DEIXIS AND REFERENCE TRACKING IN TSOVA-TUSH

*** PRE-DEFENSE DRAFT ***

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE UNIVERSITY OF HAWAIʻI AT MĀNOA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN LINGUISTICS MAY 2020

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Under construction.
Abstract

This dissertation takes an in-depth look at deixis and reference tracking in Tsova-Tush, a Northeast Caucasian language spoken in the Republic of Georgia. The linguistic domains of investigation range from simple clauses to discourse as long as a short narrative. The way referents are encoded and tracked, as well as the behavior of context-independent and context-dependent (deictic) expressions, are of interest throughout.

First, basic patterns of argument structure, complementation, and question formation are established. Complement-taking predicates are described in terms of the syntactic integration of their complements into the host clause. An unusual type of subordination is identified, which combines properties of complement and relative clauses. Patterns of long-distance agreement and potential long-distance reflexivization are outlined. Taken together, these descriptions characterize the structure of simple clauses through complex sentences in Tsova-Tush.

Building off these insights, an investigation is undertaken of deixis in embedded contexts, which are typically established within complement clauses. Tsova-Tush is shown to have a restricted type of indexical shift, in which all context parameters are shifted together under verbs of speech, while the embedded clause containing the shifted indexicals remains available to certain semantic and syntactic operations. Beyond indexical shift, other types of embedded perspectives are investigated, including quotation and perspective-taking under predicates of perception. Quotatives and discourse markers are also investigated.

The linguistic domain under study is then expanded beyond the complex sentence into longer stretches of discourse. Reference tracking is investigated in thirteen narratives. An indefinite marker is identified for first mentions of animate referents, and the use of demonstrative adjectives as markers of definiteness at second mention and reintroductions is discussed. Several conditions for covert reference are explored, including activation status and syntactic position. Argument dropping is found to be preferred when reference is continuous across clauses and when the referent appears as the subject of a transitive verb. Further, in contrast to some other languages, gender in Tsova-Tush is shown to be a poor strategy for reference tracking. From this examination of narratives, several interesting discourse-level features are further identified and described.
Altogether, this dissertation provides a detailed examination of patterns in Tsova-Tush syntax, semantics, and discourse relevant to the study of deixis and reference tracking. It contributes a multifaceted description of the complexities of Tsova-Tush speaker’s choices in referential form and perspective-taking.
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<tr>
<td>INF</td>
<td>Infinitive</td>
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</tr>
<tr>
<td>INS</td>
<td>Instrumental case</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTR</td>
<td>Intransitivizer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LNK</td>
<td>A linking morpheme associated with compounding or tense/aspect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAS</td>
<td>Masdar, a deverbal noun</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MED</td>
<td>Medial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NMLZ</td>
<td>Nominalizer</td>
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<tr>
<td>OBL</td>
<td>Oblique</td>
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<tr>
<td>PART</td>
<td>Speech act participant (1 and/or 2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PFV</td>
<td>Perfective aspect</td>
<td></td>
<td></td>
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<tr>
<td>PL</td>
<td>Plural</td>
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<td>POSS</td>
<td>Possessive</td>
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<td>PPL</td>
<td>Participle</td>
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<tr>
<td>PROX</td>
<td>Proximal</td>
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<tr>
<td>PRS</td>
<td>Present tense</td>
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<tr>
<td>PRT</td>
<td>Particle</td>
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<tr>
<td>PV</td>
<td>Preverb</td>
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<tr>
<td>Q</td>
<td>Yes/no question particle</td>
<td></td>
<td></td>
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<tr>
<td>REDUP</td>
<td>Reduplication</td>
<td></td>
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<tr>
<td>REFL</td>
<td>Reflexive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REL</td>
<td>Relativizing clitic</td>
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<td></td>
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<tr>
<td>REP</td>
<td>Reported speech clitic</td>
<td></td>
<td></td>
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<tr>
<td>SG</td>
<td>Singular</td>
<td></td>
<td></td>
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<tr>
<td>SUBJ</td>
<td>Subjunctive</td>
<td></td>
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<tr>
<td>TR</td>
<td>Transitivizer</td>
<td></td>
<td></td>
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<tr>
<td>&amp;</td>
<td>Coordinating clitic ‘and’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>...</td>
<td>Longer pause</td>
<td></td>
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Chapter 1

Introduction

One of the great gifts of language is its tolerance of imprecision. We are not required to encode every concept we wish to communicate in a perfectly unambiguous way; to do so would cause communication to be so burdensome that few would want to partake in it. Language provides many paths to abbreviation. I can call this document a ‘dissertation’ rather than something lengthier—‘a written thesis representing original research that fulfills the requirements of...’ and so on—because we know what the category of things called ‘dissertation’ generally includes. Similarly, I can refer to myself as ‘I’ rather than ‘the author of this dissertation’ because we generally understand the word ‘I’ to pick out the author of the utterance that contains it.

The linguistic management of this imprecision is the central theme of this dissertation. How do speakers introduce referents (such as ‘dissertation’)? Where do they choose increasingly abbreviated strategies to refer to these concepts? And how do they manage the ambiguity caused by imprecise reference to still be effectively understood?

Often the answer to these questions depends on the extralinguistic context. While I might refer to myself in (nearly) every case with some first-person pronoun, that option is not available for anyone else, to whom I must be ‘Bryn’ or ‘her’ or ‘you,’ depending on context. An additional question this dissertation pursues is then, in what ways does the context of utterance determine the linguistic encoding of referents?

These questions can be examined within the domain of the clause or the sentence, as I have done in chapters 3 and 4, or across longer stretches of discourse, where speakers’ referential choices become more obviously complex, as explored in chapter 5. At all levels it is fruitful to investigate the ways that speaker decisions are affected by discourse-internal context vs. extralinguistic context.

Some of these questions reach beyond language into the study of cognition. Our tolerance of imprecision is facilitated by reasoning and memory. We understand other speaker’s abbreviations by virtue of having a theory of mind, which enables us to reason from the linguistic form to what the speaker likely intended. Likewise, in formulating speech, we allow ourselves to be imprecise at
moments where we imagine our listeners as capable of reconstructing our intentions. That is, our theory of mind plays a critical role in choices among linguistic forms.

From these broad themes I arrive at the specific topic of this dissertation: referential choices in Tsova-Tush, a minority language of the Republic of Georgia. It is particularly interesting to investigate questions such as those posed above in a small language community like Tsova-Tush. The shared repertoire of their speech community combines a remarkable breadth of linguistic codes—Georgian and Tsova-Tush primarily; Russian, other languages of the Caucasus, and other languages of Europe each to lessening degrees—together with a congruity of experience and common knowledge, characteristic of many smaller linguistic communities. Thus, a Tsova-Tush speaker’s theory of mind for their interlocutor in practice includes that the interlocutor can draw on the same multilingual repertoire and shared common knowledge—including knowledge of kinship, family histories, and the history of their people. In such a community, the conditions for taking linguistic shortcuts might be less restrictive in certain domains.

This dissertation pursues two intersecting topics of study: deixis and reference tracking. Deixis, in short, includes all context-dependent linguistic expressions: personal pronouns like ‘I’ and ‘you,’ spatial and temporal adverbs like ‘here’ or ‘now,’ among others, some of which can be used to track referents in discourse. Reference tracking is the ability of speakers to determine the intended referent of a linguistic expression—which might be deictic in nature, or context-independent.

Although each chapter has additional, more specific goals, the general research questions I pursue in this dissertation are stated below.

1. What are the deictics in Tsova-Tush, and in which syntactic and discourse contexts can they occur?
2. What are the syntactic and pragmatic conditions under which the interpretation of deictics can shift?
3. How are referents encoded syntactically in clauses and complex sentences?
4. How do Tsova-Tush speakers encode referents more or less explicitly in discourse, using both deictic and non-deictic reference-tracking strategies?

1.1 The structure of this dissertation

This dissertation is structured as follows. The remainder of this chapter provides some background information on the Tsova-Tush people and their language, as well as an overview of methods and assumptions undertaken throughout the dissertation. Chapter 2 provides a review of the literature on relevant aspects of deixis and reference tracking. That chapter further includes a sketch of some
key aspects of Tsova-Tush grammar, providing the background necessary to interpret examples and
glossing throughout the dissertation. Chapter 3 takes a deeper look at a more complex aspect of
Tsova-Tush grammar: complementation and complex sentences. That chapter establishes grammatical
patterns to be compared in chapter 4 with remarkable uses of deixis arising in those complex
sentences, including indexical shift, quotation, and other potentially shifted perspectives.

In chapter 5, I turn to a detailed look at reference tracking in a selected set of narratives, to
capture the larger picture of how deictics and other grammatical features are used not only in complex
sentences, but also in complex stretches of discourse. Chapter 6 concludes the dissertation, with a
reflection on material discussed and proposed directions for future research.

Two appendices contain the narrative data investigated in depth in chapter 5; other chapters draw
upon that data as well.

1.2 Background on Tsova-Tush

1.2.1 A brief history of the Tsova-Tush language and people

The first historical records that apparently mention the Tsova-Tush people date to the 6th or 7th centuries (Desheriev [Дешериев] 1953), or perhaps even earlier (Topchishvili 2014), although their distinct language was not mentioned in historical accounts until the 18th century (Bertlani [ბერთლანი] et al. 2012). From the earliest historical records until the early 19th century, Tsova-Tush speakers lived in the mountainous region of Tusheti (in present-day Georgia), and practiced transhumance, whereby some of the population migrated with their livestock, chiefly sheep, to lowland pastures around the Alazani river basin during the winter (Shavkhelishvili [Шавхелишвили] 2001). The mountain territory of the Tsova-Tush fell in the region of Tsovata, comprising eight villages (Etelta, Sagirta, Indurta, Mozarta, Nazarta, Nadirta, Taro, Shavtsqala), located in close proximity to one another (Shavkhelishvili [Шавхелишвили] 2001, Desheriev [Дешериев] 1953). The neighboring peoples of Tusheti belonged to Georgian-speaking clans, inhabiting the three surrounding regions within Tusheti: Chaghma, Pirikiti, and Gometsari (Shavkhelishvili [Шавхелишвили] 2001).

Even during this period, when Tsova-Tush speakers still lived primarily in the mountains, there was sufficient contact with Georgian (both the Tushetian dialect spoken by their mountain neighbors and the Kakheti variety in the lowlands) to introduce large numbers of loanwords into Tsova-Tush (Desheriev [Дешериев] 1953); the first major grammatical description (Schiefer 1856) already mentions extensive Georgian borrowing. It is not clear how prevalent bilingualism was at this time: Gigashvili et al. (2020: 109) suggest that, prior to the 1820s, there was only “weakly developed individual bilingualism” present in the Tsova-Tush community, via contact with the Georgian-speaking clans of
Manuscript for defense – Do not circulate

Tusheti. Other authors (e.g., Shanidze შანიძე (1970)) suggest that a shift to Georgian as the dominant language began as early as the 18th century.

The shift away from Tsova-Tush was sped along by natural disaster in the 19th century: in 1830, the Tsova-Tush village of Sagirta was destroyed by a flood and landslide, and an outbreak of the black plague decimated the population of four other villages (Topchishvili 2014). Following these disasters, the permanent resettlement of the Tsova-Tush in the lowlands hastened, with progressively fewer families returning to Tusheti in the summers. Throughout this period until the annexation of Georgia by the Soviet Union, Gigashvili et al. (2020) report that Tsova-Tush was still the primary language of in-group communication. During the Soviet period, however, Georgian became the dominant language spoken among the Tsova-Tush, resulting from compulsory Georgian-language education, a total disruption of the economic life of the Tsova-Tush due to collectivization, and the increasing number of mixed Georgian-Tsova-Tush families. At least since the 1980s, if not earlier, proficiency in Georgian has exceeded proficiency in Tsova-Tush within this community.

Figure 1.1. Map showing the location of Zemo Alvani, Georgia, where Tsova-Tush is spoken

Today, all Tsova-Tush speakers live in a single lowland village, Zemo Alvani, shown in Figure 1.1, reproduced from Hauk & Rentz (2019). Zemo Alvani is roughly evenly split between the Tsova-Tush and the Chaghma-Tush (i.e., descendents of the Chaghma clans once residing in Tusheti). The size of the population has dramatically decreased in recent decades. In the 1960s, there were estimated to be 2,500–3,000 speakers (Kolga 2001). By the early 2000s, Gippert (2008: 176) estimated no more
than 1,000. Today the Tsova-Tush people number roughly 1,600; among them, 400–800 are speakers of Tsova-Tush (Hauk & Rentz 2019).¹

Although the Tsova-Tush language has undoubtedly sustained a devastating break in intergenerational transmission, there remains a small but promising chance for the continued use of the language in the future. As of 2020, a handful of schoolchildren claim to be able to speak Tsova-Tush, and 60% of children claim that they hear their parents speak it at home (Wichers Schreur forthcoming). A local elementary school teacher gives regular lessons in Tsova-Tush, and a community council has been formed to discuss the development of a standard orthography, teaching materials, and further school curricula. The situation is indisputably dire, but perhaps not yet irreversible.

1.2.2 Language name

As is often the case with minoritized language varieties, there is no apolitical choice for name of this language and its community of speakers. Different terms are used and contested by both speakers and researchers, with no clear consensus within any group. Bats, Batsbi, Tsova-Tush, and Tush are the most common terms I have seen advocated for or against. The first two derive from the endonym bacav /baʃav/ ‘a Tsova-Tush person’ and its plural form bacbi /baʃbi/; the latter two refer to the people’s traditional territory in the Tsova gorge of the Tusheti mountain region.² In some cases, a stakeholder’s choice in terminology depends on whether they are invested in underscoring the common heritage of the Tsova-Tush language with the Chechen and Ingush languages across the border in Russia, or whether they are prefer to highlight the ethnic, religious, and cultural affiliations the Tsova-Tush people share with Georgians. The Tsova-Tush people, like the majority of the Georgian population, practice Orthodox Christianity, while their linguistic kin in Russia practice Islam, adding to the tension in aligning the group too closely with speakers of closely related languages.

There are no purely linguistic or historic grounds for selecting a language name that fully sidestep the political associations of any given term. In practice, many community members use the terms interchangeably. When naming the language is not necessary, Tsova-Tush speakers often say that they are simply speaking veɣeʃ /veɣeʃ/ ‘in our (incl) way.’ In most of my work, I use the term Tsova-Tush, because a few of my primary consultants have encouraged me to use an equivalent term when

¹ These numbers are based on locals’ own estimates. Through similar means, (Wichers Schreur forthcoming) suggests there are roughly 500 speakers. Gigashvili et al. (2020) provide a considerably higher estimate of “less than” 1,500 speakers; they find that, as of 2010, there were 410 Tsova-Tush families in Zemo Alvani. Gigashvili et al.’s (2020) estimates match my and Wichers Schreur’s (forthcoming) estimates for the size of the total heritage population; the number of speakers is most likely between a quarter to one half of that community.

² The origin and use of these terms is discussed by, e.g., Shavkhelishvili [Шавхелишвили] (2014), Uturgaidze [Утургаидзе] (1988).
speaking Russian (цюватушинский язык) or Georgian (თოვათუშური ენა)³. I acknowledge that this is not the preferred term of all stakeholders, even among speakers themselves, and I have no authority to advocate for or against any proposed language name.

Throughout this dissertation, I will continue to use Tsova-Tush, with two exceptions: when quoting a source that uses another term, and when translating excerpts of Tsova-Tush recordings in which speakers use the term bacbi or related forms, since these terms contrast with c’ov(a) /Γ’ov(a)/ and tuš /tuʃ/, which are used in Tsova-Tush as well.

### 1.2.3 Tsova-Tush documentation and description

Tsova-Tush has a long history of documentation and description. The first grammatical descriptions of Tsova-Tush were published in German (Schiefter 1854, 1856). Schiefter’s 1856 work is one of the first grammars of a Caucasian language and totaled 160 pages, including nine texts (mostly translations of Russian biblical passages) and a lexicon. This grammar was based on materials assembled by a native Tsova-Tush-speaking priest, Iob Ciskarishvili, in correspondence with Schiefter and the French Caucasologist Marie-Félicité Brosset.

In 1953, a 384-page grammar of Tsova-Tush was published in Russian (Desheriev 1953), building on the previous grammar but with much new material and novel analyses. Although this work dedicates several sections to Georgian borrowings, Desheriev otherwise deliberately avoids Georgianisms in Tsova-Tush examples, while embracing sovietisms from Russian, resulting in an artificial representation of the language.

The first major Tsova-Tush grammatical description written in English was a 65-page sketch published in 1994 (Holisky & Gagua 1994). A short grammar (168 pages) of Tsova-Tush was published recently in Georgian (Sanik’idze 2010). Chrelashvili has published grammatical sketches in Georgian (Chrelashvili 2002) and Russian (Chrelashvili 2007). A new sketch grammar in English, with new data and analyses, is scheduled to be published soon (Hauk & Harris forthcoming).

A Tsova-Tush-Georgian-Russian dictionary with 7,088 entries, on 935 hand-written pages, remains one of the most important descriptive works on Tsova-Tush (Kadagidze & Kadagidze 1984). Although published in 1984, the materials for the dictionary were collected in the 1930s (Gippert 2008). Tsova-Tush head words are transcribed in both an extended Georgian alphabet and Latin alphabet. Recently, scholars at Telavi State University in Georgian have produced a

³ To render characters in Georgian and Tsova-Tush, I have used the TITUS Cyberbit Basic font (http://titus.fkidg1.uni-frankfurt.de/unicode/titut.asp, accessed 2020-02-20), developed by the researchers in the ECLinG project (Gippert et al. 2006) in contract with Bitstream. This font includes extensions to the modern Georgian alphabet to meet the needs of the phonemically-rich minority languages of Georgia, such as Tsova-Tush.

Tsova-Tush was one of the subjects of the documentation project ‘Endangered Caucasian Languages in Georgia’ (ECLinG) sponsored by DoBeS (the Volkswagen Foundation) starting in 2002 (Gippert et al. 2006). This project produced ca. 37 hours of audio and video recordings of Tsova-Tush speech in multiple genres, as well as music and other cultural materials, available in the ECLinG collection at The Language Archive (Gippert 2012).

These previous projects are immensely valuable resources for Tsova-Tush. However, even with this long history of documentation and description, only a handful of linguistic phenomena in Tsova-Tush have received more than a very basic descriptive treatment so far. Harris has analyzed numerous aspects of Tsova-Tush morphology and syntax, in particular its unusual exponence patterns (Harris 2010, 2009, 2008, Harris & Samuel 2011). Holisky has made important contributions to the description of Tsova-Tush syntax, particularly the active-static marking of intransitive subjects and the interaction of tense and aspect (Holisky 1987, 1985). Kojima (2019) has written about the development of person agreement features.

Bellamy and Wichers Schreur have an ongoing experimental project on gender assignment of novel and borrowed nouns (Wichers Schreur forthcoming, Bellamy & Wichers Schreur 2019, Wichers Schreur 2019). Linguists at Telavi State University have produced sociolinguistic studies on such topics as code-switching (Gigashvili 2016), bilingualism (Gigashvili 2014), and language attitudes (Gigashvili et al. 2020).

In terms of my own documentation project, I have visited the Tsova-Tush community in Zemo Alvani four times to date, once each summer from 2016–2019, for a duration of roughly nine months in sum. My archival collection, including recordings, transcriptions, and annotations, is described below in section 1.3.1. I am also a co-author on the forthcoming grammatical sketch of Tsova-Tush (Hauk & Harris forthcoming), and I have conducted an acoustic study of Tsova-Tush geminate stops (Hauk & Hakim 2019, Hauk 2018). I have also conducted a language attitude survey (Hauk & Rentz 2019), and I have presented on the indexical shift of ‘we (incl)’ (Hauk 2020, 2019).

1.2.4 Writing Tsova-Tush

Tsova-Tush is commonly—and incorrectly—described as an “unwritten” language. Tsova-Tush has been written at least since the 1840s, when Iob Ciskarishvili was sending materials to Schiefner and Brosset for the grammar to be published in 1856. Since then, Tsova-Tush speakers have actively participated in the description of their language. Of the works mentioned in the previous section,
both dictionaries and two grammatical descriptions were written by or with the participation of a native speaker. The ECLinG project also included researchers of Tsova-Tush heritage.

The language has now been written in at least three different scripts: Mkhedruli (the script Georgian is written in), Cyrillic, and Latin, with additional letters borrowed from Arabic (ق for /ʡ/). For each script, multiple systems have been used. Speakers themselves regularly write posts and messages on social media using Mkhedruli or Latin characters. I have met poets and storytellers in Zemo Alvani who write their works by hand in an ad hoc modified Mkhedruli, unconstrained by the limited character modifications available in standard computer fonts. That is to say, Tsova-Tush is and has been a written language; it is simply not yet standardized.

A community activist group, called (in Georgian) თუშების სათემო საბჭო tušebis satemo sabč'o Tush Community Council, with support from linguists Jesse Wichers Schreur, Diana Kakashvili, and myself, is in the process of standardizing an orthography for everyday use and for materials to be used in teaching. A modified Mkhedruli script is expected to undergo testing within a year. At least one competing proposal for a standardized orthography has been circulated. Thus, in terms of speaker-oriented writing systems, progress has been made and is on-going, but there remains much work to be done.

In terms of researcher-oriented transcription systems, the lack of standardization can present an obstacle to using the rich documentation available. In my transcriptions, I try to adhere to the traditions of the linguistic area, using Caucasian Phonetic Alphabet rather than the International Phonetic Alphabet. Section 2.3.1 explains how my transcription system relates to the IPA.

1.3 Methods and assumptions

My goals in this dissertation are largely descriptive, but I hope to make these materials as accessible as possible to researchers of different theoretical traditions. I make reference at various points to both generativist and functionalist linguistic theories. I draw from multiple traditions because I view each tradition itself is an imperfect tool for arriving at something closer to the truth than what we once knew, and those tools are often better suited for certain tasks than others. Role and Reference Grammar, for instance, is well-suited for a broadly interpretable description of complex sentences. Cognitive approaches are well-suited for describing reference tracking in discourse. The linguistic cartographic enterprise built in the UG tradition is an apt tool for theorizing the encoding of speech act participants and epistemic states, necessary for capturing such phenomena as indexical shift and evidentiality. I have tried to clarify my terminology and assumptions at points of ambiguity, and I
hope that my mixing of theoretical approaches is understood as an attempt at reaching toward better communication within the discipline, rather than taking sides at my convenience.

I also believe in the importance of crossing modalities in a linguistic description. I discuss prosody and gesture throughout this dissertation (unfortunately, only impressionistically) under the assumption that these phenomena draw from the same cognitive apparatuses that produce words and phrases in a spoken language. A more thorough and detailed approach to both gesture and prosody than what I have been able to undertake here would undoubtedly lead to a better, more informative, more complete description of the language.

Chapters 3 and 4 draw heavily on corpus data, described below, while chapter 5 focuses on a small set of narratives, available in the appendices and described in 5.1.

1.3.1 Corpora and data citation

When answering questions not addressed in existing grammatical descriptions, I consult the following sources: my own collection, assembled across four years of fieldwork; the ECLinG corpus (Gippert et al. 2006); and the recent dictionaries (Bertlani et al. 2018, 2013, 2012), described below. I believe strongly in the importance of replicability, transparency, and accountability in the linguistic data I use, and for that reason linguistic examples in this document bear data citations, formatted in the spirit of the Tromsø recommendations for citation of research data in linguistics (Andreassen et al. 2019). The few linguistic examples in these first two chapters that do not have a data citation were constructed by me for illustrative purposes.

My own collected Tsova-Tush materials include more than 24 hours of spoken Tsova-Tush, nearly 10 hours of which includes HD video. Roughly 2.5 hours of these recordings contains naturalistic data, such as storytelling and conversation. These recordings, together with transcriptions and annotations (when available), are archived in my collection in Kaipuleohone, the University of Hawai‘i Digital Language Archive; the URI for my collection is https://scholarspace.manoa.hawaii.edu/handle/10125/42581. I segment and transcribe my recordings using ELAN (2019), and I manage my transcriptions and annotations with the FieldWorks Language Explorer (FLE) software tool (SIL-International 2019), whose built-in concordancer has greatly facilitated the analyses in this dissertation. The subset of my recordings which I have transcribed and annotated in FLE amount to 14,287 words tokens (4,149 word types).

When an example in this document is drawn from my archival collection, I provide a data citation in parentheses with filename (BH2-XXX) with a start-finish timestamp in the format HH:MM:SS.

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4 I wrote much of this dissertation before the Tromsø recommendations were finalized, so my data citations do not match their standards exactly.
Filenames should link directly to the relevant item in my collection, but if those hyperlinks should fail, the file can still be found by following the URI for the collection above and locating the file by name. Data citations differ slightly for the narratives (‘pear stories’ and ‘donkey stories’) included as appendices in this document. Those citations first point to the transcripts in the appendices, where timestamps can be found.

In addition to these archived materials, I have some fieldnotes that are not currently archived, typically from transcription sessions with one or more language experts undertaken under the expectation that those sessions were not to be recorded. When I use an example from these sessions, I cite it by date as “field notes” in the data citation line.

The ECLinG collection was described briefly above as containing ca. 37 hours of materials. For the purposes of this dissertation, I have been working with a selected subset of 187 items in that corpus, which amounts to 17h50m of recorded material, or 69,458 word tokens (22,042 word types). Recordings were selected by genre (including autobiographies, conversations, fairy tales, histories, and procedural texts; excluding poetry, anything prewritten that the speaker was reading aloud, or recordings with a majority of speech in Georgian), length (recordings under one minute were excluded from my subset), and completeness of the available transcript. Within those recordings, I further excluded the speech of the interviewers from analysis.

For the analyses in chapter 3 and 4, I searched my selected subset of the ECLinG corpus using the concordancing software AntConc (Anthony 2019), as well as the built-in concordancer in ELAN. Data citations for examples from ECLinG include the identifier assigned to audio and video files (e.g., BAV18_02), the name of the ELAN file associated with the file identifier (e.g., ‘Maiden_tale’), and a timestamp as described above. For all ECLinG examples included in this document, I have re-transcribed them according to my own transcription system for the sake of consistency, after consulting the audio recording to be sure of the accuracy of my transcription. ECLinG examples in my dissertation therefore sometimes differ in content from the transcript prepared by the ECLinG research team.

In addition to these corpora, I searched the dictionaries to find additional evidence for my analyses in chapters 3 and 4. The electronic files I have of (Bertlani et al. 2018, 2013, 2012) are machine-readable, so they can be searched, although the search function is not as powerful for these documents as for the corpora. As with ECLinG examples, I have re-transcribed dictionary examples in this document to match my own transcription system.

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[^1]: I am prepared to share the list of 187 recordings from the ECLinG corpus that formed the subset I consult in this dissertation upon request.
Altogether, these resources amount to more than 84,000 words that can be searched with regular expressions and viewed in a concordancer, with additional example sentences under 10,000+ headwords in the dictionaries—an impressive amount of material to be available electronically for an endangered language like Tsova-Tush. It should be noted however that the differing formats of these materials presented some challenges for analysis. The transcription systems differ among my collection, ECLinG, and the dictionaries. The sound that I transcribe as <ħ>, for instance, is <ḥ> in ECLinG. In the dictionaries, the same sound is represented in the Georgian script as <ჰ>, latinized as <ʼ>. However, because the special symbols needed for transcribing Tsova-Tush in the Georgian script do not yet have Unicode specifications, the electronic dictionary files use a non-Unicode font, meaning that, to find those characters, the search terms are <ô> and <Ư> respectively.⁶

That is to say, throughout chapters 3 and 4, when I state that I was “unable to find” evidence of a certain pattern when searching my data sources, or that I found more examples of X pattern than Y, etc., it remains possible that the sources themselves contain some relevant examples that I missed, due to my own errors in managing these differing transcription and searching systems. My claims in those chapters should not be interpreted as facts about the ECLinG corpus and the dictionaries themselves, but rather as a report of my ability as a researcher to find and interpret the data I need. In other words, errors and omissions are my own—not those of these excellent resources that I have been fortunate to be able to consult.

1.3.2 On glossing and translation

Non-English examples in this dissertation are given with interlinear morpheme-by-morpheme glosses, in accordance with the Leipzig glossing rules⁷ (with minor deviations). An explanation of abbreviations and punctuation symbols used in glossing is given in the List of Abbreviations. For full transparency of my methods and assumptions, however, some further explanations are necessary.

1.3.2.1 This, that, and yon

Although I prefer plain phrasing whenever possible, in one aspect of my glossing I hearken back to a system of demonstratives that has fallen out of use in most English dialects: the distinction between this, that, and yon. These three levels of distance are useful for distinguishing demonstratives and pronouns in Tsova-Tush and Georgian, where ‘this’ glosses the closest degree, ‘that’ glosses a

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⁶ That is, the dictionary compilers developed their own font—which is both admirably detailed in terms of the number of symbols included, as well as beautiful on the page—to accommodate the special characters needed for Tsova-Tush, and they defined those special symbols as aligning to existing Unicode codepoints that render as different characters in standard fonts, making searching a somewhat arduous task.

medial degree, and ‘yon’ glosses the furthest degree of distance. In the gloss line, ‘yon.one’ indicates a distal demonstrative pronoun (as in 1 below), while simply ‘yon’ glosses the distal adjective. In the translation line, I avoid using ‘yon,’ as I do not want to make the speakers of those examples sound like poets of yore when their actual speech was not stylized as such.

1.3.2.2 Overt vs. covert arguments in translation

Because a large part of this dissertation concerns reference tracking, it is desirable to make the presence or absence of the mention of a referent highly visible in interlinear texts. I have chosen to do this in the translation line. When a referent is mentioned with an overt pronoun or person agreement on a verb (e.g., yo-s go-1sg ‘I will go’), I use a pronoun in the translation line with no exceptional marking, as with ‘he’ in (1). When the argument is dropped altogether, I put a pronoun or occasionally a noun—when necessary to prevent an ambiguity in translation not present in the original—in the translation line in square brackets; e.g., [they], [him], and [them] in (1).

(1) kud dah b-aɬ-in, qo msxl dah=a b-aɬ-ín...
   hat(b/d) away cm-give-aor yon.one.erg=& three pear(b/d) away=& cm-give-aor

   ‘[They] gave [him] the hat, and he gave [them] three pears…’ (BH2-083, Appendix A: 256)

Of course, this is an idealization that treats the (c)overtness of arguments as a binary value. The reality is more nuanced, as discussed in Chapter 5. For instance, there are cases where gender agreement on a verb effectively disambiguates the referent of a dropped argument. I still gloss reference via gender agreement as [he], etc., while treating reference via person agreement as effectively overt. My rationale is that person agreement always uniquely identifies the referent as the speaker or addressee (or at least as including the speaker or addressee), whereas gender agreement can only resolve ambiguity when there is exactly one referent for the agreement marker in the current discourse. In short, my use of square brackets in translation should be understood as a visibility tool, not a linguistic claim.

1.3.2.3 Wordhood: Postpositions and preverbs

When a transcriber places white space between two units, the natural interpretation is that those units represent separate words. Insofar as words can be considered “real,” my use of white space typically represents what I believe to be a word boundary, with two exceptions: postpositions and preverbs.

Many postpositions show two patterns of unity with their nominal argument: (i) the nominal takes an oblique case, usually dative, or (ii) the nominal appears in a bare oblique stem form. The
postposition immediately follows the noun in both scenarios. In the first pattern, I treat the postposition as a separate word. In the latter, I write the postposition as an enclitic. This choice was made for the sake of consistency; but I suspect it does not reflect speakers’ understanding of word boundaries. From what I have seen, most Tsova-Tush writers write postpositions as separate words when their translation equivalent in Georgian would be written as a separate word (not a good test for wordhood).

Preverbs are a special class of morphemes that contribute a directional or aspectual (perfective/imperfective) meaning to a verb in both Tsova-Tush and Georgian. However, preverbs behave quite differently in these languages. In Georgian, preverbs are always written together with their verb, and negation precedes a verb prefixed with a preverb. Georgian preverbs are essentially inseparable from the verb and are therefore best treated as prefixation, forming a single word.

In Tsova-Tush, when they precede the verb, preverbs form a tight syntactic unit with the verbal complex, but are nevertheless less attached to the verb than their counterparts in Georgian. The negators (co ‘not,’ ma ‘don’t’) intervene between a Tsova-Tush preverb and verb, although no other material can. Tsova-Tush preverbs can detach from the verbal complex: in conversation, preverbs often appear sentence-finally immediately after a verb, while still contributing aspectual information to the verb. Thus Tsova-Tush preverbs appear to be more word-like than their counterparts in Georgian, in that the former prcliticize to verbs when possible, but can stand alone given appropriate syntactic and pragmatic context.

In my transcription, I always write preverbs as separate words, which is consistent with how linguists typically transcribe Tsova-Tush preverbs. Non-linguist Tsova-Tush writers tend to write preverbs and verbs together as a single unit when no material intervenes—(გოლ დაჰ̡ ტეტიჼ dahtet’iⁿ ‘cut’)—but otherwise as separate words: გოლ და ჰ̡ ტეტიჼ da̡ co tet’iⁿ ‘did not cut’, ჰ̡ ტეტიჼ da̡ tet’iⁿ ‘cut’ (alternate word order).
Chapter 2

Background

This chapter covers background information that is relevant throughout the remainder of the dissertation. Section 2.1 is a review of literature on reference tracking; section 2.2 is a review of literature on deixis; and section 2.3 is an overview of relevant aspects of the grammar of Tsova-Tush. Literature reviews for more specific topics are addressed in their respective chapters.

2.1 Reference tracking

Van Gijn et al. (2014: 2) define reference tracking as “the capability of interlocutors to unequivocally determine the referent(s) of a linguistic expression.” To do this, interlocutors must be able to relate the content of a new linguistic expression to a set of information and assumptions shared among them—to the common ground. This notion of common ground frames communication as a continuous updating of the set of propositions interlocutors would mutually agree to be true in some sense (Krifka 2008). Stalnaker (2002: 716) formalizes this view of common ground as follows, where \( \phi \) represents a proposition: “It is common ground that \( \phi \) in a group if all members accept (for the purpose of conversation) that \( \phi \), and all believe that all accept that \( \phi \), and all believe that all believe that all accept that \( \phi \), etc.” (italics in the original).

That is, during a conversation, if I say, “Foodland was all out of rice when I checked on Wednesday,” and my interlocutor accepts that proposition, it becomes part of our common ground, in addition to the set of facts we already believed about the world—e.g., that today is Friday, or that Foodland is a grocery store. If my interlocutor then says, “I saw some there yesterday,” they expect that I will understand that ‘some’ and ‘there’ each refer to elements in our common ground—namely rice and Foodland. For me to be a successful participant in this conversation requires that I successfully track those referents.

This common ground is continuously updated in the process of communication, as new information is shared and understood among the interlocutors, and during that process referents are intro-
duced (entered into the common ground) and then persist there at various stages of activation as the interlocutors’ memory of them decays over time. As a referent becomes less active in interlocutors’ consciousness, the linguistic requirements for how it can be referred to change. Suppose that several turns of conversation had occurred between my proposition about unavailability of rice in Foodland and my interlocutor’s assertion that it had apparently been restocked. The longer the lapse, the less felicitous it becomes for them to say, as before, “I saw some there yesterday.” When the referents rice and Foodland have sufficiently decayed, they will have to be stated explicitly: “I saw rice in Foodland yesterday.”

Explicit reference, then, involves the use of expressions that can (mostly) unambiguously identify the mental concept intended to be communicated. Even though Foodland is a chain of stores, I do not need to say, “the branch of Foodland in Kaimuki, which is a neighborhood in Honolulu, which is the capital of the state of Hawai’i, which is...” etc., because interlocutors enter conversations with sufficient background knowledge and reasoning skills to be able to accommodate ambiguity at that level. As explicitness decreases, the number of referents that could be picked out by a given expression increases: the indefinite pronoun “some” can refer to a far greater set of concepts than the concrete noun “rice” can.

The availability of less explicit forms of reference (e.g., pronouns) creates a communicative problem for both a speaker and their audience. When can less explicit forms be used, and by what means can they be resolved to their intended referent? This problem could be easily side-stepped, in theory, by *always* using explicit referential strategies. However, the fact that every language has some means of inexplicit reference—pronouns, argument dropping, etc.—indicates that this strategy is neither necessary nor desirable for facilitating communication. At times, a speaker wants to be able to encode referents more efficiently (with less effort at the encoding stage) or in a way that reminds the interlocutor that the given subject was already under discussion, and therefore inexplicit reference is a favored choice, given appropriate conditions.

