)

However, the Tsova-Tush construction shows a clear difference. In languages that use a verbal noun as the input form for the verbal borrowing, that input form often needs to be more 'noun-like' to allow borrowing in the first place. However, the Georgian inflected Verbal Noun is morphosyntactically in fact not noun-like, but is more 'adverb-like', as it is used in not just complement clauses, but mainly adjunct clauses such as in Example (27a). This makes compatibility with Wohlgemuth's typology of input forms less straightforward.

In addition, the Georgian Verbal Noun in the Adverbial case is functionally equivalent to an infinitive in many European languages (Gippert forthcoming), and cross-linguistically, infinitives are often used as the input form for borrowed verb constructions (Wohlgemuth 2009: 80), see again Ingush *diktovat' du* 'dictate', from Russian *diktovat'* 'id.' (Nichols 2011: 337). However, in these examples, the infinitive is a citation form in the donor language, which is not the case for the Georgian Verbal Noun in the Adverbial case, which is much more marginal than the citation form in the Nominative case.

As explained in Section 4.3, if a Georgian Verbal Noun frequently occurs both with and without a preverb, Tsova-Tush borrows both forms, in order to make a distinction in perfectivity (e.g. to be able to distinguish the Present and the Future, see Section 4.5.1). Note that the Tsova-Tush part of the verbal complex (i.e., the suffix *-d-i* or *-d-al*) is not marked for perfectivity.

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[15]A village in the Gometsari valley in Tusheti.

Table 5.20: Aspect pairs of verbal loans from Georgian

| Perfective | Imperfective | |
|---|---|---|
| *agrilbad-d-ar* | *grilbad-d-ar* | 'cool sth' |
| *dat'anʒod-d-ar* | *t'anʒod-d-ar* | 'torture' |
| *gamarglod-d-ar* | *marglod-d-ar* | 'weed, hoe' |
| *šerisxod-d-ar* | *risxod-d-ar* | 'invoke wrath on' |
| *moc'amlod-d-ar* | *c'amlod-d-ar* | 'apply poison/pesticide on' |

One problem arises when combining (1) the above analysis of the Georgian Verbal Noun with the Adverbial case ending as the input form with (2) the perfectivity distinction expressed by preverbs. The construction with the Georgian Verbal Noun in the Adverbial case is most clearly observed in Old Georgian; however, Old Georgian did not yet express perfectivity by way of preverbs (Gippert forthcoming). Hence, the two aspects of the loanword strategy (preverbs and Adverbial case) cannot have been established simultaneously in contact with Old Georgian. Two possible solutions can be imagined, although it seems hard to prove any of them at this point.

1. Both aspects of the loanword strategy were established simultaneously in contact with a Georgian variety that featured both these aspects. As seen in Example (28), Tush Georgian preserves, albeit marginally, the Verbal Noun in Adverbial case construction, and is also employing preverbs to distinguish perfective from imperfective verb forms. Middle Georgian, too, features both aspects, as can be seen in Example (30).

    (30)  Middle Georgian
    *vubrʒane*  *or-ta=ve*  *amat*
    I_ordered_it two-OBL.PL=EMPH PROX.OBL.PL
    **gan-mzad-eb-ad**  *čem-twis samgzavro-jsa nuzl-isa.*
    **PV-prepare-TM-VN.ADVB** 1SG-BEN travel-GEN  provisions-GEN
    'I ordered them both to prepare travel provisions for me.'
    (G. Avalishvili, Mgzavroba 1.1.18.11 (dated 1820))

2. Alternatively, the two aspects of the loanword strategy were established at different times. First, the Georgian Verbal Noun in Adverbial case was

established as the input form for borrowed verbs into Tsova-Tush. Potentially, this could have occurred during the Old Georgian stage. This form was then established as the loan verb adaptation strategy in Tsova-Tush, even when Old (or Middle) Georgian eventually lost this construction. A very close parallel are verbal forms containing the suffix *-miš* in Turkic verbal borrowings in Iranian languages (Ido 2006, as cited in Wohlgemuth 2009: 112). According to Ido, the *-miš* form is not productive anymore at least in some of the modern varieties of the donor languages (Uzbek, Uyghur), so verbs from these languages must either have been borrowed centuries ago, or the suffix itself got borrowed and became an integrated and productive part of a separate loan verb accommodation pattern in some of the recipient languages (like Tajik, Sarikoli) (Wohlgemuth 2009: 112). Since in Tsova-Tush, verbal borrowing is ongoing due to frequent code-switching, the second of Ido's explanations must be true for Tsova-Tush: the morph *-ad*, no longer productive in Modern Standard Georgian, has become a productive part of a specialised loan verb accommodation strategy. The part of the borrowing strategy that involves perfectivising preverbs was then established independently at a later stage.

It is difficult to say whether the two aspects of the borrowing strategy were established simultaneously or independently, but at any rate, the morph *-ad*, only found in Old Georgian, Middle Georgian and (marginally) Tush Georgian, has become a productive part of a specialised loan verb accommodation strategy, as evidenced by the fact that even verbal borrowings from Standard Modern Georgian, which does not feature the *-ad* construction itself, receive the suffix.

Georgian Verbal Nouns do not mark diathesis, e.g. *sargebloba* 'take advantage of sth; advantage sth'; *k'valipicireba* 'qualify sth; be qualified'; *k'nineba* 'turn tiny; diminish sth'. Due to this fact, combined with the relatively rigid distinction in Tsova-Tush between transitive and intransitive verbs (see Section 5.2), Tsova-Tush needs to make this distinction in the suffixal part of the verbal complex. Hence, for the the majority of verbs (except for Georgian Class 3 verbs, see Section 5.5.2 below), Tsova-Tush is able to derive both a transitive and an intransive verb from the same Georgian base, see Table 5.21.

As with all verbs with a suffix *-d-i* or *-d-al*, the gender marker cross-references the object of a transitive clause or the subject of an intransitive clause (most often in the Nominative case), see Example (31). If the gender marker is *d-*, the final *-d* of the Georgian Adverbial ending *-ad* is dropped, as in (31b).

Table 5.21: Transitivity pairs of verbal loans from Georgian

| Transitive | | Intransitive | |
|---|---|---|---|
| *agrilbad-d-ar* | 'cool sth' | *agrilbad-d-alar* | 'cool down' |
| *garidbad-d-ar* | 'remove' | *garidbad-d-alar* | 'leave' |
| *datxvenad-d-ar* | 'startle' | *datxvenad-d-alar* | 'be startled' |
| *k'virbad-d-ar* | 'surprise' | *k'virbad-d-alar* | 'be surprised' |
| *ridbad-d-ar* | 'keep sth away from' | *ridbad-d-alar* | 'avoid' |

(31)  a.  *isi*            *daħ=a*   *damtavrbad-**b**-al-i$^n$*          *is*   **pal**.
          there.MED.ESS PV=ADD finish.PFV-**B.SG**-INTR-AOR MED **tale(B)**
          'That fairy tale ended there.'                                          (E155-8)

   b.  **inst'it'ut'**  *damtavrba-**d**-i-n-as*          *daħ*.
          institute(D)  finish.PFV-**D**-TR-AOR-1SG.ERG PV
          'I graduated from the institute.'                                        (E045-31)

When trying to situate the Tsova-Tush loan verb adaptation strategy in a cross-linguistic perspective, some intricacies arise related to the analysis and definition of the light verbs/suffixes *d-i* and *d-al*, as already mentioned in Section 5.4.1. Superficially, they bear a strong resemblance to the light verb compounds of the type *bʕar-d-ar* 'meet', *dak'-lavar* 'think' described in Section 5.3.2.1. In fact, the light verb construction as a strategy for loan verb adaptation (see Wohlgemuth 2009: 102) is widespread in the Caucasus, see the examples from Ingush and Bezhta (Example (29)) above. Nevertheless, although the Tsova-Tush suffixes *-d-al* and *-d-i* must have undoubtedly grammaticalised from the same type of light verb construction, they are synchronically derivational suffixes. This analysis, as mentioned above in Section 5.3.5, is supported by the following two facts:

1. An independent verb *d-alar* does not exist. The independent existence of a light verb is a defining characteristic of light verbs, at least according to Wohlgemuth (2009: 106). The suffix *-d-i* is formally identical to the light verb *d-i* (Verbal Noun *d-ar*) that also exists as an independent verb 'do'. However, since the suffixes *-d-i* and *-d-al* derive pairs of verbs (see e.g. Section 5.3.5.1), I assume the same level of grammaticalisation for both suffixes.

2. Light verb compounds are unproductive, whereas verb pairs containing the suffixes *-d-i, -d-al* were to some extent productive, and can even be derived from light verb compounds (e.g. *gontas-d-alar* 'come to one's senses',

from *gon(-)tasar* 'bring to one's senses', from *gon* 'intellect' + *tas-* 'drop, leave, throw').

Therefore, rather than as a light verb construction, the Tsova-Tush strategy for adapting loan verbs can be classified as Wohlgemuth's Indirect Insertion (2009: 94); borrowed verbs require overt affixation of some kind. Wohlgemuth distinguishes between constructions that use a verbalising suffix for loan verb adaptation and a causative suffix. In Tsova-Tush, the suffixes *-d-i* and *-d-al* are verbalising suffixes (they derive verbs from adjectives, see Section 5.3.5.1), as well as causative suffixes (at least, the suffix *-d-i* is), since both suffixes are used in valency derivation (see Section 5.4). Hence, in terms of adaptation strategy, Wohlgemuth's distinction is not straightforwardly applicable to Tsova-Tush.

### 5.5.2 Georgian Class 3 verbs

As mentioned in Section 5.2.4, Georgian features a class of active intransitive verbs, called Class 3 verbs or medial verbs (Holisky 1981). They are characterised (1) morphologically, by forming their perfective stem without a preverb (Harris 1981); (2) semantically, by containing mostly atelic verbs (Gérardin 2022); (3) syntactically, by demanding an Ergative subject in the 2nd TAM Series (primarily in the Aorist). This class is opposed to Class 2 verbs, which are also intransitive, but are usually telic, have a Nominative subject in the Aorist, and show an intransitive inflectional pattern.

It is important vis-à-vis the grammar of Tsova-Tush that, in short, Georgian medial verbs are morphologically similar to Georgian transitive verbs, but only occur with a single argument, which is marked by the Ergative in the Aorist. Some of these medial verbs are borrowed into Tsova-Tush, see Table 5.22. Note that there is often not an exact formal match between the Tsova-Tush verb and the corresponding Georgian Verbal Noun. This is due to the fact that many verbs were not borrowed from Standard Georgian but from Northeastern Georgian dialects (mostly Tush Georgian), which can have different Thematic Markers to the same verb stems (Uturgaidze 1960, Gigineishvili et al. 1961).

As briefly seen in Example (5) and mentioned in Section 5.2.1.2, these verbs are incorporated differently to the basic transitive and intransitive verbs described in Section 5.5.1. First of all, even though they are monovalent verbs, they are incorporated with the transitivising suffix *-d-i* (Verbal Noun *-d-ar*), as can be seen in Table 5.22.

Secondly, congruent with their transitive morphology, these verbs demand a subject in the Ergative case in all persons, see Example (32).

Table 5.22: Borrowed Georgian Class 3 verbs

| Tsova-Tush | English | from Georgian |
|---|---|---|
| *bardod-d-ar* | 'snow heavily' | *bardna* |
| *nejdrebad-d-ar* | 'hunt' | *nadiroba* |
| *xnešad-d-ar* | 'sigh' | *xvneša* |
| *mušebad-d-ar* | 'work' | *mušaoba* |
| *gamarʒbad-d-ar* | 'be victorious' | *gamarʒveba* |

(32)  a.  *gamarʒba-d-i-r-**as**=ajnǒ!*
        be_victorious-D-TR-REM-**1SG.ERG**=QUOT
        'I had been victorious, he said.'                    (MM404-1.74)

   b.  *zoovet'inst'it'-e*        *mušeba-d-∅-o*    **mar-v=aj**
        veterinary_institute-OBL(ESS) work-D-TR-NPST **husband-ERG**=ADD
        ***pst'uin-v**=aj.*
        **woman-ERG**=ADD
        'Both husband and wife work at the veterinary institute.'    (E116-55)

Thirdly, as can be seen from the examples under (32), the gender marker is always *d-*, corresponding with the default gender D (Section 4.2). This gender marker is a necessary part of the transitive light verb *d-ar*, the verb that is the source of the transitivising suffix *-d-i*. Hence, a gender marker is obligatory to incorporate these verbs from Georgian, but in fact it does not cross-reference an argument in the clause, since these verbs are monovalent.

It has to be emphasised that this class of borrowed Georgian verbs does not mirror any native Tsova-Tush verb class. In other words, the Georgian Class 3 verbs borrowed into Georgian constitute a new morphosyntactic pattern: they are verbs that are morphologically transitive (using the transitive light verb *d-i*) but syntactically intransitive (since they are monovalent). This new class is in contrast with the existing class of intransitive verbs that demand or allow Ergative subject marking in the 1st or 2nd person (see Section 5.2.1.2). The difference between the two construction types is summarised in Table 5.23.

Table 5.23: Two types of intransitive verbs with Ergative subjects

| Native verbs with variable or obligatory Ergative subjects | Borrowed Georgian class 3 verbs |
|---|---|
| Some verbs allow both Ergative and Nominative subjects | All verbs require Ergative subjects |
| Ergative subjects only for 1st and 2nd person | Ergative subject for all persons |
| (Possible) Ergative case controlled by semantics of volition | Ergative case controlled by belonging to a morphological class |
| Gender marker cross-references Ergative subject | Default gender marker *d-*, not cross-referencing anything |

Table 5.24: A typology of Tsova-Tush complex verbs

| Type | Example | Derived/compounded from |
|---|---|---|
| Light verb constructions | *bexkʼ b-aq-ar* 'reproach' | 'fault' + 'take' |
| Light verb compounds | | |
|     Default | *dakʼ-d-ał-ar* 'realise' | 'heart' + 'appear' |
|     With fossilised gender marker | *kʼečʼ(-)j(-)aq-ar* 'come to a boil' | 'boiling' + 'take' |
| Dvandva compounds | *atʼ-xal-ar* 'die out, fade' | 'become silent' + 'fade' |
| Reduplicating verbs | *takʼ-sakʼ-ar* 'patch up' | 'sew' + *sak* |
| With suffixes *-d-i, -d-al* | | |
|     Deadjectival *-d-i* | *ap-d-ar* 'make green' | *apen* 'green' |
|     Deadjectival *-d-al* | *ap-d-al-ar* 'become green' | *apen* 'green' |
|     Deverbal *-d-i* | *d-opx-d-ar* 'dress sb' | *d-opx-ar* 'put on, wear' |
|     Deverbal *-d-al* | *d-opx-d-al-ar* 'get dressed' | *d-opx-ar* 'put on, wear' |
| Other deverbal suffixes | | |
|     Causative *-it* | *d-ał-it-ar* 'release' | *d-ał-ar* 'go out' |
|     Potential *-makʼ* | *d-etʼ-makʼ-ar* 'able to run' | *d-etʼ-ar* 'run' |

## 5.6 Summary

In terms of basic description, this chapter has provided new insight into the following domains:

1. Contrary to Holisky (1987), Tsova-Tush does not feature a class of intransitive verbs that demand an Ergative argument in all 3 persons (other than borrowed Georgian Class 3 verbs).

2. A typology of complex verbs has been outlined in Section 5.3, which is summarised in Table 5.24.

In terms of structural language contact, this chapter has shown the following parallels between Tsova-Tush and Georgian.

1. The variable marking of 1st and 2nd person subjects of some Tsova-Tush intransitive verbs has likely not arisen due to contact with Georgian.

2. Due to the borrowing of a number of Georgian Class 3 verbs, Tsova-Tush now has a new class of intransitive verbs, characterised by transitive morphology (the light verb *d-i*), a default gender marker *d-* (not cross-referencing any argument), atelic semantics, and an Ergative subject in all persons.

In terms of loan word adaptation, this chapter has shown that:

1. Verbs borrowed from Georgian are adapted using the suffixes *-d-i* for transitive and *-d-al* for intransitive verbs, to which all inflectional material is added. Thus, considerable integrational effort (in the terminology of Wohlgemuth 2009: 135) has been undertaken to integrate borrowed verbs. Root perfectivity (as defined in Section 4.3) is indicated by Georgian preverbs borrowed along with the verb root.

2. Georgian Class 3 verbs (monovalent verbs characterised morphologically by forming their perfective stem without a preverb, semantically by containing mostly atelic verbs, and syntactically by demanding an Ergative subject in the 2nd TAM Series) are adapted as monovalent Tsova-Tush verbs with transitive morphosyntax.

3. The basic input form of these borrowings is modelled on the Old Georgian Verbal Noun in the Adverbial case, not found in Modern Georgian. A very close parallel are verbal forms containing the suffix *-miš* in Turkic verbal borrowings in Iranian languages (Ido 2006, as cited in Wohlgemuth 2009: 112). According to Ido, the *-miš* form is no longer productive at least in some of the modern varieties of the donor languages (Uzbek, Uyghur). Therefore, verbs from these languages must either have been borrowed centuries ago, or the suffix itself got borrowed and became an integrated and productive part of a separate loan verb accommodation pattern in some of the recipient languages (like Tajik, Sarikoli) (Wohlgemuth 2009: 112). Since in Tsova-Tush, verbal borrowing is ongoing due to frequent code-switching, the second of Ido's explanations must be true for Tsova-Tush: the morph *-ad*, no longer productive in Modern Standard Georgian, has become a productive part of a specialised loan verb accommodation strategy.

# 6 Clause combining

## 6.1 Introduction

In the following three sections, different strategies for forming subordinate clauses in Tsova-Tush will be described; relative clauses (Section 6.3), adjunct clauses (Section 6.4) and complement clauses (Section 6.5). Additionally, a first attempt at describing the system of coordination will be described in Section 6.6. After each construction type, a brief comparison will be made with Ingush and Chechen on the one hand, and Georgian (both the standard and the Tush variety) on the other, to better hypothesise about the archaic or innovative nature of the construction. Tsova-Tush makes use of both finite and non-finite strategies for subordination. It will be clear that Georgian has had a substantial influence on the syntax of Tsova-Tush in these domains, since Tsova-Tush developed an elaborate system of finite subordination that is absent in its sister languages. This profound influence of Georgian on Tsova-Tush in the domain of subordination constitutes a typological shift from non-finite subordination, as is ubiquitous for West Caucasian and East Caucasian languages, to finite subordination found in Kartvelian and Indo-European languages of the region. An important Trans-Caucasian parallel to the Tsova-Tush development is observed in Udi, a Lezgic language, having undergone a very similar shift under influence of Iranian languages and Armenian (see Gippert 2011, Gippert & Schulze 2023, Schulze & Gippert 2023).

## 6.2 Non-finite verb forms

Non-finite subordination strategies use one of the following non-finite verb forms, listed in Table 6.1. Tsova-Tush features two participles, a Non-Past Participle formed by suffixing *-ni* to the Non-Past stem (ending in a lexically determined vowel, see Section 4.5.1) and a Past Participle, formed by suffixing *-(n)o* to the Aorist stem. Participles are used mostly in participial relative clauses (Section 6.3.1) and the Past Participle is used in several periphrastic TAME paradigms (Section 4.6). Tsova-Tush features two converbs. I use Nedjalkov's (1995) definition, who refers to non-autonomous verb forms, different from infinitives,

masdars/verbal nouns or participles, in that that they do not occur in complement clauses or in relative clauses). In comparison to Chechen, Ingush and other East Caucasian languages, Tsova-Tush has few converbs, which are general in semantics and only feature in temporal clauses. The Simultaneous Converb is based on the Non-Past stem, while the Anteceding Converb is based on the Aorist stem. Both are used in adjunct clauses (Section 6.4). The Tsova-Tush Verbal Noun in *-ar* and the Infinitive in *-an* are both used in complement clauses (Section 6.5), while the Infinitive is also used in purpose clauses (Section 6.4.2).