There are various ways of conceptualizing the relationship of a referent’s status in the common ground to the linguistic forms that can be felicitously used to refer to it. Proposed scales for predicting referential choice draw on such partially overlapping concepts as accessibility, definiteness, givenness, and topicality.

Stirling (2001) defines accessibility as the ease with which an interlocutor can identify the intended referent, observing that “highly accessible referents are coded with minimal forms while referents which have low accessibility require morphosyntactically more complex expressions which also provide more information about the referent” (Stirling 2001: 8). Thus accessibility, as a cognitive state reliant upon memory and attention, can be measured indirectly by linguistic means, looking at
the forms of reference used. If my interlocutor says “some” and I understand the reference to *rice*, that referent must have been accessible for me.

The concept of definiteness in language is notoriously difficult to define. As Chafe (1976) points out, to manipulate definiteness in linguistic expressions is to relate a referent to its membership in a category—say, the category of *dogs*—while only invoking those members of that category about which the speaker intends to communicate. That is, ‘the dog’ is a member of the category *dogs* and is further an *identifiable* dog, while *a dog* is merely any member of the category.¹ In using a definite, in the words of Chafe (1976: 39), “the assumption... is not just ‘I assume you already know this referent,’ but also ‘I assume you can pick out, from all the referents that might be categorized this way, the one I have in mind’.” Thus identifiability of the intended referent is key to definiteness, and linguistic forms described as definite (‘the,’ certain uses of demonstratives) are expected to be used when the referent is identifiable.

Of givenness, Chafe (1976: 30) states, “given (or old) information is that knowledge which the speaker assumes to be in the consciousness of the addressee at the time of the utterance.” He further points out that new information need not be *previously unknown* to the addressee, but simply not (yet) activated in the conversation. Gundel et al. (1993) draw on this concept of givenness to model the felicitousness of different referential forms. Their Givenness Hierarchy is shown in Table 2.1. Each status is the top row is a necessary and sufficient condition for the use of the linguistic forms in the bottom row.

<table>
<thead>
<tr>
<th>Table 2.1. The Givenness Hierarchy, with associated English referential forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>in focus                   &gt; activated              &gt; familiar                        &gt; uniquely identifiable &gt; referential  &gt; type identifiable</td>
</tr>
<tr>
<td>{it}</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>{that N}</td>
</tr>
<tr>
<td>{indefinite this N}</td>
</tr>
</tbody>
</table>

As formulated by Gundel et al. (1993: 275)

As this hierarchy illustrates, even different types of identifiability can be put along a cline. Gundel et al. (1993: 276) define a referent as *type identifiable* if “the addressee is able to access a representation of the type of object described by the expression”—which is appropriate for any noun. The status of *referential* includes this state, with the additional qualification that the addressee be able to retrieve an

¹ The conditions for using the English definite ‘the’ are considerably more complex than this, of course. Lyons, Christopher (1999: 1–14) illustrates the relationship of definiteness to concepts such as familiarity, specificity, uniqueness, identifiability, and inclusiveness (roughly, whether the totality of referents fitting an expression are invoked, especially in plurals), finding that the latter two concepts are most relevant to pinning down definiteness.
existing representation of the intended referent. To be *uniquely identifiable* further includes that this retrieval of an existing representation must be possible based on the referring expression alone.²

For a referent to be familiar, according to Gundel et al. (1993), it must be uniquely identifiable as corresponding to its representation in the addressee’s long-term memory. The status of *activated* increases this requirement to having the representation available the short-term memory, and to be in focus, the referent must further be the center of attention.

This well-articulated hierarchy nicely illustrates how the form of a referential expression relates to its presumed cognitive status: that is, the speakers’ best theory for the referent’s status in their addressees’ minds. Explicitness of the referential form increases from the left to the right of the hierarchy as givenness decreases. Further, the scale includes a sufficient number of stopping points to capture the differences in definiteness of linguistic expressions that can be encoded in ways that seem equivalent in terms of effort to produce the expression: ‘that dog’ and ‘the dog’ differ little (if at all) in the amount of effort it would require of a speaker to produce the form, but they satisfy different requirements for givenness, offering an explanation as to why they pattern differently in usage.

These concepts all make reference to interlocutors’ cognitive statuses, which cannot be measured directly. Rather, by looking at the linguistic form a speaker chooses, some aspects of that speaker’s theory of their addressee’s cognitive state can be inferred. Looking at patterns of referential choice across stretches of discourse, then, should provide insights into the speaker’s theory of mind. However, this is a single-sided measurement. If a speaker uses an inexplicit referential form, that referent must have been identifiable/activated/etc., but the reverse cannot be tested: we cannot necessarily identify when a speaker believes a referent to be activated in their interlocutor’s mind to examine what forms of reference are then used.

What is needed, in addition to these concepts, is a text-internal way to describe differences in a referent’s accessibility/identifiability, etc., as an independent way to predict where more or less explicit reference should be permitted. Givón (1983a,b) developed a scale in terms of topic continuity and described textual conditions for referential choices. Givón (1983b: 12) adopted the twin assumptions that “what is continuing is more predictable,” and “what is predictable is easier to process.” Within a text, it is possible to measure and track different types of continuity, as an indirect way of looking at these cognitive processes.

A somewhat simplified version of Givón’s (1983a) topic continuity scale is shown in Table 2.2. The sequence of linguistic forms follows that of Gundel et al.’s (1993) Givenness Hierarchy, but is framed in terms of the referent’s continuity as a topic in the text. Continuity can then be investigated

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² The differences between referential and uniquely identifiable is not important for this dissertation. It rather explains why an expression like ‘the dog next door’ can be used in situations of lower givenness than simply ‘the dog’ (Gundel et al. 1993: 277).
within the text in terms of distance since a given referent’s last mention, the presence of potentially competing topics, and the referent’s persistence (continued mention) in the discourse. Thus it is possible to identify linguistic environments of higher and lower continuity (e.g., occupying the subject position of adjacent clauses), which will be discussed in more detail in section 2.1.2 (and further still in chapter 5).

Table 2.2. Givón’s topic continuity hierarchy

<table>
<thead>
<tr>
<th>Continuity/accessibility</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most continuous/accessible</td>
<td>zero anaphora</td>
</tr>
<tr>
<td>topic</td>
<td>bound pronouns, grammatical agreement</td>
</tr>
<tr>
<td></td>
<td>definite NP</td>
</tr>
<tr>
<td></td>
<td>cleft/focus constructions</td>
</tr>
<tr>
<td>Most discontinuous/inaccessible topic</td>
<td>referential indefinite NPs</td>
</tr>
</tbody>
</table>

Topic continuity hierarchy as formulated in Givón (1983a: 17)

In sum, languages provide their speakers with multiple ways to express the same concept, and speakers’ choices among these expressions are related to their theory of their interlocutors’ cognitive states. To study reference tracking requires identifying what expressions are available to speakers in a given language and finding meaningful ways to compare their usage across discourse. The next two subsections describe the kinds of reference-tracking devices speakers can choose from and various approaches other researchers have taken to measuring their usage.

2.1.1 Brief typology of reference-tracking devices

The success of a referential strategy depends on its ability to pick out a referent from a pool of competing referents at various stages of activation in the interlocutors’ minds. Unambiguous reference could always be achieved by selecting a noun or noun phrase that would always uniquely identify that referent in any context: “the (only) vaguely cat-shaped lamp Bryn bought online on a whim.” In practice, it is neither necessary nor desirable to be so specific. Referents can be grouped into more general categories—e.g., inanimate objects—of which they might be the only representative in current discourse. Less explicit referential devices pick out the referents by pointing to the more general category and are successful when only one referent of that category is sufficiently activated. Thus, the English pronoun ‘it,’ which selects a singular inanimate object, can be used to track reference to the item in Figure 2.1 in a sentence like “it is already broken” as long as that item is not in competition with another singular inanimate object.

The general categories that languages use for reference tracking include gender, animacy, and number—typically expressed in a language’s system of grammatical gender or noun classes (if the
language has such a system). In English, for instance, these categories are expressed in the pronoun system, where ‘he’ and ‘she’ can refer only to singular animate referents of the appropriate gender, ‘it’ refers to singular non-human animals and inanmites, and ‘they’ picks out groups, as well as (for some speakers) singular human referents of unknown, unspecified, or non-binary gender. The ability to categorize referents by animacy, gender, and number in this way allows speakers to track them less explicitly with the pronoun system. Consider this example of reference tracking via gendered pronouns from Comrie (1989: 39):

(2) Beryl went to the cinema with Charles. It was the first time he had been able to persuade her to go out with him.

As long as an English listener recognizes as Beryl as a woman’s name and Charles as a man’s name, they should be able to identify the referents of the gendered pronouns in the second sentence. If no other he’s or she’s are introduced, speakers can in theory track gender this way for a long time.

Another reference-tracking strategy built around categorizing referents is obviation (Comrie 1989). In its tradition form, obviation is discussed almost exclusively with respect to Algonquian languages and is therefore of minimal relevance to this dissertation. However, there are some aspects of the Tsova-Tush deixis system that superficially resemble obviation, so a brief explanation is merited.

In languages with formal obviation systems (sometimes called a ‘fourth person’), one third-person referent in a stretch of discourse is treated as having prominence over others and is morphologically marked as ‘proximate,’ while all other third persons must be marked in the ‘obviative’ form (Comrie 1989). In addition to special morphological marking, there are often syntactic restrictions placed on expressions referring to obviative referents as well. The selection of which referent to treat as proximate is partially discursively conditioned, such that proximate status is assigned to the topic of the given stretch of discourse or to a third person who is physically or metaphorically close in the speaker’s point of view (Foley & Van Valin 1984: 334), citing Bloomfield 1962 on Plains Cree.

Comrie (1989) noted that potentially many languages have obviation-like reference-tracking devices, in that discursively conditioned marking of prominence might be possible through less fully
grammaticalized means than in Algonquian languages. While Tsova-Tush has no formal system of obviation, its third-person pronouns encode deictic distance, as discussed below in 2.3.4. Thus, Tsova-Tush pronouns obligatorily categorize their antecedents as close to the speaker (proximal), close to the listener (medial), or not particularly close to either (distal). If exactly one referent were active for each degree of distance, speakers could track those referents, in theory, by referring to them by their distance category similar to the way English speakers can use pronouns to track referents by gender category.

In addition to these reference-tracking devices that work by virtue of category assignment, reference tracking can be achieved if a referential device makes reference to a syntactic or discursive domain from which the referent should be supplied. In terms of syntactic domains, reference tracking is facilitated by the distinction between reflexive and non-reflexive pronouns.

In local domains (clauses, sentences), coreference is more highly marked than non-coreference: it is normally expected that the subject and the object in a clause refer to different participants (Comrie 1998). Thus, when two expressions in a local domain identify the same referent, more specialized pronouns—reflexives—are used. In non-local domains (across stretches of discourse), however, there is an expectation of topic continuity. Thus, the more marked case is when a topic switches from one clause to another. If a language requires or allows the dropping of pronominal arguments (pro-drop), it is more likely to do so for same-subject clauses. If a language uses a demonstrative pronoun in contrast to an anaphor, this usage is more likely to signal different subject. (Comrie 1998)

Some languages have formal switch-reference systems to mark same-subject and different-subject reference across clauses. In such languages, morphological marking on the predicate would disambiguate a sentence such as, “He chopped the onions, and he peeled the carrots.” If a same-subject morpheme is used on the predicate, it is clear that the food preparation was done by one person, and if the different-subject morpheme is used, these actions must have been done by different people. Thus it is a syntactic or semantic role that is monitored, rather than the referent itself, and marking clarifies whether that position is occupied by a same or different participant (Foley & Van Valin 1984: 344–345).³

³ Foley & Van Valin (1984: 354) additionally define switch-function systems, which do the opposite: “a particular participant is tracked across clauses, and the verbal morphology in each clause signals the semantic function of that participant in that clause.” I am aware of no part of Tsova-Tush grammar that behaves like a switch-function system.

As with obviation, there is reason to suspect that even languages that do not formalize switch reference in their morphological systems still mark switch reference by other means. In pro-drop languages, it is often the case that, in a sentence like, “He chopped the onions, and [he] peeled the carrots,” the second ‘he’ can only be dropped (or is required to be dropped) under coreference.
2.1.2 Survey of research methods

The reference-tracking devices described above can be realized by different parts of a language’s grammar: morphologically as agreement or special verb marking, or by the selection of different pronouns, or by syntactic and pragmatic patterns such as pro-drop. The study of reference tracking therefore spans nearly every domain of linguistic inquiry. To study this phenomenon on the basis of texts requires a myriad of careful considerations from each of these domains. Further, each category that is understood to be relevant for reference tracking has the potential to intersect with other categories, within and across domains, such that it is impossible to fully study any given reference-tracking device in isolation. In this section, I briefly summarize the linguistic features found to be relevant in previous reference-tracking studies and methods used to investigate them.

A common methodology is the comparison of parallel narratives: narratives elicited with multiple speakers using an identical stimulus, allowing the comparison of which linguistic forms are used at what point in the story. Examples include the Frog Stories of Berman & Slobin (1994), Strömqvist & Verhoeven (2004) and the Pear Stories of Chafe (1980). Pear stories are described in more detail in section 5.1.1 (and throughout chapter 5). Some studies use shorter, more controlled stimuli (e.g., Skopeteas et al. (2006)), reducing the number of competing referents available at one time. Some studies use less controlled texts, drawing from a variety of recordings, written materials, or corpora that might have greater or lesser competition among referents; those texts, therefore, are less comparable to each other. Once the texts of study have been chosen, the analysts have to decide how to transform them into the relevant data points: i.e., how to code the linguistic forms for careful comparison.

Clancy (1980) explored referential choice in English and Japanese pear stories. She coded the data by referential option (full noun, pronoun [English only], null subject) as well as by a measure of time (number of clauses) since last reference and a measure of interference (intervening mentions of competing human referents). She found a likely cognitive restraint on inexplicit reference after one or more interfering referent in both languages, in addition to several complex language-specific and speaker-specific patterns. She also found that unusual forms of reference could be explained by the presence of episode boundaries.

Haig & Adibifar (2019) looked at referential null subjects (RNS) in Persian pear stories. Their hypothesis was that higher familiarity between a storyteller and their interlocutor would favor RNS, in addition to previous observed tendencies that RNS is conditioned by person and number, distance and role of antecedent, tense-aspect-mood morphology, and the lexical semantics of verb. Pear storytellers were divided by “familiarity” with interviewer. Coding for zero arguments was done with the GRAID system (Grammatical Relations and Animacy in Discourse), an application developed for
ELAN (Haig & Schnell 2015). Other variables they considered included age and, gender of speaker, number of clause-units in each text, and new referents per clause unit. They did not find support for their hypothesis, nothing rather that RNS rates are “remarkably stable” in Persian pear stories (Haig & Adibifar 2019: 11 in prepublication draft).

Portele & Bader (2016) coded pronouns in large corpus of written German for two measures of givenness: the number of noun phrases referring to the antecedent’s referent, including the antecedent itself, and a categorical designation of given vs. new. They also coded for syntactic function (subject, non-subject), position within the clause, recency (number of sentences interfering between pronoun and antecedent), animacy, and definiteness. They found that prominence of an antecedent (as determined by position in the clause and syntactic function) influenced referential choice between personal and demonstrative pronouns.

Nagaya (2006) investigated the use of referential expressions in ten Tagalog texts. He limited his study to only core arguments in main and adverbial clauses: subjects of transitives (A), subjects of intransitives (S), and objects (O) (Nagaya 2006: 88–89). Clausal complements, purpose clauses, relative clauses, and idiomatic expressions were excluded. Each core argument was coded for the type of referential expression (lexical NP, demonstrative pronouns, personal pronouns, zero anaphora) and its rank in the animacy hierarchy. He found that Tagalog has a preferred referential strategy for participants defined by a topicality hierarchy: speech act participants and third-person topics were preferentially encoded as personal pronouns, and third-person non-topics were encoded as zero anaphora or demonstrative pronouns.

Schneider-Blum & Hellwig (2018) investigated the reference-tracking properties of word order in Tima, combining naturalistic texts with data elicited with the Questionnaire of Information Structure (QUIS) developed by Skopeteas et al. (2006). They found that “the unmarked SV/AVO constituent order is the preferred order for introducing and continuing referents, while the ergative-marked OVA constituent order is the preferred order for switching referent” (Schneider-Blum & Hellwig 2018: 975).

Lichtenberk (1996) looked at reference tracking in six traditional To’aba’ita narratives. He coded referents for syntactic role: A, S, O (direct object), OO (oblique object), PSR (possessor), OTH (other oblique). He then compared which positions were used to introduce new referents and what kind of referential strategy (lexical NP, independent pronoun, clitic pronoun, zero) was selected. He found that referential choice was determined by a complex interplay of pragmatic, semantic, and grammatical factors.

Short video stimuli were used to gather data on gesture and reference tracking in Turkish by Azar et al. (2019) and Azar & Özyürek (2015) and in German Sign Language (DGS) and German by Perniss & Özyürek (2015). These studies coded the referents for discourse (or activation) statuses: introduction,
reintroduction, maintenance, and switch. The latter two statuses refer to switch reference: a referent was coded as ‘maintenance’ when it served as the subject of adjacent clauses and as ‘switch’ when a subject referent was introduced as an object in the immediately preceding clause, (Perniss & Özyürek 2015: 43). Although findings differ among these studies, generally speaking, they observed a higher frequency of gesture with reintroduced referents than maintained referents (Azar et al. 2019: 553).

Yoshioka (2008) studied gesture used with overt, pronominal, and null reference in Japanese narratives produced by Dutcher learners of Japanese. She coded reference to maintained referents in terms of the referential expression used (lexical NP, pronoun, zero anaphora) and the rate of accompanying gestures. She found that the L2 Japanese speakers were more overtly explicit in their reference to maintained referents than native Japanese speakers in both modalities.

There have been several proposals for how to quantify the accessibility, continuity, or activation of referents when carrying out reference-tracking studies. Bickel (2003) proposed a measure of referential density: “the average ratio of overt argument NPs (nouns or pronouns) to available argument positions in the clause” (Bickel 2003: 708). That is, if a verb is known to be ditransitive, but only one of its arguments is overtly expressed, its value for referential density is lower than if all three arguments were overt. In languages with exuberant argument dropping, however, it is not always clear how many argument positions should be assumed for any given verb, so considerable prior study of the language is necessary to use this measurement accurately.

Givón (1983b) proposed a measure of referential distance: the “number of clauses to the left” since the previous occurrence of the reference in discourse. Thus a referent is maximally continuous with a referential distance value of one clause (Givón 1983b: 13). This approach can run into some of the same problems as referential distance, in that the identification of previous “occurrences” of a referent is not always straightforward unless the argument structure of every predicate is well-established.

A study by Kibrik (1996) on one Russian short story illustrates how in-depth and complex the coding of referential strategies can get. Kibrik (1996) codes each mention of a referent by the character referred to and the referential device (full NP, pronoun, distal demonstrative pronoun, proximal demonstrative pronoun, multiple types of zero anaphora). He then assigned a numerical “activation score” based on a complicated calculation from “linear distance,” “rhetorical distance,” paragraph distance, syntactic and semantic role of the antecedent, “protagonist-hood,” and animacy. Kibrik’s (1996) “cognitive calculative” approach results in numerous interesting findings and highlights just how complex reference tracking can be even in a single text.

That is, if the analyst is so inclined, abstract concepts such as accessibility, continuity, topicality, and even protagonist-hood can be quantified for the sake of comparing referential strategies, although
to do so requires considerable prior study of the language, in order to determine which categories are meaningful and how they can be consistently scored.

2.1.3 What to expect in Tsova-Tush

Expected referential strategies for Tsova-Tush (to be described in the grammatical overview in section 2.3) are listed below, in approximate order from most explicit to most covert reference, based on the literature reviewed above.

- noun phrase
  - with or without demonstrative adjective
  - with or without some other modifier
- overt pronoun
  - third person: demonstrative pronouns (proximal, medial, distal)
  - ohaʔ ‘the same (one),’ šinvaʔ ‘both,’ etc.
  - personal pronouns: so ‘I,’ ho ‘you,’ etc.
  - reflexive pronouns
- pronominal agreement (first and second person only)
- gender agreement
- co-speech gesture
- entirely overt

These reference-tracking devices can be divided into context-independent and context-dependent strategies. In the former group are referential nouns and noun phrases, gender agreement as expressed on verbs, and non-deictic anaphora such as third-person reflexives and ohaʔ ‘the same (one).’ Context-dependent strategies include pronouns, demonstratives, and co-speech gesture. The next section of this literature review explores context-dependent expressions specifically.

2.2 Deixis

Deixis refers broadly to aspects of language which can only be interpreted in terms of the context of the utterance: i.e., the participants of the communicative act and their location in space and time (Fillmore 1997b, Lyons 1977, Anderson & Keenan 1985, Lenz 2003, Weissenborn & Klein 1982). These aspects of context are often divided into personal, spatial, and temporal (Weissenborn & Klein 1982). Personal deictic expressions (or deictics) include pronouns, such as ‘I,’ ‘you.’ Spatial deictics include
demonstrative pronouns (‘this’, ‘that’), demonstrative adjectives or determiners (‘this’ in ‘this cat’),
demonstrative adverbs (‘here’, ‘there’), and other spatial adverbs (‘left’, ‘up’, ‘way over’). Temporal
deictics include adverbs, such as ‘now’ and ‘yesterday,’ as well as verb tense.

As Weissenborn & Klein (1982: 2) point out, dividing deixis into the subcategories of personal,
spatial, and temporal is not entirely satisfactory. Temporal deictics are often morphologically derived
from spatial deictics, as time is viewed metaphorically in terms of space (Diessel 1999: 139): an event
can have occurred ‘far in the past,’ while our best years remain ‘ahead’ of us. Further, as I will show
in section 2.3.4, personal and spatial deixis in Tsova-Tush overlap in the case of demonstratives (e ‘this one,’ i ‘that one,’ o ‘yon one’), which double as third-person pronouns.

(3) a. Bryn is working in her apartment at 3:25PM on March 28.
    b. I am working here now.

The sentences in (3) show the difference between deictics and lexical expressions, such as ‘apartment’ and ‘March 28,’ that retain the same meaning regardless of context. These sentences had identical
truth values at the moment that I typed them, because ‘I’ in (3b) points to Bryn, ‘here’ points to my
apartment, and ‘now’ points to 3:25PM on March 28. But those relationships are variable. If I were
to utter sentence (3b) on March 29, it would have different truth conditions, as ‘now’ would draw its
reference from a new temporal context. Similarly, if my friend Claire were to utter sentence (3b), it
would not have the same truth conditions as (3a), because ‘I’ would then point to Claire and ‘here’
would hopefully point to Claire’s own apartment (given the present necessity of social distancing).

Every language has deictic expressions that act as context-dependent variables (Lenz 2003: vii),
which differ from such expressions as ‘Bryn’ or ‘apartment’ or ‘March,’ that pick out the same referent
(or set of referents) regardless of context.⁴ Across languages, then, it is interesting to look at typo-
logical generalizations about the form and functions of deictics. Diessel (1999) provides a compelling
typological study of such aspects of demonstratives that is readily generalizable to deictics as a whole.
The next subsection briefly summarizes some of Diessel’s main findings.

### 2.2.1 Diessel (1999) on demonstratives

Diessel (1999) identified some generalizations about the syntax, morphology, semantics, pragmatic
uses, and trajectory of grammaticalization of demonstratives. His sample comprised 85 languages,
two of which are spoken in the Caucasus region: Lezgian (Northeast Caucasian), and Georgian.

Diessel identified four syntactic contexts where demonstratives occur. Demonstrative pronouns
occur in the argument position of verbs and adpositions, such as ‘this’ in the sentence ‘I want to give

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⁴ Modulo homophony and polysemy.
you *this*. Demonstrative *determiners* occur in adnominal position (i.e., before or after the noun), such as ‘this’ in ‘*this* book.’ Demonstrative *adverbs*, such as ‘here’ or ‘now,’ co-occur with verbs. Finally, demonstrative *identifiers* occur in copular or nonverbal clauses, such as ‘this’ or ‘here’ in ‘*This*/here is your book.’ Languages differ in whether the same demonstrative is used for all syntactic contexts, or if demonstratives with different syntactic distributions differ in form as well.

The latter type, identifiers, is the least well-established as a linguistic category, but importantly, some languages have unique demonstratives for this syntactic function. The Russian *vot*, Georgian *ai*, French *voilà* are examples of identifiers and are particularly difficult to translate. Example (4) shows that the Russian identifier *vot* is grammatical in this copular clause, while other demonstratives are not.

\[(4)\]  
\[
gde \text{ misha? a, vot/*tam/*tot/*etot on} \text{ Russian} \\
where \text{ Misha oh there/*there/*that/*this he} \\
‘Where is Misha? Oh, there/*there/*that/*this he is.’
\]

In terms of morphology, Diessel found that typically only adnominal demonstratives can be clitics. Demonstratives in other syntactic positions are typically unbound. Syntactic function also correlates with the likelihood that the demonstrative will inflect. Pronominal demonstratives are the most likely to take inflection, followed by adnominal demonstratives and identifiers, and adverbial demonstratives (‘here,’ ‘now’) are the least likely to inflect. Diessel also found that most demonstratives have monomorphemic stems, and that the stem of adnominal demonstratives typically matches that of pronominal demonstratives.

Diessel identified two semantic features of demonstratives: *deictic features*, and *qualitative features*. Deictic features indicate the location of the referent in the speech situation with respect to the deictic center: near or far, higher or lower, visible or out of sight, moving toward the deictic center or away, etc. All languages in Diessel’s sample had, at minimum, a contrast between proximal and distal distance among adverbial demonstratives. Qualitative features characterize the referent in such terms as humanness, sex, number, and animacy. Such features are utilized to help the interlocutor identify which referent is meant. In the sentence, ‘*This is a picture of Chris and their horse after it won the race,*’ the pronoun ‘it’ cannot refer to ‘Chris,’ because it requires a non-human antecedent, so ‘it’ must refer to the horse.

Diessel classified four pragmatic uses of demonstratives: *exophoric, anaphoric, discourse deictic,* and *recognitional.* The exophoric use orients the interlocutor to the speech situation. Only exophoric

\[\text{Diessel (1999) credits Himmelmann (1996) with this taxonomy of pragmatic uses.}\]
uses of demonstratives can be accompanied with a pointing gesture, as in ‘This chair is new.’ The anaphoric use keeps track of discourse topics, where the demonstrative is coreferential with a prior noun phrase (i.e., the Russian pronoun on ‘he’ in example 4).

The discourse deictic use connects two discourse units, where the demonstrative refers to a chunk of the discourse. While anaphoric demonstratives are coreferential with a prior NP, discourse deictic demonstratives refer back to propositions or speech acts. The word ‘that’ is used as a discourse deictic in the following sentence: ‘Sam told me I would get my money back, but that was a lie.’ The recognitional use of demonstratives activates shared knowledge of the speaker and interlocutor that has not been previously mentioned in the speech situation. Upon meeting, a person may ask their friend, ‘How’s that knee?’ only if both parties were aware that the friend had been experiencing knee pain.

Regarding grammaticalization, Diessel described the path by which demonstratives typically grammaticalize into other linguistic elements, finding that their trajectory differs by syntactic category. Pronominal demonstratives often grammaticalize as third-person pronouns, relative pronouns, complementizers, sentence connectives, possessives, expletives, and verbal number markers. Adnominal demonstratives often grammaticalize as definite articles, linkers, determinatives, nominal number markers, and potentially relative pronouns. Adverbial demonstratives often grammaticalize as directional preverbs, sentence connectives, and expletives. Identificational demonstratives often grammaticalize as nonverbal copulas, focus markers, and expletives.

Finally, Diessel discussed the possible grammatical sources from which demonstratives themselves derive. He proposed that demonstratives do not grammaticalize from lexical items, as previously supposed, but rather that they might derive from genuine deictics that belong to the basic category of every language. Support for this argument comes from the phonetic form of demonstratives cross-linguistically, where there is strong tendency for proximal demonstratives to be expressed with a higher or fronter vowel, while distal demonstratives are expressed with a back vowel.

Diessel’s demonstrative typology is useful for discussing deictics more generally. For instance, personal pronouns (‘I,’ ‘you’) have deictic features, in that the first person is closer to the deictic center than the second person. Third-person pronouns can also have qualitative features: ‘she’ points to antecedents that are female and animate. Different persons may differ in this respect: Lovick (2005) finds that Dena’ina third-person pronouns track qualitative features, such as animacy and humanness, while first-person and second-person pronouns do not.
2.2.2 A note on terminology: deixis vs. indexicality

In linguistics, words that variably point to different referents depending on the context of the utterance are known as ‘deictics’ or ‘deictic expressions,’ and their study is generally considered to fall within the linguistic subfields of pragmatics and semantics. The same phenomenon in the fields of philosophy and semiotics has traditionally been called ‘indexicality,’ where various signs or linguistic forms that draw their meaning from context are called ‘indexicals.’ Thus, when a distinction needs to be drawn, ‘deixis’ is a narrower term than ‘indexicality,’ referring only to the linguistically relevant aspects, while ‘indexicality’ can further include non-linguistic context-dependent signs (Hornoiu 2015), such as a red light indicating that drivers are expected to stop, or the blue text in this document indexing a clickable hyperlink. However, this fine distinction is not always drawn (cf. Hornoiu (2015)), or is sometimes drawn with somewhat different delimitations (cf. Nunberg (1993)).

Throughout the dissertation, I use the term ‘deixis’ as defined by Lyons (1977: 637): “the location and identification of persons, objects, events, processes and activities being talked about, or referred to, in relation to the spatiotemporal context created and sustained by the act of utterance and the participation in it.” I use the terms ‘deictics’ or ‘deictic expressions’ as defined by Anderson & Keenan (1985: 259): “those linguistic elements whose interpretation in simple sentences makes essential reference to properties of the extralinguistic context of the utterance in which they occur.” However, for the phenomenon discussed in chapter 4, I use the term ‘indexical shift,’ even though ‘deictic shift’ would be equally descriptive. I have chosen the former term, because it follows the tradition of the majority of the literature about this phenomenon. I do not draw a distinction between ‘deictics’ or ‘indexicals.’

2.3 Grammatical overview of Tsova-Tush

This section provides a grammatical overview of Tsova-Tush, particularly emphasizing those aspects of the language that will be most necessary for interpreting examples and terminology in this dissertation. Large portions of this overview are reproduced from Hauk & Harris (forthcoming).

2.3.1 Phonology

Table 2.3 shows the 41 consonant phonemes of Tsova-Tush.⁶ The phones in parentheses are not phonemes, as there are no minimal pairs, and the distribution is predictable (described below) for all but [v/w], [χ], and [ʁ].

⁶ Note the following correspondences to the IPA: c = f̃, c’ = f̃’, ʒ = d̃z, č = f̃ʃ, č’ = f̃ʃ’, ʒ = d̃ʒ, ʃ = ʃ, ʒ = ʒ.

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With the exception of the epiglottal /ʔ/ and glottal /ʔ/ (which are unaspirated), stops and affricates can be aspirated, ejective, or voiced. Aspirated stops are produced with a period of aspiration noise after the release, while ejectives are produced with a much shorter voice onset time and lower spectral tilt (creaker or less modal voice) in the subsequent vowel. Voiced consonants are fully voiced throughout their duration. Geminate stops, also called intensives, are characterized by a longer closure duration (Hauk & Hakim 2019, Hauk 2018). Long fricatives and /lː/ have not yet been closely studied.

The fricatives listed as velar, /x, ɣ/, vary in pronunciation from velar to uvular place of articulation (i.e., can be produced more like [χ, ʁ]). The phoneme /v/ is produced as a labiodental fricative [v] in word-initial position before a vowel, while in some other positions, it is pronounced [w] or perhaps [ʋ]. The distribution of these two variants has not been studied. The voiceless fricatives are generally not aspirated.

Previous descriptions have given ambiguous accounts of the phonemic status of distributional variants of radical consonants. The voiceless pharyngeal fricative /ħ/ is most clearly a phoneme. It has a wide distribution, appearing in all environments except in a syllable onset following a voiced or ejective consonant. This distribution follows a phonotactic pattern observed throughout the language: in a stop-fricative cluster, both elements are either long VOT (aspired stop + voiceless fricative) or short VOT (voiced or ejective stop + voiced fricative); e.g., thak [tʰakʰ] ‘track, footprint’ vs. t’ak ‘mud.’
In addition to /h/, some accounts have differentiated two other “pharyngeal” segments, occasionally as separate phonemes: [ʕ]⁷ and a third pharyngeal/radical consonant. The latter is probably a stop, perhaps an epiglottal [ʔ] or pharyngealized glottal stop [ʔˤ]. An instrumental study is needed to determine the precise place of articulation of this consonant. I use [ʔ], because Nichols (2011) considers the analogous segment in Ingush to be an epiglottal stop.

Whatever the precise phonetic qualities of these radical/pharyngeal consonants, their distribution would permit an analysis where only two are phonemic. The voiced fricative/approximant [ʕ] occurs only in a syllable onset following a short VOT consonant (voiced or ejective); [ʔ] occurs only word-initially before a vowel. More simply, these variants are in complementary distribution with each other as well as with /h/.

Thus there are multiple possibilities for phonologically grouping [ʕ] and [ʔ]. One possibility is that [ʕ] and [ʔ] are allophones of a single phoneme. If the phoneme were underlingly the epiglottal stop, it could be said to undergo spirantization following a short VOT consonant to be realized as [ʕ], to obey phonotactic rules in the language. If the underlying form is the voiced fricative/approximant, it would undergo fortition in word-initial position to be realized as a stop. The other possibility is that [ʕ] is a positional variant of /h/, which becomes voiced when preceded by a voiced or ejective consonant. This is consistent with the general tendency in Tsova-Tush that fricatives do not appear after short VOT consonants. By this analysis, which I lean toward, the stop [ʔ] would be a separate phoneme /ʔ/, and [ʕ] is an allophone of /h/.

That said, speakers identify and distinguish all three of these segments, which have been written in dictionaries as shown in Table 2.4. At an orthography development meeting in August 2019, attendees insisted that these sounds are distinct and each require a separate grapheme (to be determined). Thus the linguistically most efficient analysis—where one of these phones is an allophone of another—differs from the metalinguistic intuitions of these speakers. It is possible that these speakers have been influenced by the use of separate symbols for these sounds in the Kadagidzes’ dictionary. It is also possible that these three segments maintain psychological reality for speakers because there are no active morphophonemic processes for transforming one into the other.⁸ Following the leadership of Tsova-Tush writers, I keep <ʔ> and <ʕ> distinct in my transcriptions.

Word-finally, /h/ is deleted in polysyllabic words: sogoh ‘to me (ALL)’ → [sogo], but the pharyngeal is retained in joh [joh].

---

⁷ Phonologically, [ʕ] patterns like a fricative, and I have tabulated it as such. It is realized, however, either as an approximant or as pharyngealization on a following vowel.

⁸ One could test the pronunciation of [ʔ] in compounds such as bʕark’ʔiriⁿ ‘sharp-eyed’ (from bʕark’ ‘eye’ and ʔiriⁿ ‘sharp’) or ‘blackhearted’ dok’ʔarč’iⁿ (from dok’ ‘heart’ + ʔarč’iⁿ ‘black’), to check whether it is realized as [ʕ] after the short VOT stop.
Regarding other non-phonemic sounds, [f] appears in no native words, but speakers use it easily in new loan words from Russian.⁹ Voiceless [ɾ] occurs only preceding voiceless /ɬ/: e.g., barɬ [bar̥ɬ] ‘eight,’ qirɬ [qʰir̥ɬ] ‘is afraid.’¹⁰ While some have suggested that [ʂː] is a phoneme, I have found only one word where it is reliably elongated: ešmešin [eš(ː)mešːin] ‘crazy, feeble-minded’ (created via reduplication from eš ‘is lacking’). I believe the lengthening in this case is via relation to the pattern of another word in this semantic grouping: eqːseqːin ‘stupid, crazy, flighty’ (created via reduplication from eqː ‘jumps’).

For all the consonants in Table 2.3, there is a predictable labialized variant that occurs word-finally after /o/ or /u/ has been deleted. I do not consider labialized consonants to be phonemic (nor do speakers), but I transcribe reduced vowels as labialization when I hear them as such.