Non-finite forms do not inflect for person, diathesis, evidentiality or mood, but do inflect for gender (for the one third of verb roots that have gender marking) and pluractionality (since all non-finite forms can be derived from both "perfective" and "imperfective" stems (see Section 4.3)). Participles do inflect for tense and, similarly to adjectives (see Section 3.5.2), agree in case with their head noun.

Table 6.1: Tsova-Tush non-finite verb forms

| | |
|---|---|
| Non-Past Participle | *-ani, -eni, -ini, -oni, -uni* |
| | *daǧuin* (*d-aǧ-oni*) 'coming' |
| Past Participle | *-eno, -ino* |
| | *davinǒ* (*d-av-ino*) 'lost' |
| Simultaneous Converb | *-aš, -eš, -iš, -oš, -uš* |
| | *st'exoš* (*st'ex-oš*) '(while) waiting' |
| Anteceding Converb | *-ečeħ, -ičeħ* |
| | *dejlče* (*d-al-ičeħ* '(after) having died' |
| Verbal Noun | *-ar* |
| | *tit'ar* (*tit'-ar*) '(the act of) cutting' |
| Infinitive | *-an* |
| | *daga$^n$* (*d-ag-an*) '(to) see' |

## 6.3 Relative clauses

Tsova-Tush features both a gap strategy using participles, similar to other East Caucasian languages (Nichols 2017, Comrie et al. 2017), as well as finite clauses with relative pronouns, similar to Kartvelian languages (Nichols 2017: 190, Aronson 1991: 284–287). Additionally, Tsova-Tush features a third type, using a general subordinator *me*, copied from Georgian, as explained in Section 6.3.3.

### 6.3.1 Participial clauses

The first strategy for relativisation uses a participle showing case agreement (Nominative or Oblique) with the head noun in the matrix clause and gender agreement with the Nominative[1] argument in the relative clause. This type of relative clause precedes the head noun (Holisky & Gagua 1994: 205, Hauk & Harris forthcoming: 39–40). In Example (1)[2], the participle bears no case marking, because the head it modifies is in the Nominative, while in (2), the participle is marked Oblique, as the head it modifies bears the Dative case.

(1)  [ *isi-ǧ=aħo*        *b-aǧ-**uin*** ]                 *lek'-i,*          *ħatx*
     there-TRANS=down M.PL-come-**PTCP.NPST** Daghestanian-PL in_front
     *bʕo   qet-b-∅-o-s*                  *šun    le co?*
     army attack.IPFV-B.SG-TR-NPST-1SG.ERG 2PL.DAT or NEG
     'Daghestanians coming from down there, will I oppose your army or
     not?'                                                      (AS010-8.1)

(2)  *wun-ak'   d-∅-o-lo-t*          *vaj*      [ *ax-gomci*ⁿ
     what-INDF D-do-NPST-SBJV-PL 1PL.INCL half-ADTERM
     *b-av-**in**-čŏ* ]             *mat't'-a-n=a?*
     B.SG-loose-**PTCP.PST**-OBL language-OBL-DAT=EMPH
     'What should we do for a partially lost language?'        (MM128-11.1)

Arguments of participial verbs retain the case forms they would have in a matrix clause, as in Example (3), where the subject of the verb *at-* is Ergative (the same case as it would have in a matrix clause).

(3)  [ ***as***    *at-**inŏ*** ]    *tuix mič   d-ax-e*ⁿ*?*
     **1SG.ERG** crush-**PTCP.PST** salt  where D-go-AOR
     'Where did the salt that I have ground go?'               (KK001-54.2)

Headless relative clauses can be formed using participles, with the case marking attaching directly to the participle, as in Example (4). This is similar to other headless noun phrases as described in Section 3.7.4.

(4)  [ *pex d-ax-**en**-**čo**-**n*** ]      *mak ǧoč'  j-ett-or.*
     near D-go-**PTCP.PST-OBL-DAT** on    stick J-beat-IMPF
     'S/he was beating whatever came near (her/him) with a stick.' (Holisky &
     Gagua 1994: 205)

---

[1]Or sometimes Ergative, see Section 5.2.1.2.

[2]Original orthography of (1): Isighaḥo baghuin Leki, ḥathx bḥo xethbos ṡun le co?

For the other Nakh languages, Chechen and Ingush, the strategy of forming relative clauses with participial verb forms is the most common (Desherieva 1999: 171–173, Nichols 2011: 587–600, Komen 2007). See Example (5), where the Ingush nouns are modified with a pre-posed participial clause.

(5)  Ingush

    a.  [ *je*  *hama d-æ* ]    *sag*
          PROX thing D-do.**PTCP** person
          'the person who did this'              (Nichols 2011: 590)

    b.  [ *āz*  *kæxat jāz-d-æ* ]    *q'ɔlam*
          1SG.ERG letter  write-D-**TR.PTCP** pen
          'the pen that I wrote the letter with'      (Nichols 2011: 591)

As in Tsova-Tush, participles in Ingush and Chechen agree with the head in either Nominative (unmarked) (6a) or Oblique (6b). The case marking of the arguments of the participial clause does not change compared to that of matrix clauses. Thus the subject of *xuʔ-u* 'know-PTCP' in Example (6a) is in Dative, and the subject of *jāz-d-æ* 'write-D-PTCP' in Example (5b) is in Ergative.

(6)  Chechen

    a.  [ *sajna*  *xuʔ-u* ]    *dieš-naši nīsa sʕa-ʔāl-a*    *læʔ-a*
          1SG.DAT know-**PTCP.PRS** word-PL right PV-speak-INF want-PRS
          *sūna.*
          1SG.DAT
          'I want to pronounce the words that I know right.'    (Komen 2007)

    b.  [ *lyra*  *ħōq-u-ču* ]    *muox-uo ditt-aš uoram-aš-ca*
          fiercely blow-**PTCP.PRS-OBL** wind-ERG tree-PL root-PL-INS
          *sʕa-d-ōx-ura.*
          PV-D-extract-IMPF
          'The fiercely blowing storm uprooted trees.'      (Komen 2007)

Standard Modern Georgian features the same strategy as in Nakh (Hewitt 1987: 185–212). See Example (7), where Georgian Past Participles in *-ul* or *-il* are pre-posed to create non-finite relative clauses. Agreement with the head noun is more extensive in Georgian than in Nakh[3], and subject and object arguments of the participial clause are in the Genitive, as seen in *p'lat'on-is* in Example (7b).

---

[3]Modern Georgian adjectives have *-i* if the head noun is in Nominative or Genitive, zero if the head noun is in Dative or Adverbial case, and adjectives copy the nominal case marker if the head noun is in Ergative or Vocative.

(7) Standard Modern Georgian

    a. *daašora*      *mat*      *tavis-i*      *siʒe*
       s/he_seperated_it DEM.PL.OBL POSS.REFL-AGR brother_in_law
       [ *m-is=gan*      *da-t'anǯ-**ul**-ma* ]        *p'lat'on-ma.*
       DEM-GEN=ABL PV-torment-**PTCP.PST**-ERG Plato-ERG
       'Plato, who had been tormented by his brother-in-law, got him away
       from them.'                                (Hewitt 1987: 187)

    b. [ *p'lat'on-is mo-txr-ob-**il**-ma* ]      *ambav-ma bevr-i*      *sxva*
       Plato-GEN   PV-tell-TM-**PTCP.PST**-ERG news-ERG  much-AGR other
       *tavgadasaval-i gaaxsena.*
       adventure-NOM it_reminded_of_it
       'The news which Plato related reminded them of many other
       adventures.'                               (Hewitt 1987: 187)

    This strategy is already attested in Old Georgian, where modifiers such as relative clauses are are often postposed, as in Examples (8).

(8) Old Georgian
    *da šeaginen*      *k'erp'-n-i*      [ *vecxl-it mo-s-**il**-n-i*
    and they_cursed_at idols-PL-NOM silver-INS PV-adorn-**PTCP.PST**-PL-NOM
    *da okro-jt mo-s-**il**-n-i* ].
    and gold-INS PV-adorn-**PTCP.PST**-PL-NOM
    'And they were cursing at idols adorned with silver and at those adorned
    with gold.'                            (Oshki Bible: Isaiah 30.22)

### 6.3.2 Clauses with a relative pronoun

In the second strategy, the Tsova-Tush head noun is followed by a finite relative clause, introduced by the relative pronoun *menux-a* 'which'. This relative pronoun consists of an interrogative pronoun followed by *-a* or *-e* (which finds its origin in the Additive particle *=a, =e*). Most often, a morpheme *-(i)c(i)* is added to the verbal form in the relative clause (see Examples (9) and (10)).

(9) *t'q'uiħsine d-is-ŭ*      *o-bi*   [ ***menxu-čo-n-a***      *vašban co*
    finally      D-remain-NPST DIST-PL **which-OBL-DAT-REL** RECP   NEG
    *d-ap'c'-mak'-in-**či*** ].
    D-recognise-POT-AOR-**SUBORD**
    'At the end remain those who can't recognise each other.'
                                     (Holisky & Gagua 1994: 206)

(10) *načx   teg-j-∅-an=en        gamoq'opad-v-i-en-v-a          st'ak',*
cheese do.IPFV-J-TR-INF=BEN assign-M.SG-TR-PTCP.PST-M.SG-be man
[ ***menxuj-čo-x-a***    *mek'od  c'-e-jc* ].
which-OBL-CONT-REL mekode be_called-NPST-SUBORD
'For the manufacture of the cheese, a man is selected who is named a
"mekode".                                                          (E005-4)

Examples (11) and (12) show how other relative pronouns based on the inter-
rogatives 'who' and 'what' can be used to form headless relative clauses. A re-
sumptive demonstrative is most often found in the matrix clause, as in (11), but
is not obligatory (12).

(11) [ ***wun-e***   *j-e-jc* ],       *oh=a      nʕejʔ qeħ  bazir     daħ j-oxk'-a$^n$.*
what-REL J-be-SUBORD DIST=ADD out    take bazaar.ILL PV J-sell-INF
'They also take what(ever) they have to the bazaar to sell.'        (E006-85)

(12) [ ***ħan-n-a***       *leʔ* ],      *ğ-o,*   [ ***ħan-n-a***       *co*
who.OBL-DAT-REL wish(NPST) go.PFV who.OBL-DAT-REL NEG
*leʔ* ],       *co    ğ-o-geg.*
wish(NPST) NEG go.PFV-IAM
'Who wants to, will go, who doesn't want, will not go (anymore).'
(E226-44)

In Chechen and Ingush, these types of relative clauses seem to be absent, in-
stead these language feature non-finite relativisation exclusively (Nichols 2011:
587–600, Komen 2007), as is the case in the overwhelming majority of Daghesta-
nian languages (Daniel & Lander 2011: 147, Hewitt 2004: 197).

In Standard Modern Georgian and in the Tush dialect, we do find this type of
relative clause, introduced by a relative pronoun that exactly mirrors the Tsova-
Tush one. To see this similarity, compare Table 6.2, where the similar derivations
in Tsova-Tush and Georgian are shown. To indicate the suppletion in the Tsova-
Tush interrogatives 'what' and 'who', both the Nominative and an Oblique case
are given.

Compare the Georgian relative pronoun 'which' in (13a) and (14) with Tsova-
Tush Example (9) and (10), and the Georgian relative pronoun 'who' (13b), with
Tsova-Tush Examples (11) and (12), all three introducing a headless relative
clause.

Table 6.2: Derived relative pronouns in Tsova-Tush and Georgian

|  | Tsova-Tush | | Georgian | |
| --- | --- | --- | --- | --- |
|  | Interrogative | Relative | Interrogative | Relative |
| 'what' (NOM) | *wu$^n$* | *wun-e* | *ra* | *ra-c* |
| 'what' (INS) | *st'e-v* | *st'e-v-a* | *r-it* | *r-ita-c* |
| 'who' (NOM) | *me$^n$* | *men-e/a* | *vin* | *vin-c* |
| 'who' (DAT) | *ħan-n* | *ħan-n-a* | *vi-s* | *vi-sa-c* |
| 'which' | *menux* | *menux-a* | *romel-i* | *romel-i-c* |
| (Additive particle) | *=e, =a* | | *=c* | |

(13)  Standard Modern Georgian

a.  *xut-i      k'ac-i      gamočnda,      [ **romel-i-c***
    five-NOM man-NOM s/he_appeared **which-NOM-REL**
    *modiodnen* ].
    they_were_coming
    'Five men appeared, who were approaching.'          (Hewitt 1987: 186)

b.  *cdebian  isini,    [ **vin-c**    t'q'via-c'aml-it      pikroben*
    they_err DIST.PL **who-REL** bullet-powder-INS they_think_of_sth
    *glex-eb-is      ga-čum-eba-s* ].
    peasant-PL-GEN PV-silence-VN-DAT
    'They err who think to silence the peasants by bullets and
    gunpowder.'          (Hewitt 1987: 186)

(14)  Tush Georgian

*ī?s      bič'-i=c      ī?m      otax-ši  mī?q'vanesa=v,*
DIST.NOM boy-NOM=ADD DIST.OBL room-in they_took_sb=QUOT
[ **romel-šia-c** *qelmc'ipe-m utxra=v* ].
**which-IN-REL** king-ERG      s/he_told_sth_to_sb=QUOT
'They took that boy into that room too, in which the king told him [...].'
          (TU046-1.46)

The same type of construction is widespread in Old Georgian, where the interrogative pronoun *romel-i* 'which' can function as a relative pronoun without the derivational marker *-c* (see Example (15)), which is obligatory in the modern language. It is, however, possible to add the morphemes *-ca* 'and', *-ğa* 'even' to the

interrogative/relative pronoun (Gippert forthcoming). Additionally, third person pronouns can be attached. These personal pronouns are usually in the Nominative form, regardless of the case of the relative pronoun, as in *igi* in Example (15b).

(15)   Old Georgian

    a. *msgavs arn  per-i*      *m-is-i*      *iak'int-isa*    *tual-isa,*
       similar it_is colour-NOM DEM-GEN-NOM hyacinth-GEN gem-GEN
       [ ***romel-i***    *motetre arn* ].
       **which-NOM** whitish it_is
       'It is similar in colour as a hyacinth gem, which is whitish.'
                           (Cod.Satb., Epiph.Cypr. Gemm., B_9, 157, 24 (88v, 61))

    b. *parisevel-man man,*      [ ***romel-man=ca=igi***
       Pharisee-ERG  DEM.ERG **which-ERG=ADD=DIST.NOM**
       *xxada*           *mas* ]
       s/he_summoned_sb DEM.DAT
       'the Pharisee who (had) summoned him'
                            (Lk. 7.39 W) (Gippert, forthc.)

### 6.3.3  Relative clauses with a subordinating conjunction

A third strategy of Tsova-Tush relativisation involves a subordinating conjunction *me* which introduces a finite relative clause. This *me* is cognate with *me$^n$*, the Nominative form of 'who' (in fact *me$^n$* as a conjunction is found with some speakers), but it does not inflect: in Example (16), the relativised noun would have been an (intransitive) subject in the Nominative case, in (17) an agent in the Ergative, in (18) a possessor in the Adessive case, and in (19), an experiencer in the Dative case. Such a strategy is completely absent in the other Nakh languages (Nichols 2011, Komen 2007). The Ingush Emphatic particle *mɨ* (see Nichols (2011: 726)) may or may not be cognate with Tsova-Tush *me*. In any case it does not have a subordinating function in Ingush.

(16)   *men-ak'  v-a-ra-lŏ*        *o*   *st'ak'* [ ***me***   *txo$^n$*   *ħatx*
      who-INDF M.SG-be-IMPF-SBJV DIST man  **SUBORD** 1PL.DAT in_front
      *uitt-ra-lŏ* ].
      stand-IMPF-SBJV
      'Who would have been that man, who was apparently standing in front of us?'                    (EK001-2.10)

(17) *st'ak'o-v* [ ***me*** *ğazi-š* *t'ot'-i* *j-il-o* ] *[...]*
man.OBL-ERG **SUBORD** good-ADV hand-PL J-wash-NPST
'A man, who washes his hands well, [...]' (E147-167)

(18) *ma ožax* *co* *j-a-r* [ ***me*** *cħa don* *co* *b-a-ra-lŏ* ].
but family NEG J-be-IMPF **SUBORD** one horse NEG B.SG-be-IMPF-SBJV
'But there wasn't a family, that wouldn't have [at least] one horse.'
(E008-3)

(19) *comena lex-mak'* *txoⁿ* *q'onoⁿ pešk'r-i* [ ***me*** *bacbur*
no_one find-POT(NPST) 1PL.DAT young child-PL **SUBORD** Tsova_Tush
*qet-e-lŏ* ].
know-NPST-SBJV
'We can't find any young people who know Tsova-Tush.' (BH076-152.1)

This type of relative clause can be found only in contemporary subcorpora containing 21st-century Tsova-Tush. At this moment, it is unkown whether these type of relative clauses can occur without a head or not.

In Standard Modern Georgian, the same strategy is very widespread, and makes use of the conjunction *ro(m)*, which developed from the Old Georgian relative/interrogative pronoun *romel(i)* 'which'. This strategy comes in three subtypes (Harris 1994, whence the following examples are quoted).

I. The postnominal gap strategy. It is considered gap strategy, because there is no nominal in the relative clause that is coreferential with the head noun (see Harris 1994). A finite verb forms a relative clause after the head noun with the conjunction *rom* in second position (Examples (20a,b)).

(20) Standard Modern Georgian

a. *xalx-i* [ *k'ar-eb-tan* *axlos **ro*** *idga* ],
people-NOM door-PL-APUD close **SUBORD** s/he_sat
*aq'aq'anda.*
s/he_clapped
'The people who sat close by the doors began to clap.'
(Vogt 1971: 51)

b. *ert-i* *mat-gan-i* [ *tma-ši **rom*** *band-i* *akvs*
one-NOM 3PL-ABL-NOM hair-IN **SUBORD** band-NOM s/he_has
*čac'n-ul-i* ].
tie-PTCP.PST-NOM
'one of them who has a band tied in his hair' (Vogt 1971: 51)

II. The prenominal gap strategy, where a finite verb forms a relative clause before the head noun with the conjunction *rom* in second posistion. A resumptive demonstrative is obligatory in the main clause (see Example (21).

(21) Modern Georgian

[ *šen-gan **ro*** *miviǧeb* ] ***im*** *pul-it* *me*
you-ABL **SUBORD** I_receive_it **DIST.OBL** money-INS 1SG

*gadavixdi* *val-s.*
I_will_pay_it debt-DAT

'I will pay off the debt with that money which I receive from you.'

(Tschenkéli 1958: 203)

III. The prenominal non-reduction strategy, where the head noun is integrated into the relative clause. It is called non-reduction, since there is a full noun phrase in the relative clause that is coreferential with the head noun (Harris 1994). In the main clause, the noun can be resumed by a demonstrative (22a), but doesn't have to. Alternatively, the entire nominal can be repeated (22b).

(22) Modern Georgian

a. *minda,* [ *betania-ši **rom*** *k'olmeurnoba=a* ] *is*
I_want_it Betania-IN **SUBORD** collective=COP DIST.NOM

*vnaxo.*
I_would_see_it

'I want to see the collective farm that is in Betania.'