Tsowa-Tush vowels are shown in Table 2.5. The phonemic status of long vowels /iː, eː, ɑː, oː/ has not yet been determined conclusively. No more than two minimal pairs exist for /iː, eː, oː/. In most previous works, vowel length is not marked (as in Desheriev [Дешериев] (1953)) or is marked sporadically (Kadagidze [ქადაგიძე] & Kadagidze [ქადაგიძე] 1984). Holisky & Gagua (1994: 152) note that some long vowels “... may be analyzed as the result of compensatory lengthening and/or simplification of diphthongs, but for others, particularly the frequently-occurring [ɑː], such an analysis seems unmotivated for the present-day language.” An in-depth investigation is needed to answer questions regarding vowel length distinctions. At least /ɑː/ should be regarded as phonemic. In this text, I mark vowels as long when I hear them as long or when speakers have specifically called my attention to the length of the vowel; I have certainly failed to identify and mark some long vowels.

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<table>
<thead>
<tr>
<th>IPA</th>
<th>Dictionary symbol</th>
<th>Symbol description</th>
</tr>
</thead>
<tbody>
<tr>
<td>h</td>
<td>ჰ</td>
<td>Georgian letter ჰ h with a tail</td>
</tr>
<tr>
<td>ʕ</td>
<td>ჵ</td>
<td>Georgian letter hoe (archaic)</td>
</tr>
<tr>
<td>?</td>
<td>ე</td>
<td>Arabic letter ayin</td>
</tr>
</tbody>
</table>

---

⁹ In older loans, or Russian words borrowed via Georgian, Russian /l/ becomes Tsowa-Tush /pʰ/.

¹⁰ Tsowa-Tush writers typically use <ჰ> lh for /ɬ/, but when /ɬ/ is preceded by /r/, there is variation in the use of the ჰ grapheme(s): ჭ(ჰ)ჭ(ჰ) r(h)l(h).
For each vowel phoneme, there is a nasalized variant, created via a word-final nasal reduction process. I do not consider nasalized vowels to be phonemic, as there are no minimal pairs and their distribution is restricted only to the last syllable of a word that underlying ends in /n/. Speakers do not all realize nasalization the same way: sometimes oral vowels are used when a nasalized vowel is predicted. This variation has not been studied (to my knowledge). In connected speech, when followed by another consonant across a word boundary, a nasalized vowel can be realized as homorganic nasal consonant; e.g., xeⁿ ‘tree’ becomes [xem] in e xeⁿ ba ‘this is a tree.’¹¹

Holisky and Gagua (1994) identify four front closing diphthongs (/ui, oi, ei, ai/) and two back closing diphthongs (/ou, au/). They analyze diphthongs as non-phonemic, resulting in most cases from a predictable diphthongization process following metathesis. Metathesis occurs when a ‘fleeting’ vowel of a certain type is syncopated. The exact pattern is determined by the height of the vowel in the retained syllable vs. the height of the syncopated vowel, described in detail by Mikeladze [მიქელაძე] (1977) and summarized in Hauk & Harris (forthcoming). Diphthongs created through this process can monophthongize, although this process has not been studied systematically.

Tssova-Tush has apparently borrowed an l/r dissimilation rule from Georgian, by which multiple occurrences of /l/ or multiple occurrences of /r/ are avoided in adjacent syllables. There are a few suffixes containing /r/ in one allomorph and /l/ in another; the /r/ allomorph is used if the base contains an /l/, and the /l/ allomorph is used when the base contains an /r/. The precise domain of this dissimilation is unclear (it may span several syllables).

There is another unstudied (to my knowledge) morphophonemic process by which /-liⁿ/ can be pronounced as /lni/. This ‘liquid-nasal attraction’ might apply in broader environments, but I have noticed it chiefly when the aorist past tense /-iⁿ/ is suffixed onto a verb root ending in /l/.

Some nouns that begin with /-j/ drop that phoneme and undergo vowel changes in plural or in oblique cases.

Table 2.6 summarizes known morphophonological processes in Tssova-Tush, with descriptions and examples from Hauk & Harris (forthcoming).

By the present analysis, then, the phonology of Tssova-Tush includes 41 consonants (42 if both /ʔ/ and /ʕ/ are considered phonemes) and 9 vowels, for a total of 50–51 phonemes. Other analysts arrive at different numbers, depending on their treatment of vowel length, nasalized vowels, and the phonemehood of the three radical-pharyngeal consonants and other distributional variants described above.¹²

¹¹ See BH2-008 (00:13:18–00:13:19) for an example.
Table 2.6. Tsova-Tush morphophonemic processes

<table>
<thead>
<tr>
<th>Process</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution of hiatus</td>
<td>One of two vowels juxtaposed across a morpheme boundary is deleted.</td>
<td>/let'-d-o-as/ → [let' dos] ‘I add’</td>
</tr>
<tr>
<td>Syncope</td>
<td>Some vowels are deleted when followed by a CV sequence.</td>
<td>/sak'er-ev/ → [sak'rev] ‘neck (INS)'</td>
</tr>
<tr>
<td>Metathesis</td>
<td>A vowel in the second syllable of the stem travels over an intervening consonant after syncope under certain conditions.</td>
<td>/ʔabik'-ev/ → [ʔaibk'ev] ‘spoon (INS)'</td>
</tr>
<tr>
<td>l/r dissimilation</td>
<td>In adjacent syllables, two occurrences of /l/ or two of /r/ are avoided.</td>
<td>/t'ʕir-erč/ → [t'ʕirelt͡ʃ] ‘stars’</td>
</tr>
<tr>
<td>Liquid-nasal attraction</td>
<td>Vowel nasalization is sometimes realized as a nasal stop following a liquid</td>
<td>/doliⁿ/ → [dolni] ‘after’</td>
</tr>
<tr>
<td>j-deletion</td>
<td>Word-initial j- is deleted in oblique forms of some nouns, typically with vowel changes.</td>
<td>/jexk'-ar/ → /axk'ar/ ‘combs’</td>
</tr>
<tr>
<td>Monophthongization</td>
<td>Diphthongs created via metathesis can become monophthongal mid-vowels.</td>
<td>/kairfsxi/ ‘clothes’ → [kerfsxi]</td>
</tr>
<tr>
<td>Word-final vowel reduction/deletion</td>
<td>Word-finally, /u/ and /o/ reduce to lip-rounding on preceding consonant. Front vowels delete entirely.</td>
<td>/daxk'o/ ‘mouse’ → [daxkʷ]</td>
</tr>
<tr>
<td>Word-final nasal reduction</td>
<td>Word final /n/ is realized as nasalization of the preceding vowel or deleted.</td>
<td>/don/ ‘horse’ → [dō]</td>
</tr>
<tr>
<td>Word-final pharyngeal deletion</td>
<td>In polysyllabic words, word-final /h/ can be deleted.</td>
<td>/psareh/ ‘yesterday’ → [psare]</td>
</tr>
</tbody>
</table>

Little dedicated study has been carried out on any aspects of the suprasegmental phonology of Tsova-Tush. Holisky & Gagua (1994: 155) note that stress typically falls on the first syllable of a word, except in oblique forms of some lexical items. Coordinating and interrogative clitics, which always occur word-finally, typically attract stress.

I make reference to prosody throughout this dissertation, and I use my judgments about the placement of prosodic breaks to inform my transcriptions. As a non-native speaker, my aural impressions are certainly not an ideal representation of prosody in this language, but my judgments are nevertheless informed by nearly five years of repetitive exposure to audio recordings and interactions with native speakers when in the field.

Based on my impressions (largely drawing from storytelling), I define two prosodic units: the prosodic sentence, and a smaller intonational unit roughly equivalent to a phrase. I mark the former with a period and new gloss line, and the latter with a comma. Typically, a prosodic sentence starts at a mid-to-high intonation, with rising intonation toward a non-final break. Each subsequent phrasal unit starts at a somewhat lower intonation, with rising intonation if the clause is not sentence-final. In the final phrasal unit of a prosodic sentence, intonation falls rapidly, tempo slows, and the final syllable is typically lengthened. Speakers can add an addendum to a previous completed prosodic
Manuscript for defense – Do not circulate

sentence by started the appended phrase at roughly the same intonation as the previous non-initial phrase. I treat addenda as separate lines in transcriptions.

2.3.2 Nouns

2.3.2.1 Gender

Tsowa-Tush has five full grammatical genders and three inquorate genders (genders containing a limited number of nouns that are best treated as an exception; Corbett (2014)), as determined by the form of the agreeing class marker a noun triggers on an agreement target in singular/plural. Following Caucasian tradition, genders are referred to by the form of the agreeing class marker they trigger in singular/plural. That is, the noun nan ‘mother’ belongs to gender /j/d, because of the agreement markers (glossed as cm for ‘class marker’) on the verbs in example (5).

(5) a. e nan j-a.
   this.one mother(j/d) cm-be.impv
   ‘This is a mother.’

b. ebi nan-i d-a.
   these.ones mother(j/d)-pl cm-be.impv
   ‘They are mothers.’

The genders are shown in Table 2.7, reproduced from (Hauk & Harris forthcoming). All v/b gender nouns refer to male humans, and all j/d gender nouns refer to female humans. There are some nouns denoting humans that vary in grammatical gender: e.g., mezobel ‘neighbor’ triggers v/b agreement when the neighbor is known to be male, j/d when known to be female, d/d when human gender is unknown. There are some nouns denoting humans that always trigger d/d agreement, even when the human gender is known: e.g., bader ‘child.’

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>v</td>
<td>b</td>
<td>mar ‘husband’, dad ‘father’</td>
</tr>
<tr>
<td>j</td>
<td>d</td>
<td>pst’u ‘wife’, ag ‘grandmother’</td>
</tr>
<tr>
<td>j</td>
<td>j</td>
<td>q’a ‘rain’, gaga ‘egg’</td>
</tr>
<tr>
<td>d</td>
<td>d</td>
<td>bader ‘child’, c’a ‘house’</td>
</tr>
<tr>
<td>d</td>
<td>j</td>
<td>lark ‘ear’, t’ot ‘hand; paw; branch’</td>
</tr>
<tr>
<td>b</td>
<td>b</td>
<td>borag ‘knit slipper’, k’alos ‘galosh’</td>
</tr>
<tr>
<td>b</td>
<td>d</td>
<td>ča ‘bear’, p’ya ‘wing’</td>
</tr>
<tr>
<td>b</td>
<td>j</td>
<td>t’ark ‘finger’, bak ‘mouth’</td>
</tr>
</tbody>
</table>

34
Three of the classes in Table 2.7 are very small (inquorate). Kadagidze [ქადაგიძე] & Kadagidze [ქადაგიძე] (1984) list five words in class b/b, four of them meaning some kind of shoe, but not all shoes are in this class. Class d/j contains 9 words, all of them body parts. Class b/j contains 21 nouns, most representing body parts, but not all body parts are in these two classes.

Among the three remaining classes (j/j, b/d, d/d), linguists have had little success in identifying semantic contents. In addition to some nouns denoting humans, gender d/d includes animals, inanimates, intangible objects, many (but not all) borrowed nouns, and all masdars (deverbal nouns). Gender d/d is also default agreement, used when the agreement trigger is a question word (vux ‘what’), an indefinite pronoun (menax ‘someone’), a novel borrowing, a finite clause, or multiple nouns of different genders conjoined by coordination (i.e., koka=e borga=e ‘a leg and a slipper’ (Holisky & Gagua 1994: 163)). Genders b/d and j/j are similarly mixed.¹³ Nichols (2007: 8) finds that “Nakh-Daghestanian exhibits an extreme variety of a rare phenomenon,” in that (i) most nouns lack head gender (where gender markers appear on the noun itself), (ii) nouns have morphological classes aside from gender, and (iii) gender is only assigned semantically for human referents. New experimental evidence regarding how speakers assign gender to novel borrowings shows promise for revealing the systematicity of these seemingly opaque gender categories (Wichers Schreur forthcoming).

In the gloss line of my examples, I represent the gender of nouns in parentheses (i) if the noun is a core argument of a verb (absolutive or ergative case) and therefore might trigger gender agreement, or (ii) for oblique nouns if they trigger agreement NP-internally (e.g., with an adjective, numeral, or participle). Otherwise, I typically do not represent the gender of nouns in oblique case in the gloss line; the exception is the appendices, where I have tried to make my glossing maximally informative, which means including the gender of nouns that do not serve as agreement triggers.

There are instances when the agreeing form agrees with an argument that is either not present, due to argument dropping, or is expressed by a pronoun, which itself is not gendered. In those cases, translations disambiguate the source of the agreement. Example (6a) has a dropped subject argument; however, based on the agreement marker v- on the copula, we know it must be a singular human male, and the translation, therefore, refers to this argument as ‘he.’ Likewise, in example (6b), the subject is expressed with a first-person pronoun; however, because of the agreement marker j-, we know it must be a human female, and so the translation specifies ‘I (f).’

(6) a. k‘ac’k’oⁿ v-a
    small cm-be
    ‘[He] is small.’

¹³ See Hauk & Harris (forthcoming: section 3.2.1) for additional detail.
b. so k’ac’k’oⁿ j-a-s
   tsG small   cm-be-1sg
   ‘I (f) am small.’

In some instances, the gender of the antecedent of a pronoun cannot be disambiguated. This occurs when examples containing pronouns were elicited (and therefore have no context to disambiguate the antecedent of a pronominal referent) and also include no class markers that would reflect the gender of the pronoun. In the translation line, I represent pronouns of ambiguous gender as ‘they (sg)’¹⁴ when I believe the referent to be human (e.g., 7b below), and ‘it’ otherwise.

2.3.2.2 Case and number

Tsowa-Tush nouns decline in terms of number (singular and plural) and case. The citation form of a noun is absolutive (also called nominative) singular, which has no distinguishing affixes. The plural is formed most commonly with the suffix -i. However, other plural suffixes exist: -iš, -bi, -mi, -arč, -erč, -ar, and -er. These plural strategies are apparently lexically conditioned and must be memorized on a word-by-word basis. Another suffix, -ši, is used only for substantivizes (i.e., when participles, possessives, genitive-case nouns, adjectives, and numerals are used as nominal heads). Some common nouns have suppletive plurals (e.g., st’ak ‘man’ → vaser ‘men’). Some nouns are always plural (sani ‘door(s),’ telzi ‘saddlebag(s)’).

Different authors arrive at different counts for the number of grammatical cases in Tsowa-Tush. As in Hauk & Harris (forthcoming), I assume 11 simple cases: absolutive, ergative, genitive, dative, instrumental, contact, allative, adverbial, illative, directional, and locative; as well as two compound cases: locative-of-allative and locative-of-illative. The two compound cases involve the stacking of the locative case -ḥ onto another case suffix. The locative -ḥ is often not pronounced, due to the word-final pharyngeal deletion rule, but it protects the vowel preceding it from word-final vowel reduction processes.

In the singular, case suffixes (given in Table 2.8) attach to the oblique form of a noun, which is formed with a linking vowel (-e-, -i-, -o-, or -a-) determined by the noun’s declension class. Oblique stems can also include other root-internal changes, such as ablaut, j-deletion, or deletion of a fleeting vowel. In the plural, case suffixes follow the plural suffix, although nouns that form the plural with -i take ’a as a linking vowel in genitive plural, instrumental plural, and contact plural. Substantives in oblique cases are formed with the linking morpheme -čo-.

¹⁴ Voted word of the decade for the 2010s by the American Dialect Society
Table 2.8. Tsova-Tush case suffixes, which attach to the singular or plural oblique stem

<table>
<thead>
<tr>
<th>Case</th>
<th>Suffix</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolutive</td>
<td>-</td>
<td>Suffixed in the plural</td>
</tr>
<tr>
<td>Ergative</td>
<td>-s, -v</td>
<td>Generally, -s for singular humans; -v for plurals and other singulars</td>
</tr>
<tr>
<td>Genitive</td>
<td>-ⁿ</td>
<td>Underlyingly /-n/, undergoes nasal reduction</td>
</tr>
<tr>
<td>Dative</td>
<td>-n</td>
<td>Typically resists nasal reduction (speakers vary)</td>
</tr>
<tr>
<td>Allative</td>
<td>-g(*)</td>
<td>Underlyingly /-go/, undergoes vowel reduction</td>
</tr>
<tr>
<td>Contact</td>
<td>-x</td>
<td></td>
</tr>
<tr>
<td>Instrumental</td>
<td>-v</td>
<td></td>
</tr>
<tr>
<td>Adverbial</td>
<td>-ɣ</td>
<td></td>
</tr>
<tr>
<td>Illative</td>
<td>-l(*)</td>
<td>Underlyingly /-lo/, undergoes vowel reduction</td>
</tr>
<tr>
<td>Directional</td>
<td>-i</td>
<td></td>
</tr>
<tr>
<td>Locative</td>
<td>-ħ</td>
<td></td>
</tr>
<tr>
<td>Locative-of-allative</td>
<td>-go</td>
<td>Underlyingly /-go-ħ/, undergoes pharyngeal deletion</td>
</tr>
<tr>
<td>Locative-of-illative</td>
<td>-lo</td>
<td>Underlyingly /-lo-ħ/, undergoes pharyngeal deletion</td>
</tr>
</tbody>
</table>

Adapted from Hauk & Harris (forthcoming), Holisky & Gagua (1994)

Table 2.9 gives an example of the noun kortʷ ‘head’ declined in nearly every case. Consultants found the directional case of this word to be infelicitous when I asked, but this form might exist if a suitable context can be found. Examples of nouns of other declension classes are given in Hauk & Harris (forthcoming). The function of many of these cases is described in chapter 3 and elsewhere as relevant. Hauk & Harris (forthcoming) provide a more complete description of all grammatical cases.

For the sake of simplicity, I segment the oblique markers that define each noun declension class (e.g., -i- above) together with the case suffix: e.g., ag-as grandmother-ERG, although a more fine-grained segmentation would be ag-a-s grandmother-OBL-ERG.

2.3.3 Verbs

This section describes verbs in terms of tense, aspect, actionality, mood, evidentiality, and valency-changing derivations. Agreement and argument structure is described in chapter 3.

The citation form of verbs is their masdar (deverbal noun) form, a non-finite form ending in -ar.¹⁵ Some, but not all, verbs include a slot for agreement marking. Agreeing class markers (CM) can precede or follow the verb stem, or both. Class markers are represented by the default d agreement and separated from the rest of the verb by hyphens: d-axar ‘to go,’ d-ic-d-alar ‘to forget,’ etc.

¹⁵ The term ‘masdar’ originates from Arabic linguistics (from Arabic مَصَادِر, masādir ‘source’) and is used widely in Caucasian linguistics for what might be called a ‘gerund’ or ‘deverbal noun’ in other traditions. Conveniently and entirely coincidentally, the term masdar resembles the form of Tsova-Tush masdars; in fact, mas-d-ar ‘to make (d-class object) angry’ is a possible masdar in Tsova-Tush (although only the intransitive form mas-d-al-ar ‘to become angry’ is listed in the dictionaries).
Many verbs distinguish imperfective from perfective stems, often formed via ablaut, but formed through other means as well. Some examples are shown in Table 2.10. This lexical distinction between perfective and imperfective verbs intersects with verbal morphology that further contributes aspectual (perfect vs. imperfect) meaning, described below.

Some verbs, mostly those denoting a change in position, have additional paired stems that distinguish pluractionality: a pluractional base is used when the subject (if intransitive) or the direct object (if transitive) is plural.¹⁶ As will be discussed in 5.3.5, there are reasons not to treat these verbs

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¹⁶ This is not the same as saying that the pluractional form is used if the absolutive argument is plural. The pluractional stem is also conditioned by a plural ergative argument when the verb is of a split intransitive type, described further in chapter: e.g., daxk’ratx ‘we (erg, excl) came.’ Compound verbs formed with mak’ ‘can’ take dative subjects, but nevertheless combine with a pluractional stem when the dative subject is plural: txon co daxk’mak’ ‘we (dat, excl) can’t come.’
as morphologically plural. For that reason, I do not gloss pluraclational verbs with pl, which I use for morphological plurals. Instead, I add the word ‘many’ to the gloss: to the left of the verb if it is conditioned by a plural subject (7a), and to the right if conditioned by a plural object (7b).

(7) a. obi b-axk’-en
    yon.ones cm-many.come-aor
    ‘They came.’

    b. oqus k’alt-i hal qoxk’-d-i-en vir=mak
    yon.one.erg basket(b/d)-pl up hang.many-cm-tr-aor donkey(d/d)=on
    ‘They (sg) hung the baskets on the donkey.’

Tense, aspect, and evidentiality forms fall into three groups: the present, future, and aorist groups. The first is based on the imperfective stem the second on the perfective stem, and the last on both stems.

- **Present group**: Present, Imperfect
- **Future group**: Future, Future imperfect
- **Aorist group**: Aorist perfective, Aorist imperfective, Perfect perfective, Perfect imperfective

For verbs that do not distinguish perfective from imperfective stems, the future group is not distinct from the present group. In the Present and Future Groups, transitive verbs form the basic tense (present or future) with /-o/, while intransitives form the basic tense with /-i, -e, -u, -o, -a/, but these vowels often fail to show up in the surface form. The imperfect and future imperfect are formed with -ra, and in the third person and inclusive forms the vowel of the basic tense is usually preserved. In the present and future (but not in the imperfect and future imperfect), the postradical cm (if present) metathesizes with the vocalic present/future marker. In the Aorist Group, the basic tense is marked with -in or -en (or corresponding forms with reduced nasals), lexically determined. The vowel is syncopated by the regular processes described above and may influence the vowel of the stem. In the perfect, as in the imperfect and future imperfect, the ending -ra is added (with /a/ dropped when it is word-final).

Intersecting with the tense-aspect system is evidentiality. The evidential -l(ʷ) (underlyingly /-lo/) combines with the Present and Future Groups of tenses, and the evidentials -no and d-ano combine with the Aorist Group. These evidentials apparently identify information obtained second-hand (i.e.,

¹⁷ The term ‘aorist’ is widely used in the linguistic tradition of the Caucasus, typically for a perfective past.
hearsay). Evidentiality is left unmarked on verbs otherwise, although section 5.3.4 identifies an additional use of these evidentials.

Table 2.11, based on ex. 57 in Holisky & Gagua (1994: 180), shows the verb tit’ar (pfv) / tet’ar (impv) ‘to cut,’ partially conjugated, providing forms that would be used with a third-person subject. Translations are my own and are at best approximations of the tense/aspect/evidentiality combination. The syncretism in the aorist reported past form is due to a chain reaction of morphophonemic processes (syncope, metathesis, monophthongization, word-final vowel reduction); i.e., the form with the imperfective stem is underlyingly /tet’-i-no-ra/, while the perfective is /tit’e-no-r-a/.

<table>
<thead>
<tr>
<th>Present Group: tit’ar (imperfective)</th>
<th>Future Group: tit’ar (perfective)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td></td>
</tr>
<tr>
<td>tet”w</td>
<td>(they) cut, are cutting</td>
</tr>
<tr>
<td>Imperfect</td>
<td></td>
</tr>
<tr>
<td>tet’or(a)</td>
<td>(they) used to cut</td>
</tr>
<tr>
<td>Imperfect reported</td>
<td></td>
</tr>
<tr>
<td>tet’ralw</td>
<td>(they) evidently used to cut</td>
</tr>
</tbody>
</table>

Table 2.11. A partial paradigm of the Tsova-Tush verb tit’ar/tet’ar ‘cut’

<table>
<thead>
<tr>
<th>Present Group: tit’ar (imperfective)</th>
<th>Future Group: tit’ar (perfective)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aorist</td>
<td></td>
</tr>
<tr>
<td>tet’in</td>
<td>(they) cut, did cut (multiple times)</td>
</tr>
<tr>
<td>Perfect</td>
<td></td>
</tr>
<tr>
<td>tet’ir</td>
<td>(they) had cut (multiple times)</td>
</tr>
<tr>
<td>Aorist reported</td>
<td></td>
</tr>
<tr>
<td>tet’ino</td>
<td>(they) evidently cut, did cut (multiple times)</td>
</tr>
<tr>
<td>Perfect reported</td>
<td></td>
</tr>
<tr>
<td>tit’nor</td>
<td>(they) evidently had cut (multiple times)</td>
</tr>
</tbody>
</table>

In addition to these tenses, there are periphrastic tenses formed by combining a participle or converb with a form of the verb d-a ‘be.’ Participles resemble adjectives; both participles and adjectives are largely ignored in this dissertation. Converbs are non-finite verbs used in adverbial subordination. Tsova-Tush has two converbs: the present converb is formed by suffixing -š to the present tense, shown in (8), and the past converb is formed by suffixing -če to a verb stem (in example 9 below). Verbs also exhibit person and gender agreement, described in section 3.1.

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(8) ese pst’uin laːtː oqar-g heč’-u-š.

here woman(j/d) stand yon.ones-all watch.impv-prs-cvb

‘The woman stands here watching them.’ (BH2-044 00:00:20–00:00:23)

Beyond these indicative verb forms, other moods include subjunctive, conditional, and imperative. The subjunctive suffix is -l(ʷ) (/lo-/, like one of the evidentials), which can combine with several of the tenses in Table 2.11. Subjunctives are discussed in more detail in chapter 3. Conditionals are formed with -he, often added to a converb (as in 9) or a reported tense form. Conditionals and imperatives are generally absent from this dissertation.
Verbal valency can be changed by adding the intransitive -d-al after the verb stem\(^\text{18}\) or by adding a causitive suffix. Causatives are formed by adding -it- or -d-i- after the verb stem (if it did not already require a postradical cm). Example (10) shows the verb lark’ ?opar ‘to listen’ in its typical form in the latter half and as a derived causative in the first half.

(10) equig=a lark’ ?op-ir-as, equs=a lark’ ?op-i-r
    this.one.all=& ear cover-caus-impf-1sg.erg this.one.erg=& ear cover-prs-impf
    arsn-egʷ.
    Arsen=all

    ‘I had her listen too, she also listened to Arsen.’ (BH2-076 00:07:20–00:07:23)

In the remainder of this dissertation, I simplify the glossing of verb forms by combining discrete elements where their independent morphemic nature has little bearing on the question being addressed; i.e., instead of ?op-i-r as in (10), I only segment ?op-ir cover-impf. I also generally do not mark whether the verb stem is perfective or imperfective, although in more detailed glossing in the appendices I indicate the stem type: e.g., hač’-en watch.pfv-aor.

2.3.4 Deictics

It is now possible to turn to the linguistic elements of greatest interest in this dissertation: deictics, which includes demonstratives; personal pronouns and agreement; spatial preverbs, adverbs, and postpositions; and temporal adverbs.

2.3.4.1 Demonstratives

Tsova-Tush demonstrative pronouns, adjectives, and adverbs can be divided into three deictic distances, such that the first vowel of each almost perfectly covaries with the distance: e- proximal, i- medial, and o- distal. In canonical usage, the proximals are used for reference close to the speaker, medials are used for reference close to the addressee, and distals are used for greater degrees of physical distance. Native speakers state this arrangement plainly when asked to describe the difference among these demonstratives. However, as explored in this dissertation, other conditions may affect

\(^{18}\) There is another intransitive suffix, -d-is, which is no longer productive.
which demonstrative is used in practice—topicality, contrastiveness, speaker stance, perspective, and so on.

Table 2.12 gives the form of demonstrative pronouns in absolutive and ergative case, plus the oblique stem. The oblique stem is used in the formation of the remaining 11 cases not shown in the table.

Table 2.12. Tsova-Tush demonstrative pronouns: Absolutive, ergative, and oblique stem

<table>
<thead>
<tr>
<th></th>
<th>‘this one’</th>
<th>‘that one’</th>
<th>‘yon one’</th>
</tr>
</thead>
<tbody>
<tr>
<td>singular</td>
<td>ABS e</td>
<td>i, is</td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>ERG equis</td>
<td>icxus</td>
<td>oquis</td>
</tr>
<tr>
<td></td>
<td>OBL stem equi-</td>
<td>icxui-</td>
<td>oqui-</td>
</tr>
<tr>
<td>plural</td>
<td>ABS ebi</td>
<td>ibi, isbi, ibsi</td>
<td>obi</td>
</tr>
<tr>
<td></td>
<td>ERG eqar</td>
<td>icxar</td>
<td>oqar</td>
</tr>
<tr>
<td></td>
<td>OBL stem eqar-</td>
<td>icxar-</td>
<td>oqar-</td>
</tr>
</tbody>
</table>

Adapted from Hauk & Harris (forthcoming)

One form of the medial pronoun, is, happens to match the form of the Georgian distal demonstrative pronoun ის is ‘yon one.’ In fact, Georgian, like Tsova-Tush, has a three-way contrast among third-person pronouns, given in Table 2.13 for comparison. It is likely that some patterns in use of the Georgian three-way deictic system might influence how corresponding forms are used in Tsova-Tush. For instance, with discourse deictic uses of Georgian demonstratives, reference to a preceding proposition is typically done with a proximal, while reference to a following proposition is typically accomplished with a distal.¹⁹ I would expect similar tendencies in Tsova-Tush.

Table 2.13. Georgian demonstrative pronouns: Absolutive and dative cases

<table>
<thead>
<tr>
<th></th>
<th>‘this one’</th>
<th>‘that one’</th>
<th>‘yon one’</th>
</tr>
</thead>
<tbody>
<tr>
<td>singular</td>
<td>ABS es</td>
<td>eg</td>
<td>is</td>
</tr>
<tr>
<td></td>
<td>DAT amas</td>
<td>magas</td>
<td>imas</td>
</tr>
<tr>
<td>plural</td>
<td>ABS eseni</td>
<td>egeni</td>
<td>isini, igini</td>
</tr>
<tr>
<td></td>
<td>DAT amat</td>
<td>magat</td>
<td>imat</td>
</tr>
</tbody>
</table>

Adapted from Hewitt (1995: 77–78)

Outside these demonstratives, Tsova-Tush has a distance-neutral pronoun oha? ‘the same (one).’²⁰ There are also numeral-based pronouns such as შინვა? ‘both’ and ყოკ’ე? ‘all three,’ which are distance-

¹⁹ My source for this observation is my Georgian teachers’ frustration with my apparently insurmountable English-speaker tendency to prefer the opposite pattern. That is, in English, I use the proximal cataphorically—‘listen to this: I learned a weird fact today’—while anaphorically, I prefer the distal: ‘Land snails can sleep for up to three years straight. Can you believe that?’ For at least some Georgian constructions, the opposite pattern is used.

²⁰ There is no ეჰა? or იჰა? attested in my data, so I believe that the pronoun oha? does not denote any specific distance.
neutral. However, the spatially-distinct demonstrative pronouns are overwhelmingly the most commonly used for third-person pronominal reference.

In the examples that follow, one speaker (TB) uses all three degrees of deictic distance when referring to characters in the ‘Circle of Dirt’ picture elicitation series by Eisenbeiss et al. (1999). TB described each slide in the story as I showed them to her, sometimes pointing at my computer screen. The use of the proximal *equs* and distal *oqus* as third-person anaphors is exemplified in examples (11a) and (11b), referring respectively to the mother character and the daughter character in different scenes of the picture series.

(11) a. **equs** dah b-it: e pħu
this.one.ERG PV cm-wash this dog(b/d)

‘She [the mother] is washing **this** dog.’

(bh2-044 00:05:15–00:05:17)

b. **oqus** o phar-a-n muɣ ḥeč’q’ dah
yon.one.ERG yon dog.OBL-PL-DAT tail wring away

‘She [the girl] is wringing out **that** dog’s tail.’

(bh2-044 00:07:38–00:07:40)

In figure 2.2, the speaker is pointing to the dog on slide 18 of the picture elicitation series by Eisenbeiss et al. (1999) as she utters the sentence in (11a) with proximal demonstratives.

In another excerpt from this same recording, the main narrator TB uses the proximal demonstratives *e, equs* to refer to the girl on the slide and the medial demonstratives *icxuig, is* to refer to the cat,
in lines (12a)-(12b). In line (12c), my chief consultant and research assistant, Revaz Orbetishvili, offers a correction to her understanding of the slide. He continues TB’s use of the medial is in referring to the cat.

(12) An excerpt from the ‘Circle of Dirt’ story (BH2-044 00:03:27–00:03:48)

a. TB: e čak’unt’ad-el-n icxui-g hič’
   this squat-intr-ppl that.one-all look.at
   ‘This squatting one is looking at that one [the cat].’

b. TB: k’uit’ gočnad-d-o. k’uit’ gočnad-d-o equis.
   cat(d/d) pet-cm-prs cat(d/d) pet-cm-prs this.one.erg
   ‘The cat is getting petted. She is petting the cat.’

c. RO: t’at’en d-a is k’uit’ e daħ c’em-o-d.
   wet cm-be that.one cat(d/d) and pvb clean-prs-cm
   ‘That cat is wet, and (she) is cleaning (it).’

Table 2.14 gives the form of the demonstrative adjectives. Like other adnominals in Tsova-Tush, demonstrative adjectives show a limited degree of case agreement with their head noun. If the noun is in absolutive case, the absolutive form of the demonstrative adjective (identical to the absolutive of the demonstrative pronoun) is used; if the head noun is in any other case, the demonstrative adjective is expected to be in its oblique form. I have observed that some speakers use the absolutive form of demonstrative adjectives in all contexts, using the oblique form rarely or not at all. This pattern is consistent with the trajectory of the grammaticalization of adnominal demonstratives into determiners discussed by Diessel (1999: 128–129).

<table>
<thead>
<tr>
<th></th>
<th>‘this’</th>
<th>‘that’</th>
<th>‘yon’</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABS</td>
<td>e</td>
<td>is</td>
<td>o</td>
</tr>
<tr>
<td>OBL</td>
<td>eq</td>
<td>icx</td>
<td>oq</td>
</tr>
</tbody>
</table>

Reproduced from Hauk & Harris (forthcoming)

Examples of the demonstrative adjectives were given in examples (11a), (11b), and (12c): e phu ‘this dog,’ o (pharan) muy ‘that (dog’s) tail,’ and is k’uit’ ‘that cat.’

An additional example of a demonstrative adjective, in the oblique, is shown in (13a). In contrast, the demonstrative in (13b) is the oblique form of the possessive oquiⁿ, which is identical to the
genitive case form of the demonstrative pronoun. In Tsova-Tush, all personal possessive adjectives are identical to the genitive case of the personal pronoun, and the oblique form of the possessive is formed by denasalizing the final vowel (in my transcription, dropping the <ⁿ>).

(13) a. seⁿ mač’ar γazix xiħ oq mač’ar-ex
    my wine better be.pfv yon.obl wine-con
    ‘My wine will be better than that wine.’ (BH2-024 00:01:29–00:01:36)

b. seⁿ mač’ar γazix xiħ oqui mač’ar-ex
    my wine better be.pfv 3sg.poss.obl wine-con
    ‘My wine will be better than their (sg) wine.’ (BH2-024 00:01:15–00:01:18)

The same deictic distances are reflected in demonstrative adverbs, as well as adjectives and nouns derived therefrom, as shown in Table 2.15.

<table>
<thead>
<tr>
<th>Proximal meaning</th>
<th>Medial meaning</th>
<th>Distal meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ese(h), ise(h) 'here'</td>
<td>isi(h) 'there'</td>
<td>osi(h), ois, uis 'yon'</td>
</tr>
<tr>
<td>esivh, ese, iseivh, ise 'hither'</td>
<td>isivh 'thither'</td>
<td>osivh, uis 'in yon direction'</td>
</tr>
<tr>
<td>eserna(h) 'from here'</td>
<td>iserna(h), isilna 'from there'</td>
<td>uisrena(h), osilna 'from yon'</td>
</tr>
<tr>
<td>išt’ ‘in this way’</td>
<td></td>
<td>uиш’ ‘in yon way’</td>
</tr>
<tr>
<td>išt(r)uⁿ ‘this kind of’</td>
<td></td>
<td>ošt’uⁿ ‘yon kind of’</td>
</tr>
<tr>
<td>eseva, iseva ‘state of being here’</td>
<td></td>
<td>osiva, uisa ‘state of being yon’</td>
</tr>
<tr>
<td>išna ‘a place like this’</td>
<td></td>
<td>uis(t)na ‘a place like yon’</td>
</tr>
</tbody>
</table>

Adapted from Hauk & Harris (forthcoming), citing Kadagidze ქადაგიძე & Kadagidze ქადაგიძე (1984)

The relative distance of some of these forms is illustrated in excerpt (14), in which speaker TL describes how he and his fellow travelers returned uisrena ‘from yon’ (specifically, from Agvali, a regional capital within Daghestan, Russia), back to ese ‘here’ (i.e., Zemo Alvani, where we recorded this retelling of his story). Travel from Tbilisi (which Tsova-Tush speakers typically call kalik ‘the city’) is described with the medial distance adverb, isilna ‘from there,’ in line (14d).