(Vogt 1971: 51)

b. [ *durmišxan-s* *alget-ze* ***rom*** *c'iskvil-i eč'ira* ]
Durmishkhan-DAT Alget-SUPER **SUBORD** mill-NOM s/he_had_it

*is* *c'iskvil-i.*
DIST.NOM mill-NOM

'… the mill which Durmishkhan had on [the river] Algeti'

(Ertelishvili 1963: 153)

As discussed in Harris (1994), these strategies involving *rom* are absent in Old Georgian and evolved around the Middle Georgian period. They are, however, observed in the Tush dialect (almost exclusively using the reduced form *ro*).

Table 6.3: Relative clause types

| Chechen-Ingush (and Daghestanian) | Tsova-Tush | Mod. Georgian Tush Georgian | Old Georgian |
|---|---|---|---|
| Participle | Participle Pronoun Conjunction *me* | Participle Pronoun Conjunction *ro(m)* | Participle Pronoun |

### 6.3.4 Summary

The strategies pertaining to relative clauses are summarised in Table 6.3.

All language varieties show a non-finite relativisation strategy involving a participle. It is likely that Tsova-Tush inherited this strategy from Proto-Nakh and Proto-East-Caucasian, since the entire family shows a clear preference for non-finite subordination (Daniel & Lander 2011: 147). Furthermore, the suffixes that derive participles are cognate across all Nakh languages, and the morphosyntax (agreement with the head noun and the marking of arguments in the relative clause) is the same. Exceptions to East Caucasian non-finite relative clauses are usually explained as structural copies from a dominant language, such as in Example (23), where Udi (East Caucasian > Lezgic) shows a subordinate clause with a relative pronoun, a construction very likely to have been borrowed from Georgian or Armenian.

(23) Udi

  *čoban-ux* [ **ma-t'-ǧ-on-te** *e<q'un>f-esai* *biasun-un*
  shepherd-PL **which-OBL-PL-ERG-REL** keep<3PL>-IMPF evening-GEN
  *q'araul-ax* ].
  watch-DAT2
  '… the shepherds who kept the evening watch.'    (Luke 2:8. Schulze 2005)

Similar to Udi, the Tsova-Tush relative pronoun strategy shows clear parallels to Georgian. Although it is imaginable that Tsova-Tush copied this construction in the Old Georgian period, it is more likely to assume it did so after the Modern Georgian innovation of the form of the pronoun itself. While Old Georgian displays significant formal variation in the relative pronoun (often the bare interrogative *romel-i* 'which', but also *romel-i=ca, romel-i=ǧa, romel-i=igi, romel-i=ca=igi*, etc.), Modern Georgian settles on *romel-i-c*, where the *-c* is obligatory. It is exactly this form that is parallel to the Tsova-Tush relative pronoun *menux-a*.

The third strategy, which makes use of a general subordinating conjunction, is absent in Old Georgian, and only developed during the Middle Georgian period (*romel* > *rome* (see Example (24)) > *rom* > *ro*).

(24)   Middle Georgian
  *igi*        *sam-n-i*      *k'ac-n-i,*     [ ***rome*** *lom-ta*      *zeda sxdes* ].
  DIST.NOM three-PL-NOM man-PL-NOM **SUBORD** lion-PL.OBL on    they_sit
  '... those three men, that sit on lions.'

<div align="right">(Amirandar., 3, 303, 28. Dzidziguri 1973: 256)</div>

It can therefore be hypothesised that Tsova-Tush copied the relative pronoun construction and the subordinator construction from Modern Georgian (whether Standard or Tush), where the form of the relative pronoun is settled on *romel-i-c*, and the subordinator *ro(m)* bears no resemblance anymore to its origin *romel*.

## 6.4  Adjunct clauses

Tsova-Tush features both non-finite and finite adjunct clauses. Non-finite clauses make use of postpositions, of the Infinitive, of the Verbal Noun, and of the Simultaneous Converb *-a/e/i/o/u-š* and the Anteceding Converb *-ičeħ/-ečeħ*. Finite clauses make use of the general subordinating conjunction *me*, or of a series of relative adverbs. These are formed in the same way as the relative pronouns seen in Section 6.3.2 and are also calqued on the Georgian relative adverbs. See Table 6.4 for an overview.

Table 6.4: Relative adverbs in Tsova-Tush and Georgian

|  | Tsova-Tush | | Georgian | |
|---|---|---|---|---|
|  | Interrogative | Relative | Interrogative | Relative |
| 'when' | *maca$^n$* | *macn-e* | *rodis* | *rodesa-c* |
| 'how' | *moħ* | *moħ-e* | *rogor* | *rogor-c* |
| 'how much' | *meł* | *meł-e* | *ramden-i* | *ramden-i-c* |
| 'where' | *mičeħ* | *mičħ-e* | *sad* | *sada-c* |
| (additive particle) | *=e, =a* | | *=c* | |

Since multiple (finite and/or non-finite) strategies can be used for the same clause type, each of the following sections (temporal, purpose, conditional, causal and manner clauses) will contain all different strategies for that type.

### 6.4.1 Temporal clauses

Tsova-Tush features at least three distinct ways of forming temporal clauses: using converbs (I), nominal forms of the verb followed by a postposition (II), and conjunctions (III). It remains to be seen whether the general subordinating conjunction *me* can be used in these types of adjunct clauses (IV).

I. Temporal clauses can be expressed by way of specialised converbs, i.e. non-finite verbal forms functioning as adverbs. Tsova-Tush has two forms, a Simultaneous Converb -*š* (25, 26), and an Anteceding -*čeħ* (27, 28).[4] These converbs often have the same subject as the matrix verb (25, 27), but not always (26, 28).

(25) [ *cark'-i-v    daħ tet'-oš* ],   *daħ j-aɫ-eⁿ*         *o*
     tooth-PL-INS PV  cut-SIMUL PV  F.SG-go_out-AOR DIST
     *ħuna-x.*
     forest.OBL-CONT
     'Biting with her teeth, she escaped from that forest.'     (E179-114)

(26) *qeⁿ*  [ *sa-xiɫ-uš* ]        *mič-ax*       *j-ax-eⁿ*        *o,  šarn*
     then dawn-be.PFV-SIMUL whither-INDF F.SG-go-AOR DIST away.PV
     *j-ax-eⁿ.*
     F.SG-go-AOR
     'Then, as it was dawning, she went somewhere, she went away.'
                                                                 (E179-101)

(27) [ *barnaul-i    aħ    v-ex-če* ],     *c'ʕerkoⁿ o   bʕar-d-ax-eⁿ*
     Barnaul-INESS down M.SG-go-ANTE suddenly DIST meet-D-LV-AOR
     *soⁿ.*
     1SG.DAT
     'And when I went to Barnaul, I suddenly met [them].'     (E275-43)

(28) [ *o   nʕaiʔ v-aiɫ-čeħ* ],       *v-eʔ-eⁿ*        *oqu-n      qena*
     DIST out  M.SG-go_out-ANTE M.SG-come-AOR DIST.OBL-DAT other
     *mar     q'uil.*
     husband thief
     'When he had gone out, the other husband, the thief came to her.'
                                                                 (AS008-1.10)

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[4]Original orthography of (28): O nḥaiwaiḷċeḥ, wee oxun xena mar quil.

For the other Nakh languages, the use of converbs is the main strategy to convey temporal clauses (Nichols 2011, 1994a), using forms cognate to the Tsova-Tush ones, such as in (29), where Chechen uses the morpheme *-ča* (cognate to Tsova-Tush *-če(ħ)*) to form an anteceding temporal clause, and (30), where the Ingush morpheme *-až* (cognate with Tsova-Tush *-š*) is used to mark a simultaneous clause.

(29)  Chechen
[ *šiena*   *āxča*      *d-el-ča* ],   *āra-v-ēl-ira*      *Mūsā.*
REFL.DAT money.NOM D-give-ANTE out-M.SG-go-AOR Musa
'When (someone) gave him money, Musa went out.'
(Nichols 1994a: 64)

(30)  Ingush
[ *šollağ nomer āra-j-oaqq-až* ],   *so*      *sie*      *balxa*   *mɨ*
second issue   out-J-take-SIMUL 1SG.NOM 1SG.REFL hire.ADV EMPH
*ett-ar=ī.*
LV-PST=Q
'When the second issue was coming out, I was already working there myself.'                    (Nichols 2011: 602)

Besides these basic converbs, Chechen and Ingush feature a range of converbs for more specific temporal relations (Ingush has 13). For more details, see Nichols (1994a, 2011), Good (2003).

Modern standard Georgian shows one non-finite strategy for temporal adjunct clauses, by inflecting the verbal noun in the Dative of the Genitive (using so-called *Suffixaufnahme* (i.e. case stacking), see Boeder 1995). This is illustrated in Example (31).

(31)  Standard Modern Georgian
[ *aset-i*   *gan-cxad-eb-is*            *ga-k'et-eb-isa-s* ]
such-AGR PV-announce-TM(VN)-GEN PV-make-TM**(VN)-GEN-DAT**
*k'i*      *iuzer-ma gaacnobieros.*
indeed user-ERG s/he_should_realise
'When making such an announcement, the user should realise...'
(Wier 2014: 55)

Thus, all language varieties make use of non-finite temporal clauses. In Chechen and Ingush, it is the default strategy, in Tsova-Tush it is one of many options, and in Georgian, it is a relatively marginal strategy.

II. To express the meanings 'before, until', or 'after', Tsova-Tush uses postpositions. *doli$^n$* 'after' requires an Anteceding Converb (Example (32)), while *-lomci$^n$* 'until, before' attaches directly to the verbal stem (Example (33)).

(32) [ *as       laum-re$^n$        v-eʔ-č'eħ        **doli$^n$** ] *oqui-nĭ*
        1SG.ERG mountain-ABL M.SG-come-ANTE **after**     DIST.OBL-DAT
        *šari$^n$       k'ex        j-ał-j-al-i$^n$*.
        POSS.REFL saddle_tree J-give-J-INTR-AOR
        'After I came back from the mountains, s/he gave him/her a saddle tree.'                                    (KK001-113.1)

(33) [ *marxv d-ast'-d-al=**lomci$^n$*** ]   *ditxo-ğe$^n$   dist'        com*
        Lent     D-undo-D-INTR=**until** meat-ADJZ mouth(LAT) nothing
        *ħ-or.*
        put-IMPF
        'Until the breaking of the Lent, s/he wouldn't put anything with meat in her mouth.'                          (KK013-1.179)

Chechen and Ingush make use of the same strategy. Chechen uses the postpositions *t'iaħa* 'after' (Example (34a)) and *ħalxa* 'before' (Example (34b)). Compare Tsova-Tush cognates *t'q'uiħ* 'behind' and *ħatx* 'in front of', which are spatial postpositions, and never used with verbal nouns to form subordinate clauses). For similar constructions in Ingush, see Nichols (2011: 607).

(34) Chechen
    a. [ *so       c'a      v-eʔ-**ančul**        t'iaħa* ], *sūna      nāb*
         1SG.NOM home M.SG-come-NMLZ **after**     1SG.DAT sleep
         *qīt-ara.*
         hit-PST
         'After I came home, I fell asleep.'                    (Good 2003)
    b. [ *sunna g-**inčul**     ħalxa* ], *iza aħmad-na     g-ira.*
         1SG.DAT see-NMLZ **before**   3SG Ahmed-DAT see-PST
         'Before I saw him, Ahmed saw him.'                    (Good 2003)

Georgian too (both the modern standard variety and the Tush dialect) has the option to employ the non-finite strategy to express temporal clauses meaning 'before' and 'after'. In Example (35), Tush Georgian Verbal Nouns

are used in combination with the Terminative case -*amde*[5] to express the meaning 'before', and the postposition *šemdeg* 'after'.

(35) Tush Georgian

    a. *zust'-ad*    *igr*     *mtavrdeba* [ *c'l-is*
       exact-ADVB so.DIST it_finished year-GEN
       *da-mtavr-**eb**-**amde*** ].
       PV-finish-TM**(VN)**-**TERM**
       'Exactly like that it finished before the end of the year.'

<div align="right">(GC052-1.44)</div>

    b. *memre gağlec'aven*    [ *ga-šr-**ob**-**is***      ***šemdeg*** ].
       then    they_thresh_it PV-dry-TM**(VN)**-**GEN after**
       'Then, after drying it, they thresh it.'      (TT004-1.45)

III. In Tsova-Tush, it is also possible to form a finite temporal clause using a conjunction *macne* 'when', which is formed in a similar way to relative pronouns, i.e. an interrogative pro-form *macan* 'when' plus a relativiser -*e* (which is originally the additive particle =*e*). See Examples (36) and (37). Compare Georgian *rodesa-c* 'when-REL (Example (38)), on the basis of which the Tsova-Tush *macn-e* is calqued. Just as in relative clauses, the subordination suffix -*(i)c(i)* occurs on the finite verb in this type of subordinate clause. The use of *macne* is already observed in the oldest textual material (AS).

(36) [ *ħal **macn-e***    *bʕark'-i q'at't'-in-c* ],     *ʕurdna*   *j-a-nor.*
      PV   **when-REL** eye-PL   open-AOR-SUBORD morning J-be-NW.REM
      'When he opened his eyes, it was already morning.'    (BH069-2.1)

(37) [ ***macn-e*** *d-aq'-uin*       *men-ax*    *d-ağ-ui-c* ],
      **when-REL** D-eat-PTCP.NPST who-INDF D-come-NPST-SUBORD
      *as*      *o*    *daħ d-ʕev-o-s.*
      1SG.ERG DIST PV   D-kill-NPST-1SG.ERG
      'When someone comes to eat [you], I will kill them.'    (E181-209)

Modern Georgian has a subordinating conjunction that is structurally parallel to the Tsova-Tush one: *rodesa-c* (from *rodis(a)* + *c* 'when' + a "relativiser" -*c*, which is originally the additive particle =*c*).

---

[5]In the Georgian grammatical tradition usually analysed as a clitic postposition.

(38) Standard Modern Georgian
[ ***rodesac*** *om-i* *damtavrdeba* ], *(mašin) q'vela-n-i*
**when(REL)** war-NOM it_will_end then all-PL-NOM
*bednier-eb-i viknebit.*
happy-PL-NOM we_will_be
'When the war ends, (then) we shall all be happy.' (Hewitt 1987: 129)

In Old Georgian, the equivalent for Modern Georgian *rodesac / roca*, was *odes*, a related but structurally different conjunction, which also preceded the subordinate clause, as in (39).

(39) Old Georgian
*da* [ ***odes*** *iq'o* *tw-isa=gan* ], *hk'itxes...*
and **when(REL)** s/he_was REFL-GEN=ABL they_asked_sb
'And when he was alone, they asked him ...' (Mk: 4.10, mss DE)

Tsova-Tush speakers are also able to freely use the Georgian conjunction *sanam* 'before', as in (40). Compare the same construction in Standard Georgian (41).

(40) [ ***sanam*** *se$^n$* *mar* *v-ux* *v-erc'* ], *as* *ħo*
**before** 1SG.GEN husband M.SG-back M.SG-return 1SG.ERG 2SG
*šarn v-ax-it-o-s.*
away M.SG-go-CAUS-NPST-1SG.ERG
'I will let you go before my husband comes back.' (MM116-2.18)

(41) Modern Georgian
*magram* [ ***sanam*** *mağal mta-ze* *avidoda* ], *simğer-is*
but **before** high mountain-on s/he_went_up song-GEN
*sit'q'v-eb-i daavic'q'da.*
word-PL-NOM s/he_forgot
'But before he went up the mountains, he forgot the words to the song.' (GNC: E. Akhvlediani)

Chechen and Ingush do not form finite temporal clauses of this type.

IV. Modern Georgian also features a subordination strategy using the conjunction *rom* (as seen in relative relative clauses in Section 6.3), The conjunction

can be used in first (42a) or second (42b) position. Because of the multifunctional nature of Georgian *rom*, the temporal reading is not always the only one, see Example (42b).

(42) Modern Georgian

    a. *axalgazrda iq'o,*     [ ***rom***    *gaatava*     *kutais-is*
      young     s/he_was **SUBORD** s/he_finished_it Kutaisi-GEN
      *gimnazia* ].
      high_school
      'He was young, when he finished the Kutaisi high-school.'
      (Hewitt 1987: 131)

    b. [ *šen **rom***     *aka xar* ],    *ar*   *mešinia.*
      2SG   **SUBORD** here you_are NEG I_am_afraid
      'When you are here, I am not afraid.' (or 'Because you are here,
      …')                        (Hewitt 1987: 131)

Tsova-Tush features a similar general subordinator *me*, which, however, is not generally used used in temporal clauses found in the Tsova-Tush corpus. One instance of a mixed construction has been found (Example (43)), using both the conjunction *macne* and the conjunction *me*, which is exceptional.

(43) *eħat cu=i*   *teł-er*       [ ***macne***   ***me***
    then NEG=Q be_better-IMPF **when(REL) SUBORD**
    *atx=a*         *zurit'a*     *ix-ora* ].
    1PL.EXCL.ERG=ADD Zurita(LAT) go.IPFV-IMPF
    'Was it not better, when we were going to Zurita.'     (EK003-2.1)

Another example, (44), can be analysed as either a temporal clause, or a relative clause with the prenominal non-reduction strategy (where the head noun is modified by a demonstrative and is repeated in full in the relative clause).

(44) [ *duiħre-lo$^n$ imp'erialist'ur msoplio buħ **me***   *b-a=r* ],    *o*
    first-ADJZ imperialist   world   war **SUBORD** B.SG-be-IMPF DIST
    *buħ-e-x*     *lev-v-∅-or*       *gac'vevad-v-i-en*       *e.*
    war-OBL-CONT be.NW-M.SG-TR-IMPF invite-M.SG-TR-PTCP.PST PROX
    'When it was the first World War, he was recruited for that war.'
                                                   (E113-75)

The strategies pertaining to temporal clauses are summarised in Table 6.5.

Table 6.5: Temporal clause types

| Chechen-Ingush | Tsova-Tush | Mod. Georgian Tush Georgian | Old Georgian |
|---|---|---|---|
| Converb vN + Postpos. | Converb vN + Postpos. Conjunction | (Inflected vN) vN + Postpos. Conjunction Conjunction *ro(m)* | Conjunction |

### 6.4.2 Purpose clauses

Tsova-Tush offers a non-finite, as well as a finite strategy to construct covalent purpose clauses. A non-finite construction involves the subordinated verb in the Infinitive from. The purpose clauses can be postposed, as in Example (45), or preposed, as in (46).

(45)  [ *wun-e   j-ej=c* ],        *oh=a*      *nʕejʔ qeħ  bazir*     [ *daħ j-oxk'-aⁿ* ].
      what-REL J-be=SUBORD DIST=ADD out   take bazaar.ILL PV    J-sell-INF
      'They also take what(ever) they have to the bazaar to sell.'        (E006-85)

(46)  [ *bader šarn   d-ik'-aⁿ* ]  *d-eʔ-eⁿ*.
      child    away D-take-INF D-come-AOR
      'She has come to take her child away.'                              (E037-58)

The same strategy can be observed in Chechen and Ingush, with a cognate Infinitive suffix (Example (47)).

(47)  Ingush
      *t'āqqa dʕāra ouša-næq'ān*     *juxa t'ɨ-b-æxk-āb*          [ *lat-a* ].
      so       there Ousha-neaqaan back at-HPL-come.PL-NW.HPL fight-INF
      'Then the Ousha-neaq'aan clan returned to fight.'        (Nichols 2011: 288)

Georgian forms these type of non-finite covalent purpose clauses with the subordinated verb in another non-finite form: the Future Participle in the Adverbial case (48). (Old Georgian uses the verbal noun in the Adverbial case, see Section 5.5 on loan verb accommodation.)

(48)   Modern Georgian

    a.   [ *gamopen-is*   **sa**-*nax*-**av**-**ad** ]                *movedi.*
        exhibition-GEN **PTCP.FUT**-see-**PTCP.FUT**-**ADVB** I_came

        'I came to see the exhibition'                (Hewitt 1987: 28)

    b.   *es*        *k'ac-i*   [ *kal-is*      *mo*-**sa**-*k'l*-**av**-**ad** ]
        PROX.NOM man-NOM woman-GEN PV-**PTCP.FUT**-kill-**PTCP.FUT**-**ADVB**

        *gamoagzavnes.*
        they_sent_it

        'They sent this man here to kill the woman.'        (Hewitt 1987: 28)

Some Tsova-Tush purpose clauses are constructed with the general subordination conjunction *me*, introducing a finite clause with the finite verb in the Subjunctive. This use of the conjunction *me* is already attested in our oldest subcorpus from the 1850s, as can be seen from Example (49).[6] All other uses of *me* are younger, as will be discussed in Section 7.3. Example (50) gives another instance of *me* introducing a purpose clause.

(49)   *wux d-ec'-e-s*          *d-∅-a$^n$,*   [ ***me***   *xił-u-**l***
      what D-must-NPST-1SG.ERG D-do-INF SUBORD be.PFV-NPST-**SBJV**

      *so-goħ*     *co-qač-l-ain*          *v-ax-ar?* ].
      1SG-ADESS NEG-end-INTR-PTCP.NPST M.SG-live-VN

      'What must I do to obtain eternal life?'                (AS005-1.2)

(50)   *čuxu-i*  *šui$^n$*    *nan-i-gore$^n$*    *čaq d-ec'*   *xił-a$^n$,*   [ ***me***
      lamb-PL REFL.POSS mother-PL-ADABL far  D-must be.PFV-INF SUBORD

      *vašba$^n$ daħ d-ic-d-∅-o-**lŏ*** ].
      RECP  PV  D-forget-D-TR-NPST-**SBJV**

      'The lambs must be apart from their mothers so that they forget each other.'                (E002-35)

This strategy can be compared directly with the most common Modern Georgian strategy, using the general subordination conjunction *rom*, also with the subordinated verb in the Subjunctive (see Example (51)).

(51)   Standard Modern Georgian
    *moval*        [ ***rom***   *mogk'la* ].
    I_will_come SUBORD I_would_kill_you

    'I will come in order to kill you.'                (Hewitt 1987: 23)

The strategies pertaining to purpose clauses are summarised in Table 6.6.

---

[6]Original orthography of (49): ux deċes da, me xiļul sogoḥ co x̌aċlain waxar?

Table 6.6: Purpose clause types

| Chechen-Ingush | Tsova-Tush | Mod. Georgian Tush Georgian | Old Georgian |
|---|---|---|---|
| Infinitive | Infinitive *me* + SBJV | (Inflected PTCP) *ro(m)* + SBJV | (Inflected VN) |

### 6.4.3 Conditional clauses

Tsova-Tush has a dedicated verbal morpheme *-ħe* to form conditional clauses, presented in more detail in Section 4.5.4. The reader is reminded that within Tsova-Tush, the Conditional verb forms are best analysed as being finite, as (1) they co-occur with the morph *-ra*, which, outside of the Conditional, only combines with finite forms, and (2) they can co-occur with person marking, which none of the non-finite forms (like the converbs used in other constructions in this chapter) are able to. Thus, morphologically, conditional forms behave like finite forms, but syntactically, they are converbs, as they are the head of an adjunct clause that does not contain a conjunction (see Examples (52) and (53)).

(52)  [ *leʔ-e-**ħ*** *ħoⁿ* ], *as* *ħo šarn v-ax-it-o-s.*
wish-NPST-**COND** 2SG.DAT 1SG.ERG 2SG away M.SG-go-CAUS-NPST-1SG.ERG
'If you want, I will let you go.' (MM116-2.18)

(53)  *at-uin-ši* *duq* *d-a,* [ *at-uině* *wum* *d-a-**ħ*** ].
grind-PTCP.NPST-PL many D-be grind-PTCP-NPST something D-be-**COND**
'We have many grinders, if anything needs to be ground.' (KK001-55.2)

Counterfactual conditional clauses are also constructed with a similar conditional form, with the subordinated verb in the Non-witnessed Remote Conditional (see Example (54)). Additionally, the matrix verb is in the Pluperfect (a periphrastic form introduced in Section 4.6).

(54)  [ *o* *din* *v-is-**noħer*** ] *so-g* *ħal*
DIST alive M.SG-stay-**NW.REM.COND** 1SG-ALL PV
*ʕam-d-∅-it-en-d-a-r* *oqu-s.*
study-D-TR-CAUS-PTCP.PST-D-be-IMPF DIST.OBL-ERG
'If he had been alive, he would have helped me study.' (E122-15)

(55) [ *pxauzt'q' manat xił-**noħer*** *melot'-e-go* ],
hundred    manat be.PFV-**NW.REM.COND** bald-OBL-ADESS
*ʕu-e-ğ*          *co  xił-en-v-a-r.*
servant-OBL-TRANS NEG be.PFV-PTCP.PST-M.SG-be-IMPF
'If the bald man had a hundred manat, I would not work as a servant.'
(WS001-9.14)

The conditional suffix *-ħe* can occur on both finite forms (52–55) as well as on the anteceding converb in *-čeħ*. See (56), with a verb form in the Past Conditional.

(56) [ *ejł-**če-ħer*** *dada-s* [ *me,* "*gara ču-tox,*
say-**ANTE-COND.PST** father-ERG SUBORD HORT PV-hit
*šuitt=en,*" ] ]    *mzat  b-a-r*    *o* [ *ħatteʔ*    *sak'er-gŏ*
INTERJECTION=QUOT ready B.SG-be-IMPF DIST immediately neck-ALL
*xaʔ-a$^n$* ].
sit-INF
'If the owner said: "Come on, beat him, 'shuitt'," [the dog] would jump on his neck immediately.'                              (E011-60)

The same morpheme can be found in Chechen and Ingush conditional clauses, such as in Example (57).

(57)  Chechen
*mūsā-na  xieta,* [ *sie-ga dīʒalla  qāba-lū  b-ā-c,*    [ *buolx ca*
Musa-DAT think REFL-ALL family.DAT feed-POT B.SG-be-NEG work   NEG
*xil-a-**ħ*** ] ].
be-PRS-**COND**
'Musa believes he will not be able to feed his family if he doesn't have work'                              (Nichols 1994a: 64)

Georgian most commonly uses the conjunction *tu* 'if' to form conditional clauses (see Example (58)). A variety of tense-aspect forms can be used in both the matrix and the subordinate clause (for a more detailed description, see Hewitt (1987: 73–86), and Samushia 2018).

(58)  Standard Modern Georgian
[ ***tu** sad-me*    *eguleboda*    *mo-sa-č'r-el-i*
**if**  where-INDF s/he_was_imagining PV-PTCP.FUT-cut-PTCP.FUT-NOM
*ra-me* ]    *ičkaroda.*
what-INDF s/he_was_hurring
'If s/he imagined something to cut anywhere, he used to hurry (there).'
(Hewitt 1987: 71)

However, as in other types of subordinate clauses, the general conjunction *rom* can be used (see Example (59)). This type creates more vague conditionals, according to Hewitt (1987). Here as well, many different tenses can signify different semantic nuance.

(59)  Standard Modern Georgian

    a.  *k'arg-i  ikneboda,*  [ *is*  **rom**  *c'erdes*  *upro*
        good-NOM it_would_be DIST.NOM **SUBORD** he_would_write more
        *čkara* ].
        quickly
        'It would be good, if he wrote more quickly.'      (Hewitt 1987: 76)

    b.  [ *p'ir-i*  *c'q'l-it*  **rom**  *ara mkondes*  *savse* ],
        mouth-NOM water-INS **SUBORD** NEG I_would_have full
        *vilap'arak'ebdi.*
        I_would_speak
        'If I didn't have my mouth full of water, I'd speak.'   (Hewitt 1987: 76)

Neither strategy (with conjunction *tu* or conjunction *me*, the Tsova-Tush equivalent of *rom*) has been found in the Tsova-Tush corpus, except for one occurrence (in a corpus of 250.000 tokens) of code-switched *tu*. Thus, the strategies pertaining to conditional clauses are summarised in Table 6.7.

Table 6.7: Conditional clause types (both factual and counterfactual)

| Chechen-Ingush | Tsova-Tush | Mod. Georgian Tush Georgian | Old Georgian |
|---|---|---|---|
| Conditional verb | Conditional verb | | |
| | | Conjunction Conjunction *ro(m)* | Conjunction |

### 6.4.4 Causal clauses

Tsova-Tush non-finite causal clauses can be formed with Oblique forms of participles, followed by the question particle *=i* (compare Example (60) with English *It's dark, right (?), we can't play outside.*)

(60)  [ *uči$^n$ j-a-**ču**=**i*** ]              *nʕaʔi  co  labc'-mak'     vai-n.*
      dark  J-be(PTCP.NPST)-**OBL=Q** out.ESS NEG play-POT(NPST) 1PL.INCL-DAT
      'Because it is dark, we can't play outside.'     (Holisky & Gagua 1994: 204)

(61)  *co  xeʔ  so$^n$,      [ so$^n$    k'aj xet-ra-lŏ,    [ k'ac'k'o$^n$*
      NEG know 1SG.DAT 1SG.DAT hot  find-IMPF-SBJV little
      *j-a-**ču**=**i*** ] ].
      F.SG-be(PTCP.NPST)-**OBL=Q**
      'I don't know, whether I found it very hot, (just) because I was so little.'
                                                                    (MM222-1.4)

Another strategy involves a Verbal Noun in the Contact case (see Examples
(62) and (63)).

(62)  [ *do$^n$  co  xił-**r-e-x*** ]          *kuitad  v-eʔ-n-as.*
      horse NEG be.PFV-**VN-OBL-CONT** on_foot M.SG-come-AOR-1SG.ERG
      'Because I don't have a horse, I came on foot.' (Holisky & Gagua 1994: 204)

(63)  [ *c'q'e-ša-c'        j-itt-**r-e-x*** ]         *axluǧ-goħ  bos*
      once-two.OBL-MULT J-wash-**VN-OBL-CONT** tunic-ADESS colour
      *b-ał-e$^n$.*
      B.SG-go_out-AOR
      'The tunic's colour faded from washing it once or twice.'     (KK002-1.263)

Chechen and Ingush, too, can form non-finite causal clauses, albeit with dif-
ferent verbal forms. Chechen uses the masdar form of the verb in the Dative (64),
while Ingush features a specialised converb (65).

(64)  Chechen
      [ *aħamada  malīkina    t'āra tuox-**ar-na*** ], *i   j-uelx-aš*
      Ahmed.ERG Malika.DAT palm hit-**VN-DAT**   3SG F.SG-cry-SIMUL
      *j-a-ra.*
      F.SG-be-PST
      'Because Ahmed slapped Malika, she was crying.'            (Good 2003)

(65)  Ingush
      [ *āz     d-erriga urs-až  jāšk$^j$ā=čɨ cʕan      ʕa-čɨ-d-exk-**andæ*** ]
      1SG.ERG D-all   knife-PL drawer=in together PV-PV-D-put.PL-**CAUS**
      *urs-až   sixa ærh-lu.*
      knife-PL fast dull-INTR.PRS
      'Because I put all the knives together in the drawer, they get dull quickly.'
                                                              (Nichols 2011: 608)

Another strategy to form causal clauses in Tsova-Tush, is to use a relative-type clause with the conjunction *oqui-n=dała me*, which is the distal demonstrative pronoun in the dative, followed by a postposition 'because of', followed by the general subordinator *me* (see Example (66)). This constitutes a structural copy of Georgian *im-it'om, rom* 'because', which consists of the distal demonstrative pronoun in the Oblique form, followed by a suffix *-it'om* (that hitherto remains unetymologised) followed by the general subordinator *rom*.

(66)  [ ***oqui-n=dała*** **me** *lamu* *že* *ah d-ec'*
       DIST.OBL-DAT=because_of SUBORD mountain(ESS) sheep PV D-must
       *d-ett-a^n* ].
       D-milk-INF
       '[…], because in the mountains, the sheep need to be milked.'     (E002-31)

A similar construction features *dax / daxaʔ / daxeʔ* instead of *oqindała* (Example (67)), which is found already in the oldest textual material (corpus AS). While the morphological structure of *oqindała* closely resembles Georgian *imit'om*, it seems less likely that *dax* is a calque.

(67)  *albat* *pxi* *šar-lu^n*,     [ ***daxaʔ***     **me** *žer sk'ol-i*
       probably five year.OBL-ADJZ because_of_this SUBORD yet school-INESS
       *co* *ix-ra-s* ].
       NEG go-IMPF-1SG.ERG
       '[I was] probably five years old, because I wasn't yet going to school.'
       (MM222-1.1)

Chechen, too, has the possibility to form causal clauses with a conjunction, although the construction is different, with the conjunction *dēla* 'because', cognate with Tsova-Tush *dała*, in the final position of the subordinate clause (see Example (68)).

(68)  Chechen
       *malīka j-uelx-aš*     *j-a-ra,*     [ *ahmada* *šiena* *t'āra tøx-**na***
       Malika F.SG-cry-SIMUL F.SG-be-PST Ahmed.ERG REFL.DAT palm hit-ANTE
       ***dēla*** ].
       **because**
       'Malika was crying, because Ahmed slapped her.'     (Good 2003)

Now compare the Tsova-Tush constructions with (both standard and dialectal) Georgian *imit'om ro(m)* 'for that reason, that', introducing causal clauses.

*imit'om* can be anywhere in the main clause (Example (69a)), but usually it is not separated from *rom*, at the very start of the subordinate clause, as in (69b).

(69)   Standard Modern Georgian

   a. *q'ur-i*   ***imit'om***        *ar*   *izrdeba,* [ ***rom***   *bevr-is*
       ear-NOM **for_that_reason** NEG it_grows **SUBORD** much-GEN
       *gamgonea* ] *=o.*
       it_hears    =QUOT
       'They say the ear does not grow because it hears a lot.'

(Hewitt 1987: 59)

   b. [ *rodesac kal-s*        *k'laven,*       [ ***imit'om***        ***rom***
       when     woman-DAT they_kill_sb **for_that_reason** **SUBORD**
       *kal-i=a* ] ]        *es*            *sazogadoeb-is p'roblema=a.*
       woman-NOM=COP PROX.NOM society-GEN   problem=COP
       'When a woman is killed because she is a woman, that's a societal
       problem.'                                          (S. Zurabishvili)

Old Georgian, too, used finite causal clauses introduced by a conjunction, although the conjunction here was usually *rametu* 'because' (see Example (70)).

(70)   Old Georgian
       [ ***rametu*** *igi=a*         *ǧmert-i*   *macxovari čwen-i* ].
       **because**   DIST.NOM=COP god-NOM animating 1PL.POSS-NOM
       '[...] for he is our animating God'                       (Ps. 94.7)

The strategies pertaining to causal clauses are summarised in Table 6.8.

Table 6.8: Causal clause types

| Chechen-Ingush | Tsova-Tush | Mod. Georgian Tush Georgian | Old Georgian |
|---|---|---|---|
| Converb, verbal noun Conjunction | Participle, verbal noun Conjunction | Conjunction | Conjunction |

### 6.4.5  Manner clauses

Tsova-Tush can form manner clauses with a conjunction formed from the interrogative *moħ* 'how' with an added *-e* (see Example (71)), similar to the relative pronoun (see Section 6.3.2) and the temporal conjunctive (6.4.1):

(71) *ħal ħarč xink'al uišt'* [ **moħ-e** *nana-s tec'-d-i-er ħo-g* ].
PV fold khinkali so.DIST **how-REL** mother-ERG teach-D-TR-REM 2SG-ALL
'Fold up khinkali the way mother taught you.' (BH037-46.1)

From my available sources, it is unclear how the other Nakh languages form manner clauses of this type. Ingush does have a cognate form used in a similar context, but the exact construction is different: *muo* is used as a postposition of non-verbal phrases only (see Example (72a) from Nichols 2011: 514). It seems that Example (72b) can be qualified as containing two manner clauses (at least according to Nichols (2011: 621) herself). It makes use of a Simultaneous Converb in *-až*, effectively not distinguishing it from a temporal adjunct clause. Data on Chechen is lacking.

(72) Ingush

a. *fɨ d-e-ž lātt ħo* [ *bežan* **muo** *dʕa-ett-ā?* ].
what D-do-SIMUL stand 2SG cow **like** PV-stand_up-ANTE
'What are you doing standing there like an idiot?' (lit. 'like a cow')
(Nichols 2011: 514)

b. [ *ğālmaqa čei yštta* **lūs-až** ] *lātt-ar,* [ *caʕ*
Kalmyk.GEN tea thus **stir-SIMUL** stand-IMPF one
[ *k'æd-j-el-ča* ] *šo-llağ-j-ar dʕa-t'ɨ=a* **j-uod-až** ].
tired-F.SG-INTR-ANTE two-ORD-F.SG-NMLZ PV-on=ADD **F.SG-go-SIMUL**
'They would stand stirring the Kalmyk tea, one woman replacing another when she got tired.' (Nichols 2011: 621)

Modern Georgian, however, can form an exactly similar type of manner clause as in Tsova-Tush Example (71), with a conjunction based on the interrogative (see Example (73)).

(73) Standard Modern Georgian
*q'velaperi ise=a,* [ **rogor-c** *unda iq'os* ].
everything so.DIST=COP **how-REL** it_should it_would_be
'Everything is as it should be.' (GNC: Ch. Amirejibi)

Another possibility to form Tsova-Tush manner clauses, is with a Verbal Noun in the Instrumental case (see Examle (74)), which also exactly mirrors a parallel Modern Georgian construction (Example (75)).

(74)  *wux  lat'-o-d-∅-mak'-er*      [ *badr-e-n*      *t'q'uiħa*
      what help-NPST-D-TR-POT-IMPF child-OBL-DAT behind
      *eqq-r-e-v* ].
      jump-VN-OBL-INS
      'How could she have helped by jumping after the child?'      (E060-26)

(75)  Standard Modern Georgian
      *nišn-is*  [ *mo-g-eb-it* ]  *miaӡaxa*      *nik'o-m.*
      sign-GEN PV-retort-VN-INS s/he_shouted Niko-ERG
      'Niko shouted mockingly'                      (GNC: E. Akhvlediani)

## 6.4.6 Summary

For an overview of all strategies of forming adjunct clauses, consider Table 6.9.

Table 6.9: Adjunct clause types

| Type | Chechen-Ingush | Tsova-Tush | Mod. Georgian Tush Georgian | Old Georgian |
|---|---|---|---|---|
| Temporal | Converb VN + Postpos. | Converb VN + Postpos. Conjunction | (Inflected VN) VN + Postpos. Conjunction Conjunction *ro(m)* | Conjunction |
| Purpose | Infinitive | Infinitive *me* + SBJV | (Inflected PTCP) *ro(m)* + SBJV | (Inflected VN) |
| Conditional | Conditional verb | Conditional verb | Conjunction Conjunction *ro(m)* | Conjunction |
| Causal | Converb, VN Conjunction | Participle, VN Conjunction | Conjunction | Conjunction |
| Manner | Converb | Conjunction Inflected VN | Conjunction Inflected VN | |

The main intermediate conclusion to draw from Table 6.9, is that whenever Tsova-Tush features a strategy involving a conjunction, Modern Standard and Tush Georgian can express the same clause type with a conjunction also. That is, in temporal, causal and manner clauses, both Tsova-Tush on the one hand and Modern Standard Georgian and Tush Georgian on the other feature conjunctions.