(14) An excerpt from an autobiographical story by TL (BH2-073 00:02:01–00:02:13)

a. je uisrena xasavjurt’i b-ex-n-atx
    and from.yon Khasavyurt cm-go-aor-1excl.erg
    ‘And from yon we went to Khasavyurt [Daghestan, Russia].’
b. xasavyurt’-ui=lna baku b-ex-n-ax.
Khasavyurt-OBL=from Baku CM-GO-AOR-1EXCL.ERG
‘From Khasavyurt we went to Baku [Azerbaijan].’

c. bako=rna magram kalik b-ex-n-ax=a.
Baku=from but city CM-GO-AOR-1EXCL.ERG=&
‘And from Baku we went to the city [Tbilisi, Georgia].’

d. je isilna magram ese b-ex-n=a.
and from there but here CM-GO-AOR=&
‘And from there we came here [Zemo Alvani, Georgia].’

2.3.4.2 Pronouns and person agreement

The Tsova-Tush personal pronoun paradigm is shown in Table 2.16. First-person plural pronouns exhibit a clusivity distinction: ve ‘we including you’ vs. txo ‘we but not you.’ The absolutive case forms are used in the formation of oblique cases except genitive. The genitive case forms of personal pronouns also fulfill the function of possessive adjectives in absolutive case. In oblique cases of possessives, the final vowel denasalizes (i.e., drop the <ⁿ>): se ‘my (obl),’ ħe ‘your (obl),’ etc.

<table>
<thead>
<tr>
<th>case</th>
<th>1ˢᵗ singular</th>
<th>2ⁿᵈ singular</th>
<th>1ˢᵗ exclusive (1+3)</th>
<th>1ˢᵗ inclusive (1+2)</th>
<th>2ⁿᵈ plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABS</td>
<td>so</td>
<td>ho</td>
<td>txo</td>
<td>ve/vai</td>
<td>ūš</td>
</tr>
<tr>
<td>ERG</td>
<td>as</td>
<td>āh</td>
<td>atx</td>
<td>ve</td>
<td>ēš</td>
</tr>
<tr>
<td>GEN</td>
<td>seⁿ</td>
<td>ħeⁿ</td>
<td>txeⁿ</td>
<td>vaiⁿ</td>
<td>ūšⁿ</td>
</tr>
<tr>
<td>OBL stem</td>
<td>so-</td>
<td>ho-</td>
<td>txo-</td>
<td>ve-</td>
<td>ūš-</td>
</tr>
</tbody>
</table>

Reproduced from Hauk & Harris (forthcoming)

Person agreement is also reflected on finite verbs when the subject or direct object is a first or second person. The agreement markers are shown in Table 2.17. These forms are suffixed onto the verb after tense, mood, and evidentiality markers, meaning that person agreement is often word-final. In that environment, both labialization and the pharyngeals can be dropped, resulting in syncretism between absolutive and ergative person agreement.
Table 2.17. Tsowa-Tush person-number-case agreement suffixes for finite verbs

<table>
<thead>
<tr>
<th></th>
<th>Absolutive</th>
<th>Ergative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>-sʷ</td>
<td>-as</td>
</tr>
<tr>
<td>2sg</td>
<td>-hʷ</td>
<td>-ah</td>
</tr>
<tr>
<td>1+3 (excl)</td>
<td>-txʷ</td>
<td>-atx</td>
</tr>
<tr>
<td>2pl</td>
<td>-ešʷ</td>
<td>-eš</td>
</tr>
</tbody>
</table>

Adapted from Hauk & Harris (forthcoming)

2.3.4.3 Spatial preverbs, adverbs and postpositions

Tsowa-Tush preverbs, shown in Table 2.18, are locative/directional adverbs that precede verbs, often as proclitics (Harris 2009). Only the negative particle co can intervene between a preverb and the verb (Holisky & Gagua 1994, Hauk & Harris forthcoming). In some cases, the preverbs retain their locative meaning; in others, they function only as a perfective marker. For instance, while ču literally means ‘in’ in combinations such as ču d-axar ‘to go in(side),’ in other expressions, such as ču d-išar ‘to lie down,’ it has become lexicalized with the verb. The preverb d-ux ‘back’ agrees in gender with the absolutive argument of the verb. Two preverbs share their form with a personal pronoun, which can present difficulties in data coding: ah is either ‘down’ or ‘you (sg.erg),’ and so is either ‘toward speaker’ or ‘I (abs).’

<table>
<thead>
<tr>
<th>Form</th>
<th>Possible meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ah</td>
<td>down</td>
</tr>
<tr>
<td>ču</td>
<td>in, into</td>
</tr>
<tr>
<td>daḥ</td>
<td>away from speaker; perfective</td>
</tr>
<tr>
<td>d-ux</td>
<td>back</td>
</tr>
<tr>
<td>hal(ʷ)</td>
<td>up; perfective</td>
</tr>
<tr>
<td>mak</td>
<td>on</td>
</tr>
<tr>
<td>nʕaiʔ</td>
<td>outside</td>
</tr>
<tr>
<td>so</td>
<td>toward speaker (in glossing: ‘hither’)</td>
</tr>
<tr>
<td>šarn</td>
<td>(toward) home, at home; away (sg)</td>
</tr>
<tr>
<td>šuin</td>
<td>(toward) home, at home; away (pl)</td>
</tr>
</tbody>
</table>

Preverbs can be stacked when denoting an iterative motion: sodah ‘to and fro,’ halah ‘up and down.’ The preverbs šarn and šuin share their form with third person reflexive pronouns and are used to describe the movement of humans. The other preverb meaning ‘away,’ daḥ, can be used with any type of referent.
Most of the preverbs in Table 2.18 are homophonous with adverbs with the same meanings, which do not bear a close association with the verb and can be used more freely in a clause.

Example (15) illustrates preverbs used both with their spatial meaning, as well as to denote verbal aspect. The preverb ču is aspectual in this example, forming the perfective of the verb otː-d-ər ‘stop; put; prop up.’ The next three verbs are spatial in nature. This speaker’s gaze and head movements roughly tracked these directions as he spoke. Subsequently mak is apparently a preverb, although the direct object of the verb unexpectedly appears between mak and the verb.

(15) ču otː-j-i-en velosip’et’, hal hač’en, so hač’en, dah hač’en, comena mak godor otː-b-i-en, šarn=a v-ax-e’n.
co gu-r, not see-impf on basket(b/d) put-cm-tr-aor away.sg=& cm-go-aor

‘[He] stopped the bicycle, looked up, looked here, looked there, didn’t see anyone, put the basket on [it] and left.’ (BH2-083, Appendix A: 242)

The final preverb šarn potentially serves both aspectual and spatial purposes. The enclitic =a in this example commonly fuses to preverbs and is worthy of some special discussion. In longer prosodic sentences, preverbs often appear with an enclitic in one of two forms: =a is used with most preverbs, =o is used with hal and aň. The clitic attracts stress in this position and is often pronounced with higher intonation than is typical for a sentence-final clause. Throughout this dissertation, I gloss these enclitics on preverbs as =&, the same gloss I use for the more general coordinating clitics of similar but not identical form (=e, =a, =ai, etc.) to be discussed in section 2.3.5. I have not yet had the opportunity to study the preverb clitics in detail in Tsova-Tush, so a few words of caution are necessary here.

Good (2003) observes that a similar marker ’a in Chechen serves an important clause-chaining function. Peterson (2001) identifies the corresponding form in Ingush—where it also plays a role in clause chaining—to be an “elusive” Type 5 clitic (citing Klavan’s 1985 clitic typology), in that its position is determined by the final element of the domain (the verb) but its prosodic host is the element preceding the verb (the preverb). The Tsova-Tush clitic =a/ =o appears to pattern similarly to its counterparts in its linguistic cousins, in that it seems to serve a clause-chaining function, particularly when the subject of the verb following the preverb matches the subject in the previous clause. For this reason I gloss these clitics as coordination.

I also suspect that another motivation for using =a/ =o with preverbs might be metrical in nature. When I ask speakers the purpose of the =a in šarn=a and other preverbs, they find it impossible
to put into words, even though they have no problem translating the coordinating clitic discussed in 2.3.5 as ‘and’ when it fuses to other elements. In discussions about this form, language experts have attempted to alleviate my confusion by repeating the phrase over and over with increasingly exaggerated intonation and directing my attention to how nice it sounds. Georgian similarly has a euphonic -a that surfaces for metrical reasons.

Finally, because preverbs can combine with each other, and because word-final pharyngeals are deleted in polysyllabic words, it is possible that at least some instances of, e.g., so=a hither=& might in fact be so-ah hither-down, a combination of two preverbs.

In a word, preverb-clitic combinations glossed here with =& deserve a more careful analysis in future research. My transcription and translation of such clitics here could be flawed.

Table 2.19. Some Tsova-Tush postpositions

<table>
<thead>
<tr>
<th>Form</th>
<th>Meaning</th>
<th>Case of preceding noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>ču</td>
<td>in</td>
<td>GEN</td>
</tr>
<tr>
<td>čuih</td>
<td>inside</td>
<td>CON</td>
</tr>
<tr>
<td>dah</td>
<td>from</td>
<td>ADV</td>
</tr>
<tr>
<td>doliⁿ</td>
<td>after</td>
<td>oblique stem</td>
</tr>
<tr>
<td>guih</td>
<td>towards</td>
<td>oblique stem</td>
</tr>
<tr>
<td>hatx</td>
<td>in front of</td>
<td>DAT</td>
</tr>
<tr>
<td>juq’</td>
<td>between</td>
<td>DAT</td>
</tr>
<tr>
<td>juxe(h)</td>
<td>beside, at the base of</td>
<td>DAT</td>
</tr>
<tr>
<td>k’ik’el</td>
<td>under</td>
<td>DAT</td>
</tr>
<tr>
<td>mak</td>
<td>on; about</td>
<td>DAT</td>
</tr>
<tr>
<td>mciⁿ</td>
<td>up to, until</td>
<td>ALL</td>
</tr>
<tr>
<td>mpleⁿ</td>
<td>as much as, equal to</td>
<td>DAT OF GEN</td>
</tr>
<tr>
<td>penix</td>
<td>near, beside</td>
<td>DAT</td>
</tr>
<tr>
<td>pex</td>
<td>beside</td>
<td>DAT</td>
</tr>
<tr>
<td>reⁿ</td>
<td>from (SG)</td>
<td>GEN OF ALL</td>
</tr>
<tr>
<td>t’q’uih</td>
<td>behind, back, after</td>
<td>DAT</td>
</tr>
<tr>
<td>xiⁿ</td>
<td>‘from (PL)’</td>
<td>GEN</td>
</tr>
</tbody>
</table>

(Holisky & Gagua 1994, Hauk & Harris forthcoming)

Table 2.19 lists some Tsova-Tush postpositions. Like preverbs, many of these postpositions can also function independently as adverbs. Postpositions can combine with the deictic pronouns discussed in section 2.3.4, such as equ-mpleⁿ ‘this much.’ Additional adverbs with a spatial meaning include n’aiʔ ‘out,’ gogex ‘around; back,’ divh ‘there; in that direction,’ laqiś, laqeis ‘high, above,’ and laxuś ‘down’ (Hauk & Harris forthcoming).
2.3.4.4 Temporal adverbs and tense

Table 2.20 shows a non-exhaustive set of temporal adverbs in Tsova-Tush. Anderson & Keenan (1985: 298) remark that it is uncommon “for a language to employ demonstratives with specialized temporal senses that are not (in any obvious way) based on the metaphor of time as space.” Thus far, the relationships I have found between temporal and spatial deixis are the following: hatxeʔ ‘long ago’ appears to be formed from postposition hatx ‘in front of’ plus an intensifying particle -eʔ; eħat ‘then’ might be of similar origin, but with the proximal deictic; and inc ‘now’ could conceivably be related to medial deictics beginning with i- or with proximals beginning with e-.

<table>
<thead>
<tr>
<th>Forms</th>
<th>Meanings</th>
</tr>
</thead>
<tbody>
<tr>
<td>inc, qengeʔ, txa</td>
<td>now, just now, today</td>
</tr>
<tr>
<td>eħat, hatxeʔ</td>
<td>then, long ago</td>
</tr>
<tr>
<td>psareh, sipsre(h)</td>
<td>yesterday, day before yesterday</td>
</tr>
<tr>
<td>qaⁿ, lamʷ, ulʷ, palʷ</td>
<td>tomorrow, day after tomorrow, day after lamʷ, day after ulʷ</td>
</tr>
</tbody>
</table>

(Holisky & Gagua 1994, Hauk & Harris forthcoming)

Tense was discussed above in section 2.3.3, but it is worth recognizing that tense is part of the system of deixis, in the sense that its precise interpretation depends on the context of the utterance. By definition, the present tense identifies the utterance time, and past tenses identify times before the utterance time.

In narratives, unexpected shifts in tense seem to signal that the storyteller has aligned themself with the perspective of a character within a story. Consider the except in (16). Prior to this excerpt, the speaker had been telling the story in the past tense, but in this scene, where a man climbs down from a pear tree and discovers that one of his baskets of pears has been stolen, the speaker seems to be taken on that character’s perspective, signalled both by the shift in tense, as well as the exclamation of surprise, hwa!, representing the man’s reaction to the situation. All of these events occurred equally ‘before’ utterance time—the speaker is describing the ‘Pear Film,’ which he had watched a few minutes before. Yet the clauses most closely aligned with the man’s perspective are in present tense, treating the information that is new to the man as presently happening.

(16) Excerpt from DE’s pear story (BH2-084, Appendix A: 228–230)

a. ah os-en st’ak’, godor co b-a=geg.
   down go.down-aor man(v/b) basket(b/d) not cm-be.IMPV=anymore
   ‘The man came down, the basket isn’t there anymore.’
2.3.4.5 Other deictic elements

One additional demonstrative serves as an identifier (in Diessel’s (1999) terms): ai ‘(look) here,’ of Georgian origin. In example (17), the speaker concludes his narrative about a travel adventure with a friend using the identifier ai.

(17) ai ist’un.. cha lamzur buisa j-a-r txo-go-(h)..< cha-γ.  
behold like.this one beautiful night(j/j) cm-be-impf 1+3-all-loc one-adv  
‘Thus.. we had one beautiful night.. together.’  

Additionally, there are certainly some verbs that encode some aspects of deixis, most obviously motion verbs like d-axar ‘go’ vs. d-ayar ‘come.’ Deictic motion verbs are complex enough to be the subject of an essay of their own (e.g., Fillmore (1997a)). These and any other deictic elements I have omitted from the preceding sections will receive only minimal attention in this current study.

2.3.5 Coordination

Having covered the basic linguistic units in Tsova-Tush, I can now describe some elements of more complex sentences, although most of that discussion is reserved for chapters 3 and 4.

Coordination can be achieved through parataxis, the use of a coordinating conjunction (an independent prosodic word), or the use of a coordinating clitic. The first two strategies are restricted to clausal coordination; the clitic is used for both clausal and constituent coordination.

In parataxis, or asyndetic coordination, clauses are stated in a series with no conjunction, the only coordinating element being prosody. Both clauses in example (18) are finite and would be grammatical as independent intonation units. In this case, however, only the second clause had final intonation, although there is no overt coordinating morpheme. While parataxis is especially common with clauses that share the same subject, as in (18), it occurs also with different-subject clauses, sometimes with multiple clauses in a row, as in (19) from the same narrative.
Manuscript for defense – Do not circulate

(18) \text{qe}ⁿ \text{cha pešk’ar} \text{gu<d>a}-\text{en}, \text{velosip’et’-ev} \text{d-ay-or.}
\text{then one child(d/d) appear}^{<\text{cm}>}-\text{aor bicycle(j/j)-ins cm-come.i mpv-impf}
‘Then a child appeared, was coming by bicycle.’ (BH2-084, Appendix A:276)

(19) \text{daħ=a} \text{b-arž-eⁿ} \text{e msxal, divh penix, qo pešk’ar d-ay-or,}
\text{away=}& \text{cm-spill-aor this pear(b/d) there nearby three child(d/d) cm-come.i mpv-impf}
\text{chanaw, p’i”p’o”g} \text{labc’-b-or.}
\text{one.erg ping.pong(b/d) play-cm-impf}
‘The pears spilled out, over there nearby, three boys were coming, one was playing with a pingpong paddle.’ (BH2-084, Appendix A:286)

The coordinating conjunction takes the following forms: \text{je, e, and, for some speakers, ne}. The latter form seems to have evolved from the coordinating clitic \text{=}e in word-final position, where it frequently follows /n/ due to the large number of final morphemes ending in /n/ (e.g., aorist tense, genitive case, dative case, participles, adjectives in absolutive case, the reportative clitic \text{en(ʷ)}). The coordinating conjunction appears very frequently at the beginning of intonation units, where it more likely serves a discourse marking function rather than effecting syntactic coordination. In this position, it is often, but not always, elongated and followed by a brief pause.

Given that one form of the conjunction, \text{e}, is homophonous with the proximal demonstrative \text{e} ‘this (one),’ there is potential uncertainty in transcription, especially at the beginning of an intonation unit before a noun. To resolve this ambiguity, I rely on a mixture of consultants’ translations and prosodic patterns. Based on the theory that a phrase consisting of a demonstrative adjective and a noun is more syntactically integrated than a coordinating conjunction and a full clause, I assume that the demonstrative \text{e} ‘this’ will be more prosodically integrated with a following noun than the conjunction with a following phrase. Therefore, I transcribe ambiguous tokens of \text{e} as ‘this’ when they are brief, with no pause before the following noun, and as ‘and’ when they are elongated or if there is an intervening pause. This heuristic, of course, still leaves the possibility of transcription errors, and in some cases the only way to resolve the ambiguity would require looking into the speaker’s mind.

Occasionally speakers use the Georgian conjunction \text{და da} ‘and’ in Tsova-Tush. Contrastive coordinating conjunctions include \text{magram} ‘but,’ originally Georgian, and \text{ma} ‘but/and,’ perhaps a clipped version of the former. Disjunction is expressed with \text{le} ‘or.’
The coordinating clitic is the most common strategy for coordination, and it is also used in the formation of relative clauses (suffixing onto the relative pronoun).²² In noun coordination, this connective encliticizes to both coordinated nouns: *kuit’=ai phu=ai* ‘the cat and the dog.’ In phrasal coordination, it fuses to the head of the phrase. When clauses are coordinated, then, the coordinator typically encliticizes to the verb, shown in example 20. The clitic can also mean ‘too, also,’ and in that meaning its host is the focal element: e.g., *cha st’ak’=a ṣ-ay-or* ‘a man was coming too.’

(20) nač’er dah ħeč’q’-o= e qeⁿ dah d-ec’ c’am-d-a”
    rag(d/d) away wring.out-PRS=& then away cm-want clean-cm-inf
    ‘[She] is wringing out the rag and then she wants to clean [it].’ (BH2-0414 00:04:28–00:04:29)

The form of the coordinating clitic is variable, and the conditions determining which form is used have not yet been determined. The most common forms of the coordinating clitic are =e, =a, and =ai, but clitics of the form, =o, and oi are also attested in my data with apparent coordinating properties.

Table 2.21 illustrates that the different forms of the coordinating clitic are not lexically or phonologically determined, since they can be used with the same nouns. The distribution is not necessarily sociolinguistic in nature, since numerous speakers I work with use all three forms in this table at different times. The possible conditioning factors, then, must be limited to syntax and pragmatics.

<table>
<thead>
<tr>
<th>Process</th>
<th>Form</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>coordination</td>
<td>=e</td>
<td><em>phu=e</em> ‘and dog,’ <em>st’ak’=e</em> ‘and man’</td>
</tr>
<tr>
<td></td>
<td>=a</td>
<td><em>phu=a</em> ‘and dog,’ <em>st’ak’=a</em> ‘and man’</td>
</tr>
<tr>
<td></td>
<td>=ai</td>
<td><em>phu=ai</em> ‘and dog,’ <em>st’ak’=ai</em> ‘and man’</td>
</tr>
<tr>
<td>relativization</td>
<td>=e</td>
<td><em>han=e</em> ‘who,’ <em>mič=e</em> ‘where’</td>
</tr>
<tr>
<td></td>
<td>=a</td>
<td><em>menux=a</em> ‘which,’ <em>menxuic’ on mak=a</em> ‘on which’</td>
</tr>
</tbody>
</table>

Some of the forms of the clitic bear similarities to the demonstrative pronouns and adjectives discussed in section 2.3.4.1, which raises the question of whether these clitics might be somehow deictically conditioned. Sentence connectives (both for coordination and relativization) have been known to grammaticalize from demonstratives (Diessel 1999: 127), so the hypothesis is not unfounded. The clitic *=ai* seems most clearly to be the identifier *ai* ‘(look) here’ repurposed for coordination. Testing this hypothesis systematically is outside the scope of this dissertation.

²² The use of coordinating clitics for relativization is probably influenced by Georgian, where the suffix -� -c ‘and, too’ is also used to derive relative pronouns from interrogatives.
As discussed above in section 2.3.4.3, some forms of the coordinating clitic resemble clitics that appear with preverbs for apparent clause-chaining purposes, and I treat these elements the same in the gloss line, as =&. It remains unclear to me whether these clitics should be grouped together or clearly distinguished.

2.3.6 Subordination

Unlike coordination, where two clauses are linked with roughly equal status, subordination involves the combination of clauses in a dependency relation, such that the linking unit determines the structure and interpretation of the linked unit (Matić et al. 2014). Different types of subordination can be distinguished. In complementation, the subordinate clause behaves like an argument of the embedding verb. Such constructions are the subject of chapter 3. In this section I will describe less tightly linked subordination—called ad-subordination in Role and Reference Grammar (Foley & Van Valin 1984, Matić et al. 2014).

Adverbial clauses can be formed with an overt subordinating connective or with a specialized verb form, such as conditionals and converbs. The latter type was illustrated briefly in section 2.3.3. Converbs are especially important for questions regarding discourse cohesion and clause chaining, relevant to chapter 5. However, the number of different types of converb as well as their frequency of use in Tsova-Tush is dramatically less than in related languages (cf. Good (2003) on Chechen, Nichols (2011: 293–307) on Ingush). Converbial actions supply background information for the action expressed with the finite verb. I translate converbs with gerunds: the present converb letxanixoš translates as ‘dancing’ (example 23 below), and its past converb letxanixče translates as ‘having danced.’

Another specialized verb form for subordination is the use of a masdar in contact case to express a purpose clause: tag-d-ar-ex make-cm-mas-con ‘for making [d- class object].’ This construction is also used for complex verbs with quasi-incorporated nouns occupying the object position (uar atar ‘refuse,’ literally ‘say refusal’) that therefore cannot take a non-finite complement as an object, as in example (21).

---

23 A full sentence with a purpose clause is given in chapter 3, example (56).
24 The gender agreement on the verb d-axk’rex ‘for (many) to go’ does not match the expected plural marker for bees, j-. The speaker seems to have anthropomorphized these bees (which makes sense in the context of the story), resulting in d- agreement as would be used for mixed plural humans. See section 5.2.2.7 for a discussion of anthropomorphic gender marking.
Adverbial clauses can be formed with subordinating connectives, often formed from question words with a relativizing clitic: macne ‘when’ (macaⁿ ‘when?’ + =e), mič=e ‘where’ (example 22), etc. Other connectives include daxeʔ ‘because,’ oquin:da: me ‘because,’ sanam ‘while; until,’ manam ‘while,’ baq’eldǝ ‘although,’ mohek’i ‘as soon as,’ and me ‘(so) that.’ The latter connective is also used in complementization and relativization and can present problems for analysis (as discussed in chapter 3). Example (23) shows a subordinating (but not complementizing) use of the connective me.

(23)  

\[
\begin{align*}
\text{vir-en} & \quad \text{uišt’} \quad \text{moc’onad-al-iⁿ me... letx-aⁿ ix-o-š t’quih=a} \\
\text{donkey(d/d)-DAT like.that.DIST like-INTR-AOR so.that dance-INF go-PRS-CVB behind=&} \\
\text{d-ol-d-al-iⁿ} & \quad \text{dad-ax.} \\
\text{CM-start-CM-INTR-AOR master(v/b)-CON}
\end{align*}
\]

‘The donkey liked [the music] so much, that [it] started dancing behind [its] master.’

(BH2-077, Appendix B: 486)

For relativization, there are two strategies: a gap with a participial verb, and a relative pronoun with a finite verb. Example (24) illustrates the participle strategy. Example (25) shows a relative clause formed with the relative pronoun menxu-. In restrictive relative clauses, the pronoun vun=e ‘(all) that, which’ is used.

(24)  

\[
\begin{align*}
\text{[ as } & \quad \text{dac’unba-d-uin ] daq’ar žer co xif-en-d-a.} \\
\text{[ 1SG.ERG } & \quad \text{refuse-CM-PPL ] food(d/d) still not be-PPL-CM-BE}
\end{align*}
\]

‘Food [ I would refuse ] doesn’t exist.’

(BH2-039 00:01:44–00:01:47)
2.3.7 Particles and discourse markers

Elements glossed as **prt** are particles, i.e., small words or affixes whose meaning and function I can neither describe specifically nor translate well. The particle *-aʔ* is emphatic; *k‘i* is contrastive.

Elements glossed as **dm** are discourse markers that also pose difficulties for translation. These include *jev*, *k‘aco*, and *ra*. The latter two are originally Georgian, and their discourse function in Tsova-Tush is probably similar to their use in Georgian, although to my knowledge *k‘aco* as a discourse marker has not been described in either language. The discourse markers *k‘aco* and *jev* are discussed in section 4.4.3 and 5.2.2.8 as having quotative-like properties in available corpora, although in wider use they might have additional discourse functions like signaling stance; see section 4.5 for a discussion. The marker *ra* seems to signal a speaker’s desire for a lesser degree of commitment to the proposition expressed.
Chapter 3
Syntax of Complementation

This chapter provides a comprehensive description of complementation in Tsova-Tush. This topic has received little dedicated attention in previous literature. Shavkhelishvili & Vamling (2012) gives a general overview, and Holisky (1994) examines non-finite complements of auxiliary verbs. In this chapter, I build on these studies and establish a more thorough picture of Tsova-Tush complementation, drawing on corpora and dictionaries (as described in section 1.3.1).

The insights from this chapter set the stage to account for the use of deixis in embedded contexts, addressed in the next chapter. Therefore, in addition to establishing basic patterns of argument structure and complementation, the current chapter also details several syntactic operations that can be used as diagnostics for indexical shift.

Parts of this chapter were taken from Hauk & Harris (forthcoming).¹

3.1 Basic patterns of alignment and agreement

Holisky (1994: 13) suggests that there are at least eleven different valency patterns in Tsova-Tush and identifies five morphological cases associated with argumenthood: absolutive (Holisky’s ‘nominative’), ergative, dative, contact, and allative. To that list I would add one complex case, the locative-of-allative in its use at the subject in a possessive construction.

Tools for identifying grammatical relations in Tsova-Tush are limited. Word order cannot be used to identify subjects and objects, as every possible word order is attested in the data. Obligatoriness of an argument is also not a reliable test, because any argument can be dropped given a pragmatically appropriate context. Reflexives can be used to identify which of two arguments can serve as an antecedent and are therefore suggestive of subjecthood; however, because non-subject control is possible for at least reflexive possessives (example 36), reflexive licensing as a diagnostic must also

¹ Within Hauk & Harris (forthcoming), the relevant sections are ‘4.2.2 Case alignment and agreement,’ ‘4.4.2 Complementation,’ and ‘4.8 Non-verbal predication.’
be approached with caution. Patterns of agreement further attest that at least ergative and absolutive case nominals are core arguments of the verb, as they can trigger verbal agreement (described below).

In essence, while subjecthood can often be demonstrated, and objecthood can be demonstrated in limited cases where agreement applies, it is less clear how to demonstrate indirect-objecthood. Nevertheless, because one of the goals for this chapter is to inform an investigation of attitude reports, it remains of interest how noun phrases beyond the subject and direct object are encoded even where argumenthood cannot be established, given that addressees of attitude reports are likely to be treated as indirect objects or obliques. Therefore, in this section, I will show the basic patterns of intransitive and transitive verbs and of additional potential arguments in the six morphological cases identified above, irrespective of whether the latter would be better treated formally as indirect objects or something else.

A basic clause in Tsova-Tush features minimally a finite verb and a subject (overt or dropped) in either absolutive or ergative case. Third-person intransitive subjects as in (26), as well as the inclusive ve ’we including you,’ must be in absolutive case.

(26) q’ar j-atx
    rain(j/j).ABS cm-drip

‘It is raining.’ (lit., ‘Rain drips/falls.’) (Bertlani et al. 2012: 53)

First-person exclusive and second-person intransitive subjects take ergative case in two conditions: (i) when they are the subject of a class of verbs (including d-axar ‘go’ and d-ayar ‘come’) that invariably require ergative case for such subjects, or (ii) as the subject of other intransitive verbs, when perceived as acting deliberately, as in (27a). Otherwise, subjects are in absolutive case, as in (27b).

(27) a. as j-erst’n-as
    1SG.ERG cm(f)-gain.weight-AOR-1SG.ERG

    ‘I (f) put on weight [on purpose].’

    (Hauk & Harris forthcoming)

b. so j-arst’e-s"w
    1SG.ABS cm(f)-gain.weight-PRS-1SG.ABS

    ‘I (f) am putting on weight [unintentionally].’

    (Hauk & Harris forthcoming)
Holisky (1987: 109) finds that the group of intransitives that always take absolutive subjects is in fact quite small. The verb in (28) is an example of an invariant intransitive. Intransitive verbs agree in gender, person, and number with their subject (either absolutive or ergative).²

(28) uk’urnebel lac’r-ex qerɨ-i-sʷ
    incurable illness-con be.afraid.of-PRS-1SG.ABS
    ‘I am afraid of incurable illness.’ (Bertlani [ბერთლანი] et al. 2013: 323)

In typical transitive clauses, the subject is in ergative case, and the object is absolutive. Elicitation word order is SOV, as in (29), but any ordering of these constituents is possible; examples (30) and (31) show OSV and SVO word order respectively.

(29) oqus dol tepx-ʷ
    S   O   V
    yon.one.ERG drum(j/j).ABS play-PRS
    ‘They (sg) play the drum.’ (BH2-03700:26:43–00:26:44)

(30) oquiⁿ p’ečenia e k’nat-ev hal qalː-iⁿ
    O   S   V
    yon.one.GEN cookie(j/j).ABS this boy(v/b)-ERG up eat.PFV-AOR
    ‘This boy had eaten her cookies.’ (BH2-092 00:02:19–00:02:20)

(31) as ?am-d-o-s e maq-iš
    S   V   O
    1SG.ERG study-CM-PRS-1SG.ERG this verse(b/d)-PL.ABS
    ‘I am studying these verses.’ (BH2-029-a 00:07:43–00:07:45)

For transitive verbs, gender agreement is determined by the absolutive direct object. A first-person or second-person argument in either ergative or absolutive case controls person agreement.

² In terms of person agreement, Harris (2011) finds that both ergative and absolutive first and second persons trigger person agreement on a finite verb. Kojima (2019) considers absolutive person marking to be cliticization, not agreement, finding that it patterns with encliticized dative, allative, contact, and locative-of-allative case arguments. I follow Harris (2011) in treating absolutive person marking on verbs as agreement.
If both arguments are a first or second person, and therefore eligible to serve as a trigger for person agreement, the ergative argument ‘wins out,’ as in (32).³ Thus *jik’os* in this example agrees with two different arguments, showing gender agreement with the female (second-person) absolutive argument but person agreement with the first-person ergative subject, while in (33), *vexi”sʷ* agrees with the absolute object (a first-person male) in both features. The verb *tamdos* in (31) shows another instance of agreement with both subject and object.

(32) ḥal j-ik’-o-s ho lom=en
up CM(F)-take-PRS-1SG.ERG 2SG.ABS mountain.OBL=REP
‘I will take you (f) up to the mountains.’

(BH2-049 00:00:33–00:00:36)

(33) mam-is ħaš-eɣ v-ex-iⁿ-sʷ
aunt(j/d)-ERG guest-ADV CM(M)-invite-AOR-1SG.ABS
‘[My] aunt invited me (m) as a guest.’

(Bertlani დერთელი et al. 2013: 98)

There is another transitive pattern in which an experiencer subject is expressed in dative case (an alignment pattern that Tsova-Tush shares with Georgian for the same classes of verbs). Dative subjects are required of verbs expressing perception, knowledge, desire, and a few other experiences: *d-agar* ‘see,’ *xac’ar* ‘hear,’ *qetar* ‘know how,’ *d-abc’ar* ‘know (someone),’ *leʔar* ‘wish,’ *d-ec’ar* ‘love, want,’ *ešar* ‘lack,’ among others. The abilitative suffix -*mak’* ‘can, able to’ derives this pattern from ergative-absolutive transitive verbs, such that the would-be ergative argument is expressed in dative case.

The dative argument of experiencer verbs is the more grammatically prominent argument, as demonstrated by the fact that it can serve as the antecedent for locally bound anaphors such as reciprocals. In example (34), the subject of *d-abc’* ‘know (someone)’ must be in dative case, while the object *vašaⁿ* ‘each other’ has to be in absolutive case. The order of constituents can be scrambled, including word orders that place the anaphor before its antecedent, but the case frame is strictly dative-absolutive.

³ Kojima (2019: 290) finds that, when both the subject and object are a first or second person, the ergative argument is reflected as a agreement, optionally followed by object agreement as an enclitic: e.g., *v-abc’-v-in-as=ħo CM-introduce-CM-AOR-1SG.ERG=2SG.ABS* ‘I introduced you.’ In my own data, it is not clear to me that the postposed absolutive argument forms a unified prosodic unit with the verbal complex, and Kojima (2019) does not provide access to the recordings on which he bases his judgments of prosodic unity and encliticization. Regardless, it is clear that the ergative argument is privileged in terms of its ability to contribute person agreement and form a tight unit with the verb.
(34)  a.  oqarn  d-abc’  vašaⁿ
     yon.ones.DAT  cm-know  each.other.ABS
     ‘They know each other.’  (BH2-026 00:21:24–00:21:26)

    b.  *vašbin  d-abc’  oqar
     each.other.DAT  cm-know  yon.ones.ABS
     Intended:  They know each other.

This pattern differs from other verbs that take non-subject arguments in dative case, such as let’ ‘help’ in (35), in which the absolutive subject serves as the antecedent of the dative-case reflexive; a reversal of these cases would be ungrammatical.⁴

(35)  chadari  badr-i  let’  dačo  šair  kort-in
     some  child(d/d)-pl.ABS  help  only  3SG.REFL.POSS  head-DAT
     ‘Some children help only themselves (lit. their own head).’  (BH2-026 00:16:06–00:16:26)

As hinted above, however, the ability of the dative experiencer to serve as the antecedent of a reflexive in (34a) does not definitively indicate that the dative argument is the subject. The ambiguity in interpretation of example (36) indicates that non-subject control is possible at least for the reflexive possessive šariⁿ ‘her/his own.’ In this example, the reflexive—modifying the direct object—can refer back to either the ergative subject (Kutsi) or the allative indirect object (Champo).

(36)  kuci-s  č’amp’ui-g  j-ag-it-ieⁿ  šariⁿ  surat.
     S  IO  V  Refl  O
     Kutsi(j/d)-ERG  Champo(v/b)-ALL  cm-see-caus-aor  3SG.REFL.POSS  picture(j/j)
     ‘Kutsi_k showed Champo_v her_k/his_v own picture.’  (BH2-040 00:13:50–00:13:53)

It could be argued on this basis that the reflexive pattern with the dative experiencer in (34a) is another instance of an indirect object licensing a reflexive direct object. However, there is no other argument in the dative-experiencer pattern that could possibly be a subject. Since the opposite reflexive-licensing pattern is ruled out, the absolutive cannot be the subject. An ergative argument cannot be introduced in (34a)—‘It knew them to each other.’—nor for any of the experiential verbs

⁴ The reflexive construction in (35), combining the noun kortʷ ‘head’ with a reflexive possessive, is a common strategy for reflexivization in Tsova-Tush and appears to be calqued from Georgian reflexives with თავი tavi ‘head.’ When the reflexive serves as the agreement trigger, verbs reflect b-class agreement with kortʷ (shown in examples 45 and 46 below). This is the only construction in which a human (in the singular) can trigger the agreement marker b-. 

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that pattern this way, so it seems unlikely that the dative pattern mirrors that of the ditransitive in (36).

Dative verbs could be treated, then, as either obligatorily subjectless ditransitives, or as an unusual transitive pattern where the subject is in dative case. Because unusual case assignment seems more plausible than a class of subjectless verbs, I adopt the dative-subject analysis.

Additional objects are expressed in dative, allative, contact, or locative-of-allative case. Dative is used in most instances where the argument is a recipient, beneficiary, or goal: e.g., *d-ələr* ‘give (to),’ *tag-d-ar* ‘make, do (for),’ *qosar* ‘throw (at),’ *d-ešar* ‘promise,’ *khek-d-ar* ‘cook, prepare (for),’ *ecar* ‘buy (for).’ An indirect object of this type is shown in (37).

(37) ...*o kud dah b-aɬ-in oquin equs magram...*
    *yon hat(b/d) away cm-give.pfv-aor yon.one.dat this.one.erg but*
    ‘... he gave that hat to him, however...’

Allative case is used with verbs (transitive and intransitive) denoting a transfer of information to or attention toward the allative argument, as in (36) above (‘...showed Champo’) and in (38) below. For most verbs of speech, allative case is used for the argument to whom the described speech is addressed. Some non-speech verbs take allative indirect objects as well, such as *tec’-d-ar* ‘teach (to),’ *heč’ar* ‘watch, look at,’ *kir-d-alar* ‘stare (at),’ and *lark’ ʡopar* ‘listen (to).’ Allative case is also used for the causee in a causative derived with -it: *d-ag-it-ar* ‘show (to)’ (from *d-agar* ‘see’).

(38) *vašbar v-ek-iⁿ hame-go...*
    together cm(m)-call-aor everyone.obl-all
    ‘[He] called everyone together...’

Allative case is used with verbs (transitive and intransitive) denoting a transfer of information to or attention toward the allative argument, as in (38). For most verbs of speech, allative case is used for the argument to whom the described speech is addressed. Some non-speech verbs take allative indirect objects as well, such as *tec’-d-ar* ‘teach (to),’ *heč’ar* ‘watch, look at,’ *kir-d-alar* ‘stare (at),’ and *lark’ ʡopar* ‘listen (to).’ Allative case is also used for the causee in a causative derived with -it: *d-ag-it-ar* ‘show (to)’ (from *d-agar* ‘see’), shown in the non-subject reflexive example (36) above.

Contact case expresses, among other things, a subject/theme talked ‘about’ or thought ‘about’ (39), the source of information with verbs of asking (40), the object of a belief (41), or a point of contact (42).

(39) *obi vašba-x dak’liv*
    yon.ones.abs each.other-con think
    ‘They are thinking about each other.’

(BH2-029-b 00:12:29–00:12:31)
Example (42) shows the pattern for up to four nouns with point-of-contact verbs. The instrument of hitting (stick) is the direct object in absolutive case, triggering j-class agreement on the verb (i.e., ‘The child hit the stick to the cow on the udder.’) Word order here is unrestricted, as in other examples.

The remaining clause types of interest are equational clauses and those expressing ownership/possession. In equational clauses, two absolutive arguments can be equated by a copula (d-a if imperfective, xi ál a if perfective) or the verbs motːar ‘seem (like), appear (to be), be considered’ and šeʒlebalar ‘can be.’ In principle, either absolutive argument of d-a ‘be’ could serve as the agreement trigger; the choice appears to be based on some property of the argument’s accessibility (topicality, specificity, givenness, etc.) rather than, for instance, word order, as shown in example (43). In (43a) the copula shows b-class agreement with ‘horse,’ the first argument; in (43b) agreement is with ‘bird’s house,’ the second argument.³

³ These examples were elicited and are therefore not good evidence regarding topicality.
The verb *motːar* ‘seem (like),’ in addition to two absolutive arguments, takes an experiencer in dative case (44). Based on reflexivization patterns, this dative argument seems to be the subject, rather than either absolutive argument (45, 46), albeit with the same cautions as above.

(44) ča motː o st’ak’-on bear(b/d).ABS seem yon.one.ABS man-DAT
‘To the man she appears to be a bear.’ (or, ‘The man considers her a bear.’)

(ECLinG bav18_05 ’Orphan girl,’ 00:07:01–00:07:03)

(45) oquin šaris kortʷ yaze₃ orat’or motː yon.one.DAT 3SG.REFL.Poss head(b/d).ABS good orator(m/f).ABS seem
‘They (sg) consider themself a good orator.’ (i.e., ‘To that one, self, seems a good orator.’)

(BH2-061 00:04:05–00:04:07)

(46) k’vexad-b-uin sai₃ kortʷ motː so₃, ma: so k’vexad-v-uin praise-CM-PPL.ABS 1SG.REFL.Poss head(b/d).ABS seem 1SG.DAT but 1SG.ABS praise-CM-PPL
comena v-a
nobody cm-be
‘I think myself praiseworthy, but there is no one praising me.’ (i.e., ‘To me, self, seems praiseworthy…’)

(Bertlani [ბერთლანი] et al. 2013: 25)

In the basic construction for ownership (i.e., ‘to have’), the possessor is expressed in the locative-of-allative case. The possessed argument is in absolutive case, serving as the agreement trigger, and the verb is either a plain copula, as in (47) or a positional verb, such as *lepčar* ‘be lying.’ The locative-of-allative argument is the grammatically more prominent of the two, as indicated by its ability to serve as the antecedent of a reflexive in (48).

(47) mara: j-aq:oⁿ ist’oria j-a ve c’ova-bi-go-(h).
DM CM-big history(j/j).ABS CM-be 1+3 Tsova.person-PL-ALL-LOC
‘Of course we Tsovas have a long history.’

(BH2-064 00:03:25–00:03:28)

(48) ouquito-(h) šaris mašina j-a.
yon.one.ALL-LOC 3SG.REFL.Poss car(j/j).ABS CM-be
‘They (sg) have their own car.’

(BH2-031 00:00:37–00:00:41)
The case frame of subject and direct objects illustrated in this section are summarized in Table 3.1. The verbs identified as intransitive or transitive in this table can often combine with the indirect object types given in Table 3.2. In some circumstances, a verb can combine with two indirect object types in this table, as in the point-of-contact verb in example (42), which had both a ‘give’-type and point-of-contact-type additional argument.

Table 3.1. Tsova-Tush argument patterns: Subject and direct object

<table>
<thead>
<tr>
<th>Subject</th>
<th>Direct object</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>intransitive: invariant</td>
<td>ABS  ABS</td>
<td>*</td>
</tr>
<tr>
<td>intransitive: split S by person</td>
<td>ERG  ABS</td>
<td>*</td>
</tr>
<tr>
<td>intransitive: split S by person and volition</td>
<td>ERG/ABS  ABS</td>
<td>*</td>
</tr>
<tr>
<td>transitive: canonical</td>
<td>ERG  ERG</td>
<td>ABS</td>
</tr>
<tr>
<td>transitive: dative subject</td>
<td>DAT  DAT</td>
<td>ABS</td>
</tr>
</tbody>
</table>

Table 3.2. Case of Tsova-Tush indirect objects

<table>
<thead>
<tr>
<th>Indirect object</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Give’ type</td>
<td>DAT</td>
</tr>
<tr>
<td>‘Say’ type</td>
<td>ALL</td>
</tr>
<tr>
<td>‘About’ type</td>
<td>CON</td>
</tr>
<tr>
<td>‘Ask’ type</td>
<td>CON</td>
</tr>
<tr>
<td>Point-of-contact type</td>
<td>CON</td>
</tr>
<tr>
<td>Have-experiencer type</td>
<td>ALL-LOC</td>
</tr>
</tbody>
</table>

It is possible to combine ‘ask’ and ‘about’ types, even though they take the same case, although speakers seem uncomfortable with multiple same-case obliques in the same clause. Example (49a) shows a speaker trying to avoid translating the prompt with two contact-case arguments by using an alternative strategy, a postpositional phrase with mak ‘on’ (an alternative way of saying ‘about’ something, calqued from Georgian -ზე -ze ‘on’). However, as he later explained to me, he did not like the sound of two postpositional phrases with mak in such close proximity, so he quickly self-corrected (49b) and gave the alternate in (49c) with two contact-case arguments. This speaker later concluded that both formulations are grammatical, but neither are ‘beautiful,’ because of the doubling—he would prefer only one instance each of mak and contact case.
The argument patterns described in this section will be especially relevant when looking specifically at verbs that condition indexical shift. Each of the case frames in Tables 3.1 and 3.2 can be found among attitude verbs—i.e., verbs of speech, thought, belief, and knowledge, the semantic types associated with potential shift. Example (50)—which contains two clauses—illuminates two attitude verbs taking nominal (non-clausal) complements. The next section turns to more complex complements.

(50) men=a dal-ex teš-ē oqus dal-egʷ locu-i lev-o-jʷ
who.abs=rel god-con believe-prs yon.one.erg god-all prayer(j/j)-pl say-lnk-cm-prs
One who believes in God says prayers to God.
(Kadagidze & Kadagidze 1984: 390)

3.2 Clausal complements

This section addresses clausal complements: arguments of the verb that are themselves non-finite or finite clauses. Subordinate clauses that are not in an argument position—relative clauses, clauses expressing purpose or manner (‘because...’), time or location (‘when...’, ‘where...’, converbs)—are not considered here.

A major goal for this section is to establish the patterns of complement-taking predicates, as described by Noonan (2007). The argument pattern of a non-exhaustive list of complement-taking predicates is given in Table 3.3. This table was compiled from a combination of my own data, illustrative examples provided in the entries of the most recent dictionaries (Bertlani et al. 2018, 2013, 2012), and my selected subset of the ECLinG corpus (Gippert et al. 2006), as described in section 1.3.1. In the table Noonan’s semantic type ‘pretense’ is not represented (imagine, pretend, make
believe, fool into thinking), as I was only able to identify one example of one verb that seems to fit this
category (lač’q’-d-ar ‘hide,’ in the sense ‘hide (information) from someone’; see 148 in chapter 4 for
this example). Tsowa-Tush does not have any verbs fitting Noonan’s negative or conjunctive types
(when negators and conjunctions function as verbs themselves).

Table 3.3 is arranged by semantic type following Noonan (2007: 120–145). A handful of complex
predicates are included in order to represent the semantic types more thoroughly. In all cases except
cer d-aɬar ‘finish,’ the complex element in a direct object noun in absolutive case, duplicated in the
direct object column to illustrate argument structure. In the case of cer d-aɬar, the additional element
cer ‘(at the) edge’ seems to be a bare oblique, since it does not serve as the agreement trigger, contrary
to expectation if it were an absolutive case direct object. If cer (gender j/j) were the agreement trigger,
j- agreement would be expected (j-aɬar). In the two rightmost columns, the argument structure (in
terms of the grammatical case taken by arguments) is interpreted in terms of the transitivity types
from Table 3.1 and the indirect object types from Table 3.2.

The following subsections describe complement-taking predicates, such as those in Table 3.3, with
non-finite and finite complements.

3.2.1 Non-finite complements

There are two-types of non-finite verbs that can act as clausal complements: masdars, formed with
the suffix -ar; and infinitives, formed with -aⁿ.

Masdars can be used as subject complements, as in (51), or object complements (52). All masdars
belong to the d/d gender class. In both examples, the matrix verb shows d-class agreement with the
masdar, while the embedded masdar agrees with its own object (j/j gender ‘soup’ in 51) or subject
(v/b class human male subject of the act of going in (52). Constituent order is easily scrambled, as in
the latter example.

(51) sup soup(j/j) kħek-j-ar prepare-cm-mas easy cm-be
       at’ːan d-a.
‘Making soup is easy.’ (BH2-061 00:08:57–00:08:58)

(52) bazir market.dir gadac’q’vet’a-d-i-eⁿ decide-cm-pfv-tr-aor cm(m)-go.pfv-mas
       v-ax-ar.
‘[He] decided to go to the market.’ (BH2-068, Appendix B: 438)
### Table 3.3. Alignment of Tsova-Tush complement-taking predicates

<table>
<thead>
<tr>
<th>Semantic class</th>
<th>Predicate (PFV/IMPV)</th>
<th>Gloss</th>
<th>1,2 sub.</th>
<th>3 sub.</th>
<th>DO</th>
<th>IO</th>
<th>Transitivity</th>
<th>IO type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Utterance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>aɬar</td>
<td>say (PFV)</td>
<td>ERO</td>
<td>ERO</td>
<td>ABS</td>
<td>ALL</td>
<td>transitive</td>
<td>'say' type</td>
<td></td>
</tr>
<tr>
<td>lev-d-ar</td>
<td>say (IMPV)</td>
<td>ERO</td>
<td>ERO</td>
<td>ABS†</td>
<td>ALL</td>
<td>split intrans.</td>
<td>'say' type</td>
<td></td>
</tr>
<tr>
<td>taver</td>
<td>say</td>
<td>ERO</td>
<td>ABS</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d-epcar</td>
<td>tell</td>
<td>ERO</td>
<td>ERO</td>
<td>ABS†</td>
<td>ALL</td>
<td>transitive</td>
<td>'say' type</td>
<td></td>
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<tr>
<td>xat'ar / xet'ar</td>
<td>ask</td>
<td>ERO</td>
<td>ERO</td>
<td>ABS</td>
<td>transitive</td>
<td>'ask' type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d-ekar</td>
<td>call</td>
<td>ERO†</td>
<td>ABS</td>
<td>*</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>qeblar</td>
<td>pass on message</td>
<td>ERO</td>
<td>ERO</td>
<td>ABS</td>
<td>DAT</td>
<td>transitive</td>
<td>'give' type</td>
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<tr>
<td>(dah) ax-d-ar</td>
<td>lie to</td>
<td>ERO</td>
<td>ERO</td>
<td>ABS†</td>
<td>-</td>
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<tr>
<td>šebedo-d-ar</td>
<td>dare to say</td>
<td>ERO</td>
<td>ERO</td>
<td>ABS†</td>
<td>DAT</td>
<td>transitive</td>
<td>'give' type</td>
<td></td>
</tr>
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<td>d-adar</td>
<td>swear oath</td>
<td>ERO†</td>
<td>ABS†</td>
<td>*</td>
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<td>d-ekš-'d-alar</td>
<td>promise</td>
<td>ERO†</td>
<td>ABS†</td>
<td>*</td>
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<tr>
<td>d-šar</td>
<td>promise</td>
<td>ERO</td>
<td>ERO</td>
<td>ABS†</td>
<td>DAT</td>
<td>transitive</td>
<td>'give' type</td>
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<tr>
<td>dakhavar / dakh livar</td>
<td>think</td>
<td>ERO</td>
<td>ABS</td>
<td>*</td>
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<tr>
<td>tesar</td>
<td>believe</td>
<td>ERO</td>
<td>ABS</td>
<td>*</td>
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<tr>
<td>ec'evalar</td>
<td>doubt</td>
<td>-</td>
<td>ABS</td>
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<tr>
<td>xalavar</td>
<td>know</td>
<td>DAT</td>
<td>DAT</td>
<td>ABS</td>
<td>-</td>
<td></td>
<td></td>
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<tr>
<td>tešvar</td>
<td>believe</td>
<td>DAT</td>
<td>DAT</td>
<td>ABS†</td>
<td>*</td>
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<tr>
<td>c'onalvar</td>
<td>like</td>
<td>DAT</td>
<td>DAT</td>
<td>ABS</td>
<td>-</td>
<td></td>
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<tr>
<td><strong>Knowledge and acquisition of knowledge</strong></td>
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<tr>
<td>xat'ar</td>
<td>complain</td>
<td>ERO</td>
<td>ABS</td>
<td>CON</td>
<td>-</td>
<td></td>
<td></td>
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<tr>
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<td>condemn</td>
<td>ERO</td>
<td>ABS</td>
<td>CON</td>
<td>-</td>
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<td>'ask' type</td>
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<tr>
<td>q'axetar</td>
<td>regret, be sorry for</td>
<td>DAT</td>
<td>DAT</td>
<td>ABS</td>
<td>-</td>
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<tr>
<td>yoxetar</td>
<td>be pleased</td>
<td>DAT</td>
<td>DAT</td>
<td>ABS</td>
<td>-</td>
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<tr>
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<td>ABS</td>
<td>-</td>
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<td><strong>Desiderative</strong></td>
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<tr>
<td>ke/rar</td>
<td>wish</td>
<td>ERO</td>
<td>ABS</td>
<td>*</td>
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<tr>
<td>d-ec'ar</td>
<td>want; love</td>
<td>ERO</td>
<td>ABS†</td>
<td>*</td>
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<td>iemed-j-a</td>
<td>(hope) (have hope)</td>
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<td>ABS</td>
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<td>damu'kuda-d-alar</td>
<td>threaten</td>
<td>ERO</td>
<td>ABS</td>
<td>*</td>
<td>DAT</td>
<td>transitive</td>
<td>'give' type</td>
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<td>teq'ar</td>
<td>beg</td>
<td>ERO</td>
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<td>*</td>
<td>DAT</td>
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<td>trei-d-ar</td>
<td>convince</td>
<td>ERO†</td>
<td>ABS†</td>
<td>*</td>
<td>DAT</td>
<td>transitive</td>
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<td>d-exar</td>
<td>request</td>
<td>ERO</td>
<td>ABS†</td>
<td>CON</td>
<td>transitive</td>
<td>'about' type</td>
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<td>iemed-j-alar</td>
<td>give hope</td>
<td>ERO</td>
<td>ERO</td>
<td>ABS†</td>
<td>DAT</td>
<td>transitive</td>
<td>'give' type</td>
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<td>mak'ar</td>
<td>can</td>
<td>DAT</td>
<td>DAT</td>
<td>ABS</td>
<td>-</td>
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<tr>
<td>ieglebala</td>
<td>be possible</td>
<td>ABS</td>
<td>ABS</td>
<td>ABS</td>
<td>-</td>
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<td><strong>Achievement</strong></td>
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<tr>
<td>qeqle-d-alar</td>
<td>manage to</td>
<td>ERO</td>
<td>ABS</td>
<td>*</td>
<td>DAT</td>
<td>transitive</td>
<td>'say' type</td>
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<tr>
<td>cad-d-alar</td>
<td>try</td>
<td>ERO†</td>
<td>ABS†</td>
<td>*</td>
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<td>transitive</td>
<td>'about' type</td>
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<tr>
<td>d-ic-d-alar</td>
<td>forget to</td>
<td>ERO</td>
<td>ABS†</td>
<td>*</td>
<td>DAT</td>
<td>transitive</td>
<td>'about' type</td>
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<tr>
<td>(mo) ieqle-d-alar</td>
<td>avoid</td>
<td>ERO</td>
<td>ERO</td>
<td>(imed 'hope')</td>
<td>DAT</td>
<td>transitive</td>
<td>'give' type</td>
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<td><strong>Phasal</strong></td>
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<tr>
<td>d-ol-d-alar</td>
<td>start</td>
<td>ERO†</td>
<td>ABS†</td>
<td>*</td>
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<tr>
<td>c'eq-d-alar</td>
<td>finish</td>
<td>ERO†</td>
<td>ABS†</td>
<td>*</td>
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<tr>
<td><strong>Perception</strong></td>
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<tr>
<td>lark'ropar / lēpar</td>
<td>listen (turn ear toward)</td>
<td>ERO</td>
<td>ERO</td>
<td>(lark 'ear')</td>
<td>ALL</td>
<td>transitive</td>
<td>'say' type</td>
<td></td>
</tr>
<tr>
<td>lark'qal-d-ar</td>
<td>overhear (hit ear against)</td>
<td>ERO†</td>
<td>ERO</td>
<td>(lark 'ear')</td>
<td>DAT</td>
<td>transitive</td>
<td>'about' type</td>
<td></td>
</tr>
<tr>
<td>labar / lehar</td>
<td>touch, feel</td>
<td>ERO</td>
<td>ERO</td>
<td>ABS</td>
<td>CON</td>
<td>transitive</td>
<td>point-of-contact</td>
<td></td>
</tr>
<tr>
<td>lab-d-alar / leh-d-alar</td>
<td>touch, feel</td>
<td>ERO</td>
<td>ERO</td>
<td>ABS†</td>
<td>CON</td>
<td>transitive</td>
<td>point-of-contact</td>
<td></td>
</tr>
</tbody>
</table>

An asterisk (*) represents ungrammaticality. An endash (–) represents a lack of data (although it is likely that a large portion of these missing data points are in fact ungrammatical). A dagger (†) represents the agreement trigger for verbs with a slot for agreement. The double dagger (‡) marks one exceptional agreement pattern, long-distance agreement, detailed in section 3.4.3.
As nouns, masdars can decline and be modified by adjectives, as shown in (53). In this example, a heavy noun phrase including a reflexive adjective (šariⁿ ‘his own’), a locative phrase functioning as a temporal adverbial (duqeč xane ‘for a long time’), and a postpositional phrase identifying the location (xenen k’ik’el ‘under a tree’) is headed by a masdar latːar ‘to stand,’ itself nested in a postpositional phrase. Shavkhelishvili [Шавхелишвили] & Vamling [Вамлинг] (2012: 16) find that masdars can also be modified by adverbs: lemzret abar ‘to beautifully sew.’

(53) ilo-s d-epc-or šari duq-eč xan-e xen-en k’ik’el laːtː-r-en
ondo-erg cm-tell-impf 3sg.poss.refl much-obl time-loc tree-dat under stand-mas-dat
mak.

‘Ilo told about [ his standing under a tree for a long time ].’ (BH2-101 00:00:42–00:00:46)

Shavkhelishvili [Шавхелишвили] & Vamling [Вамлинг] (2012) find that infinitival complements are used with predicates expressing desire, intention, ability, will, and achievement, as well as modal and phasal predicates.

As described by Holisky (1994), there are two patterns for the infinitival complements of a finite verb in terms of which predicate controls case and agreement: one in which the finite verb is the main verb, and one in which a non-finite auxiliary verb is the main verb.

The finite-verb-as-main-verb pattern is illustrated in examples (54) and (55). The case of the subject (absolutive in both) is determined by the finite verb, which agrees in gender with the subject. The verbs expressed as infinitives (‘plow’ and ‘search for’) would normally take an ergative subject—obligatorily dropped in infinitival constructions, where the subject of the infinitive must match that of the finite verb. The infinitival clauses contain absolutive direct objects (the source of agreement in 55). The result is a sentence that contains two absolutive arguments, governed by different verbs, even though neither of those verbs could support two absolutives on its own. That is, these sentences are biclausal, and the subject is expressed only in the higher clause. Holisky (1994) concludes that in this pattern the finite verb is the main verb.

(54) o hal v-ol-v-al-iⁿ [ mindor ax-aⁿ ].
yon.one.abs up cm(m)-start-cm(m)-intr-aor [ field(j/j) plow-inf ]

‘He started [ to plow the field ].’ (BH2-061 00:20:35–00:20:37)
Example (55) further illustrates that the finite verb and infinitive can reflect agreement with different arguments in this finite-verb-as-main-verb construction. The finite verb *vaɬen* ‘[he] went up’ agrees with its dropped subject. If the subject were overt, it would be in absolutive case, determined by the finite verb. At the same time, the infinitive *lexba* ‘to search for [b-class object]’ agrees with the direct object, ‘pear.’ The obligatorily dropped subject of the infinitive is the same as the subject of the finite verb; when ‘search for’ is expressed with a finite verb, it takes an ergative subject. This example shows a common use for the infinitive: to express purpose, ‘(in order) to.’

In some cases, infinitives form part of a complex verb construction, such as *letxa*ixar ‘to dance (lit., go to dance)’ in (56). In this construction, the finite verb is again the main verb. The contact-case masdar here, *ɣosxetrex* ‘in order to delight,’ is not a clausal complement, because it does not occupy an argument position. It is rather an adverbial clause expressing reason or purpose (an additional function of contact case).

(56) o albat vir *ɣosxet-r-ex* ix-or *letx-a*.
    *yon-one.abs* perhaps donkey delight-mas-con go-impv dance-inf
    ‘He danced perhaps to delight the donkey.’

The second pattern Holisky (1994) identifies is also a same-subject construction, but one in which the finite verb serves as an auxiliary and the infinitive is in fact the main verb that determines the case of the subject, as illustrated with the auxiliary *d-ec* ‘need, must; want’ in (57) and (58). In (57), the subject ‘you (pl)’ is in absolutive case, as determined by the infinitive ‘to be.’ The auxiliary agrees in gender with the plural mixed-gender subject in this instance (if the addressees were all men, the verb would be *b-ec* to reflect plural male agreement). In (58), the subject ‘I’ is in ergative case, as determined by the infinitive ‘to take’ (of pictures). This example was uttered by a male speaker; hence the v-class agreement on the verb ‘forget.’ The auxiliary, however, agrees not with the subject, as in (57), but instead with the absolutive object of the embedded infinitive (‘picture’). That is, both agreement and subject case are determined by the infinitive, not the finite verb, in contrast to the first pattern.

(57) šu qa* kheki* d-ec’ xil-a*.
    *2pl.abs* tomorrow ready cm-need be-inf
    ‘You need be ready tomorrow.’

BH2-062 00:01:36–00:01:39
Indirect questions are possible with non-finite clauses, as shown in (59).

(59) ... meč’ar-ev, co xeʔ=g-er [vux dah cer-d-an ]=e...
... fisherman(v/b)-erg not know=anymore-impf [what away end-cm-inf ]=&
‘... the fisherman no longer knew [what to do], and...’ (BH2-077, Appendix B: 489)

3.2.2 Finite complements

Holisky & Gagua (1994: 203) state that “usually only nonfinite clauses function as subject.” Likewise, I have found no evidence that finite clauses can serve as a subject complement (i.e., sentences such as ‘[That the baby panda sneezed suddenly] suprised its mother’ are expressed via a relative clause); therefore, this section discusses only finite clauses in object position.

Finite complements are sentence-like clauses (i.e., clauses that could function as stand-alone utterances with little to no modification), functioning as a core argument (here: object) of a predicate in another clause. Non-finite complements, in contrast, are unacceptable as stand-alone sentences. For instance, the infinitival complement in (60a), dad xiɬaⁿ ‘to be a father,’ cannot function as an independent clause; the finite complement in (60b), dad xiɬul ‘[He] should be a father,’ can, although the subjunctive mood in this clause is interpreted differently depending on whether it is a complement or stand-alone sentence. Example (60) further shows that non-finite complements can in some cases be paraphrased as finite complements. However, because infinitival complements are obligatorily same-subject and finite complements are not, the latter phrasing allows two interpretations: one where Ilo wants himself to be a father, and one where he wants fatherhood for someone else.

(60) a. oquin leʔ-er dad xiɬ-aⁿ.
yon.one.dat want-pfv father(v/b) be.pfv-inf
‘He wanted to be a father.’ (BH2-037 00:04:37–00:04:44)

b. il-uin leʔ me dad xiɬ-ul.
illo-dat want comp father(v/b) be.pfv-subj
‘Ilo_i wants that [he]_{i,j} be a father.’ (BH2-037 00:04:20–00:04:29)
In nearly all cases, when a finite clause is the object of a verb with a slot for a class marker, the marker is d-, reflecting default agreement. In (61), the verb levodʷ ‘says’ takes d-class agreement for the clausal complement; in comparison, the verb levojʷ in (50) above showed j-class agreement with the nominal complement locui ‘prayers.’ There is an exception to this agreement pattern, which will be discussed in section 3.4.3.

(61) lev-o-d-ʷ me hamaxeʔ nipsiⁿ mot’; b-a=enʷ say-LNK-CM-PRS that the.most correct language(b/d) CM-be=REP '[They] say that [it] is the most correct language.' (BH2-064 00:02:02–00:02:05)

Finite complements can be described in terms of the type of complementizer that introduces them and the mood of the verb in the embedded clause, as discussed in the next subsections.

### 3.2.2.1 Complementizers and indirect questions

Finite clauses are introduced by one of a) the complementizer me, b) a content question word, or c) no complementizer. The connective me is used most generally, including to introduce clauses that are not complements (relative clauses, manner/purpose clauses, etc.). Examples (62) and (63) show finite complements introduced by me. In (62), a non-final intonation break (represented by a comma) follows the complementizer. It is common for me to be prosodically integrated into the matrix clause.

(62) qengeʔ dak'<v>aɬ-iⁿ me, hanax-čo-v dah b-eh-iⁿ... only.later realize<cm>-aor comp someone-obl-erg away cm-steal-aor '[he] only later realized that, someone stole [his basket]...' (BH2-084, Appendix A: 299)

(63) oquin le? me as e moq hal ?am-b-o-lo-s. yon.one.dat want comp 1SG.ERG this song(b/d) up learn-cm-LNK-SUBJ-1SG.ERG 'They (sg) want me to learn this song.' (BH2-037 00:11:07–00:11:26)

Finite complements can also take the form of indirect questions, in which case the complementizer me can be dropped. Word order in the embedded question follows that of a direct question. Example (64) shows an indirect yes/no question, retaining the question particle (=i) used in yes/no questions in matrix clauses. In (65), an indirect content question is embedded under a verb of knowledge/understanding. Example (66) contains an indirect content question with both the complementizer me and the question word vux ‘what.’
The complementizer *me* can be dropped with finite complement clauses following various types of predicates, including all utterance predicates, as in (67). Available corpora also contain examples of complements without a complementizer following some predicates belonging to various other semantic classes: commentative, knowledge, manipulative (68, 69), and perception predicates, at least.

(67)  
*pst’uin-čo-v aɬ-iⁿ c’em-d-in-a(h) magram...*  
wife-obl-erg say-aor 2sg.erg these.ones.med wash-cm-aor-2sg.erg but  
“The wife said, “you washed these but...””  
(BH2-080 00:03:33 - 00:03:41)

Looking at corpora cannot reveal in which instances, if any, the removal of a complementizer would be ungrammatical. I leave this question to future research. The verb *šežlebalar* ‘be possible’
is unique in that it is the only complement-taking predicate I have investigated that can take finite complements (as in 70) and yet never appears in the corpus with a complementizer. This verb seems to be at least partially grammaticalized, much like English ‘maybe,’ although šezlebalar productively takes tense and person agreement marking.

(70) inc oși j-it-no-h-ra-s šezlebala deni? qena?– deni? qena?
    now yon cm-leave-aor.evid-cond-impf-1sg.abs is.positive totally other totally other
    admien xil-ra-lo-s...
    person(d/d) be.pfv-impf-subj-1sg.abs

‘Now if [she] had left me there, it is possible I would be a totally different– totally different person.’  

(ECLinGbav19_14 ‘Tbatana story2,’ 00:01:44–00:01:53)

3.2.2.2 Verbal mood in the embedded clause

The finite complements (minus the complementizer) in the examples in the previous subsection could all function as stand-alone sentences, although not equally well. In (62), hanaxčov dah behiⁿ ‘someone stole [b]’ is an acceptable sentence in any context where a b-class referent is appropriately activated in the conversation (i.e., satisfying the conditions for a dropped argument to be described in chapter 5). The embedded clause in (63), as e moq hal šambolos, changes its interpretation if not subordinated: because of the subjunctive mood marking on the verb, it comes to mean, ‘I should learn this song.’

(62, repeated) ...qenge? dak’<v>a-l-iⁿ me, hanax-čo-v dāh b-eh-iⁿ...
    only.later realize<cm-2>AOR COMP someone-OBL-ERG away CM-steal-AOR
    ‘...[he] only later realized that, someone stole [his basket]...’

    (BH2-084, Appendix A: 299)

(63, repeated) oquin le? me as e moq hal ?am-b-o-lo-s.
    yon.one.dat want COMP 1sg.erg this song(b/d) up learn-cm-lnk-subj-1sg.erg
    ‘They (sg) want me to learn this song.’  

    (BH2-037 00:11:07–00:11:26)

Finite complements can be divided in this way according to mood of the embedded verb. The availability of indicative mood depends on the embedding (matrix) predicate. Predicates that select the most sentence-like complements permit either indicative or subordinate mood. The choice in mood in such cases reflects the intended meaning (Holisky & Gagua 1994: 202), as illustrated in example (71). Nearly all predicates that take finite complements are of this type: allowing indicative
or subjunctive mood depending on intended meaning. According to Holisky & Gagua (1994: 202), the subjunctive is used “if a modal meaning is intended.”

(71) a. gadac’q’vet’a-d-in-atx me bader čuh d-is-w.
    decide-cm-aor-1+3.erg comp child(d/d) at.home cm-stay-prs
    ‘We decided that the child is staying home.’  
    (Holisky & Gagua 1994: 202, ex. 88b)

b. gadac’q’vet’a-d-in-atx me bader čuh d-is-ra-lʷ.
    decide-cm-aor-1+3.erg comp child(d/d) at.home cm-stay-impf-subj
    ‘We decided that the child should stay home.’  
    (Holisky & Gagua 1994: 202)

Holisky & Gagua (1994: 202) report that some predicates only select complements in subjunctive mood. In practice, it is difficult to identify these predicates, since the complementizer me with subjunctive mood is also used in adverbial clauses to mean ‘so that.’ For instance, the verb in (72) initially looks like a complement-taking predicate of Noonan’s (2007) manipulative type, but upon closer inspection, the clause introduced by me is more likely an adverbial clause, in that the verb mak otːar ‘stand on; stop’ does not take a direct object. The same is true in (73) for the verb ‘try,’ an achievement predicate which can take non-finite complements, but does not occur with nominal direct objects. The only true subjunctive-only complement-taking predicate I have been able to identify is leʔar ‘want’, shown above in (60b) and (63).

(72) k’oba mak otː-eⁿ levn-en me kast’e dah b-oxk’-ra-l doⁿ.
    Koba(v/b) on stand-aor Levan-dat so.that quickly away cm-sell-impf-subj horse(b/d)
    ‘Koba made Levan quickly sell the horse.’ (lit., ‘Kobastood on Levan so that [he] sold the horse quickly.’)  
    (BH2-101 00:23:38–00:23:46)

(73) vomaʔ cad-la-r-ax axa me, gvian b-ag-ra-lo-tx,
    all try-intr-impf-1+3.erg 1+3.erg so.that late cm-come-impf-subj-1+3.erg
    sk’ol hal j-ol-j-a=lomciⁿ
    school(j/j) up cm-start-cm-inf=up.until
    ‘We all tried, so that we would come back late, before school started.’  
    (ECLinG bav01_02 ‘shepherd,’ 00:21:02–00:21:09)
3.2.2.3 Pre-posed complements

In all of examples of finite complement clauses given so far, the finite clause appears to the right of the embedding predicate. At least in the case of speech predicates, the complement can precede the matrix clause, as in (74) and (75). Although matrix-complement order is more common, pre-posed complements with verbs of speaking or thought are not unusual. This pattern seems to be freely available to avoid repetitiveness when telling stories involving a lot of dialogue and could potentially serve as a diagnostic for quoted material.

(74) mimin upr sc’rap d-a=enʷ al-in cok’l-es.
    falcon(d/d) more fast cm-be=rep say-aor fox(d/d)-erg
    “The falcon is faster,” said the fox.

(75) seⁿ sampsoⁿ tox-a-l=ainʷ, d-ix-n-as megarmon-ex...
    1SG.POSS favorite.song play-imp-subj=rep cm-request-aor-1SG.ERG accordion.player-con
    “Play my favorite song,” I requested of the accordian player..."

However, there are limited cases where predicates that do not embed quotation (see chapter 4) still allow a pre-posed complement. These cases apparently require more specific discourse conditions, illustrated below. Example (76) shows an extended context, comprising two prosodic sentences (the first in 76a–76b, the second in 76c). The speaker had been prompted to tell a story, familiar to the interviewers, about the well-known shepherd Chkopishvili.⁶ In (76) the speaker sets the scene for the story.

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⁶ This Tsova-Tush shepherd, Aleksi Chkopishvili (ალექსი ჭყოპიშვილი), appears in several examples used in this dissertation, both in excerpts from ECLinG’s ‘Tchkopishvili_GU’ (76, continued in 145 in chapter 4) and in an example from Bertlani [ბერთლანი] et al. (2018) (150). I use the anglicization of his name as given by Gigashvili et al. (2020: 105), who note that Chkopishvili “was deprived more than 12,000 sheep, 300 cows, and 500 horses” during dekulakization (1929–1933). His story is well-remembered even today by villagers who were impacted by the effect his loss had on the local economy.
(76) Excerpt from ECLinG BAV25_16 ‘Tchkopishvili_GU’ (00:01:52–00:02:09)

a. c’qe’c’ cha dro j-a=e... m; k’omunist’-i ču b-axk’en b-a... once one time(j/j) cm-be=& hes communist(v/b)-pl in cm-many.come-ppl cm-be ye... so ot:-en, dah ot:-en, and hither stand-aor away stand-aor

‘Once it is one time... hm, the communists had come in... and... [they] stood here, stood there,’

b. moħ t’ateb d-ec’e-r tag-d-aⁿ, k’omunist’-i-n co xaʔ-iⁿ. how money(d/d) cm-should-impf make-cm-inf communist-pl-dat not know-aor

’How [they] were supposed to earn money, the communists didn’t know.’

c. b-ax-en, aɬ-iⁿ me, e mdidar xalx-go dah d-aq-o-et=ve, cm-go-aor say-aor comp this rich people-all away cm-take-prs-pl=1+2 e vunax-mičax-i aɬ-iⁿ, k’olekt’iv=a čamoq’albad-j-o-t this something-somewhere-pl say-aor collective(j/j)=& establish.pfv-cm-prs-pl aɬ-iⁿ. say-aor

’[They] went, said, “let’s rob these rich people, and presto-chango,” [they] said, “we’ll establish a collective,” [they] said.’