In temporal clauses and causal clauses, Chechen, Ingush, and Old Georgian also show the possibility to use conjunctions, but the comparison is less striking, because of the similarity in form between the Tsova-Tush conjunction itself and its contemporary Georgian counterparts. To see this similarity, compare Table 6.10, where the similar derivations in Tsova-Tush and Georgian are shown. To indicate the suppletion in the Tsova-Tush interrogatives 'what' and 'who', both the Nominative and an Oblique case are given.

Table 6.10: Derived relative pronouns and subordinating conjunctions in Tsova-Tush and Georgian

| | Tsova-Tush | | Georgian | |
| | Interrogative | Relative | Interrogative | Relative |
|---|---|---|---|---|
| 'what' (NOM) | *wu$^n$* | *wun-e* | *ra* | *ra-c* |
| 'what' (INS) | *st'e-v* | *st'e-v-a* | *r-it* | *r-ita-c* |
| 'who' (NOM) | *me$^n$* | *men-e/a* | *vin* | *vin-c* |
| 'who' (DAT) | *ħan-n* | *ħan-n-a* | *vi-s* | *vi-sa-c* |
| 'which' | *menux* | *menux-a* | *romel-i* | *romel-i-c* |
| 'when' | *maca$^n$* | *macn-e* | *rodis* | *rodesa-c* |
| 'how' | *moħ* | *moħ-e* | *rogor* | *rogor-c* |
| 'how much' | *meł* | *meł-e* | *ramden-i* | *ramden-i-c* |
| 'where' | *mičeħ* | *mičħ-e* | *sad* | *sada-c* |
| (additive particle) | *=e, =a* | | *=c* | |

In addition to the table, compare again the Tsova-Tush and Georgian constructions for 'because'. Even though Chechen-Ingush and Old Georgian also feature conjunctions in the clause type, the construction is not parallel to the Tsova-Tush/Georgian one (Chechen *dēlla*, Old Georgian *rametu*).

(76)  Tsova-Tush                                Georgian
      *oqui-n-dała*                    *me*       *im-it'om*                *rom*
      DIST.OBL-DAT-because_of SUBORD      DIST.OBL-because_of SUBORD
      'because'                                  'because'

On the basis of these parallels alone, one could hypothesise that Tsova-Tush borrowed from Standard Modern Georgian or from Tush Georgian:

- The possibility to form finite adjunct clauses

- The possibility to form temporal, causal, and manner clauses using a conjunction

- The template for forming adverbial conjunctions by adding the additive particle to an interrogative base

- The template for forming a conjunction 'because'

- The possibility to form purpose clauses using a general subordinator and a finite form in the Subjunctive.

Finally, it has to be observed that the use of the above-mentioned Georgian general subordinating conjunction *ro(m)* has not been copied in Tsova-Tush temporal or conditional clauses. In the context of adjunct subordination, we only observe its Tsova-Tush parallel *me* in purpose clauses.

## 6.5 Complement clauses

Most Tsova-Tush complement clauses are formed with Infinitives or Verbal Nouns on the one hand, or feature a finite verb in combination with the general subordinator *me*, on the other.

### 6.5.1 Phasal verbs

Tsova-Tush forms complement clauses to the phasal verb 'begin' using the Infinitive form of the verb. As is clear from Examples (77) and (78), the verb 'begin' agrees in gender with its own intransitive subject, not with the Nominative argument in the subordinate clause.

(77)  [ *qor-i    d-aq'-$a^n$* ]       *v-ol-v-ejl-nor.*
      apple-PL B.PL-eat.IPFV-INF M.SG-begin-M.SG.-INTR-NW.REM
      'He began to eat apples.'                                    (E058-66)

(78)  *je    ħalŏ b-ol-b-ajl-n-atx*                [ *načx  teg-j-∅-$a^n$* ].
      and PV    M.PL-begin-M.PL-INTR-AOR-1PL.ERG cheese make.IPFV-J-TR-INF
      'And we began to make cheese.'                          (EK009-4.2)

Complement clauses to the verb *maq'ŏ b-ałar* 'stop' use the Verbal Noun in the Dative case (see Examples (79) and (80)). This parallels the Dative case of the nominal object of the same verb in (81). The Dative case can be explained by the fact that this verb consists of a light verb construction (see Section 5.3.1), and the Nominative argument slot is already filled by the lexical part of the verb *maq'ŏ* 'freedom' (B gender). The semantics of *maq'ŏ bałar* developed from 'give freedom' to 'leave, let' (which is attested) to 'stop'.

(79) *zorajšĭ k'aʒik' xan-e* [ *čxindur d-∅-**ar-e-n*** ] *maq'ŏ*
very little time-OBL(ESS) stocking D-do-**VN-OBL-DAT** freedom
*b-ajł-nor* *mehir-e-s.*
B.SG-give-NW.REM Mehir-obl-erg
'She (apparently) stopped knitting for a while.' (MM118-2.22)

(80) *değ-e-v* [ *kot't'-d-al-**r-e-n*** ] *c'ʕajrko^n maq'ŏ*
body-OBL-ERG breathe-D-INTR-**VN-OBL-DAT** suddenly freedom
*b-ał-i^n.*
B.SG-give-AOR
'The body suddenly stopped breathing.' (MM421-1.31)

(81) *oqar vašbi-ci^n buħ-**e-n** maq' b-ał-i^n.*
DIST.PL RECP-APUDESS fight-**OBL-DAT** freedom B.SG-give-AOR
'They stopped fighting [lit. the fight] with each other.' (Elicit.)

In both Chechen-Ingush and Georgian, using non-finite clauses is the main strategy to form complement clauses to phasal verbs. In Example (82), Ingush uses an Infinitive as complement to the matrix verb 'begin' and a Simultaneous Converb as the complement to 'stop'. Georgian (Example (83)) uses Verbal Noun constructions for both phasal clauses.

(82) Ingush

    a. *čārx c'æxxā* [ *qest-**a*** ] *j-uol-a-j-al-ar.*
       wheel suddenly turn-**INF** J-begin-INF-J-INTR-PST
       'The wheel suddenly started turning.' (Nichols 2011: 552)

    b. *ber* [ *cɨ d-elx-**až*** ] *sac-ar.*
       child NEG D-cry-**SIMUL** stop-PST
       'The baby stopped crying.' (Nichols 2011: 581)

(83) Standard Modern Georgian

    a. *man*     *šec'q'vit'a*    [ *mic'a-ze*   *muša-ob-**a*** ].
       3SG.ERG s/he_stopped earth-SUPER work-TM-**VN**
       'S/he stopped working the land.'              (Elicit.)

    b. *daircxvina*      *da daic'q'o*    [ *tit-eb-is*     *ertmanet-ši*
       s/he_felt_ashamed and s/he_started finger-PL-GEN RECP-IN
       *xlart-v-**a*** ].
       entangle-TM-**VN**
       'S/he felt ashamed and started to interlace their fingers.'
                                (GNC: Ch. Amirejibi)

Old Georgian formed complement clauses to phasal verbs (as well as to desiderative and manipulative verbs) with a Verbal Noun in the Adverbial case (Kobaidze & Vamling 1997). See Section 5.5 on the accommodation of borrowed verbs using this same Old Georgian form.

### 6.5.2 Desiderative verbs

In Tsova-Tush, complement clauses to desiderative verbs, too, can be formed using an Infinitive, as long as the matrix verb and the subordinate verb share the same subject (see Examples (84) and (85)).

(84) *nan-e-n*       [ *majqǐ j-aq'-**a$^n$*** ] *leʔ-ĕ.*
     mother-OBL-DAT bread   J-eat-**INF** wish-NPST
     'Mother wants to eat.'          (Holisky & Gagua 1994: 202)

(85) *txo-n*        [ *ʕam-d-∅-**a$^n$*** ] *d-ec'=in.*
     1PL.EXCL-DAT learn-D-TR-**INF** D-want=QUOT
     '"We want to study," (they say).'          (E019-165)

In Chechen and Ingush, the same strategy can be observed, as illustrated by Example (86).

(86) Ingush
    *baq'oncā* [ [ *sie*    *mal=ū* ]    ***xā*** ]    *biezam b-ɨ*      *sɨ.*
    really    1SG.REFL who=M.SG.be **know.INF** like   B.SG-be.PRS 1SG.GEN
    'I would like to know who I really am.'      (Nichols 2011: 565)

A second strategy in Tsova-Tush involves the general subordinating conjunction *me*, to introduce a finite complement clause to the same matrix verbs. This

strategy is used when the subject of the subordinate clause differs from that of the matrix clause (see Examples (87) and (88)).

(87)  *leʔ  soⁿ*     [ ***me***  *qe-ču-š-n=a*        *d-ag-e-l* ].
      wish 1SG.DAT **SUBORD** other-OBL-PL-DAT=ADD D-see-NPST-SBJV
      'I want others to see it too.'                                    (E29-11)

(88)  *leʔ-er*      [ ***me***  *sakartvelo damouk'idebel gaqdad-j-∅-ora-lǒ* ],
      wish-IMPF **SUBORD** Georgia   independent  become-J-TR-IMPF-SBJV
      'They wanted Georgia to become independent,'                      (E146-4)

In these different-subject complement clauses to desiderative verbs, Chechen also requires a verb in the Subjunctive (Example 89), while Ingush would instead have a non-finite verb, as in (90).

(89)  Chechen
      *cun-na læʔ-a  as   saj      nan-na     ǧuo d-∅-ojla.*
      3SG-DAT want-PRS 1SG.ERG 1SG.POSS.REFL mother-DAT help **D-do-SBJV**
      'S/he wants that I help my mother.'              (Nichols 1994a: 63)

(90)  Ingush
      *si=ʔa*        [ *uquo  dieš-**ar*** ] *lou-ra.*
      1SG.GEN=ADD 3SG.ERG study-**VN** want-IMPF
      'I too want him to study.'                           (Nichols 2011)

Georgian, on the other hand, makes use of the general subordinator *rom* to create complement clauses to desiderative verbs. A simple finite Optative verb without any overt subordination can also be used in same-subject clauses (see Example (91a,b)).

(91)  Standard Modern Georgian
   a. *me ar  minda* [ ***rom***   *dagcinodnen* ].
      1SG NEG I_want **SUBORD** they_would_mock_you
      'I don't want them to mock you.'           (GNC: R. Mishveladze)

   b. *ʒalian minda,* [ *mand*    ***rom***   *viq'o* ].
      very   I_want there.MED **SUBORD** I_would_be
      'I really want to be there with you.'       (GNC: Ch. Amirejibi)

It has to be noted that Georgian is able to form complement clauses of this type with a verbal noun also.

### 6.5.3 Cognitive verbs

In Tsova-Tush, in order to express a complement to the verb *xeʔar* 'know that' (as opposed to 'know how to' and 'know + interrogative'), a finite clause introduced by the subordinating conjunction *me* is used (see Examples (92) and (93)).

(92)  *xeʔ-ra-l*          [ ***me,***   *naqʼa*        *badr-i*   *bʕar-ğ-or* ].
      know-IMPF-SBJV **SUBORD** road.OBL(ESS) child-PL meet-LV-IMPF
      'He (apparently) knew that children would meet him on the road.' (E031-2)

(93)  *ħoⁿ*      *xeʔ*   [ ***me,***   … ]
      2SG.DAT know **SUBORD**
      'You know that [in the year 1659, the Tush, Pshav, Khevsurs and the
      Kakhetian nobles made a treaty with the Cholokashvili's].        (E104-3)

The verb *mottar* 'think, deem' requires a similar pattern (Example (94)).

(94)  *o*    *mott soⁿ*     [ ***me***   *ğaz-iš*    *moq b-∅-o* ].
      DIST think 1SG.DAT **SUBORD** good-ADV song B.SG-do-NPST
      'S/he, I think, sings well.'                        (BH023-15.1)

The verb *dakʼlavar* 'think' can take a clausal complement indicated with a quotative particle (Examples (95) and (96)). The conjunction *me* is optional, exactly mirroring complement clauses to speech verbs.

(95)  *dakʼlav-er*     *stʼakʼ* [ *šakar d-a=**enǒ*** ]   [ *b-aqʼ-oš* ].
      think.PFV-IMPF man   sugar   D-be=**QUOT** B.SG-eat.IPFV-SIMUL
      'A man could think that it was sugar, when he ate it.'        (E015-53)

(96)  *dakʼlav-iⁿ*      [ ***me***   *ese-ğ=a*
      think.PFV-AOR **SUBORD** here-TRANS=down
      *d-axkʼ-o-d-∅=**uin*** ].
      D-take.ANIM-NPST-D-TR=**QUOT**
      'He thought that they would take them (sheep) away this way.'   (E147-80)

In these types of complement clauses, Chechen and Ingush use an asyndetic finite verb (Subjunctive or Indicative). The Chechen verb *xæʔa* in (97) is the cognate to Tsova-Tush *xeʔ* in (92–93), and the verb *mott* in the Ingush Example (98) is cognate to the Tsova-Tush verb *mott* in (94).

(97) Chechen

*sūna    xæʔ-a,    [ mūsā hinca=ʔa  txө̄-gaħ    v-u-jla      / v-u ].*
1SG.DAT know-NPST Musa   now=ADD 1PL-ADESS M.SG-be-SBJV / M.SG-be
'I know Musa is still at our place.'          (Nichols 1994a: 63)

(98) Ingush

[ *čħa kinaškʲa jāzd-ež    v-oall* ]    *mott suona  iz.*
one   book    write-SIMUL M.SG-LV.PROG think 1SG.DAT 3SG
'I think he's writing some kind of book.'      (Nichols 2011: 575)

In Standard Modern Georgian, as well as in the Tush dialect, these types of complement clauses are mainly expressed using the subordinator *ro(m)* (see Examples (99) and (100)).

(99) Standard Modern Georgian

a. *me vici,    [ **rom**  srulkmnil-i  adamian-i  ar  arsebobs* ],
   1SG I_know  SUBORD perfected-AGR person-NOM NEG s/he_exists
   'I know a perfect human does not exist.'      (GNC: Ch. Amirejibi)

b. *rat'om ar  pikrobt,    [ **rom**,  ikneb,  p'irikit*
   why    NEG y'all_think SUBORD perhaps conversely
   *moxdes* ]*?*
   it_would_have_happened
   'Why don't you think that, perhaps, the opposite has happened?'
                                               (GNC: R. Mishveladze)

(100) Tush Georgian

*mašin ician,      [ **ro**   ar  varga=o* ],
then   they_know SUBORD NEG it_is_of_value=QUOT
'Then they know it isn't any good.'            (TT058-1.174)

### 6.5.4 Perception verbs

Tsova-Tush perception verbs, too, take a complement clause introduced by the conjunction *me* (see Examples (101[7]–103)).

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[7]Original orthography of (101): Dagi cruen, me čhain uirwas dakardie itt baḥ oḳrui.

(101)   *d-ag-iⁿ*     *cru-e-n,*     [ ***me***   *cħajn*  *uirv-a-s*
     D-see-AOR rogue-OBL-DAT **SUBORD** one.OBL Jew-OBL-ERG
     *dak'ar-d-i-eⁿ*    *it't' baħ*     *okrui-ⁿ* ].
     count-D-TR-AOR ten 100_pieces gold-GEN
     'The rogue saw, that a Jewish man was counting a thousand gold pieces.'
                                      (AS008-11.3)

(102)   *seⁿ*     *bader, g-u*   *soⁿ*    [ ***me***   *ğazeⁿ st'ak' v-a-ħ* ].
     1SG.GEN child  see-NPST 1SG.DAT **SUBORD** good man  M.SG-be-2SG
     'Son, I see that you are a nice fellow,'          (WS001-10.11)

(103)   *e*   *mimin-e-n*     *xac'-eⁿ*  [ ***me***   *cok'l-e-v*   *ise*
     PROX hawk-OBL-DAT hear-AOR **SUBORD** fox-OBL-ERG here
     *lev-d-Ø-or*       [ *me*   *so-x*     *sc'rap d-a=enŏ.* ] ]
     say.IPFV-D-TR-IMPF SUBORD 1SG-CONT fast   D-be=QUOT
     'And the falcon heard that the fox was saying "he is faster than me."'
                                        (BH085-13.1)

Chechen uses an asyndetic finite clause (104), similar to complement clauses of cognitive verbs (see Section 6.5.3 above), while Ingush has innovated and extended the quotative particle *ænna* (compare Tsova-Tush *=enŏ* in Example (95)) to also function as a more general subordinator, as in (105).

(104)   Chechen
     *sūna*    *xezza mūsā-gara* [ *aħmada-na šā*   *bʕarg-v-aⁿ*   *ca vieza* ]
     1SG.DAT heard Musa-ABL  Ahmed-DAT REFL eye-M.SG-see NEG like
     *b-ōx-uš.*
     B.SG-say-SIMUL
     'I heard from Musai that Ahmed hates him.'       (Nichols 1994a: 62)

(105)   Ingush
     *suona*   [ *mūsā ʕa-v-iež-āv*        ***ænna*** ] *xaz-ar.*
     1SG.DAT Musa  down-M.SG-fall-NW.M.SG **SUBORD** hear-PST
     'I heard that Musa fell down. I heard that Musa had fallen down (and he had).'                            (Nichols 2011: 544)

Just like with cognitive verbs, Modern Georgian uses the conjunction *rom* to introduce complement clauses to perception verbs (see Examples (106a,b)).

(106)  Standard Modern Georgian

   a. *da naxa,* [ ***rom*** *sac'ol-ze čacmul-i c'evs* ].
      and s/he_saw **SUBORD** bed-SUPER dressed-NOM s/he_lies
      'And s/he saw that s/he was lying on the bed with his/her clothes
      on.'                                                    (GNC: B. Akunin)

   b. *xom gaigone,* [ ***rom*** *čem-i kal-i čem-tan*
      Q    you_heard **SUBORD** 1SG.POSS-AGR woman-NOM 1SG.OBL-APUD
      *rčeba* ].
      s/he_remains
      'You have heard, right, that my wife stays with me?'
                                                             (GNC: A. Kazbegi)

### 6.5.5 Summary

Consider Table 6.11 for an overview of all strategies of forming complement
clauses.

Table 6.11: Complement clause strategies

| Matrix verb | Chechen-Ingush | Tsova-Tush | Mod. Georgian Tush Georgian | Old Georgian |
|---|---|---|---|---|
| Phasal | Infinitive, Converb | Infinitive | Verbal noun | Inflected VN |
| Desiderative (Same subj.) | Infinitive | Infinitive Asynd. finite | Verbal noun Asynd. finite | Inflected VN |
| Desiderative (Diff. subj.) | Verbal noun | *me* + SBJV | Verbal noun *ro(m)* + SBJV | Inflected VN |
| Cognitive | Asynd. finite | Conjunction *me* | Conjunction *ro(m)* | |
| Perception | Asynd. finite Particle *ænna* | Conjunction *me* | Conjunction *ro(m)* | |

It is clear from Table 6.11, that Tsova-Tush complement clauses feature the
conjunction *me* whenever the same clause type in Georgian would feature the
conjunction *ro(m)*, i.e. in complements to cognitive verbs and perception verbs,
as well as to different-subject desiderative verbs.

## 6.6 Coordination and clause chaining

Tsova-Tush features coordinating conjunctions to conjoin both phrases and clauses in addition to special verb forms that are used in clause chaining constructions.