In (76a), the speaker highlights the communists’ initial cluelessness and inefficacy (‘they stood here, stood there’). In (76b), the finite complement of a knowledge verb precedes its embedding clause. The speaker’s choice to use this construction can be viewed as a continuation of that topic or as an effort to stylistically underscore his view that the Soviets ‘didn’t know’ how to implement their plans. Their callous understanding of how to establish agricultural communes is further highlighted in the speaker’s illustration of the communists’ apparent thought process in (76c). From the speaker’s perspective, then, the communists’ ineptitude and disregard for the human cost of collectivization is

The dismissive/elliptical construction vunax-mičax (lit., ‘something-somewhere’) is used often in reported speech to express something ellided from the original (‘yada yada yada’). In this case, my impression is that the speaker is specifically highlighting the communists’ flippant attitude toward the impact of collectivization, which I have attempted to capture in my translation.
the theme of this passage, providing context for the central point of the story (that an important figure in the community lost his livelihood).

3.2.2.4 Summary: Clausal complement types

Returning to complement clauses, Table 3.4 summarizes the complement-taking predicates for which I have sufficient data, following the semantic classes of Noonan (2007) (with inspiration from Vamling (1989)). Plus signs indicate that a given type of complement was found in the available corpora. Lack of a plus sign should not be understood as agrammaticality, but simply that I was not able to find the given predicate-complement pairing in the corpora.

Even lacking data on agrammaticality, patterns emerge in this table. As stated above, the only verb that takes a finite clause with a complement in subjunctive but not indicative mood is leʔer ‘wish,’ and all verbs that take finite complements can appear with complementizers, except šežlebalas ‘be possible.’

There are also general trends as to whether a given predicate takes a finite or non-finite complement, or both, which follow expectations laid out by Noonan (2007: 101): “In general, the stronger the semantic bond between the events described by the matrix and complement predicates, the greater the degree of syntactic integration there will be between the two clauses.” The least syntactically integrated complement (most similar to an independent sentence) is a finite clause in indicative mood (e.g, 61, 62); the most syntactically integrated complement represented in the table (least similar to an independent sentence) is a masdar (examples 51–53), which behaves more similarly to nouns than other complement types do. Masdars are nevertheless distinguished from nouns by their verb-like ability to introduce nouns in absolutive case and to be modified by adverbs, which are not a properties of simpler nouns—establishing masdars as more clause-like than nouns, yet less like independent sentences than other complements.

The syntactically most integrated group is phasal predicates (e.g., 54), which are restricted in Tsova-Tush to taking only non-finite clausal complements, followed by similarly highly-integrated achievement (58) and modal predicates (57). The predicates taking the most sentence-like complements, on the other hand, belong to the categories of utterance (61), propositional attitude, knowledge (59), manipulation (68), and perception (95–99). Only two predicates placed in these categories are able to take a non-finite complement: dak’livar ‘think’ and qetar ‘know (how).’ Regarding the latter verb, its pattern of clausal complementation is in complementary distribution with its semantic neighbor, xeʔar ‘know (that).’

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8 Both knowledge verbs can take simple nominal complements.
These syntactic patterns will be returned to in chapter 4 as part of the explanation for patterns of indexical shift.

### 3.3 An unusual subordination pattern

Until this point, the only type of clausal subordination I have discussed is complementation. However, in order to explain some unusual long-distance agreement patterns in complement clauses (section 3.4.3), it is necessary to look at a different subordination pattern that bears elements of both relativization and complementation.

Relativization was briefly described in section 2.3.6. To review, Tsowa-Tush has two major strategies for relativization: a gap with a participial verb (shown in 24), and a relative pronoun with a finite verb. In the latter strategy, there are two types of relative pronouns that can be used: content question words (see 3.5) suffixed with a relativization particle (\(=e\) or \(=a\)), which decline for case, or the invariable relativizer me ’that,’ as in (77). Holisky & Gagua (1994) consider the pronominal relativization strategies to be calques from Georgian, and it is likely that these constructions are becoming more common due to continued intense contact.

(24, repeated) \[ as \_ dac’unba-d-uin ] daq’ar \_er co xi-en-d-a. 
\[ 1SG.ERG \_abs refuse-CM-PPL \] food(d/d) still not be-PPL-CM-BE  
‘Food [ I would refuse ] doesn’t exist.’ (BH2-039 00:01:44–00:01:47)

(77) ai comena lex-mak’ txo” q’ono” pešk’r-i me bacbur qet-e-l"w.  
here nobody find-can 1+3.DAT young child(d/d)-PL REL Batsbi understand-PRS-SUBJ  
‘Look we can’t find any young kids that understand Batsbi.’ (BH2-076 00:05:56–00:05:59)

It is this use of the connective me that requires further attention. As a complementizer, me optionally appears at the far left of the complement clause. As a relativizer, however, it is not always the left-most element within a subordinate clause. In (78), relativizer me appears to the right of čuli” ‘pregnant.’ Because this adjective is in absolutive case, it cannot belong to the matrix clause: the only absolutive argument licensed in that clause by dixk’en ‘gave birth to’ is the dropped object, the pig’s offspring (which are, obviously, not pregnant themselves). Only the embedded verb can support čuli” as a complement, which it does despite the intervening me.\(^9\)

\(^9\) I’ve been using square brackets to represent referents in the translation line that were dropped in the original, but now that I’m trying to show constituency, I have a problem with square brackets having multiple meanings (and looking ugly next to each other). Any suggestions?
Table 3.4. Complement properties of Tsova-Tush complement-taking predicates

<table>
<thead>
<tr>
<th>Semantic class</th>
<th>Predicate (PFV/IMPV)</th>
<th>Gloss</th>
<th>Finite mood</th>
<th>Finite comp</th>
<th>Non-finite</th>
<th>Transitivity</th>
<th>IO type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Indic.</td>
<td>Subj.</td>
<td>me Q</td>
<td>INF + MAS</td>
<td>Trans.</td>
</tr>
<tr>
<td>Utterance</td>
<td>a TAR</td>
<td>say</td>
<td>+</td>
<td>+</td>
<td>+ +</td>
<td>trans.</td>
<td>'say' type</td>
</tr>
<tr>
<td></td>
<td>lev-d AR</td>
<td>say</td>
<td>+</td>
<td>+</td>
<td>+ +</td>
<td>trans.</td>
<td>'say' type</td>
</tr>
<tr>
<td></td>
<td>lavar / levar</td>
<td>say</td>
<td>+</td>
<td>+</td>
<td>+ +</td>
<td>split intrans.</td>
<td>'say' type</td>
</tr>
<tr>
<td></td>
<td>tebar</td>
<td>say, tell</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>trans.</td>
<td>'say' type</td>
</tr>
<tr>
<td></td>
<td>d-e pcar</td>
<td>tell</td>
<td>+</td>
<td>+</td>
<td>+ +</td>
<td>trans.</td>
<td>'say' type</td>
</tr>
<tr>
<td></td>
<td>xa TAR / xet AR</td>
<td>ask</td>
<td>+</td>
<td>+</td>
<td>+ +</td>
<td>split intrans.</td>
<td>'say' type</td>
</tr>
<tr>
<td></td>
<td>d-ekar</td>
<td>call</td>
<td>+</td>
<td>+</td>
<td>+ +</td>
<td>split intrans.</td>
<td>'say' type</td>
</tr>
<tr>
<td></td>
<td>(da)-mt'k'icha-d ar</td>
<td>assert, claim / prove</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>trans.</td>
<td>-</td>
</tr>
<tr>
<td>Propositional attitude</td>
<td>dak lavar / dak livar</td>
<td>think</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>split intrans.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>telar</td>
<td>believe</td>
<td>+</td>
<td>+</td>
<td></td>
<td>split intrans.</td>
<td>'ask' type</td>
</tr>
<tr>
<td></td>
<td>e' c' ve balar</td>
<td>doubt</td>
<td>+</td>
<td>+</td>
<td></td>
<td>split(?) intrans.</td>
<td>-</td>
</tr>
<tr>
<td>Commentative (factive)</td>
<td>kaf ar</td>
<td>complain</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>split intrans.</td>
<td>'ask' type</td>
</tr>
<tr>
<td></td>
<td>y oss e tar</td>
<td>be pleased</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>dat. subj.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>c' on al ar</td>
<td>like</td>
<td>+</td>
<td>+</td>
<td></td>
<td>dat. subj.</td>
<td>-</td>
</tr>
<tr>
<td>Knowledge and acquisition of knowledge</td>
<td>xe TAR</td>
<td>know</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>dat. subj.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>vun txe e?</td>
<td>not know</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>dat. subj.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>qetar</td>
<td>know (how)</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>dat. subj.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>dak'o-d-ar</td>
<td>remember</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>dat. subj.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>d-ic-d-ar</td>
<td>forget</td>
<td>+</td>
<td>+</td>
<td></td>
<td>dat. subj.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>yan d-ag ar</td>
<td>dream</td>
<td>+</td>
<td>+</td>
<td></td>
<td>dat. subj.</td>
<td>-</td>
</tr>
<tr>
<td>Fearing</td>
<td>qe TAR</td>
<td>be afraid</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>invariant intrans.</td>
<td>'about' type</td>
</tr>
<tr>
<td></td>
<td>le TAR</td>
<td>wish</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>dat. subj.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>d-ec' ar</td>
<td>want, love</td>
<td>+</td>
<td></td>
<td>+</td>
<td>dat. subj.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>ime d-j a</td>
<td>hope</td>
<td>+</td>
<td>+</td>
<td></td>
<td>dat. subj.</td>
<td>-</td>
</tr>
<tr>
<td>Manipulative</td>
<td>te TAR</td>
<td>beg</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>split(?) intrans.</td>
<td>'give' type</td>
</tr>
<tr>
<td></td>
<td>d-ekar</td>
<td>request</td>
<td>+</td>
<td>+</td>
<td></td>
<td>trans.</td>
<td>'ask' type</td>
</tr>
<tr>
<td></td>
<td>ime d-j ar</td>
<td>give hope</td>
<td>+</td>
<td>+</td>
<td></td>
<td>trans.</td>
<td>'give' type</td>
</tr>
<tr>
<td>Modal</td>
<td>mak TAR</td>
<td>can</td>
<td>+</td>
<td></td>
<td></td>
<td>dat. subj.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>d-ec' e</td>
<td>need, should</td>
<td>+</td>
<td></td>
<td>+</td>
<td>auxiliary</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>segle halar</td>
<td>be possible</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>equational</td>
<td>-</td>
</tr>
<tr>
<td>Achievement</td>
<td>qer qa-d ar</td>
<td>manage to</td>
<td>+</td>
<td></td>
<td></td>
<td>trans.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(ga-) hedo d ar</td>
<td>dare</td>
<td>+</td>
<td></td>
<td></td>
<td>trans.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>d-ic-d-ar</td>
<td>forget to</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>split intrans.</td>
<td>-</td>
</tr>
<tr>
<td>Phasal</td>
<td>d ol-d-ar</td>
<td>start</td>
<td>+</td>
<td></td>
<td></td>
<td>split intrans.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>cer d-ar</td>
<td>finish</td>
<td>+</td>
<td>(con)</td>
<td></td>
<td>split intrans.</td>
<td>'about' type</td>
</tr>
<tr>
<td></td>
<td>lat ar</td>
<td>repeat, do habitually</td>
<td>+</td>
<td></td>
<td></td>
<td>auxiliary</td>
<td>-</td>
</tr>
<tr>
<td>Perception</td>
<td>guar / d-ag ar</td>
<td>see</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>dat. subj.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>xa TAR</td>
<td>hear, smell</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>dat. subj.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>ha' TAR / he' TAR</td>
<td>watch, look</td>
<td>+</td>
<td>+</td>
<td></td>
<td>split intrans.</td>
<td>'say' type</td>
</tr>
</tbody>
</table>

Under the ‘Finite mood’ header, columns indicate whether each predicate was found with a finite complement in indicative or subjunctive mood. Under 'Finite comp', columns indicate whether the predicate was found with a finite complement introduced by me ‘that’ or in the form of an indirect question (q). Under ‘Non-finite,’ columns indicate whether the given predicate was found to introduce infinitival or masdar complements.
This ability of relativizer me to float downward within its clause indeed parallels Georgian რომ ‘that.’ According to Harris & Amiridze (2015: 1603), “the relativizer rom (unlike the complementizer of the same form) generally occurs in the ‘floating’ position; that is, it occurs between the first constituent and the verb of its clause.” This description serves similarly well for the relativizer me in Tsova-Tush.

These observations highlight how this type of subordination in Tsova-Tush can occasionally straddle the line between relativization and complementation. Consider example (79) with its Georgian translation (80), as given in the recent dictionary. The subordinate clauses in these examples could be either a relative or a complement clause. The complement clause analysis is supported by morphological case: in both, ‘girls’ is in ergative case, which can only be licensed by the verb in the lower clause. If ‘girls’ were an object of ‘like,’ it would have to be absolutive case, given that verbs of experience and preference are dative-absolutive aligned in both languages. Semantically, at least the Georgian example retains the factive meaning of ‘like’ over the clause. Georgian speakers reject follow-ups to (80) such as ‘fortunately, they / such girls no longer exist.’¹⁰ Requirements of factivity are expected for complement clauses, but not relative clauses.

On the other hand, the relative clause analysis is favored if we consider word order. In Georgian, when rom acts as a complementizer, it must be the left-most element within its clause.¹¹ We have seen the same pattern with Tsova-Tush me, which was always the left-most element when present in finite complements.

(79) co  c’onala son, maxk’ar-v me vaser-v=saⁿ šarval-i j-opx-iⁿ.
not like 1SG.DAT GIRL.PL-ERG REL MAN.PL-ERG=LIKE PANTS(1j)-PL CM-PUT.ON-AOR
‘I don’t like (it) that girls wear pants like men.’ / ‘I don’t like girls that wear pants like men.’

(Bertlani ბერთლანი et al. 2018: 49)

¹⁰ That is, საბედნიეროდ ისინი აღარ არსებობენ sabednierod isini aɣar arseboben and variations thereof were found to be nonsensical after (80) by two Georgian speakers. I have not been able to collect similar judgments for the Tsova-Tush example.

¹¹ Alice C. Harris, personal communication, 2020-02-02.
Thus, the sentences in (79–80) are either relative clauses with an unexpected assignment of ergative case to an object that should be absolutive, or they are complement clauses where the complementizer has unexpectedly drifted downward in the clause. Harris (1992), citing Dondua 1967, favors the former analysis. In this pattern of “regressive case attraction,” the head noun (‘girls’) attracts the case from the gap in the relative clause.

This permeability of a clause boundary by nominal features will be revisited in section 3.4.3.

3.4 Syntactic operations across clausal boundaries

In the next chapter, it will be necessary to show which complement clauses, when under indexical shift, are opaque to syntactic operations that they would be subject to under normal conditions. This section explores typical cases of question formation, NPI licensing, and agreement across clause boundaries.

3.4.1 Formation of content questions

Question words are given in Table 3.5. Many of these words can combine with enclitic postpositions: macolomciⁿ ‘until when’ (macaⁿ + =lomciⁿ ‘until’). Phonologically less integrated postpositions (e.g., t’q’uih) must nevertheless remain in a tight unit with the question word: no material can intervene between the question word and postposition in hann t’q’uih ‘behind whom.’ These observations lead to the generalization that postpositions cannot be stranded. Question-word phrases can include referential nouns as well (šariⁿ meɬ qa ‘how many of his own pigs’), which also form tight syntactic units.

When the question word vux takes the place of an agreement trigger, the agreement target reflects d-class (default) agreement (see 85 below). When ‘who’ (absolutive meⁿ or ergative haⁿ) serves as the agreement trigger, gender agreement is usually of the d-class, but default agreement can be overridden if the speaker expects the referent of ‘who’ to be male (v), female (j), or plural (b if plural male; d if plural female or mixed gender). Complex question phrases formed with menux ‘which’ or moluⁿ
Table 3.5. Tsoda-Tush content question words

<table>
<thead>
<tr>
<th>Q word / oblique stem</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>vux / st’e(n)-</td>
<td>what</td>
</tr>
<tr>
<td>meⁿ / han-</td>
<td>who</td>
</tr>
<tr>
<td>menux / menxuič-</td>
<td>which</td>
</tr>
<tr>
<td>moluⁿ / moluč-</td>
<td>what kind</td>
</tr>
<tr>
<td>macaⁿ</td>
<td>when</td>
</tr>
<tr>
<td>mič(e)</td>
<td>where (at)</td>
</tr>
<tr>
<td>mič</td>
<td>where (to)</td>
</tr>
<tr>
<td>moh</td>
<td>how</td>
</tr>
<tr>
<td>meɬ</td>
<td>how much/many</td>
</tr>
<tr>
<td>vuⁿ</td>
<td>why</td>
</tr>
</tbody>
</table>

‘what kind’ assume the gender of the noun (moluⁿ k’ab ‘what kind of dress’ assumes (j/j) gender from k’ab).

Within a single clause, content questions are formed by positioning the question phrase immediately before the verbal complex; only negation (co) and preverbs are allowed to intervene between the verb and a question word or phrase. In (81), for instance, Manana cannot intervene between menxuič jaš-ex ‘which sister’ and ħarčeⁿ ‘hugged, even though this word order would be acceptable in a declarative sentence. Multiple wh-questions are possible, and question words can serve as the antecedent for a reflexive, as shown in (82).

(81) menxuič jaš-ex ħarč-eⁿ manan?
    which.obl sister-con hug-aor Manana(j/d)
    ‘Which sister did Manana hug?’

(82) haⁿ han-gʷ d-ag-it-ieⁿ šariⁿ c’a?
    who.erg who.obl-all cm-see-caus-aor 3sg.refl.poss house(d/d)
    ‘Who, showed whom, their own_j house?’

An interesting feature of content questions is that the question word ‘who’ is sometimes marked for ergative case twice. This double ergative marking occurs frequently in multiple wh-questions, as in (83b), but is not exclusive to that construction. Rather, this feature seems to be related to focus. The minimal pair in (84) differ in that the double ergative in (84b) highlights the person in control of the building (e.g., the foreman or superintendent of a construction project). More speakers’ judgments are needed on this point.

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Similar rules of question formation apply to the questioning of constituents of a non-finite complement. Example (85) shows a question formed from the would-be absolutive argument of the masdar dar ‘to do’ with an auxiliary. As described in 3.2.1, in auxiliary+non-finite verb constructions, the non-finite verb serves as the main verb. Therefore, both the auxiliary and the masdar reflect default d-class agreement with the question word.

(85) ha, vux d-ec’e-(h) d-ar, jev.
yes what(d/d) cm-should-2sg.erg cm-do.mas dm
‘Yes, what should you do, man?’ (BH2-076 00:02:12–00:02:14)

In contrast, example (86) shows a content question with a finite-verb-as-main-verb infinitival construction, as confirmed by the gender agreement patterns in (86a): the finite verb reflects j-agreement with its female subject, Dzadzo, while the infinitive reflects d-agreement with the question word. Apparently two word orders are possible: in (86a), the infinitive is allowed to intervene between the finite verb and question word, in contrast to patterns observed for monoclausal questions. In (86b), the question word immediately precedes the finite verb, and the infinitive follows later.

(86) a. ha”, khek-d-ie” xink’al
who.erg prepare-cm-aor khinkali(d/d)
‘Who made khinkali?’ (BH2-048 00:03:49–00:03:52)

b. han-as vux khek-d-ie”
who.erg-erg what prepare-cm-aor
‘Who made what?’ (BH2-048 00:04:04–00:04:06)

(84) a. ha” teg-o-d c’a
who.erg make-cm-prs-cm house(d/d)
‘Who is building the house?’

b. han-as teg-o-d c’a
who.erg-erg make-cm-prs-cm house(d/d)
‘Who is in charge of building the house?’ (field notes, 2019-08-19)
The pattern in (86a) seems to be restricted to simple infinitival phrases: all other examples in the corpora of an infinitive phrase intervening between vux ‘what’ and a finite verb involve the infinitive aɬaⁿ ‘to say’, specifically in the phrases, vux aɬaⁿ da ‘what does it mean’ and vux aɬaⁿ leʔ(er) ‘what do (did) you want to say.’ Otherwise, the overwhelming pattern is for vux to be immediately followed by the finite verb phrase, with any non-finite complements following, as in (86b). Thus, with limited exceptions, content questions formed from non-finite clauses are subject to the same word order restrictions as monoclusal questions.

Example (87) shows two alternative word orders for the sentence ‘What does Levan need to buy?’ with an infinitival clause. The question word appears before the finite verb, rather than before the infinitive, suggesting its syntactic membership in the higher clause.

Questions can also be formed from finite complement clauses, and the same rules pertaining to the word order of the question phrase and finite verb obtain. Example (88a) can mean the same thing as the questions from infinitival complements in (87). The subject of the embedded clause (88a) need not be co-indexed with the matrix subject, although the co-indexed reading is preferred when the embedded subject is dropped (apparently true for finite complements in general). Example (88b) parallels (88a), but this time with an overt different subject in the embedded finite clause.

Example (87)

a. vux d-ec’ levn-en [ ec-aⁿ ]
   what cm-need levan-dat [ buy-inf ]
   ‘What does Levan need [ to buy ]?’
   (BH2-106 00:13:16–00:13:18)

b. levn-en vux d-ec’ [ ec-aⁿ ]
   levan-dat what cm-need [ buy-inf ]
   ‘What does Levan need [ to buy ]?’
   (BH2-106 00:13:20–00:13:22)
Question formation from a finite complement is straightforward, as in (88), when the matrix verb is a modal. The question word appears in the matrix clause in its syntactically required position (immediately preceding the verb phrase), although it is an element of the complement (the item to be bought) that is questioned. When the matrix verb is a perception, knowledge, or utterance predicate, the question word typically appears in both clauses, again in the syntactically required position for question words, as illustrated in examples (89–91). The lower copy of the question word in these examples apparently marks the scope where the question should be interpreted. The fact that the question word precedes ɣaⁿ ‘dream,’ a noun, in (91) suggests that the verb ɣan dagar ‘to dream’ is more integrated than typical verb-object combinations, perhaps on the path to noun incorporation.

(88) a. vux d-ec’ lev-en [ me ec-o-l ]
    what cm-need Levan-DAT [ comp buy-subj ]
    ‘What does Levan, need [ that he, should buy ]?’ (BH2-106 00:13:23–00:13:25)

b. vux d-ec’ levn-en [ me as oquin ec-lo-s ]
what cm-need Levan-DAT [ comp 1sg.erg yon.one.DAT buy-subj-1sg.erg ]
    ‘What does Levan need [ that I should buy him ]?’ (BH2-106 00:17:48–00:17:54)

3.4.2 Negative polarity items

If negative polarity items can be identified in a language, it is of interest to establish whether negation can only license any given NPI within its own clause or across a clausal boundary. That is, would it be possible to say, ‘I did not say that I was hungry at all’?
At present I have identified two negative polarity items in Tsova-Tush, the adverb ʋʕalːaʔ ‘at all’ and the verb (com) šabala ‘(not) be a big deal,’12, which require the presence of a negator (co ‘not,’ com ‘nothing,’ ma ‘don’t,’ shown in 92), a negative pronoun starting with co- or ma-), or a question word (e.g., vux šabala ‘what’s the big deal?’, Appendix A, 241). Word order does not matter for the NPIs themselves: ʋʕalːaʔ can appear anywhere in a sentence, as long as a co-clausal negator appears before the verb. Negative pronouns, such as comena ‘no one,’ can co-occur with negators such as co ‘not,’ or they can serve as negators themselves. Treatment of negative pronouns as negators might be an instance of Jespersen’s Cycle (Jespersen 1917), where an item that occurs in negated contexts is reinterpreted as effecting negation itself.

(92) ʋʕalːaʔ *co qirɬ-as išt’u-ĉ st’enax-ĉo-x.
     at.all not be.afraid-1SG.ERG such-OBL something-OBL-OBL-CON

 ‘I am not at all afraid of such things.’

(93) vaħ-ov co al-iⁿ me o (*ʋʕalːaʔ) nerbebala
     boy-ERG not say-AOR COMP yon.one at.all be.nervous

 ‘The boy did not say that he is nervous (*at all).’

For all instances of NPI ʋʕalːaʔ in the available corpora, ʋʕalːaʔ appears in a finite matrix clause with co-clausal negation. However, when I ask speakers about the acceptability of sentences such as (92) without the negator, judgments have been varied and inconsistent. At least one speaker accepted (92) without the negator; for him the sentence meant the same thing with or without co. This reinterpretation of ʋʕalːaʔ again looks like Jespersen’s Cycle. If Tsova-Tush NPIs are in the process of being reinterpreted as negation—and especially if speakers are at different stages in that reinterpretation—it is necessary to be particularly careful to establish that a supposed NPI is indeed an NPI for each speaker.

Available evidence suggests that NPIs in Tsova-Tush cannot be licensed across clausal boundaries. There are no instances of ʋʕalːaʔ in an embedded clause in the corpora, and the consultants I asked about (93) rejected the sentence with ʋʕalːaʔ in the lower clause when the only negator was in the matrix clause. In the past, some speakers have accepted similar sentences where ʋʕalːaʔ was apparently licensed in a lower clause by a negator in the higher clause, but I have not gotten consistent judgments from any one speaker allowing cross-clausal licensing of ʋʕalːaʔ.

(93) vaħ-ov co al-iⁿ me o (*ʋʕalːaʔ) nerbebala
     boy-ERG not say-AOR COMP yon.one at.all be.nervous

 ‘The boy did not say that he is nervous (*at all).’

→ Unacceptability of embedded ʋʕalːaʔ confirmed by 2 out of 2 speakers asked.

12 cf. Georgian არა უშავს  ‘it doesn’t matter,’ ‘it’s no big deal’
The other NPI, (com) šabala ‘it’s not a big deal,’ is too restrictive to allow this test, since it specifically requires com ‘nothing,’ a noun. It makes no sense to ask for acceptability judgments regarding, e.g., ‘He said nothing, that it is a big deal,’ because com occupies the position of direct object which would be needed for the finite complement clause. The only other use of šabala is with a question word: vux šabala ‘what’s the big deal?’ However, it also makes no sense to test whether vux ‘what’ can license šabala from a higher clause. That is, if I have heard the speaker utter the example in (94), it would be at best very odd to even trying asking her, ‘What did you say matters?’, because the only possible response would be com ‘nothing.’

(94) v-iš-a-l el-n-as cha?-? com šabala=en....
     cm-lie-imp-subj say-aor-1sg.erg one-prt nothing matter=rep
     “Let him lie,” I said, “nothing matters [to him]...”
     (ECLinG bav20_17 ‘burying_and_mourning’ 00:01:13–00:01:16)

Thus, based on the limited available evidence, it appears that Tsoda-Tush does not allow NPIs to be licensed across clausal boundaries.

3.4.3 An unusual agreement pattern

As described in section 3.2.2, when a finite clause is the object of a verb with a slot for a class marker, the marker is d-, reflecting default agreement. This pattern holds for all complement-taking predicates examined in this study, except for one: d-agar ‘see.’ This predicate can agree with an agreement trigger in an embedded finite clause.¹⁴ I have encountered this unusual long-distance agreement in both elicitation (95) and more naturalistic speech (96, 97, 99) with multiple speakers.

Example (95) illustrates this pattern most clearly. The noun mezobel ‘neighbor’ is of variable gender, taking v/b agreement when the referent is male and j/d when the referent is female, and the consultant in this elicitation provided translations of the prompt in both scenarios. In (95a), the intransitive verb ‘laugh’ takes v-class agreement with the hypothetical male neighbor, and that agreement

¹³ I have tried asking speakers about vux elnah me šabala (intended: ‘What did you say matters?’) in various arrangements, and they confirmed only that it was very odd of me to ask.

¹⁴ It would be reasonable to hypothesize that other perception verbs might pattern the same way. However, I have not been able to identify any other perception verbs that contain a slot for gender agreement with an object. The verbs xac’ar ‘hear; smell’ and zegar ‘taste’ contain no gender markers; the verb leh-d-alar ‘feel’ has a gender marker, but is intransitive, agreeing with its subject. More specialized verbs of seeing, such as t’q’oba-d-ar ‘notice,’ take d-class agreement with a clausal complement, the typical pattern. Thus the only verb I have identified to exhibit this exceptional agreement pattern is d-agar ‘see.’ However, given the high frequency of this verb and the potential interest in its unusual pattern, I consider it worthy of discussion here.
is also reflected on the matrix verb 'saw.' In (95b), the hypothetical neighbor is female, triggering j-class agreement both within its clause on 'laugh' and in the matrix clause on 'saw.' Recall that dative subjects never serve as agreement triggers for gender features, and thus it cannot be the case that vagi^n/jagi^n agrees with the gender of the referent of son 'I (DAT).

(95) a. son  v-ag-i^n  me  mezobel  v-el-ir.  
    1SG.DAT  CM-see-AOR  COMP  neighbor.M(v/b)  CM-laugh-IMPF
    'I saw that my neighbor (m) was laughing.'  (BH2-106 00:14:55–00:15:01)

b. son  j-ag-i^n  me  mezobel  j-el-ir.  
    1SG.DAT  CM-see-AOR  COMP  neighbor.F(j/d)  CM-laugh-IMPF
    'I saw that my neighbor (f) was laughing.'  (BH2-106 00:15:02–00:15:06)

Likewise, example (96) shows b-class agreement with msxal 'pear' on both the embedded intransitive verb and 'saw' in the matrix clause. Even more strikingly, in (97), 'see' apparently agrees with an ergative case argument, jaḥov 'girl,' which does not even serve as the agreement trigger within its own clause: the embedded verb daq' 'eats' reflects d-class agreement with vunax 'something.' It is particularly surprising, if a source for gender features is to be taken from the lower clause, that the source in this example is the ergative argument, rather than the absolutive, given that within the clause the ergative argument of a transitive cannot control gender agreement. A non-final prosodic break (slight rising intonation on jaḥov and subsequent pause ~0.2s), represented by a comma in the transcription line, further suggests that this argument might bear a special relationship with the matrix verb, although nothing in the matrix clause could license ergative case by itself.

(96)  b-ag-i^n  me  ese  msxal  b-at'…
    CM-see.PFV-AOR  COMP  here  pear(b/d)  CM-spread
    '[They] saw that the pears are spread around here…'  (BH2-084, Appendix A: 287)

(97)  mičax=renaː  monadir  v-ay-o=e  j-ag-i^n  me  bešbardylare
    somewhere=from  hunter(v/b)  CM-come-PRS=&  CM-see-AOR  COMP  disheveled
    jah-ov,  vunax  d-aq'=e…
    girl(j/d)-ERG  something(d/d)  CM-eat=&
    'A hunter comes from somewhere and saw that a disheveled girl is eating something…'
    (ECLinGbav18_05 'Orphan girl,' 00:06:55–00:07:00)
It appears either that the gender features of the embedded noun travel upward to the matrix ‘see’ verb, or this verb is uniquely able to probe downward into an embedded clause in search of an agreement trigger, even when that argument supplying gender features for the ‘see’ verb fails to serve as the agreement trigger within its own clause. I will call this hypothesis a Long-Distance Agreement analysis.

An alternative analysis might suggest that the nouns in these patterns actually belong to the matrix clause and only appear in the embedded clause due to the loose restrictions on word order. That is, example (95) might translate as ‘I saw my neighbor that was laughing,’ and (97) would be, ‘The hunter... saw the disheveled girl who is eating something.’ I will call this hypothesis a Wandering Direct Object analysis. I find this analysis to be less plausible.

As stated above regarding example (97), the argument supplying the gender features for the ‘see’ verb is in ergative case, which cannot be licensed by any element in the matrix clause. If ‘girl’ belongs to the matrix clause, we would expect it to take absolutive case as the object of ‘see.’ However, as seen in section 3.3, there might be a precedent for treating even the ergative-case girl as the object of a dative-aligned verb, serving as the head of a relative clause. Could this be an instance of regressive case attraction, as discussed for examples (79–80)?

Word order undermines this analysis. The exceptional patterns discussed in section 3.3 crucially involved a rightward floating relativizer. The pattern in (79–80), which resembled both complementation and relativization, required that the relativizer appear to the right of at least one constituent of the relative clause. Drifting in the opposite direction was not observed. That is, no constituent of the matrix clause can appear to the right of me, but it is possible for constituents of the embedded clause to appear to the left of the relativizer, as was shown above in (78).

If jahov ‘girl (erg)’ were the object of ’see,’ which then received ergative case marking via regressive case attraction, the relativizer me should float to the right of jahov. Yet, in all examples of this exceptional agreement pattern, me immediately follows the verb and precedes all material in the lower clause; i.e., it is in the position of me the complementizer, not me the relativizer. Thus jahov ‘girl (erg)’ receives case from the lower clause, in its position as subject of ‘eats something,’ but contributes its gender features to the higher clause.

Further evidence against the Wandering Direct Object analysis comes from the patterning of pronouns vs. local anaphora with arguments referring to the same referent. Example (98) establishes that locally-bound anaphora are required if co-clausal arguments identify the same referent. When the dative subject of ‘see’ is co-referential with the object, the object must be reflexive (98a); when these arguments are not coreferential, a pronoun (or referential expression) is needed instead. To use terms conceived of in Government and Binding theory, the co-referenced reading of the subject and
Manuscript for defense – Do not circulate

\textit{oqui\textsuperscript{a}} in (98) is ruled out by Principle B (Chomsky 1981), which states that pronouns cannot be bound locally.

(98) a. hann v-ag-i\textsuperscript{n} šari\textsuperscript{n} dad?
   who.dat cm-see-aor 3sg.refl.poss father(v/b)
   'Who saw their own\textsubscript{i,j} father?' (BH2-048 00:15:47–00:15:48)

   b. hann v-ag-i\textsuperscript{n} oqui\textsuperscript{n} dad?
   who.dat cm-see-aor 3sg.poss father(v/b)
   'Who saw his\textsubscript{i,j} father?' (field notes, 2017-08-04)

According to this pattern, then, \textit{oquin msxal} 'his pairs,' with a pronoun, in (99) must belong to the complement clause, not the matrix clause. The possessor of the pears referred to by the pronoun \textit{oquin} 'his' is the dative subject of \textit{bagi\textsuperscript{a}} (the old man). If these arguments were co-clausal, the local anaphor \textit{šari\textsuperscript{n}} 'his own' would be required. That is, Principle B rules out an analysis of (99) where \textit{oquin msxal} 'his pairs'—the agreement trigger for the matrix verb—is co-clausal with that verb. It must be the case that \textit{bagi\textsuperscript{a}} agrees with an argument within its complement clause.

(99) ...bab-uin b-ag-i\textsuperscript{n} me o badr-i-v šuin msx\textacutedash{a} oquin
   old.man(v/b)-dat cm-see-aor comp that child(d/d)-pl-erg 3pl.refl.poss fs 3sg.poss
   msxal b-aq'-or...
   pear(b/d) cm-eat.impv-impf
   '...the old man, saw that those children\textsubscript{j} were eating their own\textsubscript{j} pea– his\textsubscript{i} pears...'
   (BH2-091, Appendix A: 364)

It is perhaps important that the speaker stumbles in (99), initially using a local anaphor, \textit{šuin} 'their (pl) own,' instead of the pronominal \textit{oquin} 'his' that she quickly corrects herself to. However, 'he saw their own pears (\textit{šuin msxal})' is quickly ruled out as ungrammatical due to a mismatch in number features on the reflexive. In fact, this false start could perhaps be understood to lend more support to the Long Distance Agreement hypothesis: the plural reflexive \textit{šuin} 'their own' could only refer to the plural subject in the lower clause, 'children.' I understand this speaker's false start as more likely
related to her deciding whether the pears belonged to the children or the old man,¹⁵ rather than a struggle to decide whether Principle A or B is in effect.

Thus, we have to reject a Wandering Direct Object analysis of (99), which treats oquin msxal ‘his pears’ as a co-clausal argument of bagiⁿ ‘saw.’ The best remaining explanation for the b-class agreement is that this ‘see’ verb indeed allows long-distance agreement with an embedded absolutive argument.

This pattern of long-distance agreement is not unique to Tsova-Tush: Polinsky & Potsdam (2001) identify a similar long-distance agreement phenomenon in Tsez, a related language spoken in Dagestan, Russia. They observe that only embedded arguments with topic status can serve as an agreement trigger for a verb in a higher clause. This topic status motivates the movement of these arguments at LF to an Ā position in a local agreement configuration with the matrix verb, thereby triggering agreement.

The available Tsova-Tush data are consistent with Polinsky & Potsdam’s (2001) analysis of Tsez. In fact, their insight that only topics trigger long-distance agreement sheds light on why the verb in (97) agrees with the ergative ‘girl’ (who is indeed the topic of the story, called ‘Orphan girl’), rather than with the absolutive ‘something’ in the same complement clause. Together, these facts motivate a Long-Distance Agreement analysis of d-agar ‘see,’ allowing a certain permeability of gender features across a clause boundary.

3.4.4 Long-distance reflexives

It appears that, under certain conditions, a reflexive in a lower clause can refer to an antecedent in a higher clause.¹⁶ In (100), the third-person reflexive possessive modifies the ergative argument in the complement clause, identifying that argument as the father of subject in the matrix clause. No potential antecedents intervene between ‘Babuts’ and ‘her (own).’ A similar pattern is shown in (101). Interestingly, the dropped subject in the subordinate clause could serve as an antecedent for reflexives in the position of šariⁿ ‘her own,’ but that possibility is ruled out in this case by a number mismatch: the plural reflexive šuiⁿ ‘their own’ would have to be used if its antecedent were plural.¹⁷

¹⁵ This sentence is from a pear story, and at this point in the story, the possessor of the pears is arguably up for grabs: although the pears were initially the old man’s and, in the old man’s perspective, continue to be his, the pears were briefly possessed by the bicycle thief and have come to be in the physical possession of the helpful children. So in one sense, the children each are eating “their own” pears, but more pertinently, given that this clause is at least partially interpreted from the old man’s perspective, the children are eating his pears.

¹⁶ This fact does not undermine the Long-Distance Agreement analysis in the previous section. It remains true that pronouns cannot be used for co-clausal noun phrases identifying the same referent; this scenario requires reflexives.

¹⁷ It is clear from context in this recording that the dropped subject must be plural. The speaker had just described taboo name replacements once used by specific family members to refer to their nus, which can be either
At present I lack sufficient data to determine the conditions by which reflexives can refer to an antecedent in a higher clause. I suspect that the use of šariⁿ in example (101) is emphatic (‘... so that they didn’t use her actual name’). In several other Northeast Caucasian languages, reflexives can resemble or be identical to emphatic pronouns, and often one of multiple reflexive strategies can be used in long-distance reflexivization (e.g., long-distance reflexivization as described by Forker (2013: 680-690) in Hinuq).

### 3.5 Conclusions

This chapter has described the syntax of complementation in Tsova-Tush. Its major contributions include: (i) a careful enumeration of the case frames and complement-taking properties of Tsova-Tush verbs by semantic class in Tables 3.3 and 3.4, (ii) a description of the formation of content questions from constituents of finite complement clauses, and (iii) a discussion of unusual patterns of subordination (section 3.3) and long-distance agreement (section 3.4.3)—syntactically interesting patterns in Tsova-Tush that had not been previously identified. This chapter also sets the stage for an investigation of a phenomenon specific to finite complements: indexical shift, the subject of the next chapter.

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'daughter-in-law’ or ‘sister-in-law.’ These name taboos have not been observed by the community for a couple generations.
This chapter looks at deixis in embedded contexts: rhetorical contexts introduced within discourse, typically in the finite complement clauses described in the previous chapter. Why might deictics in embedded clauses be of particular interest?

As outlined in section 2.2, deixis refers broadly to aspects of language which can only be interpreted in terms of the context of the utterance—the participants of the communicative act and their location in space and time. If someone delivers a monologue without moving from their location, those context parameters remain unchanged: the Author throughout is the soliloquizer, the Addressee is their audience, the utterance Location is also the soliloquizer’s location, and the utterance Time is the duration of their speech. Since the utterance context does not change simply because a subordinate syntactic structure is introduced, the interpretation of indexicals in those embedded structures, by definition, should also not shift—unless, however, indexicals are sensitive to rhetorical contexts introduced within discourse. It is these shifty uses of deictics in embedded contexts that are the subject of this chapter.

There are two exceptions to the canonical use of indexicals as receiving their interpretation from utterance context: quotation and indexical shift. While some form of quotation is possible in every language, not all languages exhibit indexical shift. I will first outline the basics of indexical shift (4.1), and then I will explore dimensions of shift and quotation in Tsova-Tush.

### 4.1 Indexical shift

It is uncontroversial that indexicals shift their interpretation when intended as a quote (Schlenker 2003: 31, fn. 4). The English indexical ‘I’ in (102a) receives its canonical interpretation, referring to the author of (102a), while the same pronoun in (102b) shifts its interpretation to refer to an embedded author; that is, in the former Moira is Johnny’s choice for city council candidate, and in the latter, Johnny prefers himself to run.
The shift of ‘I’ in (102b) is uncontroversial with respect to quotation (quotation will be discussed further in section 4.2). However, what if there were languages—or a device within a language—that allowed indexicals outside of quotation to shift their interpretation from utterance context to an embedded context?

In his influential essay, Kaplan (1989 [1977]) explicitly rejects that possibility. Kaplan laid out a theory for the interpretation of indexicals that captured the property that indexicals seem to be rigidly fixed to the context of the utterance containing them—a property which contrasts with definite descriptions such as ‘the winner of Best in Show’ in (103). Definite descriptions do not always contribute the same content to the utterance, demonstrated by the fact that (103a) is true about Siba the Standard Poodle as of 2020, while (103a), adding the modifier ‘last year,’ is false, since last year’s ‘winner of Best in Show’ was King the Wire Fox Terrier. In contrast, the indexical ‘you’ contributes the same content to the utterance regardless of whether it is modified by ‘last year’: both (104a) and (104b) are true statements in the context provided.¹

(103) Context: The year 2020
   a. Siba is the winner of Best in Show.
   b. Last year, Siba was the winner of Best in Show. (= false)

(104) Context: The year 2020, Bryn addressing Siba the Standard Poodle
   a. You are Siba.
   b. Last year, you were Siba.

Kaplan captured the resistance of indexicals to this kind of modification by defining the character of indexicals to be rigid. For Kaplan, character is the means of determining what content (meaning) an expression contributes to an utterance in a given context, which supplies values for Author, Addressee, Time, Location, and World. Thus, while the meaning of an indexical varies depending on context—‘you’ means something different when said to Siba the Poodle than when it is said to King the Terrier—the character of the indexical remains fixed: ‘I’ always picks out the Author of the utterance context; ‘you’ always picks out the Addressee; ‘now’ selects utterance time; ‘here’ selects utterance location.

Kaplan (1989 [1977]: 511) rejects the possibility of a linguistic operator that would “meddle” with the character of an expression and thereby allow the content of an indexical to be determined by

¹ The argumentation in the section is modeled after Rabern (forthcoming), which provides a summary of Kaplan’s theory as well as various interpretations of Kaplan’s terminology (‘monsters,’ ‘character,’ ‘context’).
some other means than direct reference to utterance context. Kaplan was so adamant about the unnaturalness of such a hypothetical operator that he termed it a ‘monster.’ There is some controversy as to whether Kaplan meant to posit the impossibility of his monsters in English or in natural language in general. It is also unclear whether Kaplan’s monsters must only be those that operate on the character of expressions, or if any mere context-shifting operator would be monstrous.² In any case, in linguistics ‘monster’ has come to mean an operator that changes the interpretation of indexicals within its scope.

This type of monster is precisely the kind of operator needed in order for ‘I’ in to refer to Johnny in (102a): e.g., ‘Johnny \( I \) said that \[ 👹 \ I \] should run for city council,’ where 👹 represents some linguistic operator whose function is to change the interpretation of ‘I’ such that it refers not to the utterance context Author, but to the embedded Author in a context instantiated by the attitude report. The fact that English speakers reject this interpretation indicates that no monster has scope over the embedded indexical, consistent with Kaplan’s analysis of the rigid character of English indexicals. However, research in recent decades has revealed that languages do in fact vary in this respect. As Anand & Nevins (2004) observed, the Iranian language Zazaki, for instance, permits two readings of the sentence in (105).

(105) Heseni va ɛz dewletia.  

Hesen said that I rich.be-pres

i. Unshifted: ‘Hesen said that I am rich.’

ii. Shifted: ‘Hesen said that Hesen is rich.’ (Anand & Nevins 2004: 21)

In (i), the pronoun ɛz ‘I’ is interpreted as expected as the Author of utterance context. In reading (ii), however, ɛz receives its interpretation from a local context created by the attitude predicate va ‘said.’ It still selects the speaker as its referent, but within this local context where the speaker is Hesen. That is, to get reading (ii), a monster must have scope over ‘I’: ‘Hesen \( h \) said that \[ 👹 \ I \( h \) am rich \].’ This phenomenon is known as indexical shift: a phenomenon whereby indexicals embedded under an attitude predicate,³ such as ‘think,’ ‘believe,’ or ‘say,’ are not assigned semantic values rela-

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² See Rabern (forthcoming) for a discussion of the four possible definitions of ‘monster’ that arise from Kaplan (1989 [1977]).

³ Rabern (forthcoming: fn. 16) points out that the requirement for indexical shift to involve an attitude predicate is a stipulation that need not follow from traditional work on indexicals. The distributed reading of the second ‘I’ in ‘Only I got a question I understood’ could be sufficiently monstrous without the attitude predicate stipulation, in Rabern’s reading. Some linguists indeed explain indexical shift under attitude predicates as a binding-like phenomenon (Schlenker 2003, von Stechow 2003). The approaches I follow here (Deal 2020, Sundaresan 2018) find explanations referencing binding alone insufficient to capture the linguistic patterns observed specifically under attitude predicates in indexical shifting languages.
tive to the broader utterance context, but relative to the local context of the attitude holder (Anand & Nevins 2004).

It is easy to supply examples in Tsova-Tush that appear to exhibit the same phenomenon as in Zazaki. Like (105), the Tsova-Tush sentence in (106) has two readings available: (i) where the first-person agreement refers to the Author of utterance context, as expected, and (ii) where the reading of that indexical has shifted to pick out the embedded attitude holder, Levan. The attitude verb is one of speech, and a reportative clitic =en marks the embedded clause.⁴

(106) levn-es aʃ-iⁿ me v-aγ-o-s=en.

Levan-erg say-aor comp cm-come-prs-1sg.erg=rep

i. Unshifted: ‘Levan said that I am coming.’

ii. Shifted: ‘Levan said that Levan is coming.’ (BH2-042 00:25:16–00:25:27)

The availability of these two readings suggests that Tsova-Tush has optional indexical shift in embedded attitude reports much like Zazaki. However, so far nothing rules out a quotational analysis for the shifted reading, as discussed in the next section. Reading (ii) of (106) requires a monster to scope over the embedded indexical: ‘Levan said that [👹 I am coming ].’

Since the first reports of languages exhibiting indexical shift, the phenomenon has been identified, according to Deal (2020: 4), in languages across five continents and ten language families. Among the languages most relevant to the Tsova-Tush data below, indexical shift has been concretely demonstrated in the Northeast Caucasian language family in Tsez (Polinsky 2015) and potentially also Hinuq, Udi, Kryz, Chechen, and Ingush (see Polinsky (2015) for the relevant citations). Recently, Thivierge (2019) has provided an initial account of indexical shift in Georgian, with a more thorough analysis still pending.

From this rich typological data, it has been observed that not all indexical shifting languages behave alike, and there are some cross-linguistic generalizations in terms of what can shift and under what circumstances. In languages that permit indexical shift, the important dimensions of variation, according to (Deal 2017), are (i) which verbs can embed clauses with indexical shift, (ii) which indexicals can shift (and with which verbs), (iii) for which of these elements is shift optional or obligatory, and

⁴ The form the reportative varies by speaker: =ain(ʷ)–=en(ʷ). The reportative marker will be addressed in detail in section 4.4.1.
(iv) which indexicals must be read de se when shifted.⁵ In the present study of Tsova-Tush, I address dimensions (i) and (ii), leaving (iii) and (iv) for further research.

Deal (2020, 2017) has identified the implicational hierarchies in (107) pertaining to the first two dimensions of indexical shift. Languages have been attested that shift indexicals under verbs of speech, but not those of thought or knowledge; that shift indexicals under speech and thought, but not knowledge verbs; and that shift indexicals under all three categories. However, no languages have been observed to shift indexicals under, for example, verbs of thought, without also shifting under speech verbs.

(107) **Implicational hierarchies of indexical shift** (adapted from Deal (2020))

*Items on the right imply the presence of all items to the left.*

a. Verbs involved in shifting
   
   verbs of speech > verbs of thought > verbs of knowledge

b. Indexicals subject to shift
   
   Temporal deixis > 1ˢᵗ person > 2ⁿᵈ person > spatial deixis

Likewise, some languages shift only first-person indexicals, but not second-person or reference to location. An example of such a language, Amharic, is shown in (108). The embedded verb in this example bears double first-person marking, but the first-person object is interpreted in utterance context, while the first-person subject is interpreted in a shifted context. For the reported to be full shifted (both first and second person), ‘I will not obey you’ would be expected. However, Amharic shifts first-person reference in attitude reports, meaning that the embedded author must be referred to with first-person marking, but second person does not shift, such that the only way to reference the Author of utterance context is with (non-monstrous) first-person marking.

(108) alattazzäñň alä. 

**Amharic**

I.will.not.obey.me he.said

‘He said [to me] he would not obey me.’ (lit. ‘He, I said I will not obey meAuth.’)

(Example from Leslau (1995: 779), glossing adapted from von Stechow (2003: ex. 18))

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⁵ That is, if a first-person indexical is shifted—referring to the attitude holder—is it further required that the indexical point to an individual that the attitude holder recognizes as themself (Deal 2020, Lewis 1979). A classic example, modified from Kaplan (1989 [1977]: 533): suppose I see in a reflection a person whose pants are on fire, and, failing to recognize that it is in fact my own reflection, I say, ‘That person’s pants are on fire.’ Can my utterance be felicitously reported as, ‘Bryn said, "my pants are on fire"’? If that use of ‘my’ is rejected in the given scenario, the language imposes a de se interpretation requirement upon shifted first persons.
Some languages shift both categories of person indexical (those referring to Author and Addressee), but not spatial deixis. However, no languages have been attested to shift second person without also shifting first person; hence the hierarchy in (107). The placement of temporal deixis on this hierarchy is the most difficult to establish. Temporal adverbs translated as now and yesterday—which initially appear to be indexical—often operate differently across languages, in some cases failing tests for indexicality. Tense, especially with respect to Sequence of Tense rules in embedded clauses, is also notoriously complex (Deal 2020). However, data from Korean (Park 2014, as cited by Sundaresan (2018)) and some dialects of English (Anderson 2019) suggest that languages can shift temporal deixis to the exclusion of everything else, placing this context parameter highest on the hierarchy.

As pointed out by Deal (2020), Sundaresan (2018), the hierarchies in (107) mirror hierarchies proposed for the distribution of logophors and evidentials (Speas 2004, Speas & Tenny 2003), sentential adverbs (Cinque 1999), and other phenomena requiring the syntactic encoding of the Speech Act type and Speech Act participants (Zanuttini et al. 2012, Portner et al. 2019, Zu 2018). For example, logophors (special anaphors that mark an embedded argument as coreferential with an attitude holder) follow the same hierarchy, shown in (109), in terms of which predicates require their use. This distribution follows from the fact that, cross-linguistically, utterance predicates take finite complements that are most similar to independent sentences, as discussed in chapter (3). By that token, the fuller the complement clause a predicate can take, the more likely that the complement includes a semantic monster.


speech > thought > knowledge > direct perception

Thus, these hierarchies in (107) are not only robust typological generalizations, but also form part of the larger enterprise of formalizing how speech act participants (Author, Addressee) and other contextual parameters are encoded into grammar.

Investigations into indexical shift have revealed another generalization, Shift Together given in (110) below, which is hypothesized to be universal.⁶ This generalization was first formulated by Anand (2006); Deal (2020, 2017) expanded on Anand’s formulation to be able to capture cases of partial indexical shift, like in Amharic. In (110), I provide a somewhat simplified version of Deal’s reformulation.

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⁶ Some languages—Tamil (Sundaresan 2011), Mishar Tatar (Podobryaev 2014), Mutki Zazaki, Muş Kurdish, a variety of Turkish (Akkuş 2019)—have been suggested to violate Shift Together. Sundaresan (2018) and Deal (2020, 2018) offer competing paths to reconciling this data with current indexical shift theories.
(110)  

\textit{Shift together} \textit{(adapted from Deal (2020: 42))}

If one indexical of a certain class* picks up reference from a given context \(c\), then all indexicals of the same class within the same minimal attitude complement must also pick up reference from context \(c\).

*The following are classes of indexicals: \textit{1\textsuperscript{st} person, 2\textsuperscript{nd} person, person (both speech act participants), locative, temporal.}

This generalization captures the cross-linguistic observation that indexicals \textit{of the same class} in the same attitude report must either all shift together, or all not shift. The classes of indexicals match the ones given in hierarchy in (107b). That is, if one instance of an embedded ‘here’ is interpreted with respect to an embedded context, all other references to location in that same clause must relate to that same embedded location.

For a language with partial shift like Amharic, examples like 108 above might appear to violate the \textit{Shift Together} constraint, given that first-person morphology on the verb manages to pick out the utterance context Author in one instance and the embedded attitude holder in the other. However, reference to speech act participants is consistent if Amharic is understood to shift Author but not Addressee parameters. In the embedded clause, where the speaker wished to refer to the attitude holder, first-person morphology is used as required by indexical shift of that parameter. Where the speaker of 108 wanted to refer to the embedded addressee—who happens to be the utterance context Author—shift is ruled out by the fact that Amharic does not shift the Addressee class of indexicals. Therefore, the speaker is required to refer to the embedded addressee in the same way that referent would be coded in a matrix clause—as a first person, because that referent is the Author themself.

Indexical shift remains an interesting sphere of study for numerous theoretical reasons, as it offers a testing ground for various syntactic and semantic formalisms (e.g., binding, embedding, movement, the encoding of speech act participants, etc.). In section 4.2, I will show that Tsova-Tush is an indexical shifting language, and I will describe where it fits in the typology of indexical shifting languages. In section 4.3, I give an additional reason why indexical shift is relevant to the study of the structure of pronouns and pronominal features, and in 4.4, I highlight additional interesting cases of embedded deixis that require further study.

4.2  \textbf{Demonstrating indexical shift in Tsova-Tush}

To determine whether a language exhibits indexical shift, it is not sufficient to show that the interpretation of a given indexical is shifted, like \textit{ez} ‘I’ in the shifted reading of the Zazaki example in (105),
because it remains possible that the apparently shifted indexical and/or the clause containing it is intended as a quotation. It is uncontroversial that quoted indexicals are interpreted with respect to the context of the quote, and it is assumed that every language has a strategy for expressing something akin to quotation. To establish indexical shift, then, we must rule out quotation.

As observed in the previous section, some languages, such as Amharic, shift certain classes of indexicals while leaving others unshifted in the same clause. For languages (and specific predicates within those languages) that appear in one of the three left-most slots in the hierarchy in (107b), then, demonstrating indexical shift is straightforward. Any clause containing a shifted indexical of one class together with an unshifted indexical of a different class cannot be analyzed as clausal quotation.⁷ However, as I show in the following subsections, Tsova-Tush, as an indexical shifting language, falls in the rightmost slot of the indexical hierarchy (107b), meaning that extra care must be taken in demonstrating that any apparent instances of shift are not quotation.

That is not to say that shift is only interesting when it is genuine indexical shift, nor that quotation should be cast aside as linguistically uninteresting. It might be tempting to treat quotation as less worthy of linguistic research, especially under a naive view that might assume that quotations are unanalyzed (by the quoter) strings reproduced from some previous utterance. Under such a view of quotation, an analyst who is primarily concerned with the human linguistic capacity to construct novel utterances from smaller building blocks and to interpret novel utterances by calculating the meaning of those hierarchically organized building blocks might dismiss quotation as a phenomenon worthy of study on the grounds that, if you are merely copying a prior utterance, you have not participated in the utterance-building exercise that makes language such an interesting sphere of exploring human cognition.

However, for numerous reasons, we want a linguistic definition of quotation that goes beyond “merely copying a prior utterance.” Early attempts to reconcile quotation with formal syntax and semantics, such as (Quine 2013 [1960], Partee 1973, Davidson 1979), had to grapple with the fact that quotation in natural language is more than just a ‘mention’ of an expression, and in fact quotations

⁷ Some analysts claim that all shifted indexicals are quoted, even in cases like Amharic where a clearly shifted and clearly unshifted element appear as morphological marking on the same verb (Maier 2016, 2007, Geurts & Maier 2005). Such accounts consider indexical shift to be mixed quotation, where the quoted material can be as small as a morpheme; i.e., ‘Bush said that the terrorists "mis"-underestimated him’ (Maier 2007). Thus the Amharic shift observed in (108) would involve the quotation of one of the first-person agreement morphemes: "I"-will-not-obey-me. However, as many authors have observed, the mixed quotation approach fails to capture the typological generalizations established in (107) (Deal 2020, Sundaresan 2018). For my own purposes, a mixed quotation account fails to capture the fact that there is interesting language-internal variation in the kinds of predicates that select clausal quotation. Therefore, I follow approaches that treat indexical shift as a real phenomenon that falls between indirect speech reports and direct quotation, such as Deal (2020), Sundaresan (2018) (whose theories nonetheless differ in what element(s) they consider to control indexical shift).
are both used and mentioned. Quotation can neither be treated as an unanalyzed “string of noises,” since speakers can refer anaphorically back to the quotation’s contents, nor can quotation be treated as fully syntactically and semantically integrated into its host sentence (Partee 1973).

Further, it is not sufficient to suggest that what a quoter attempts to produce in formulation a quotation is a verbatim reproduction of some prior utterance (Clark & Gerrig 1990). Each of the examples in (111) contain a valid quotation that cannot be a reproduction of a prior utterance. The quoted string in (111a) is speculated future speech that may or may not occur in actuality. Example (111b) contains the imagined thoughts of a non-verbal animal, and further, even if those thoughts were had by a human, it would be impossible, barring telepathy, for another person to reproduce those private mental impressions verbatim. The quoter in (111c) has replaced some parts of the original utterance with a stand-in (‘blah blah blah’) to represent that an abbreviated version of a prior utterance, without faithfully reproducing the entirety of that speech. In (111d) material is quoted in a different language than the original, and thus fails to be a verbatim reproduction, with non-quoted material additionally interrupting the quote.

(111) a. They will probably say, “it’s not my fault.”
b. The mouse thought, “man, I’m not going in there.”
c. They evidently said, “blah blah blah, they executed him, yada yada yada.”
d. “Go,” she said in Georgian, “where you want.”

Indeed, as Clark & Gerrig (1990) point out in their analysis of quotations as demonstrations (depictions), quoters are by no means bound to verbatim reproduction of an utterance, real or imagined: “By our account, what speakers commit themselves to in a quotation is the depiction of selected aspects of the referent” (Clark & Gerrig 1990: 795, emphasis mine). The aspects that a quoter selectively depicts can include the linguistic content of the original (though not in 111c, “yada yada yada”), the language of the original (though not in 111d), the original prosody or gestures (Klewitz & Couper-Kuhlen 1999, Blackwell et al. 2015), and other aspects of the original delivery, such as voice quality, pitch, and emotional state (Clark & Gerrig 1990: 775). Because speakers are free to choose what to include and highlight in their depictions, the absence of any one aspect of the original does not exclude quotation as a valid analysis of its reproduction.

So how, then, can quotation be distinguished from non-quoted speech reports with indexical shift?

The most cross-linguistically stable property of quotations rather seems to be that quoted material is bounded off from the surrounding material in a way that other constituents are not. The canonical
type of quotation⁸ (like those in 111) occupies the same part of a sentence as a noun phrase object of an utterance verb: i.e., the same position as a non-quoted, non-shifted finite complement clause, and the same position as the indexically shifted Zazaki clause in (105). However, syntactic and semantic operations can transgress the boundary of a finite complement clause (as discussed in 3.4), but not the boundary of a quotation. Example (112) illustrates this contrast in English. While (112b) shows that a question can be formed from an indirect report (cf. 112a), the ungrammaticality of (112d) confirms that it is impossible to form a question from quotation (cf. 112b).

(112) Adapted from Banfield (1973: 4)

a. Yesterday at the station Mary told me that she would meet me there today.

b. Who did Mary tell me that she would meet there today?

c. Yesterday at the station Mary told me, “I will meet you here tomorrow.”

d. *Who did Mary tell me, “I will meet here tomorrow”?

This property defines what can be a valid test of indexical shift: if an instance of reported speech is opaque to syntactic and semantic operations, it is a quotation; if it can be subjected to the same type of syntactic and semantic operations as other finite complement clauses, it is an indirect report; if the reported speech behaves like an indirect report with respect to syntactic and semantic operations, but like a quotation in that the indexicals are shifted (i.e., a monster is present), it must be indexical shift.

### 4.2.1 Ruling out quotation

For the reasons given above, the tests to identify indexical shift have traditionally involved the following: descriptions *de re*, *wh*-extraction, relativization, and cross-clausal binding (Deal 2020, Sundaresan 2018, Anand & Nevins 2004, Sundaresan 2011, Schlenker 2003, 1999).⁹ Each of these appeals to the

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⁸ I am ignoring quotations that occupy syntactic positions that are not assumed to be possible hosts for indexical shift; e.g., the adjectival quotation in “These are not “I really should” radishes...” (Clark & Gerrig 1990: 771, citing Jon Carroll in the San Francisco Chronicle).

⁹ In languages that allow NPIs in an embedded clause to be licensed by negation in a higher clause (‘I did not say I was hungry at all’), NPIs can be used as a test for genuine indexical shift: ‘He did not say that I was hungry

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syntax or semantics of the matrix clause, which ought to be unavailable if the speech report is quotation.¹⁰ In the following subsections, I apply these tests to Tsova-Tush.

4.2.1.1 Description \textit{de re}

A semantic test for indexical shift is whether descriptions \textit{de re} are permitted in the shifted report. A description \textit{de re} is ‘about the thing’—i.e., a true description of the referent—in contrast with \textit{de dicto} ‘about what is said.’ It is possible for a speaker to refer to a given concept without recognizing all possible descriptions of it: I might say that I saw tourists in the town square, but not know that the tourists were French; nonetheless it is true that I saw a group of French people in town square. Their Frenchness is a description \textit{de re}, although what I actually said (\textit{de dicto}) and what I in fact know about them is merely their tourist status.

Thivierge (2019) provided this evidence for Georgian indexical shift, as in (113). This example is grammatical given the context that Dato knows Bryan Adams for his activism work, but not for his music career. Even if what Dato literally said was, ‘I saw Bryan Adams in Tbilisi,’ Thivierge (2019) found that his words can be reported as in (113). The description of Bryan Adams as ‘this singer’ is clearly \textit{de re}, since Dato does not know him as a singer and therefore would not have used that identifier.

(113) \textbf{Georgian:} დათომ თქვა ვნახე ეს მომღერა თბილისში.

dato-m tkv-a v-nax-e es momyeral-i tbilis-ši-o.

\textit{Dato} \text{\textbullet\text{-\textbullet} erg} \text{\textbullet\text{-\textbullet} say-3sg.aor} \text{\textbullet\text{-\textbullet} 1-see-part.aor} \text{\textbullet\text{-\textbullet} this singer-abs} \text{\textbullet\text{-\textbullet} Tbilisi-in-rep.3}

\textit{Free:} ‘Dato said that he saw this singer in Tbilisi.’

\textit{Lit.:} ‘Dato said I saw this singer in Tbilisi.’ (Thivierge 2019: ex. 2)

Tsova-Tush passes this same test. Speakers were given the following context: tourists have arrived in Alvani. Dato does not know that the tourists are from France; he merely saw a group of people arriving in the town square by taxi. Dato tells me, “yesterday I saw some tourists.”¹¹ Both speakers I

at all’ would confirm a non-quotational use of the shifted indexical ‘I.’ However, as discussed in section 3.4.2, available evidence suggests that most (if not all) speakers of Tsova-Tush do not allow cross-clausal licensing of NPIs under any conditions. Thus, cross-clausal NPI licensing is unavailable as a test for indexical shift in Tsova-Tush.

¹⁰ As mentioned above, there one clear intraclausal test for indexical shift that requires an examination of only the report itself: \textit{mixed shift}, where for instance Author shifts but Addressee does not, as in the Amharic example (108).

¹¹ I gave this context in Georgian, i.e., დათომ მითხრა გუშინ ტურისტები ვნახე. ‘Dato told me, “I saw the tourists yesterday,” where the final -o is the Georgian third-person quotative (discussed in more detail in 4.4.1). The fact that Georgian allows \textit{de re} descriptions in this context could in theory interfere with the quality of my Tsova-Tush data here. However, ‘tourists’ should be understood to be \textit{de dicto} in the
asked agreed that (114) is an acceptable report of Dato’s utterance in that context, even though *prangi* ‘French people’ is not a description Dato himself would recognize.

(114) dato-s aɬ-iⁿ me psare son d-ag-iⁿ prang-i-en.
    Dato-erg say-aor comp yesterday 1sg.dat cm-see-aor French.person(m/f)-pl=rep

*Free:* 'Dato said that he saw the French people yesterday.'

*Lit.:* ‘Dato, said that I saw the French people yesterday.’

(personal communication 2020-02-21)

That Tsova-Tush and Georgian allow a *de re* description in reports with shifted indexicals is evidence against a quotational analysis. Even if we recognize that quotation need not be verbatim, we nevertheless expect quotations to represent the intent and understanding of the quoted speaker, which a *de re* description fails to do. Further, this evidence rules out another possible counteranalysis to indexical shift: Free Indirect Discourse.

Free Indirect Discourse is a phenomenon available in some languages where temporal and spatial indexicals can be shifted in an otherwise unshifted representation of a character’s perspective (Sharvit 2008, Eckardt 2015). This phenomenon was long assumed to be available only in writing, particularly in fiction; however, Fludernik (1993) (as cited by Eckardt (2015: 12)) confirmed that its use in oral communication as well. Although study of Free Indirect Discourse traditionally fell under the purview of literary analysis and narratology, in recent decades it has become a subject of increasing attention within semantics and pragmatics.

As Sharvit (2008) points out, Free Indirect Discourse shares a *de dicto* requirement with quotation. In example (115), it is necessary that John knows that the dean is in fact the dean in quotation (a) and Free Indirect Discourse (c), while in a standard indirect report, it need not be the case that John recognizes ‘the dean’ as a description of the referent he is thinking about. That is, (b), but not (a) or (c), is consistent with a situation where John is taking a class with the dean and has had the thought “my professor likes me today,” while completely unaware that his professor is also the dean.

(115) Examples from Sharvit (2008: 367)

a. **Quotation:** John thought, “the dean likes me today!”

b. **Indirect report:** John thought that the dean liked him that day.

c. **Free Indirect Discourse:** The dean liked him today, thought John.

context I gave, so hopefully any interference does not exceed the normal level of bilingual interference speakers would experience at any given time.
In this way, genuine indexical shift, which allows de re descriptions to share a clause with shifted indexicals, is more similar to indirect reports than to quotation or Free Indirect Discourse. Thus, the acceptability of the reports in (113) and (114) in the contexts provided is strong evidence in favor of an indexical shift analysis.

Unfortunately, I have not tested whether de re descriptions are possible in shifted reported thought. Based on data regarding the behavior of question formation and relativization from reported thoughts in previous sections, we should predict that de re description would be infelicitous, as expected for quotations.

4.2.1.2 Question formation (wh-extraction)

In section 3.4.1 it was established that content questions can be formed from finite complement clauses, where some element of the complement is the target of the question. In these constructions, the question word appeared in both clauses in the required syntactic position of question words, immediately preceding the verb phrase. It is therefore expected that indirect speech reports would exhibit this same behavior, while quotations would not.

The examples with indirect reported speech in (116) confirm that questions are formed from the complement of a verb of speech just like any other finite complement, at least when the indexicals are unshifted, with one difference: the reportative clitic =enʷ is used. Without context, these Tsoda-Tush sentences are ambiguous in roughly the same way as their English translation, in that oqar ‘they’ and oquiⁿ ‘their (sg)’ could refer to any mixture of Koba, Levan, and other third-person referents. In actual usage, there are pragmatic principles that would resolve some of this ambiguity. Speakers could also choose other referential strategies instead of the distal demonstrative pronouns to disambiguate which referents are intended (see chapter 5).

(116) a. Declarative indirect speech report

k’oba-s əl-iⁿ levn-eg me oqar hal j-ec’ tag-j-aⁿ
Koba-erg say-aor Levan-all comp yon.ones.erg up cm-should do-cm-inf

oquiⁿ mankan=enʷ

2sg.poss.obl car(j/j)=rep

‘Koba said to Levan that they should fix his car.’ (field notes 2019-07-05)
b. Question formed from indirect speech report

\[
\begin{align*}
\text{vux} & \quad \text{al-i}^n \quad \text{k'oba-s} \quad \text{levn-eg} \quad \text{vux} \quad \text{d-ec}' \quad \text{oqar} \quad \text{hal} \\
\text{what} & \quad \text{say-aor} \quad \text{Koba-erg} \quad \text{Levan-all} \quad \text{what} \quad \text{cm-should} \quad \text{yon.ones.erg} \quad \text{up} \\
\text{tag-d-an=en}'^w & \quad \text{do-cm-inf=rep}
\end{align*}
\]

‘What did Koba say to Levan that they should fix?’ (BH2-090 00:03:06–00:03:09)

Tsova-Tush passes the first diagnostic for indexical shift in (117). These sentences are nearly exact parallels of those in (116), except that the indexicals ve ‘we (incl)’ and heⁿ ‘your’ have shifted.¹² Crucially, (117b) is grammatical construction for seeking an answer such as ‘Levan’s car.’ Like other questions formed from finite complements, the question word is repeated in both clauses.

(117)  

a. Declarative speech report containing shifted indexicals

\[
\begin{align*}
\text{k'oba-s} & \quad \text{al-i}^n \quad \text{levn-eg} \quad \text{me} \quad \text{ve} \quad \text{hal} \quad \text{j-ec'} \quad \text{tag-j-a}^n \quad \text{he}^n \\
\text{Koba-erg} & \quad \text{say-aor} \quad \text{Levan-all} \quad \text{comp} \quad 1+2 \quad \text{up} \quad \text{cm-should} \quad \text{do-cm-inf} \quad \text{2sg.poss} \\
\text{mankan=en}'^w & \\
\text{car(j/j)=rep}
\end{align*}
\]

Free: ‘Koba said to Levan that they should fix his car.’

Lit.: ‘Kobaₖ said to Levan₇ that weₖ+₁ should fix your₇ car.’

(BH2-090 00:02:33–00:02:44)

b. Question formed from speech report containing shifted indexicals

\[
\begin{align*}
\text{vux} & \quad \text{al-i}^n \quad \text{k'oba-s} \quad \text{levn-eg} \quad \text{vux} \quad \text{d-ec’e-t=ve} \quad \text{hal} \quad \text{tag-d-an=en}'^w \\
\text{what} & \quad \text{say-aor} \quad \text{Koba-erg} \quad \text{Levan-all} \quad \text{what} \quad \text{cm-should-pl=1+2 pv} \quad \text{do-cm-inf=rep}
\end{align*}
\]

Free: ‘What did Koba say to Levan that they should fix?’

Lit.: ‘What did Kobaₖ say to Levan₇ that weₖ+₁ should fix?’

(BH2-106 00:02:55–00:02:57)

¹² As in (106), indexical shift is optional here. That is, (117a) could mean ‘Koba said to Levan that weauth+addr should fix youraddr car,’ refer to the Author and Addressee of utterance context. I have only shown the shifted reading for the sake of simplicity.
These examples effectively illustrate that clauses containing shifted indexicals in Tsova-Tush need not be quotation. Further, the speech report in (117b) cannot be analyzed as quotation, since it is accessible to a syntactic operation such as wh-extraction.

Additional data complicates the picture. Example (118) confirms by the same mechanism that indexical shift occurs also under verbs of thought. Curiously, however, the reportative =enʷ in (118b) marks both the embedded clause and the question word in the matrix clause, which raises the possibility that (118b) could in fact mean, “‘What,” Malo thinks, “what did I lose?”’ However, the consultant who provided (118b) in elicitation confirmed in follow-up sessions that this question is a valid way to seek an answer such as ‘the knife’ (cf. 118a), indicating that vux=enʷ ‘what-rep’ is not intended as part of Malo’s thoughts.