### 6.6.1 Clause chaining

In order to convey a sequence of same-subject events, Tsova-Tush employs the morph *-e*. This morph is affixed directly after the Non-Past/Aorist/Non-Witnessed Aorist stem, before the morph *-ra* and before any person marking. See Table 6.12, where these verb forms, labeled Sequential in this work, are given side by side with their non-sequential, default counterparts. Only verb forms that are robustly attested in the corpus are given. Note that all phonological processes apply, most importantly word-final vowel deletion (see Section 2.3).

Table 6.12: Most frequent Tsova-Tush Sequential verb forms

| 'press' | Pers. | Sequential | | Default | |
|---|---|---|---|---|---|
| | | morphs | surface | morphs | surface |
| Present | 1st | *ħač'q'-o-e-as* | *ħač'q'oes* | *ħač'q'-o-as* | *ħač'q'os* |
| | 3rd | *ħač'q'-o-e* | *ħač'q'o* | *ħač'q'-o* | *ħač'q'ŏ* |
| Imperfect | 1st | *ħač'q'-o-e-ra-as* | *ħač'q'oeras* | *ħač'q'-o-ra-as* | *ħač'q'oras* |
| | 3rd | *ħač'q'-o-e-ra* | *ħač'q'oer* | *ħač'q'-o-ra* | *ħač'q'or* |
| Aorist | 1st | *ħač'q'-in-e-as* | *ħač'q'ines* | *ħač'q'-in-as* | *ħeč'q'nas* |
| | 3rd | *ħač'q'-in-e* | *ħač'q'in* | *ħač'q'-in* | *ħač'q'i$^n$* |
| NW Remote | 1st | *ħač'q'-ino-e-ra-as* | *ħeč'q'noeras* | *ħač'q'-ino-ra-as* | *ħeč'q'noras* |
| Past | 3rd | *ħač'q'-ino-e-ra* | *ħeč'q'noer* | *ħač'q'-ino-ra* | *ħeč'q'nor* |
| Imperative | SG | *ħač'q'-a-e* | *ħač'q'a* | *ħač'q'-a* | *ħač'q'* |
| | PL | *ħač'q'-a-e-t* | *ħač'q'aet* | *ħač'q'-a-t* | *ħač'q'at* |

As illustrated in Table 6.12, these verb forms are finite, since they inflect for person and tense-aspect. This is in contrast to converbs (Section 6.4.1), which inflect only for relative tense and do not have person marking. It also contrasts sharply with clause chaining constructions in Chechen and Ingush, which only use converbs (i.e. non-finite verb forms) as verb forms in all but the last clause of the chain. See Examples (107–108) from Nichols (2011: 531–540) for Ingush and Good (2003) for Chechen.

(107) Ingush

    a. *pæt'mat-ā   axča=ʔa   d-an-na,   āra-v-æl-ar   mūsā.*
    Peatmat-DAT money=ADD D-give-ANTE out-M.SG-go-PST Musa
    'Musa gave Peatmat money and went out.'     (Nichols 2011: 535)

    b. *mašen   ħa=ʔa   j-ett-ā,   ieza=ʔa   iez-ā,*
    vehicle PV=ADD J-load-ANTE REDUPL=ADD weigh-ANTE
    *ʕa-j-æssa-j-æj.*
    PV-J-empty-J-TR.NW.J
    'They loaded the truck, weighed it, and unloaded it.'

                                            (Nichols 2011: 535)

(108) Chechen

    a. *aħmad žʕala=ʔa iec-na   v-ilx-ira.*
    Ahmed dog=ADD buy-ANTE M.SG-cry-PST
    'Ahmed bought a dog and cried.'     (Good 2003: 125)

    b. *dōǧa tøx-na   āra=ʔa j-el-la,   tyka-na=ʔa*
    lock  hit-ANTE out=ADD F.SG-go-ANTE store-DAT=ADD
    *j-aǧ-na,   c'a   j-eʔ-ara   malīka.*
    F.SG-come-ANTE home F.SG-go-PST Malika
    'Having locked the door and gone out, Malika went to the store, and
    came home.'     (Good 2003: 140)

The exact syntactic parameters of clause chaining constructions have to be investigated further, but one frequent construction involves a clause with a Sequential verb, followed by a clause that consists a preverb with the Additive enclitic *=a*, followed by the verb, see Examples (109). Note that the Additive clitic *=a* in Tsova-Tush is added to the last clause, the one that contains a non-sequential verb form, while in Chechen and Ingush, the Additive clitic is found in the chained clauses with the non-finite verb form, see the Examples (107–108) above.

(109)    a. *o   kvevr   gi-j-oll-**in**   daħ=**a**   v-ax-e$^n$.*
       DIST wine_jar on_back-J-put-**AOR.SEQ** PV=**ADD** M.SG-leave-AOR
       'He put the wine jar on his back and left,'     (E181-141)

    b. *daħ   v-ax-**en**   ħal=**o**   j-uc'-j-i-e$^n$   o.*
       PV  M.SG-leave-**AOR.SEQ** PV=**ADD** J-fill-J-TR-AOR DIST
       'He left and filled it.'     (E181-141)

Longer sequences (here without the Additive clitic) are also possible, see Example (110).

(110)　a.　*ħal qall-**in**,　　so　v-eʔ-**en**,　　　o　jaħo-g*
　　　　　PV　eat.PFV-**AOR.SEQ**　hither　M.SG-come-**AOR.SEQ**　DIST　girl-ALL

　　　　　*aɬ-iⁿ,　me　　…*
　　　　　say-AOR　SUBORD

　　　　　'He ate it, returned, and told the girl, that […]'　　　　　(E181-148)

　　　b.　*ču　v-ax-**noer**　　p'adl-i.*
　　　　　into　M.SG-go-**NW.REM.SEQ**　basement-INESS

　　　　　*o　　badr-i　nʕajʔ=aʔ　　d-axk'-d-i-**noer**,*
　　　　　DIST　child-PL　outside=EMPH　D-come.PL-D-TR-**NW.REM.SEQ**,

　　　　　*kurcn-e-ⁿ　　badr-i.*
　　　　　weasel-OBL-GEN　child-PL

　　　　　*laqiš　　ħal d-ik'-**noer**.*
　　　　　high_up　up　D-take(ANIM)-**NW.REM.SEQ**

　　　　　*šuj　　　ben　ču　xabž-d-i-nor.*
　　　　　REFL.PL.GEN　nest　into　sit_down.PFV.PL-D-TR-NW.REM

　　　　　'He went into the basement, took the children out, the weasel young, took them up high and sat them down into their own nest.'

　　　　　　　　　　　　　　　　　　　　　　　　　　　　　(EK048-2.15)

The Sequential construction can also be used with Imperatives, see Examples in (111). Note that the *-a* in these examples is not just the Imperative suffix *-a*, but must contain the Sequential morpheme, since simple Imperative *-a* would be apocopated (compare Table 6.12).

(111)　a.　*kast'eⁿ, ħalŏ ħet'-a,　　kor　lac-d-∅-eb　　e　　bader=ajnŏ.*
　　　　　quick,　PV　run-IMP(SEQ)　in_hand　take-D-TR-IMP　PROX　child=QUOT

　　　　　'Quickly, run and catch the baby!'　　　　　　　(MM226-1.6)

　　　b.　*k'ik'el c'e j-ʕaʔ-a,　　　ejɬ-nor,　　k'ruč'i-s,　qen=geʔ*
　　　　　under fire J-light.PFV-IMP(SEQ),　say-NW.REM　Kruchi-ERG　then=EMPH

　　　　　*šampur šampur-mak=a　　ott-d-∅-eb,　　ejɬ-nor.*
　　　　　skewer skewer-SUPERLAT=ADD　place-D-TR-IMP　say-NW.REM

　　　　　'"Kindle the fire," said Kruchi, "and only then put the skewers on top of each other."'　　　　　　　　　　　　　　　　(E058-93)

The precise parameters of Tsova-Tush Sequential constructions, such as the scope of illocutionary operators (see e.g. Bickel 2010: 56), remains to be investigated. It bears, however, strong resemblance to constructions in some Papuan languages termed "cosubordination" (Olson 1981, Foley & Van Valin 1984), but see Bickel (2010), Foley (2010) for doubts about the cross-linguistic validity of this term.

### 6.6.2 Coordination

Tsova-Tush coordinates different-subject clauses with the enclitic *=(j)e* 'and', see
Example (112).

(112)  a.  *osi    v-ax-er=**e**   c'ova dax*
    there.DIST(ESS) M.SG-live-IMPF=**and** Tsova therefore
    *tiɬ-d-al-iⁿ.*
    be_called-D-INTR-AOR
    'He was living there and because of him it was called Tsova.'
                 (E288-86)

  b.  *o vaħo-v o jaħi-ⁿ   c'e j-ek-j-i-eⁿ   mč'ekrat=**e**.*
    DIST boy-ERG DIST girl.OBL-GEN name J-call-J-TR-AOR aloud=**and**
    *oqu-s   t'q'oʔ oqui-n=**e**,   vaša-x=a   ħarč-eⁿ.*
    DIST.OBL-ERG again DIST.OBL-GEN=**and** RECP-CONT=EMPH wrap-AOR
    'That boy called out that girl's name aloud and she [did] the same
    with his, and they embraced each other.'   (E142-48,49)

  c.  *c'q'e ši ʕu   v-ujt'-vanor=**e**,   pħe  ču*
    once two shepherd M.SG-go-M.SG.NW.IMPF=**and** village into
    *b-epl'-iš     cħana-n   dak'-d-eʔ-nor,   me...*
    M.PL-go_through-SIMUL one.OBL-DAT hear-D-come-NW.REM SUBORD
    'Once upon a time two shepherds were going on their way and
    when they entered the village, one of them remembered that [...]'
                 (E058-35)

However, this same strategy has also been observed to be used for same-
subject coordination, see Example (113).

(113)  a.  *ħatteʔ   ču b-ik'-nor=**e**,   qal-maɬ-ar*
    immediately into M.PL-lead-NW.REM=**and** eat-drink-VN
    *d-eʔ-nor.*
    D-bring-NW.REM
    'He invited them at once, and brought them food and drink.'
                 (E058-40)

  b.  *ħo inc se   dad c'eni  v-a-ħŏ,   ise*
    2SG now 1SG.GEN.OBL father house(ESS) M.SG-be-1SG.NOM here(ESS)
    *toħ-ra-ħ=**e**,     is-ħ=eʔ*
    sleep-IMPF-2SG.NOM=**and** here-ESS=EMPH
    *ħac'am-v-al-iⁿ-ħu=jŏ.*
    wake-M.SG-INTR-AOR-2SG.NOM=QUOT
    'You are now in my father's house, you slept here and woke up here.'
    (MM405-1.50)             255

Whatever the exact functional difference between the Sequential construction and the coordinating conjunction, it is clear that they are formally distinct. Historically, the conjunction *=(j)e* may well have been the source of the Sequential suffix *-e*, but in contemporary Tsova-Tush, they are bound to different combinatory rules: the conjunction *=e* is located between clauses, and can be attached to any part of speech. These are often verbs, since the most common word order in Tsova-Tush is SOV, but this is not necessarily the case: see Example (112), where the clitic is hosted by an adverb and a demonstrative. On the other hand, the Sequential suffix *-e* is clearly affixal, since it attaches only to verbs, and can be followed by other suffixes, such as the subject cross-referencing markers (see Section 4.8) and the suffix *-t* marking argument plurality on Imperatives (see Section 4.9). Furthermore, the Sequential verb form as a whole is not necessarily the final word in a clause, see e.g. Example (110b). This last point is important; a Sequential suffix (converb or, as in Tsova-Tush, finite) can be distinguished from a conjunction in that the latter usually stands between clauses. This is not the case for a Sequential marker, see e.g. Example (114) from Kryz, a Lezgic language.

(114) Kryz (Alik)

    *ǧi-xha-ci*     *zina-ǧ*     *cura*  *halav-ar šahar.c-a ǧa-č'id-zin.*
    PV-wear-SEQ 1.REFL-SUPER other dress-PL city-IN    PV-go_out-AOR.M-1

    'After changing my clothes, I went into the city.'       (Authier 2009: 325)

Both constructions are found in the oldest Tsova-Tush sources. See Example (115a), where a Sequential construction is used, and Example (115b) for a construction with the conjunction. (For the use of pronouns and subject cross-reference markers in this period, see Section 4.8.)

(115)  a.  *as*     *v-ax-**en***     *v-itt-v-ejl-n-**e**-s*
        1SG.ERG M.SG-go-**AOR.SEQ** M.SG-wash-M.SG-INTR-AOR-**SEQ**-1SG.NOM

        *den-v-al-i$^n$*       *so.*
        whole-M.SG-INTR-AOR 1SG.NOM

        'I went, washed myself and got better.'        (AS004-1.12)

  b.  *xiɬ-e$^n$*       *nic'q'li-š*   *mac-ol*     *osi-ħ*     ***e***
        become.PFV-AOR strong-ADV hunger-NMLZ there-ESS **and**

        *o=eʕ*      *kott-v-al-i$^n$.*
        DIST=EMPH disturb-M.SG-INTR-AOR

        'There was a big shortage there, and he too was affected.' (AS006-1.4)

Contrary to contemporary Tsova-Tush, that shows occasional use of the Conjunction construction to combine same-subject clauses (see Example (113)), this

use is not found in the subcorpora dating from the 1850s (AS and IT). I therefore tentatively hypothesise that this use, i.e. using the coordinating conjunction *=(j)e* to connect same-subject finite clauses, is a structural copy from Georgian. Georgian, namely, uses a coordinating conjunction *da* to connect both same-subject (Example (116a–116b)) and different-subject (116c) finite clauses.

(116)   Standard Modern Georgian

a. *abesaʒe    c'amoxt'a       **da** k'ar-i     gaiʒaxuna.*
Abesadze s/he_jumped_up **and** door-NOM s/he_slammed
'Abesadze jumped up and slammed the door.'      (GNC: N. Dumbaze)

b. *c'aviǧeb    me am       leks-s     **da** sul    aǧar*
I_will_take 1SG PROX.OBL poem-DAT **and** at_all not_anymore
*moval       am       c're-ši.*
I_will_come PROX.OBL circle-IN
'I will take this poem and will not come to this circle again.'
(GNC: N. Dumbadze)

c. *baratašvil-i      arsebobda   **da** imit'om  aǧmoačina*
Baratashvili-NOM s/he_existed **and** therefore s/he_discovered_it
*ilia-m.*
Ilia-ERG
'Baratashvili existed and that's why Ilya discovered him.'
(GNC: N. Dumbadze)

Note that the Additive particle *=a* does not seem to be used for clausal coordination in the same way that *=(j)e* is. The Additive particle is primarily used in clause chaining (see Section 6.6.1) and to conjoin noun phrases (see Section 3.6.3).

## 6.7 Summary

In terms of basic description, this chapter has provided new insight into the following domains:

1. An extensive description of different subordination strategies in Tsova-Tush is presented, for an overview, see Table 6.13.

2. In the domain of subordination, Tsova-Tush shows a peculiar profile. It shows the capacity to form both finite and non-finite subordinate clauses, and sometimes shows these multiple strategies for the same clause type.

Non-finite constructions include participles, converbs, verbal nouns and infinitives, all of which are constructions shared with Ingush and Chechen (and Daghestanian languages), and are therefore considered archaisms. It has to be noted that in complement clauses to cognitive and perception verbs, Chechen and Ingush feature finite verbs. Crucially, however, they are not the same constructions as we find in Tsova-Tush.

3. A very preliminary analysis has been attempted for Tsova-Tush coordination strategies, with a basic distribution of the Sequential suffix *-e* for same-subject clause coordination, and the coordinating conjunction *=(j)e* for different-subject clause coordination.

In terms of structural language contact, this chapter has shown the following parallels between Tsova-Tush and Georgian, which are most likely to be attributed to influence of the latter on the former language. Tsova-Tush borrowed from Georgian the following constructions:

- The possibility to form finite adjunct clauses

- The possibility to form temporal, causal, and manner clauses using a conjunction

- The template for forming adverbial conjunctions by adding the additive particle to an interrogative base

- The template for forming a conjunction 'because'

- The possibility to form purpose clauses using a general subordinator and a finite form in the Subjunctive.

- Using the coordinating conjunction *=(j)e* to connect same-subject finite clauses is hypothesised to be a structural copy from Georgian.

Table 6.13: Subordination strategies

| Type | Chechen-Ingush | Tsova-Tush | Mod. Georgian Tush Georgian | Old Georgian |
|---|---|---|---|---|
| Relative | Participle | Participle Pronoun Conjunction *me* | Participle Pronoun Conjunction *ro(m)* | Participle Pronoun |
| Temporal | Converb VN + Postpos. | Converb VN + Postpos. Conjunction | (Inflected VN) VN + Postpos. Conjunction Conjunction *ro(m)* | Conjunction |
| Purpose | Infinitive | Infinitive *me* + SBJV | (Inflected PTCP) *rom* + SBJV | Inflected VN |
| Conditional | Cond. verb | Cond. verb | Conjunction Conjunction *ro(m)* | |
| Causal | Converb, VN | Participle, VN Conjunction | Conjunction | Conjunction |
| Manner | Converb | Conjunction Inflected VN | Conjunction Inflected VN | |
| Phasal | Infinitive, Converb | Infinitive | Verbal noun | Inflected VN |
| Desiderative (Same subj.) | Infinitive | Infinitive | Verbal noun Asynd. finite | Inflected VN |
| Desiderative (Diff. subj.) | Verbal noun | *me* + SBJV | Verbal noun *rom* + SBJV | Inflected VN |
| Cognitive | Asynd. finite | Conjunction *me* | Conjunction *ro(m)* | |
| Perception | Asynd. finite Particle *ænna* | Conjunction *me* | Conjunction *ro(m)* | |

# 7 Discussion

## 7.1 Summary of contact phenomena

The following sections will summarise all instances of contact-induced change discussed in this work. After a very brief section on phonology (Section 7.1.1), matter borrowings will be discussed. Tsova-Tush features a large amount of Georgian loanwords, but since this is not the main topic of this work, what is discussed in Section 7.1.2.1 is only the phonological and morphological adaptation of loanwords, and a chronology of borrowing we can establish. No affixes are borrowed into Tsova-Tush other than the plural marker *-t* (Section 7.1.2.2). Section 7.1.3 will summarise all pattern borrowings from Georgian into Tsova-Tush, both morphological (Section 7.1.3.1) and syntactic (Section 7.1.3.2).

### 7.1.1 Phonology

As shown in Section 2.4.1, Tsova-Tush /r/ in certain suffixes dissimilates to /l/ when an /r/ occurs in the stem. The most likely explanation for this phenomenon is influence from Georgian. The outcome of this phonological development can already be observed in our earliest textual material.

Table 7.1: Phonological contact phenomena in different historical stages

| Feature | Section | Mid-19th century | Mid-20th century | Present |
|---|---|---|---|---|
| *Phonology* | | | | |
| R-Dissimilation | 2 | x | x | x |

### 7.1.2 Matter borrowing

#### 7.1.2.1 Roots

No extensive study on lexical borrowings into Tsova-Tush has been conducted to this date. Wichers Schreur (2021) discusses basic frequency of Georgian loanwords and lexical domains. An investigation into the historical development of loanword frequency has not been undertaken here for the following reason: only our corpus of contemporary Tsova-Tush (subcorpora E, MM, EK, LJ, WS (see Section 1.4.3.3 for abbrevations) is sufficiently large and sufficiently diverse to investigate the frequency of occurrence of loanwords. For the older stages of Tsova-Tush, this is not possible: subcorpora AS and IT (mid-19th century) are too small and the wordlist in Tsiskarov (1848a) contains many artificial loan translations that aren't found in naturalistic spoken data. The subcorpora YD (mid-20th century) is very small, and KK, although large, contains only deliberately devised sample sentences, produced by two or three speakers, which cannot be readily compared with naturalistic spoken data.

At this point, it is only possible to create a relative chronology of some groups of loanwords based on phonological (see Section 2.5) and morphological (Section 3.3.5) adaptation and on whether Georgian loanwords can be discerned in Chechen and Ingush as well. Hence we can divide lexical borrowings into three historical strata, without assigning absolute dating to these periods.

1. An early group of loanwords contains Georgian loanwords that are found in all three Nakh languages. Of course it cannot be excluded that all three languages borrowed the same word from Georgian individually, but the splitting up of Proto-Nakh into its daughter languages has been understood to be fairly recent (Nichols 2003b: 1), so the most efficient way of accounting for these shared loanwords is to assume one borrowing event, and subsequent splitting up of the Nakh languages. These words include Proto-Nakh *\*kotam* 'chicken, hen' (Chechen/Ingush *kuotam*, Tsova-Tush *kotam*) from Georgian *katam-i* 'id.'; Proto-Nakh *\*kud* 'hat' (Chechen/Ingush *kuj*, Tsova-Tush *kud*) from Georgian *kud-i* 'id.'; Proto-Nakh *\*vir* 'donkey' (Chechen/Ingush/Tsova-Tush *vir*) from Georgian *vir-i* 'id.', Proto-Nakh *\*xerx* 'saw' (Chechen/Ingush *xerx*) from Georgian *xerx-i*, Proto-Nakh *\*gotan* 'plough' (Chechen/Ingush *guota*) from Georgian *gutan-i*.[1]

2. In a later period, we find loanwords that show one or more of the following traits (see also Fähnrich 1998):

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[1] The vowel correspondence is irregular in this last word. Tsova-Tush *guta$^{n}$* represents a later (re-)borrowing.

- Words borrowed with the sound *-o-* where Standard Georgian has *-va-* (see Section 2.5), which must have been borrowed from Tush Georgian. These include *maq'ol* 'blackberry', cf. Standard Georgian *maq'val-i* 'id.'; *sov* 'vulture', cf. Standard Georgian *svav-i* 'id.'; *q'oil* 'smallpox', cf. Standard Georgian *q'vavil-i* 'id.'.

- Words borrowed with the sound *-q-*, which also must have been borrowed from Tush Georgian, such as *qved* 'wooden mallet', cf. Standard Georgian *xveda* 'id.'; *qoqob* 'pheasant', cf. Standard Georgian *xoxob-i* 'id.'.

- Borrowed nouns that form their Oblique stem by suffixing *-u* (Section 3.3.5.1).

- Borrowed nouns with the no longer productive diminutive suffix *-aʔo* (Section 3.3.5.1).

- Borrowed adjectives that are incorporated into Tsova-Tush by adding a suffix *-on* (Section 3.4.4), like *ʒviro$^n$* 'expensive', from Georgian *ʒviri* 'expensive', *xabro$^n$* 'stingy, greedy', from Georgian *xarbi* 'greedy, covetous', and *qširo$^n$* 'frequent', from Tush Georgian *qširi* 'frequent'.

3. The most recent layer of loanwords consists of words that do not exhibit any of the traits above. These are:

   - Loanwords featuring the sequence *-va-* where Standard Georgian also has *-va-*, borrowed more recently from Standard Georgian, such as *ak'va$^n$* 'cradle' from Georgian *ak'van-i* 'id.', *moʒǧvar* 'priest' from Georgian *moʒǧvar-i* 'id.', *zvar* 'large vinyard' from Georgian *zvar-i* 'id.'.

   - Words borrowed with the sound *-x-*, where Tush Georgian has *-q-*.

   - Borrowed nouns that form their Oblique stem by suffixing *-e* (Section 3.3.5.1).

   - Borrowed adjectives that are not incorporated morphologically into Tsova-Tush, and appear in their bare stem, such as *blant'* 'sticky' (from Georgian *blant'-i* 'id.'), *laq'* 'rotten, bad' (from Georgian *laq'e* 'id.').

Gippert (2008) mentions several Tsova-Tush lexical items that seem like borrowings from Old or Middle Georgian. These include the word *geps* (Oblique stem *gepsu-*) 'week', cf. Old Georgian *msgeps-i* 'id.' and *k'atatv* 'July', cf. Middle

Georgian *(m)k'atatve* 'July'. Compare also the Tsova-Tush month names *tibatv* 'June', from Georgian *tibatve* 'June (lit. mowing month)'; *enk'ene$^n$ butt* 'September', cf. Georgian *enk'enistve* 'September (lit. consecration month)'; *ǧvinbe$^n$ butt* 'October', cf. Georgian *ǧvinobistve* 'October (lit. wine month)'. These archaic Georgian month names are all replaced by the pan-European words in the standard language, but survive in dialects from all over the Georgian language area (as evidenced by an extensive corpus search on the Georgian Dialect Corpus[2]). In Tsova-Tush, all month names other than 'June, July, September, October' are borrowed from Standard Modern Georgian (at least according to the dictionary of Kadagidze & Kadagidze (1984)). Thus, for the month names, a borrowing event at the Old Georgian stage is not necessary to assume. The word *geps* 'week' (Old Georgian *msgeps-i*) is absent in all contemporary spoken varieties of Georgian and is also absent in Middle Georgian. Even though, strictly speaking, it is impossible to trace back the exact moment of borrowing into Tsova-Tush due to the lack of historic non-literary data, it is likely that this word was transmitted along with the Georgian christianisation attempts of the Nakh tribes (for Georgian religious loanwords in Vainakh, see Khalilov (2004)).

### 7.1.2.2 Affixes

Only one bound affix was found that has been borrowed from Georgian. Tsova-Tush suffixes *-t* to finite verbs in the following forms (see Section 4.9): (1) imperative TAME forms, including the Simple Imperative, Polite Imperative, and Optative, (2) the Hortative is formed by adding the same plural marker and the inclusive 1st person plural pronoun *vej*, but this form is only used when referring to more than two participants. It is noteworthy that the only affix that is borrowed from Georgian into Tsova-Tush is a verbal inflectional affix, which is lowest in the borrowing hierarchy of Matras (2011: 208), see below in Section 7.3. This suffix is already found in the earliest Tsova-Tush sources (AS), in both the Simple Imperative (*lakvibat* 'throw him!' AS007-1.14) and the Hortative (*latet vai* 'let's begin' AS006-1.14). In Section 3.4.5, it is concluded that the suffix *-ur* is not productive, and therefore not a borrowed derivational affix. Instead, it is only found on loanwords.

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[2]http://corpora.co/#/corpus

Table 7.2: Borrowing of affixes in different historical stages

| Feature | Section | Mid-19th century | Mid-20th century | Present |
|---|---|---|---|---|
| *Affix borrowing* | | | | |
| Plural -*t* | 4.9 | x | x | x |

### 7.1.3 Pattern borrowing

#### 7.1.3.1 Morphology

1. In Section 3.3.3, it became clear that in 10% of all instances of Essive cases (Essive, Interessive, Inessive and Superessive), these cases are used to signal a lative function. It showed an exact functional parallel with Georgian, making contact-induced change the most likely explanation for this phenomenon. In Tsova-Tush, this merger is only observed in data from the past three decades, and as it is only 10% of cases, this can be seen as a case of synchronic variation, rather than change.

2. A similar case of contact-induced variation is shown in Section 3.4.4. Besides older, native synthetic expressions to form the degrees of comparison in adjectives, Tsova-Tush has borrowed analytic constructions from Georgian. The comparative is formed with a borrowed particle *upro* 'more' (Georgian *upro* 'more'), while the superlative is formed with a calqued expression *ħama-x=eʔ* 'than all' (compare Georgian *q'vela-ze* 'than all'). The analytic superlative construction is not found in the oldest Tsova-Tush sources, but is attested from the mid-20th century onward. The analytic comparative form with borrowed *upro* is only found in the more contemporary sources. Sources from before 1985 use the synthetic comparative -*xu*.

3. As seen in Section 4.8, Tsova-Tush person marking gradually developed over the course of the past two centuries. However, it can be said to constitute subject marking proper (and not cliticisation of pronouns) only in contemporary, 21st-century sources.

4. In Section 6.3.2, it was shown that Tsova-Tush created a series of relative pronouns on the model of Georgian ones, using an interrogative pronoun and suffixing a particle 'and' *menux-a* (non-Nominative *menxu-čo-CASE-a*) 'which', *wun-e* 'what', *men-a* 'who', compare Georgian *romel-i-c*

(non-Nominative *romel-CASE-c*) 'which', *ra-c* 'what', *vin-c* 'who'. These pronouns start to appear in sources from the mid-20th century onward, and are ubiquitous in the 21st century. Relative adverbs, however, such as *moħ-e* 'as, like', *macn-e* 'when', *mičħ-e* 'where' and *meł-e* 'as much as' are attested already in the 19th century (Section 6.4).

5. As mentioned in Section 4.7.3, it is at this point uncertain whether Tsova-Tush formed the periphrastic verb forms like the Perfect and Pluperfect on a Georgian model. This question will be addressed further in Wichers Schreur & Verhees (in preparation).

Thus, we can summarise the instances of Tsova-Tush morphological pattern borrowing in Table 7.3.

Table 7.3: Morphological pattern borrowing in different historical stages

| Feature | Section | Mid-19th century | Mid-20th century | Present |
|---|---|---|---|---|
| Lative-Essive merger | 3.3.3 | - | - | x |
| Analytic comparative | 3.4.4 | - | - | x |
| Analytic superlative | 3.4.4 | - | x | x |
| Subject marking | 4.8 | - | - | x |
| Relative pronouns | 6.3.2 | - | x | x |
| Relative adverbs | 6.3.2 | x | x | x |

### 7.1.3.2 Syntax

In this work, syntactic pattern borrowings from Georgian have been investigated mainly in the domain of clause combining.

1. As explained in Section 3.7.3, Tsova-Tush now features constructions with a negative pronoun. These can occur with or without clausal negation, but both variants must be copied from Georgian as the original construction (marginally attested in Tsova-Tush, but the default in Ingush and Chechen) is formed by using an indefinite pronoun and clausal negation.

2. In parallel with the formation of a relative pronoun itself, Tsova-Tush allows the formation of finite relative clauses with relative pronouns since

the middle of the 20th century. In the 21st century, this strategy is the primary means to form relative clauses, see Section 6.3.2.

3. The same can be said about the adjunct clauses with relative adverbs *moħ-e* 'as, like', *macn-e* 'when', *mičħ-e* 'where' and *meł-e* 'as much as', which are attested sparsely in the mid-20th century and commonly occur in the 21st century, see Section 6.4.

4. In contemporary Tsova-Tush, we find finite relative clauses introduced by the general subordinating conjunction *me*. These type of clauses appear only in the 21st-century sources, see Section 6.3.3.

5. Complement clauses introduced by the general subordinating conjunction *me* are found already in 19th-century sources. Examples mentioned in this work are: different-subject complement clauses to desiderative verbs (Section 6.5.2); complement clauses to verbs of cognition (Section 6.5.3) and perception (6.5.4).

6. Adjunct clauses introduced by the general subordinating conjunction *me* are found already in 19th-century sources. These in fact only concern purpose clauses (Section 6.4.2), which feature a subordinated verb in the Subjunctive. Georgian has more adjunct clause types which are formed using the general subordinator *rom*, such as conditional or temporal clauses, but these have not been copied into Tsova-Tush.

7. As described in Section 6.6, the Tsova-Tush conjunction *je* is now used to coordinate some same-subject clauses, where previously this was done exclusively using verbs in the Sequential form. This more recent pattern has been observed in 21st-century Tsova-Tush mainly, with a handful of attestations in the 20th-century sources. It is absent from 19th century Tsova-Tush.

Thus, we can summarise the instances of Tsova-Tush syntactic pattern borrowing in Table 7.4.

### 7.1.3.3 Functional extensions of existing forms

Two existing Tsova-Tush form-function pairings have been extended to include an additional grammatical meaning, perhaps under the influence of Georgian. However, contact-induced change is difficult to prove here for different reasons.

Table 7.4: Syntactic pattern borrowing in different historical stages

| Feature | Section | Mid-19th century | Mid-20th century | Present |
|---|---|---|---|---|
| Clauses with negative pronouns | 3.7.3 | - | x | x |
| Relative clauses with relative pronouns | 6.3.2 | - | x | x |
| Adjunct clauses with relative adverbs | 6.4 | x | x | x |
| Relative clauses with *me* | 6.3.3 | - | - | x |
| Complement clauses with *me* | 6.5 | - | x | x |
| Purpose clauses with *me* | 6.4.2 | x | x | x |
| Coordinating conjunction with same-subject clause | 6.6 | - | x | x |

1. The distal demonstrative *o* is used as the default 3rd person pronoun (where Tsova-Tush also has a proximal and a medial demonstrative), see Section 3.7.2. This is observed in all stages of Tsova-Tush attestation. The same is true for Georgian: the distal demonstrative *is* is used as the neutral 3rd person pronoun (Georgian also has a three-way deixis distinction in demonstratives). In Chechen and Ingush, however, it is the medial demonstrative (again out of three possible deixis values) that is used for the pronoun. It is safe to assume language contact as an explanation for the functional equivalence of the Tsova-Tush and Georgian forms; however, Daghestanian data is necessary to preclude a scenario where Chechen and Ingush were the ones who innovated.

2. In both Tsova-Tush and Georgian, a verbal form called the Pluperfect, consisting of a past participle plus a past form of the verb 'be', is used in counterfactual conditional clauses. In Georgian, however, this form is used in the subordinate conditional clause, while in Tsova-Tush it is used in the matrix clause (see Section 4.6). Furthermore, only Georgian intransitive verbs form the Pluperfect by combining a past participle and a past form of 'be', whereas all Tsova-Tush verbs form the Pluperfect in such a way. Hence contact-induced change is at this point not a likely scenario for this particular usage of the Tsova-Tush Pluperfect.

### 7.1.4 Other typological similarities

Other typological similarities that both Tsova-Tush and Georgian exhibit, but which are absent in Chechen and Ingush, were not investigated further, but deserve to be mentioned briefly.

- In both Tsova-Tush and Georgian the meanings 'read' and 'ask' are colexified in the same verb: Tsova-Tush *xat't'-ar*, Georgian *k'itxv-a*. Compare Chechen/Ingush *dieš-ar* 'read', *xātt-ar* 'ask'.

- In Tsova-Tush, the word *kortŏ* 'head' can be used as an (Oblique) object in the meaning 'self', see Example (1).

  (1)  *o*      *šer*            *korti-x=a*              *dak'liv.*
       DIST REFL.GEN.OBL head.OBL-CONT=ADD think.IPFV(NPST)
       'He thinks about himself as well.'                    (E002-47.1)

  In Georgian, this is the default construction (Hewitt 1995: 84), but this use is not reported for Chechen or Ingush.

- In the lexical items 'here' and 'there', both Tsova-Tush and Georgian can express a lative meaning with (1) a zero ending, (2) an ending that in the nominal paradigm has the function of Instrumental. Compare Tsova-Tush *uis* (< *osi*) and *osi-v* 'thither', *ese-v* 'hither', *tur-e-v* 'with a sword'; Georgian *ik* and *ik-it* 'thither', *ak* and *ake-t* 'hither', *xml-it* 'with a sword'. This usage of the Instrumental case has not been observed in Chechen or Ingush.

### 7.1.5 Summary

Combining all tables presented in Sections 7.1.1–7.1.3.2, we arrive at the following diachronic perspective of Tsova-Tush features that are a result of contact-induced change (see Table 7.5).

The most striking result is that phonological influence is present already in the mid-19th century, most syntactic influence starts in the middle of the 20th century, and the amount of morphological pattern borrowing increases sharply in the 21st century, from three to six patterns.

## 7.2 Results

If we combine the findings listed in Table 7.5 with the sociolinguistic context of Tsova-Tush in the past 200 years (shown in Section 1.4.1.5, based on Mikeladze 2008), we can draw up the following overview, presented in Table 7.6.

Table 7.5: Contact phenomena in different historical stages

| Feature | Section | Mid-19th century | Mid-20th century | Present |
|---|---|---|---|---|
| *Phonology* | | | | |
| R-Dissimilation | 2.4.1 | x | x | x |
| *Affix borrowing* | | | | |
| Plural *-t* | 4.9 | x | x | x |
| *Morphology (PAT)* | | | | |
| Lative-Essive merger | 3.3.3 | - | - | x |
| Analytic comparative | 3.4.4 | - | - | x |
| Analytic superlative | 3.4.4 | - | x | x |
| Subject marking | 4.8 | - | - | x |
| Relative pronouns | 6.3.2 | - | x | x |
| Relative adverbs | 6.3.2 | x | x | x |
| *Syntax (PAT)* | | | | |
| Clauses with negative pronouns | 3.7.3 | - | x | x |
| Relative clauses with relative pronouns | 6.3.2 | - | x | x |
| Adjunct clauses with relative adverbs | 6.4 | x | x | x |
| Relative clauses with *me* | 6.3.3 | - | - | x |
| Complement clauses with *me* | 6.5 | - | x | x |
| Purpose clauses with *me* | 6.4.2 | x | x | x |
| Coordinating conjunction with same-subject clause | 6.6 | - | x | x |

Table 7.6: Outcomes of Georgian-Tsova-Tush language contact by time period

|  | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Dates | −1820 | 1820–1920 | 1920–1990 | 1990– |
| Government | Tsarist | Tsarist | Soviet | Post-Soviet |
| Settlement | Tsovata valley | Alvani region | Alvani | Alvani |
| Contact variety of Georgian | Tush | Kakhetian (+Standard) | Standard (+Russian) | Standard |
| Subcorpora | - | AS, IT | YD, KK | E, MM, EK, LJ, WS |
| R-Dissimilation |  | x | x | x |
| Plural *-t* |  | x | x | x |
| Purpose clauses with *me* |  | x | x | x |
| Relative adverbs |  | x | x | x |
| Adjunct clauses with relative adverbs |  | x | x | x |
| Relative pronouns |  | - | x | x |
| Relative clauses with relative pronouns |  | - | x | x |
| Clauses with negative pronouns |  | - | x | x |
| Complement clauses with *me* |  | - | x | x |
| Coordinating conjunction |  | - | x | x |
| Analytic superlative |  | - | x | x |
| Lative-Essive merger |  | - | - | x |
| Analytic comparative |  | - | - | x |
| Subject marking |  | - | - | x |
| Relative clauses with *me* |  | - | - | x |

## 7.3 Conclusions

New descriptions of various facets of Tsova-Tush grammar were given in this work that are unrelated to language contact with Georgian.[3] In Section 2, a previously unnoticed marginal phoneme *w* ([ɦʷ] or [w̥]) is identified. In the nominal domain, it is recognised that most spatial cases involve a two-slot system, very similar to a typical Daghestanian system of spatial case (Section 3.3.3), an attempt at distinguishing different nominal declension classes has been made (Section 3.3.4), and a modification construction is investigated where an endingless noun in the Oblique form can modify another noun (Section 3.6.2). In the verbal domain, a new category of Iamitive is identified, signifying the meaning 'already' in positive clauses and 'anymore' in negative clauses (Section 4.5.5), and a typology of complex verbs has been outlined in Section 5.3. In the domain of clause combining, besides an extensive description of different subordination strategies in Tsova-Tush in Table 6.13, this work provides a very preliminary analysis for Tsova-Tush coordination strategies with a basic distribution of the Sequential suffix *-e* for same-subject clause coordination, and the coordinating conjunction *je* for different-subject clause coordination.

Additionally, instances of contact-induced change have been identified and summarised above in Section 7.1. In the sections below, these results will be put in the context of the general literature on language contact discussed in Section 1.4.1. The general conclusions on borrowability will be tested on the case of Tsova-Tush, as well as the theory of intensity of contact predicting certain structural outcomes.

### 7.3.1 Borrowability

In Section 1.4.1, the issue of borrowability was discussed briefly. Several hierarchies have been established in the literature (e.g. Moravcsik 1978, Thomason & Kaufman 1988, van Hout & Muysken 1988, Field 2002, Matras 2011), such as arguably the most famous one: "nouns are more likely to be borrowed than non-nouns and function words." These types of statements can be reformulated into verifiable or falsifiable claims in the following way: "When non-nouns are borrowed into language A, nouns are also borrowed into language A, but the opposite is not necessarily true." Hence, the academic literature gives us testable claims that can be compared against the Tsova-Tush evidence for each historical period presented in Table 7.6.

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[3]More correctly: facets that at this point have not proven to be the result of language contact.

**7.3.1.1 1820–1920**

In this period, we observe many loanwords (not investigated in this work), the plural suffix *-t* and a phonological rule (R-dissimilation) that was borrowed. Additionally, we find pattern borrowing involving purpose clauses with the subordinator *me*, as well as finite adverbial clauses with the relative adverbs *moħe* 'as, like', *macne* 'when' and *mičħe* 'where' calqued from Georgian. In this synchronic stage, we can try to test the following borrowing hierarchies (for each hierarchy, see Matras (2011) and the literature cited there):

*Nouns > non-nouns, function words* (Matras 2011: 208): Even though this is not investigated in this work, we find many nouns, some verbs (*c'olbala* 's/he suffers' AS002-1.7; *c'eraddor* 's/he wrote' AS003-1.7), but no function words borrowed from Georgian in this period. Thus, if we do not differentiate between function words and other non-nouns, this hierarchy is not testable in Tsova-Tush. If we separate function words, however, we can confirm that at this stage, Tsova-Tush has borrowed nouns and verbs, but no function words, which is in accordance with this hierarchy.

*Free morphemes > bound morphemes* (Matras 2011: 208): Since at this stage Tsova-Tush borrowed both free morphemes (loanwords) and the bound morpheme *-t*, this hierarchy is not testable in Tsova-Tush.

*Derivational morphology > inflectional morphology* (Matras 2011: 208): The plural suffix *-t* on imperative forms and on indicative forms of the first person inclusive is certainly an inflectional morpheme. In combination with the fact that Tsova-Tush did not borrow any derivational affix (or any other affix, for that matter) in this period or later, this leads us to the conclusion that the borrowing forms a counterexample to this hierarchy. One could argue that Tsova-Tush borrowed the *-t* from Georgian contexts where it is a clitic on certain interjections, such as *bodiši=t* 'sorry', *k'argi=t* 'okay', *salami=t* 'hello', *gamarʒoba=t* 'hello'. Here, the plural suffix *-t* found in verb forms (see Section 4.9)[4] has degrammaticalised into a clitic-like element attached to interjections (nouns and adjectives in origin). However, the use of the *-t* in Tsova-Tush is completely parallel to its occurrence as a verbal suffix in Georgian, not as clitic to interjections. Also, the age of the usage of *-t* with interjections in Georgian is not known, and it might be a recent innovation that occurred after borrowing into Tsova-Tush. Hence, at this point, the Tsova-Tush data form a counterexample to this proposed hierarchy.

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[4]Also used as a politeness marker.

*Concessive, conditional, causal, purpose > other subordinators* (Matras 2011: 220): This hierarchy is not easily applied to the Tsova-Tush data. On the one hand, Tsova-Tush borrowed adjunct clause constructions at this stage, and no relative clause constructions, thus confirming this hierarchy. On the other hand, Tsova-Tush borrowed purpose clause constructions and those with the relative adverbs *moħe* 'as, like', *macne* 'when' and *mičħe* 'where' (i.e. manner, temporal, and locational clauses, respectively) and no concessive, conditional or causal clauses. Hence, it is prudent to use the Tsova-Tush data as neither an example in favour of, or a counterexample to this hierarchy. Note that the general subordinator *me* is at this point exclusively used as purpose clause marker, and only later is used for other adjunct clauses and relative clauses. Thus, when applied only to the subordinator *me*, at this historical stage, the hierarchy could be upheld.

*Clause linking > word morphology* (Matras 2011: 224): In terms of pattern borrowing, it is clear that Tsova-Tush only copied constructions from Georgian in the domain of clause combining (at least at this historical stage). The only morphological borrowing that is observed is the calque of Georgian relative adverbs *moħe* 'as, like', *macne* 'when' and *mičħe* 'where', that make this type of finite subordination possible in the first place. If one is willing to view these word formations as part of the more general pattern borrowing of finite adjunct clauses, this hierarchy is confirmed by the Tsova-Tush data.

### 7.3.1.2 1920–1990

In addition to the material presented above, Tsova-Tush borrowed more constructions from Georgian in this period. The Georgian pattern of relative clauses with relative pronouns is borrowed, as well as clauses with negative pronouns. Complement clauses with the general subordinator *me* are attested in this stage, as well as coordinating conjunctions with same-subject clauses. In terms of word morphology, the analytic superlative is calqued from Georgian. In this synchronic stage, we can test the following borrowing hierarchies:

Higher numerals > lower numerals (Matras 2011: 213): In this period, numerals higher than one hundred are all borrowed directly from Georgian (see Section 3.4.2), confirming this hierarchy.

Superlative > comparative (Matras 2011: 220): In this period, a superlative construction is calqued on the Georgian equivalent, whereas the comparative is not affected, hence confirming this hypothesis.

### 7.3.1.3 1990–2020

In this period, we witness the partial Lative-Essive merger, relative clauses with the subordinator *me*, and the analytic comparative, of which the latter is a case of matter borrowing. Additionally, we observe the true grammaticalisation and univerbation of subject pronouns into proper subject cross-reference markers.

Clause linking > word morphology (Matras 2011: 224): In terms of pattern borrowing, it is only in this period that we find morphological calquing besides the aforementioned relative pronouns and adverbs: the formation of subject cross-reference markers on verbs.

Thus, Tsova-Tush largely follows the expected and established borrowing hierarchies with one clear exception and two constructions that can be called ambiguous. The borrowing of the plural marker *-t* is a clear violation of the borrowing hierarchy "derivational morphology > inflectional morphology", since the only bound morpheme that Tsova-Tush borrowed is an inflectional one. Furthermore, it depends on one's analysis whether one should consider the formation of relative pronouns and adverbs as word morphology (and thus be a counterexample to the hierarchy "clause linking > word morphology") or view it as the borrowing of a larger syntactic construction of finite subordination. Lastly, concerning the hierarchy "concessive, conditional, causal, purpose > other subordinators", we have seen that Tsova-Tush borrows not only a finite purpose clause construction from Georgian, but also manner, temporal and locational adjunct clauses.

### 7.3.2 Intensity of contact

In terms of intensity of contact, it is clear that the sociolinguistic situation of Tsova-Tush changed throughout the last 200 years. In terms of the three factors outlined by Thomason & Kaufman (1988: 63–74) (relative population size, length of contact, and degree of bilingualism) the Tsova-Tush community underwent radical change. Before migrating to the Kakheti plain in the 1820s and 30s (see Section 1.2.3), the relative size of the Tsova-Tush community was equal to each of the other Tush *temis*: the Pirikiti, Chaghma, and Gometsari Tush (all between 1,300 and 1,600 individuals (Transcaucasian Statistical Committee 1893)). Thus, the Tsova-Tush were mostly in contact with the other Tush *temis*, who together outnumbered them three to one. Only adult men took their flocks to the lowlands every winter, coming into (relatively superficial) contact with other Georgians like Kakhetians. After migrating, however, the Tsova-Tush found themselves on

the Kakhetian plains among between 200,000 and 300,000 Kakhetians. The degree of bilingualism, although not directly investigated in this work, must have increased steadily, especially among adult women in the decades after migration, and especially with the advent of universal schooling, when children were becoming bilingual at an earlier age.

Thus, the degree of intensity of contact with the Georgian language increased sharply after the migration, but mapping the Tsova-Tush data onto the proposed levels of intense contact by Thomason & Kaufman (1988) is not straightforward, as can be seen in the overview below. Each level of intensity is discussed along with the predictions based on Thomason & Kaufman (1988) in quotes, and a discussion of the Tsova-Tush data.

*Casual contact:* "Only non-basic vocabulary is borrowed." This must have been before the first written documents of Tsova-Tush in the mid-19th century, as we see a fair amount of pattern borrowing already there (see 7.3.1). At this stage, the language was probably (close to) Proto-Nakh, when non-basic vocabulary such as 'chicken', 'donkey', 'hat', 'saw', and 'plough' were borrowed from Georgian.

*Slightly more intense contact:* "Besides the above, also conjunctions and adverbs are borrowed. Phonologically, new phonemes can be adopted, but only in loanwords. Syntactically, new functions of existing constructions are borrowed, or new orderings that cause no typological change."

*More intense contact:* "Besides the above, also adpositions, derivational affixes, personal and demonstrative pronouns, low numerals are borrowed more likely than in category 2. Phonologically, stress rules and prosody are borrowed. Syntactically, minor orderings such as noun-adposition can be affected."

*Strong cultural pressure:* "Besides the above, phonological rules can be borrowed, as well as the additional or loss of entire contrastive features. Extensive word order changes occur and inflectional categories and affixes are borrowed."

In the period **1820–1920**, we observe many loanwords, the plural suffix *-t*, and a phonological rule (R-dissimilation) that was borrowed. Additionally, we find pattern borrowing involving purpose clauses with the subordinator *me*, as well as finite adverbial clauses with the relative adverbs *moħe* 'as, like', *macne* 'when', and *mičħe* 'where' calqued from Georgian.

Hence, we see pattern borrowing that caused typological change (non-finite to finite subordination), borrowing of an inflectional affix, and borrowing of a morphophonological rule. However, no conjunctions, adpositions or pronouns were borrowed yet. In this work, prosodic features are not discussed, nor are word order changes. Still, it could be justified to classify the contact situation in this period as "strong cultural pressure". Hence, the diagnostics that Thomason & Kaufman list do not fully apply to the Tsova-Tush data.

*Very strong cultural pressure:* "Significant typological change: new morphophonological rules, phonetic changes, word structure rules (such as prefixation vs. suffixation, flexional vs. agglutinative), alignment systems, agreement rules, and bound pronominal elements can all be borrowed."

The changes observed in the periods **1920–1990** (the Georgian pattern of relative clauses with relative pronouns, as well as clauses with negative pronouns; complement clauses with the general subordinator *me*; coordinating conjunctions with same-subject clauses; the calqued analytic superlative) and **1990–2020** (partial Lative-Essive merger; relative clauses with the subordinator *me*; the analytic comparative; the grammaticalisation and univerbation of subject pronouns into proper subject cross-reference markers) together make up a significant addition to the instances of contact-induced change. However, all these phenomena do not constitute changes in word structure rules, alignment systems or agreement rules, nor does do they involve borrowing of pronominal elements. Hence, this level of intensity as proposed by Thomason & Kaufman (1988) is not reached.

Thus, the change from Thomason & Kaufman's "casual contact" to "strong cultural pressure" must have taken place before 1820, and in mountainous Tusheti. Clearly, more investigation is necessary on the bilingualism rate of the Tsova-Tush in the periods before 1820 (perhaps by utilising methods similar to those in Dobrushina 2013). Migrating to the Kakhetian plains intensified the contact situation heavily when looking at social and sociolinguistic indicators (relative population size, length of contact, and degree of bilingualism), but it does not constitute a new level of intensity in Thomason & Kaufman's terms. Instead, it seems that language attitudes and ethnic self-identification played a large part in explaining the cultural pressure before 1820. Most contact-induced changes occurred in this earlier period for which we do not have attestations, when the relative population size was more equal and the degree of bilingualism was relatively low, but ethnic self-identification shifted to Georgian.

# Appendix A: Georgian verb forms

Table A.1: All Tsova-Tush finite verb forms

|  | Morphemes | Glossing | Surface form |
|---|---|---|---|
| Non-Past (Present) | *tet'-o* | cut.IPFV-NPST | *tet'ŏ* |
| Non-Past (Future) | *tit'-o* | cut.PFV-NPST | *tit'ŏ* |
| Hortative | *tet'-o(-t) vej* <br> *tit'-o(-t) vej* | cut.IPFV-NPST(-PL) 1PL.INCL <br> cut.PFV-NPST(-PL) 1PL.INCL | *tet'ŏ vej/tet'ot vej* <br> *tit'ŏ vej/tit'ot vej* |
| Non-Past Subjunctive | *tet'-o-lo* <br> *tit'-o-lo* | cut.IPFV-NPST-SBJV <br> cut.PFV-NPST-SBJV | *tet'olŏ* <br> *tit'olŏ* |
| Imperfect | *tet'-ora* <br> *tit'-ora* | cut.IPFV-IMPERF <br> cut.PFV-IMPERF | *tet'or* <br> *tit'or* |
| Past Subjunctive | *tet'-ora-lo* <br> *tit'-ora-lo* | cut.IPFV-IMPERF-SBJV <br> cut.PFV-IMPERF-SBJV | *tet'ralŏ* <br> *tit'ralŏ* |
| Non-Past Conditional | *tet'-o-ħe* <br> *tit'-o-ħe* | cut.IPFV-NPST-COND <br> cut.PFV-NPST-COND | *tet'oħ* <br> *tit'oħ* |
| Past Conditional | *tet'-oħera* <br> *tit'-oħera* | cut.IPFV-COND.PST <br> cut.PFV-COND.PST | *tet'oħer* <br> *tit'oħer* |
| Non-Past Iamitive | *tet'-o-ge* <br> *tit'-o-ge* | cut.IPFV-NPST-IAM <br> cut.PFV-NPST-IAM | *tet'og* <br> *tit'og* |
| Past Iamitive | *tet'-ogera* <br> *tit'-ogera* | cut.IPFV-IAM.PST <br> cut.PFV-IAM.PST | *tet'oger* <br> *tit'oger* |
| Non-Witnessed Non-Past | *tet'-o-d-ano* <br> *tit'-o-d-ano* | cut.IPFV-NPST-D-NW.NPST <br> cut.PFV-NPST-D-NW.NPST | *tet'danŏ* <br> *tit'danŏ* |
| Non-Witnessed Imperfect | *tet'-o-d-anora* <br> *tit'-o-d-anora* | cut.IPFV-NPST-D-NW.IMPERF <br> cut.PFV-NPST-D-NW.IMPERF | *tet'danor* <br> *tit'danor* |
| Aorist | *tet'-in* <br> *tit'-en* | cut.IPFV-AOR <br> cut.PFV-AOR | *tet'i$^n$* <br> *tit'e$^n$* |

| | Morphemes | Glossing | Surface form |
|---|---|---|---|
| Non-Witnessed Aorist | *tet'-ino* | cut.IPFV-NW.AOR | *tet'inŏ* |
| | *tit'-eno* | cut.PFV-NW.AOR | *tit'enŏ* |
| Non-Witnessed Remote Past | *tet'-inora* | cut.IPFV-NW.REM | *tit'nor* |
| | *tit'-enora* | cut.PFV-NW.REM | *tit'nor* |
| Non-Witnessed Aor. Cond. | *tet'-ino-ħe* | cut.IPFV-NW.AOR-COND | *tit'noħ* |
| | *tit'-eno-ħe* | cut.PFV-NW.AOR-COND | *tit'noħ* |
| Non-Witnessed Remote Cond. | *tet'-inoħera* | cut.IPFV-NW.REM.COND | *tit'noħer* |
| | *tit'-enoħera* | cut.PFV-NW.REM.COND | *tit'noħer* |
| Remote Past | *tet'-ira* | cut.IPFV-REM | *tet'ir* |
| | *tit'-era* | cut.PFV-REM | *tit'er* |
| Imperative | *tet'-a(-t)* | cut.IPFV-IMP(-PL) | *tet'/tet'at* |
| | *tit'-a(-t)* | cut.PFV-IMP(-PL) | *tit'/tit'at* |
| Polite Imperative | *tet'-a-le(-t)* | cut.IPFV-IMP-POL(-PL) | *tet'al/tet'alet* |
| | *tit'-a-le(-t)* | cut.PFV-IMP-POL-(-PL) | *tit'al/tit'alet* |
| Optative | *tet'-a-la(-t)* | cut.IPFV-IMP-OPT(-PL) | *tet'al/tet'alat* |
| | *tit'-a-la(-t)* | cut.PFV-IMP-OPT-(-PL) | *tit'al/tit'alat* |
| Perfect | *tet'-ino d-a* | cut.IPFV-PTCP.PST D-be | *tet'inda* |
| | *tit'-eno d-a* | cut.PFV-PTCP.PST D-be | *tit'enda* |
| Pluperfect | *tet'-ino d-a-ra* | cut.IPFV-PTCP.PST D-be-IMPERF | *tet'indar* |
| | *tit'-eno d-a-ra* | cut.PFV-PTCP.PST D-be-IMPERF | *tit'endar* |
| Non-Witnessed Perfect | *tet'-ino d-a-no* | cut.IPFV-PTCP.PST D-be-NW.AOR | *tet'indanŏ* |
| | *tit'-eno d-a-no* | cut.PFV-PTCP.PST D-be-NW.AOR | *tit'endanŏ* |
| Non-Witnessed Pluperfect | *tet'-ino d-a-nora* | cut.IPFV-PTCP.PST D-be-NW.REM | *tet'indanor* |
| | *tit'-eno d-a-nora* | cut.PFV-PTCP.PST D-be-NW.REM | *tit'endanor* |

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# Name index

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# Language index

# Intensive language contact in the Caucasus

Tsova-Tush is an East Caucasian language spoken in one single village in Eastern Georgia by approximately 300 speakers. Since its early description, scholars have been intrigued by the high degree of linguistic influence from the Georgian language. This book has a threefold goal: (1) To contribute to the overall description of the Tsova-Tush language, by filling gaps in the previous literature in absence of a reference grammar. (2) To contrast Tsova-Tush constructions with functionally equivalent constructions in Chechen and Ingush, its closest relatives, and with Georgian, the language of wider communication which all Tsova-Tush speakers speak as a second language, in order to form hypotheses concerning which Tsova-Tush construction is inherited, and which has arisen under influence of Georgian. (3) To provide the most probable diachronic scenario of language contact, by looking at historical Tsova-Tush language data, as well as at its historical sociolinguistics.

This book provides a basic description of Tsova-Tush, in particular in the domain of spatial cases (which exhibit a two-slot system similar to Daghestanian languages), TAME categories (indentifying a Iamitive and a Past Subjunctive developing indirect evidential semantics), complex verbs, and subordination and clause-chaining (which in Tsova-Tush is finite).

In terms of language contact, this book concludes that (1) Tsova-Tush conforms to most established borrowing hierarchies and theories surrounding intensity of contact, except for the borrowing of a verbal inflection marker in a remarkably early stage of contact; (2) The Georgian influence that Tsova-Tush shows in sources from the 1850 suggest that a notable increase in bilingualism occured already at a point where there was little institutional or numeral dominance of surrounding the Georgian-language population. A change in ethnic self-identification can be the underlying factor for the early instances of contact-induced change.