(118) a. malʷ dak’liv (me) (as) nek’ dah d-av-d-in-as=enʷ
   Malo(j/d) think (that) (1SG.ERG) knife(d/d) PVB CM-lose-CM-AOR-1SG.ERG=REP

   Free: ‘Malo thinks that she lost the knife.’
   Lit: ‘Maloₘ thinks that Iₘ lost the knife.’ (BH2-078 00:10:44–00:10:47)

b. vux=enʷ dak’liv malʷ vux d-av-d-in-as=enʷ
   what=REP think Malo(j/d) what CM-lose-CM-AOR-1SG.ERG=REP

   Free: ‘What does Malo think that she lost?’
   Lit: ‘What does Maloₘ think Iₘ lost?’ (BH2-078 00:11:04–00:11:07)

Attempts to explain when the reportative =enʷ is possible, required, or ungrammatical have so far not reached any conclusions. Typically when a speaker has told me a given use of the reportative was optional or obligatory, that judgment has been contradicted at a later session, often by the same speaker. The optionality of the reportative makes it difficult to ask for judgments about cases where it might be strictly required. For me this indicates that elicitation is not the best way to investigate the obligatoriness of =enʷ, and a corpus study might be more informative (but see section 4.4.1). However, questions formed from reported speech seem to be rare in naturalistic discourse. As far as I can tell, the available corpora contain no instances of this construction.

Example (119) shows another interesting complication, resulting from my attempt to learn whether ‘who’ questions could be formed from reported thought. The question word in (119b) has been syntactically integrated into the matrix clause as an ‘about’ type argument (in contact case) of the thought verb. The question word is not a copy of the question word in the lower clause, which is in ergative case, representing the subject of the verb ‘deceive.’ I view this as evidence that the reported thought

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in (119b) must be quotation: syntactically it is not being operated upon the same way other finite clauses can be.

(119) a. malʷ dak'liv me žemo-s dah ax-j-ie^n-s=enʷ

Malo(j/d) think that Jemo-erg away deceive-cm-aor-1sg=rep

_Free:_ 'Malo thinks that Jemo deceived her.'
_Lit._: 'Malo_m thinks that Jemo deceived me_m.' (BH2-078 00:11:20–00:11:25)

b. ħan-ax dak'liv malʷ ha^n ax-j-ie^n-s=enʷ

who-con think Malo(j/d) who.erg deceive-cm-aor-1sg=rep

_Free:_ 'Who does Malo think deceived her?'
_Lit._: 'About whom does Malo_m think, “who deceived me_m?”'
(BH2-078 00:11:45–00:11:48)

I can think of two reasons for the contrast between the indexical shift in (117b) and the quotation in (119b): syntactic ergativity, and the type of attitude verb. The first relates to the type of question formation. The questioned element in the former is an absolutive, while the questioned element in the latter is an ergative argument. It has been observed that in a number of ergative languages, the ergative argument is less available for syntactic operations, especially Ā extraction (Deal 2016, Dixon 1979), suggesting an independent reason the ergative subject in (119b) apparently cannot be questioned. I ruled out syntactic ergativity in monoclausal question formation in section 3.4.1 (example 82). However, at present I have no data regarding whether questions can be formed from ergative arguments of finite complements. Example (120) shows that ergative arguments are available for relativization. However, studies of other languages have found that relative clauses and question formation can differ with respect to syntactic ergativity (e.g., Heaton et al. (2016) on Kaqchikel). Therefore the lack of syntactic ergativity in relativization does not necessarily entail the same for question formation.

(120) so-n v-ec’ o ħan=e γaziš ?am-d-o

1sg.dat cm-love you.1 one who.erg=rel well study-cm-prs

'I love the one (m) who studies well.' (Desheriev [Дешериев] 1953: 295)

The other possibility is that Tsova-Tush indexical shift is restricted to certain types of attitude verbs. While (non-quotational) shift was licit with a verb of speaking in (117b), it is apparently not an option under verbs of thought in (119b) and perhaps also (118b), which had potentially unexplained reportative marking on the matrix question word. The restriction of indexical shift to complements
of speech verbs, to the exclusion of verbs of cognition, fits with the indexical shift hierarchy established in (107). Thus these examples can be taken as initial evidence that Tsova-Tush indexical shift is restricted to speech verbs, a known variation in indexically shifting languages.

In sum, the evidence from question formation confirms that Tsova-Tush has indexical shift for at least verb of speaking, while the quotation analysis seems potentially more fitting for verbs of thought.

4.2.1.3 Relativization

As with questions formation, the relativization of an element of an attitude report with shifted indexicals is evidence against a quotational analysis. For one relativization strategy in Tsova-Tush, I have evidence that relativization can target an argument within an indexically shifted clause introduced by a speech verb.

Example (121a) shows a typical example of a complement clause containing a person indexical under a speech verb, where that indexical can be interpreted according to utterance context (i) or in a shifted context (ii). This shifted reading could be explained as either quotation or indexical shift. In (121b), the embedded indexical remains optionally shifty, and the quotation analysis has to be ruled out for (121b.ii) because mezobel ‘neighbor’ has been relativized out of this clause.

\[ (121) \]

\[
\begin{align*}
\text{a. } & \text{ ah } \, \text{el-n-a } \, \text{me} \, \text{mezobel} \, \text{v-el-ir} \, \text{so-x=en} \\
& \text{2sg.erg say-aor-2sg.erg comp neighbor.m(v/b) cm-laugh-impf 1sg-con=rep} \\
& \text{i. Unshifted: You said that the neighbor is laughing at me}^\text{auth}. \\
& \text{ii. Shifted: You, said, “the neighbor is laughing at me,”} \\
\end{align*}
\]

\[
\begin{align*}
\text{b. } & \text{son} \, \text{co} \, \text{c’onalə o} \, \text{mezobel} \, \text{ah} \, \text{me} \, \text{el-n-a} \\
& \text{1sg.dat not like yon neighbor.m(v/b) 2sg.erg rel say-aor-2sg.erg} \\
& \text{v-el-ir} \, \text{so-x=en.} \\
& \text{cm-laugh-impf 1sg-con=rep} \\
& \text{i. Unshifted: I don’t like the neighbor who you said was laughing at me}^\text{auth}. \\
& \text{ii. Shifted: I don’t like the neighbor who you, said “_ was laughing at me,”} \\
& \rightarrow \text{ Judgment (i) confirmed by 3 of 3 speakers asked. Judgment (ii) confirmed by 2 of 3.}
\end{align*}
\]

Not all speakers accepted the shifted reading in (121b.ii), although the unshifted reading was available to each of the speakers I asked. That is, there is apparently interspeaker variation in terms of whether indexical shift is possible in Tsova-Tush. Interspeaker variation in the grammaticality of indexical shift has been reported in other languages as well. Anderson (2019) found that speakers of
English vary in their acceptance of shifted temporal indexicals, such as ‘tomorrow’ in (122). In a pair of online experiments, Anderson (2019) showed that some speakers of American English accept non-utterance-time readings of temporal indexicals in sentences similar to (122), suggesting that American English has indexical shift of temporal adverbs in at least some dialects.

(122) **Shifty English**: Two weeks ago, Jane said that the package would arrive tomorrow, but it never came. (Anderson 2019: 37)

The fact that indexical shift is apparently a feature of only some Tsova-Tush speakers’ grammar, then, is not unprecedented, and this data highlights the need for thorough sociosemantic documentation.

Relativization out of reported thought is apparently not allowed in the same way as with reported speech. The speech verb in (121a) can easily be replaced with ‘thought’ instead of ‘said’ and retain both the unshifted and shifted reading of the embedded indexicals. However, relativizing out of the reported thought requires a different strategy, where the relative pronoun is put into contact case (i.e., the ‘about’ type additional argument). This workaround exactly parallels the issue with question formation from reported thought observed in (119b), contributing further evidence that the type of attitude predicate determines the availability of genuine indexical shift.

(123) son co c’onalə o mezobel malʷ menxui-ćo-x=a dak’liv me
1sg.dat not like yon neighbor.f(j/d) Malo(j/d) which-obl-con=rel think comp
dok’lak j-a=enʷ.
angry cm-be=rep

I don’t like that neighbor,n about whom,n Malo thinks that [she]n is angry.

Thus, the evidence from relativization confirms that Tsova-Tush has indexical shift for at least verbs of speaking, while shifted complements of reported thought again pattern more like what is expected for quotation.

4.2.1.4 Cross-clausal binding

Although there is some provisional evidence for long-distance reflexivation in Tsova-Tush, as discussed in section 3.4.4, I have too little data to establish a pattern that can be used as a diagnostic for indexical shift. Because Tsova-Tush reflexives vary by person (saiʷ kortʷ ‘myself,’ haiʷ kortʷ ‘yourself,’ šuiʷ kortmi ‘themselves,’ etc.), Tsova-Tush examples structured similarly to (124) would be needed to
test whether a reflexive embedded in a speech report can be coreferential with the attitude holder bearing the same person features. Similar patterns are observed in Hinuq, although Hinuq does not have specialized first and second person reflexive pronouns (Forker 2013: 680-690).

(124) a. I said to them, “you insulted me (myself).”
   b. I said to them, “you insulted my (own) family.”

However, because of ongoing monophthongization processes (as described in section 2.3.1), it is becoming increasingly less likely that such potentially revelatory examples could be meaningfully tested in Tsova-Tush. Formerly distinct reflexive possessives (saiⁿ ‘my own,’ haiⁿ ‘your own’) become homophonous with plain personal possessives (seⁿ ‘my,’ heⁿ ‘your’) in many speakers’ pronunciations. Third-person reflexives šariⁿ (sg) and šuiⁿ (pl) remain distinct, but would not be useful in a test for indexical shift in a language that shifts all indexicals together; i.e., in ‘He said to them, “my family did not insult you,”’ the long-distance reflexive use of šuiⁿ kortʷ ‘themselves’ to express the embedded object would be ruled out for independent reasons described in section 4.2.2.

Regardless of any potential collapsing of the reflexive paradigm, long-distance reflexivization in Tsova-Tush remains a valuable topic for future research.

4.2.2 Tsova-Tush in indexical shift typology

The previous section has shown that, for at least some speakers’ grammars, Tsova-Tush exhibits genuine indexical shift in certain circumstances. It is now possible to discuss Tsova-Tush with respect to the typological generalizations discussed in section 4.1.

Based on evidence from question formation, relativization, and de re descriptions, indexical shift under the speech verb aɬar ‘say’ was shown not to be quotation. For verbs of thought, however, evidence from the first two tests pointed toward a quotation analysis. Indexical shift with verbs of knowledge was not tested explicitly. Based on overwhelming evidence for the implicational hierarchy of indexical shift predicates, it is predicted that verbs of knowledge should not permit indexical shift if verbs of cognition do not. However, it remains possible that Tsova-Tush might pattern exceptionally with respect to knowledge verbs. The available data supports a treatment of Tsova-Tush indexical shift as shown in (125), putting it at the restrictive end of the indexical shift hierarchy: shift only occurs (or is only known to occur) after predicates theorized to take the largest complements, speech verbs.
Manuscript for defense – Do not circulate

(125) Tsova-Tush on the indexical shift predicate hierarchy

verbs of speech > verbs of thought > verbs of knowledge

These observations are further confirmed by corpus data regarding the patterning of the reportative clitic and shifted indexicals. In available corpora, I found no evidence of indexical shift under propositional attitude verbs tešar ‘believe’ or eč’vebalar ‘doubt.’ Curiously, there were some examples of finite complement clauses under the knowledge verbs xaʔar / xeʔar ‘know, understand (PFV/IMPV)’ that were marked with the reportative clitic =en, as in (126). The patterning of this clitic is addressed in section 4.4.1. None of the available examples contain indexicals that can be identified as shifted or unshifted. Thus, it remains possible that Tsova-Tush knowledge verbs might be able to embed quotation, although genuine indexical shift with these verbs is predicted not to occur.

(126) je ?urdeⁿ xaʔ-iⁿ txoⁿ me, kok’-t’ot’-iⁿ axk’-in, vešguryariⁿ

and in.morning know-AOR 1+3.DAT COMP hand-foot-GEN tie-PPL Veshaguridze(v/b)

paεʷ, telv-i dah v-ik’-en=en.

Patso(v/b) Telavi-DIR away CM-take-AOR=REP

‘And in the morning we knew (found out) that they took Patso Veshaguridze to Telavi, bound by his hands and feet.’ (ECLinG 22_08 ‘story_KV’ 00:13:03–00:13:11)

The other major typological generalization discussed 4.1 concerns which indexicals undergo shift. Can all context parameters—Author, Addressee, Time, and Location—be shifted under Tsova-Tush verbs of speaking?

Example (127), together with (117) above, confirm that all person indexicals shift (see also 129 below). In (127), the pronouns as ‘I (erg)’ and ve ‘our (incl)’—which includes features of both first and second person, discussed in section 4.3 below—shift together in the clause introduced by aɬ-iⁿ; this clause is confirmed not to be quotation in (127b). Example (117) illustrated the same for the second person he ‘your.’ That is, both first and second person—both Author and Addressee—are subject to indexical shift.
Regarding the shift of spatial and temporal deictics, I collected preliminary data with two speakers on how these adverbs are interpreted in clauses with shifted person indexicals, using pictures like those in Figures 4.1–4.2. In the versions seen by Tsova-Tush speakers, the red text was in Georgian, and all other text was in Tsova-Tush (ad hoc spellings recognized by my participants). In response to the situation shown in Figure 4.1, both speakers identified Malo as the buyer of the present (i.e., shifted reading of as 'I(erg)'), Tuko as the recipient (i.e., shifted hon 'you (dat)'), and Tuesday as the day of purchase (i.e., Malo spoke to Tuko on Wednesday about her purchase on shifted psare'yesterday'). Congruent judgments were elicited using additional pictures, confirming a shifted reading of txa 'today.'

In response to the situation shown in Figure 4.2, both speakers selected Dima’s mother as the one who did not want to go somewhere (i.e., shifted se ‘my’), and Tbilisi (left) as the location she did not want to go (i.e., shifted j-axaⁿ ‘to come (f)’ and esivh ‘(to) here’). Congruent judgments were collected using additional pictures, confirming a shifted reading of osivh ‘(to) there,’ ese ‘here,’ osi ‘there,’ and j-axaⁿ ‘go (f),’ where all temporal and spatial deixis shifted as predicted in the reported speech.

Based on these participants’ judgments, it appears that Tsova-Tush shifts the following parameters together: Author, Addressee, Time, and Location. However, a word of caution is needed for the temporal and spatial deictics.
Two days ago Malo told me that I bought you a present yesterday.

Who bought whom a present?
When did she buy the present?

Figure 4.1. English translation of picture used to collect judgments on shift of psare 'yesterday'

Dima called from the city, said that my mom does not want to come here.

Whose mother does not want to come?
Where does she not want to go?

Figure 4.2. English translation of picture used to collect judgments on shift of ese 'here'
First, the scenarios presented in the images in Figures 4.1–4.2 were, for simplicity’s sake, always declaratives; i.e., ‘Yesterday Malo told me, “I will bake a cake tomorrow,”’ and not ‘What did Malo say to me yesterday that she will bake?’ Although the pictures all involved the same speech verb aɬar ‘say’ that was established above as permitting shifty complements, it remains possible that speakers interpreted the example sentences as quotation. In fact, any clause in which all indexicals shift together that is not shown not to be quotation with an independent test (question formation, relativization, de re descriptions) could, in theory, be quotation, a point I will return to in section 4.2.3.

Second, I also lack clear evidence establishing that the temporal adverbials psare and txa ‘today’ (among others) are truly indexical. It is possible that psare, for instance, in fact means ‘one day earlier’ (which would not be context-dependent). Deal (2020: 89–90) raises this issue with Nez Perce temporal adverbials watiisx and kii taagc, traditionally translated at ‘yesterday/tomorrow’ and ‘today.’ She finds that these adverbs actually lack this context-dependent meaning, in fact behaving more like ‘one day away’ and ‘the same day,’ respectively, as illustrated by temporal binding: ‘Whenever I wash my car, watiisx (the next day/#tomorrow) it rains.’ She concludes, ‘...languages vary in whether they contain truly indexical temporal adverbials, and methodologically... translation with an indexical element furnishes a poor diagnostic for indexicality. The fact that a word is translated as ‘today’ or ‘tomorrow’ does not mean it is actually indexical” (Deal 2020: 90).

I have not collected equivalent judgments regarding Tsova-Tush temporal adverbs, so it remains possible that they are not indexical at all. If my participants read Figure 4.1 to mean, ‘Two days ago Malo said that she bought me a present one day earlier,’ it would be no surprise that they selected three days before Tuko’s utterance as the day of purchase.

If we suspect that my participants’ judgments of Figures 4.1–4.2 were of indexical shift, and not of quotation, we would place Tsova-Tush on the lowest slot of hierarchy of shiftable indexicals in (107b), illustrated in (128). However, because I have no examples of shifted spatial deixis in an attitude report otherwise established as non-quotation, the strongest conclusion I can draw is that Tsova-Tush shifts both person indexicals, both Author and Addressee. Because temporal deixis is assumed to be the first slot on the hierarchy, it should be the case that temporal indexicals in Tsova-Tush shift as well (if truly indexical temporal reference exists).

(128) Tsova-Tush on the shiftable indexicals hierarchy

Temporal deixis > 1ˢᵗ person > 2ⁿᵈ person > spatial deixis

↑?

↑?

¹³ The de re description example in (114) above contained the temporal adverbial psare ‘yesterday’ (‘Dato, said that I saw the French people yesterday.’) However, even though that example could not be explained as quotation, it is unclear in the context supplied whether reference to ‘yesterday’ has shifted.
A final point for typological comparison is the Shift Together constraint, given in (110) above. So far I have shown that indexical shift is optional on a clausal level under *alar ‘say.’ However, is it possible that the shift of any given indexical is optional, resulting in clauses with mixed shift? The Shift Together constraint predicts that mixed shift would be ungrammatical, and this is indeed observed in Tsova-Tush.

Grammaticality judgments provided for (127), given in (129), confirm that this example permits two readings: (i) fully unshifted (an indirect report) and (ii) fully shifted (indexical shift). Any attempts to get mixed shift-y readings were firmly rejected for this and numerous similar examples.

(129) i. *Unshifted*: What did Kobaₖ say to Levan₇ that I_AUTH bought our_AUTH+ADDR sister?
ii. *Shifted*: What did Kobaₖ say to Levan₇ that heₖ bought their_{k+l} sister?
iii. *Mixed shift*: *What did Kobaₖ say to Levan₇ that I_AUTH bought their_{k+l} sister?
iv. *Mixed shift*: *What did Kobaₖ say to Levan₇ that heₖ bought our_AUTH+ADDR sister?

For instance, the same sort of judgments, ruling out mixed shift, are given with the temporal adverb qaⁿ ‘tomorrow’ in (130). Nothing in this example rules out a quotation analysis of reading (ii), however.

(130) šin den-i hatxda malo-s a⁻³-iₙ (me) as qaⁿ
two.OBL day-LOC ago Malo-ERG say-AOR COMP 1SG.ERG tomorrow
tag-b-o-s datxur=enʷ.
make.PFV-CM-PRS-1SG.ERG datxur(b/d)=REP

i. *Unshifted*: ‘Two days ago Maloₙ said that I_AUTH will make datxur tomorrow.’
ii. *Shifted*: ‘Two days ago Maloₙ said that sheₙ would make datxur the next day.’
iii. *Mixed shift*: *‘Two days ago Maloₙ said that I_AUTH would make datxur the next day.’
iv. *Mixed shift*: *‘Two days ago Maloₙ said that sheₙ would make datxur tomorrow.’

(BH2-078 00:14:11–00:14:21)

4.2.3 Interim discussion: Tsova-Tush indexical shift

Tsova-Tush exhibits what might be considered the most restrictive type of indexical shift, the kind most difficult to distinguish from quotation: it is limited to complements of speech verbs, is allowed for some speakers but not others, and never permits any mixed shift where reference to both utterance context and an embedded context is made within the same clause. The only way Tsova-Tush indexical shift is distinguishable from quotation is its transparency to certain syntactic and semantic
patterns. I was unable to find any examples of these particular patterns that distinguish indexical shift from quotation—question formation from a speech report, relativization from a speech report, and de re description—in the available corpora. The apparent rarity of confirmatory evidence of indexical shift in naturalistic speech, together with the language’s endangerment status, raises some important questions: How is Tsova-Tush indexical shift acquired? and, How should reported speech in new and existing documentation be treated?

As discussed in section 1.2.1, the Tsova-Tush language suffered a break in intergenerational transmission in the early-to-mid 20th century, and Georgian has been a pervasive influence on the language even before that. The number of Tsova-Tush speakers today is low (roughly 400–800) and few if any children are acquiring the language. In such situations, languages have been observed to undergo sometimes major changes to their grammar at an accelerated pace (Palosaari & Campbell 2011). Given the subtleties of indexical shift in Tsova-Tush, this phenomenon seems particularly vulnerable, and its attrition (or rather, its reinterpretation as quotation) could have started decades ago, resulting in variation in contemporary speakers’ grammars. If current or future generations will include any new speakers of Tsova-Tush, it can be predicted that their grammars will likely not include indexical shift.¹⁴

The need for semantic documentation has received more attention in linguistics somewhat recently (e.g., Bochnak & Matthewson (2015), Matthewson (2004), the establishment of the journal Semantic Fieldwork Methods in 2019). The fragility of this highly restrictive version of indexical shift as in Tsova-Tush further highlights the importance of semantic documentation. Many of the languages that have been shown to exhibit indexical shift are in similarly vulnerable situations, and language endangerment—in addition to its far more consequential effects on the speaker community—further poses a threat to this kind of semantic diversity. Existing studies on the linguistic effects of language endangerment have typically focused on phonetic and morphosyntactic changes (Palosaari & Campbell 2011); it follows, of course, that the diversity of semantic phenomena might be imperiled as well.

Another issue arises from the way indexical shift is traditionally identified that affects how reported speech in existing corpora can be interpreted. Each of the three tests I have used to identify indexical shift in Tsova-Tush only serve to rule out a quotational analysis of that particular instance of shift—any sentence containing shift that is not actively passing one of these tests could be quotation. That is, only Tsova-Tush examples (117b, 121b, 114, 127b) have been established to be instances of indexical shift, not quotation, because those examples pass one of the given tests. In a language like Tsova-Tush, with uniform indexical shift of all contextual parameters (Author, Addressee, Time, ¹⁴ The possibility of indexical shift in Georgian complicates this picture, of course. Potential new speakers of Tsova-Tush might acquire indexical shift by way of Georgian—a possibility of high interest for research on semantics in language contact and multilingualism, should it come to pass.
Manuscript for defense – Do not circulate

and Location), any examples with shifted indexicals under a speech predicate could just as well be quotation in the absence of Ā extraction or a de re description. Even in a language with mixed shift, such as Amharic’s shift of only first persons, any instance of purported indexical shift that does not include, minimally, an unshifted second person might in fact be quotation: i.e., an Amharic report equivalent to ‘Johnny said, I should run for city council’ with a shifted first person cannot necessarily be disambiguated with respect to the reporting strategy.

By that token, examples (131–134) are technically ambiguous: are their embedded indexicals shifted due to indexical shift or quotation? Only example (132) can be definitively determined to be quotation, since the evidence in section 4.2 found that predicates of thought do not embed indexical shift in Tsova-Tush. None of these examples can be verbatim, for reason discussed with respect to the English counterparts in (111).

(131) oqus utood aɬ-ʷ me, seⁿ bexk’ co b-a=enʷ.
  yon.one.erg probably say.pf-prs comp 1sg.poss fault(b/d) not cm-be=rep
  ‘They (sg) will probably say that “it’s not my fault.” ’ (BH2-085 00:00:51–00:00:55)

(132) daxk’ dak’liv me k’aco;, as st’en b-ec’e-s ču b-ax– as
  mouse(b/d) think comp man 1sg.erg why cm-should-1sg.erg in cm-go 1sg.erg
  co yo-s osi ču=enʷ
  not go.fut-1sg.erg there in=rep
  ‘The mouse thought that “man, why should I go in– I’m not going in there.” ’ (BH2-085 00:00:51–00:00:55)

(133) oqar j-o-ra-l ambui me išt’-išt’=en, b-aːv-b-ieⁿ;
  yon.ones.erg cm-do-impf-evid story(j/j) comp such-such=rep cm-execute-cm-aor
  vunax-mičax=en=e…
  something-somewhere=rep=&
  ‘They evidently told [her] that “such-and-such, [they] executed [him], yada yada yada,” and…’ (ECLinG bav25_10 ‘relatives_lifestory,’ 00:04:19–00:04:24)

(134) šarn yob aɬ-iⁿ miče le? hon aɬ-in
  away go.imp say-aor to.where wish 2sg.dat say-aor
  ‘Go,” [she] said, “where you want,” [she] said.’ (BH2-074-b 00:00:53–00:00:55)
For (134), for instance, which reports speech originally uttered in another language,¹⁵ it can be observed that the shifted clause contains an imperative and that part of the shifted material appeared to the left of the speech verb. Should these factors be taken to mean that (134) is definitively quotation, or is the restriction of imperatives and pre-position of speech reports a feature of English quotations that is not shared cross-linguistically?

The indeterminancy of examples such as these frustrates any corpus-based attempts to describe the features of either quotation or indexical shift. If there are, in fact, three reported speech strategies in a language—fully direct quotation, fully indirect reports, and indexical shift falling in between—there is a risk in looking at corpus data where an example cannot be disambiguated. Any features we seek to describe in this way could be conflating two subcategories of reported speech.

Major & Mayer (2019) provide the first steps toward a solution by investigating prosody in Uyghur speech reports. Uyghur has three strategies for reporting speech—quotation, indexical shift, and indirect reports—as established by the usual syntactic tests. By looking at intonation, Major & Mayer (2019) find that there are three distinct intonational contours associated with each of these reporting strategies in Uyghur, where indexical shift does appear to be the medial strategy, sharing features with the intonational contours of the other two types of reports. Intonation, then, can be used to disambiguate Uyghur reported speech containing shifted indexicals, without having to perform a syntactic test like Â extraction to establish the possibility of indexical shift with each new pattern.

This methodology is a marked improvement than the methods currently used for identifying indexical shift, because it reduces the need to engage in taxing elicitations, where consultants understandably grow tired of questions about the possible resolution of referents of indexicals in highly complex clauses (e.g., ‘What did Koba say to Levan that I bought our sister?’). Further, Major & Mayer’s (2019) method can be applied to any example with an audio recording, opening up a phenomenon like indexical shift to potential corpus-based investigations, as well as studies of semantic change over generations of speakers.

Unfortunately, prosody in Tsova-Tush has received little (possibly no) prior study, so I am unable to apply this test to examples of indexically shifted clauses in Tsova-Tush without first establishing basic prosodic patterns. Nonetheless, Major & Mayer’s (2019) insights highlight the necessity of prosodic documentation of understudied languages. Further, I would suggest that a full gestural documentation of a language with indexical shift might contribute additional insights for this phenomenon. Previous studies have shown that intonation and gesture work together in signaling speech reports

¹⁵ Per the story from which example (134) was taken, the utterance being reported was produced by someone from outside the Tsova-Tush community who certainly would not have known Tsova-Tush. This outsider—the authority figure at the sovkhoz where the speaker of (134) worked one winter—probably spoke Georgian or Russian.
(Blackwell et al. 2015). Gestures, both vocal and embodied, are worthy of consideration in future work on this and similar phenomena.

4.3 Shifty clusivity and pronoun feature theories

Before turning away from the question of indexical shift, I would like to draw attention to one way this Tsova-Tush data highlights how indexical shift could be used as a testing ground for theories regarding the structure of pronouns. Examples (117, 121, 127) each contain a shifted indexical that has received little prior attention in studies of indexical shift: the inclusive we, in Tsova-Tush ve. I will call examples like these, containing a shifted inclusive we, examples of shifty clusivity (clusivity being the category name for inclusive vs. exclusive distinctions among pronouns).

In the literature on indexical shift, much attention is rightly paid to the behavior first-person and second-person singular pronouns, I referring to Author and you referring to Addressee. As observed above, these pronouns can pattern differently with respect to indexical shift, where some languages (or even some predicates within indexical shifting languages) allow shift of Author in embedded contexts without shift of Addressee. The asymmetry in the behavior of these indexicals has contributed to theories of how speech act participants are encoded in the grammar, which require that Addressee be dependent upon Author. Investigations of indexical shift of the Is and yous of the world is an undeniably fruitful pursuit in the syntax-semantics interface.

Considerably less attention has been paid by indexical shift researchers to the behavior of we, often referred to as a first-person plural pronoun. It makes sense that we would be overlooked, if it differs only in number from I, because number is not an indexical feature: a plural is plural regardless of when it is discussed or from whose perspective. If language experts are already tired from deciding who I can refer to in ‘What did Koba say to Levan that I bought?’, why trouble them with a mere shift in number?

However, as pointed out by Cysouw (2003) and Wechsler (2004), we have known for some time that we is not truly plural. The plural dogs refers to a group, each member of which is a dog, but we does not refer to a group where each member is the Author.¹⁶ A group of multiple Authors can only be achieved by speaking in chorus, an act not grammaticalized in the pronoun system of any known language (Wechsler 2004). Rather, we refers to a heterogenous group, referring to the Author and at least one other person who differs in their context-dependent features.

¹⁶ The same is of course true for ”plural” second persons like Pittsburgh English yinz, which can be used to refer to groups including but not limited to multiple Addressees (i.e., third parties can be included).
Further, linguists have observed as far back as 1560 that pronoun systems of different languages grammaticalize different types of group membership of *we* (Haas 1969); that is, some languages distinguish an *exclusive*, referring to the Author plus one or more third parties, and an *inclusive*, referring to both the Author and Addressee (plus or minus third parties). This inclusive *we* is indexically unique, in that it refers to two indexical parameters, Author and Addressee, in a single word. Thus, inclusive *we* is neither strictly a plural nor strictly a first person, but rather a combination first and second person (which may further include additional, context-independent referents).

Formalizations of pronoun features have incorporated this multi-person nature of inclusive *we* through combined binary features such as [+Author][+Addressee] (Dalrymple & Kaplan 2000) or in feature geometries such as Harley & Ritter’s (2002), as shown below. In Harley & Ritter’s (2002) feature geometry for pronouns, monovalent pronominal features form structured dependencies, and inclusive *we* is represented as instantiating both Author and Addressee nodes under a more general Participant feature (which distinguishes person indexicals from third persons). Such approaches stand in contrast to any treatment of inclusive *we* as bearing a [+incl] feature.

The combined feature approach to *we* raises an interesting question for hierarchy of shiftable indexicals demonstrated by Deal (2020, 2017). If inclusive *we* truly encodes both Author and Addressee features, while exclusive *we* encodes only Author plus some third parties, where do these pronouns fit on the hierarchy? Presumably, because Addressee shift entails Author shift but not vice versa, inclusive *we* would pattern like a second person, while exclusive *we* would pattern as a first person, as schematized in (135b). That is, *we* would not pattern as a mere plural version of *I* in the combined feature approach. If, however, *we* is not a combination of features, but merely treated by the grammar as its own category (e.g., 1PL, with 1PL.INCL and 1PL.EXCL in languages with a clusivity distinction), might it occupy its own slot in a hierarchy of shiftable indexicals, as depicted in (135b)?
a. Predictions of a combined person-feature approach to inclusive we

Temporal > 1st person > 2nd person > spatial
↑(excl)? ↑(incl)?

b. Predictions of a non-combinatory approach to inclusive we

Temporal > 1sg > 1pl? > 2sg...
↑(incl, excl)?

This theoretical landscape leads to several empirical questions:

1. Is non-quotational indexical shift of inclusive we possible in natural languages?
2. Can shifty inclusive we co-occur in an attitude report with unshifted first persons?
   (a) Put differently: does shifty clusivity obey Shift Together with first persons?
3. Can shifty inclusive we co-occur in an attitude report with unshifted second persons?
   (a) Put differently: does shifty clusivity obey Shift Together with second persons?
4. In languages with indexical shift of first person but not second person that also have a clusivity distinction, is it possible to get a half-shifted inclusive we?

This chapter has already answered the first three of these questions, at least provisionally, with data from Tsova-Tush. Namely, examples (117, 121, 127) confirmed that a shifted reading of ve ‘we (incl)’ in an embedded was available in clauses that could not be explained as quotation. Example (129) showed that shifty ve obeyed Shift Together with first persons. Similar judgments in (136) establish that shift ve also obeys Shift Together with second persons.¹⁷

(136) k’oba-s ałów-i’ levn-eg me ve hal j-ec’ tag-j-a’n he’n

Koba-erg say-aor Levan-all comp 1+2 up cm-should do-cm-inf 2sg.poss
mankan=en’w

car(j/j)=REP

i. Unshifted: ‘Koba_k said to Levan_l that we_{auth ADDR} should fix your_{ADDR} car.’
ii. Shifted: ‘Koba_k said to Levan_l that we_{k+1} should fix your_l car.’
iii. Mixed shift: *‘Koba_k said to Levan_l that we_{AUTH ADDR} should fix your_l car.’
iv. Mixed shift: *‘Koba_k said to Levan_l that we_{k+1} should fix your_{ADDR} car.’

(Partially repeated from 117a)

¹⁷ A declarative is given for simplicity, but the same judgments were given for the questioned version in (117b) as well.
However, Tsova-Tush cannot offer conclusive evidence for Shift Together with inclusives, because it always shifts all context parameters together. Better evidence is needed from a language that optionally shifts second person.

For the same reason, Tsova-Tush cannot be used to answer the fourth empirical question about shifty clusivity. Because Tsova-Tush indexical shift is of the kind that falls at (or to the right of) second-person shift on the hierarchy of shiftable indexicals (128), it cannot be used to determine how shifty we patterns with respect to the two person features, first vs. second.

What is needed, then, is data from a language with a clusivity distinction, that shifts first person but not second person, with respect to the scenario established in (137–138). In the context given in (137), Jamal would uncontroversially use the exclusive we to refer to himself and Kelly when addressing Li.

(137)  **Context:** Jamal\(j\), standing next to Kelly\(k\), says to Li\(l\):
       We\(j+k\) [excl] are happy to see you\(l\).

(138)  **Context:** Mel\(m\), overheard (137) and later says to Kelly:
       Jamal\(j\) said, ”we\(j+k\) are happy to see her\(l\).”

Because I have proposed this hypothetical scenario to be tested in a language that does not shift second persons, Mel would have to refer to Li in (138) with a third-person pronoun; a context-shifted way to refer to Li is not available. The interesting data point is how we is to be expressed in (138). Per the context, this we should include Jamal (the shifty Author) and Kelly, who was a present third party in (137) but who is now the unshiftable, utterance-context Addressee in (138). That is, this we must refer to both the Author (shifted) and the Addressee (unshiftable): it must be the inclusive. If the inclusive we is possible in (138) for what was original said with an exclusive we, it would be the first reported case (to my knowledge) of a half-shifted indexical.

Inclusive we in (138), if it is possible, would have to be half-shifted, because it would be drawing reference from both Jamal’s perspective (with respect to the Author) and Mel’s unshifted perspective (with respect to the Addressee, Kelly). This half-shift is what changes the indexical from an exclusive in the original to an inclusive in the report. Dominant theories regarding the features of pronouns, which treat inclusives as combinations of Author and Addressee features, make a clear prediction for the possibility of this half-shift.

Further, if this half-shifted indexical is possible, theories of the structure of pronouns must be developed that allow a single indexical to draw reference from two separate contexts simultaneously. Sundaresan (2018), for instance, proposes an internal structure for indexicals where the Addressee
node dominates the Author node, and therefore Addressees cannot be expressed without bringing along the necessary contextual information for determining Author. A semantic monster that shifts only first person but not second person would have to be able to access the Author node of inclusive we without meddling with other nodes in the structure.

![Diagram](image)

**Figure 4.4.** The hierarchical structure of a second-person indexical proposed by Sundaresan (2018: 37)

If half-shifted we is impossible in (138), however, its exclusion would require explanation. How, in that case, would speakers of this hypothetical language express the report in (138)? There must be some way to express this scenario—however rare and convoluted it may be. Speakers might choose some kind of circumlocution (‘Kelly and I’) or an indirect report. It might be that the human cognitive ability to unambiguously resolve referents given such complex contexts will be overtaxed, resulting in speakers making “errors” or in their interlocutors failing to understand the intended referent of whichever pronouns the speaker chooses. Additionally, given that pronoun feature theories predict the possibility of half-shift in this scenario, these theories would have to be updated to accommodate the apparent stipulation against half-shift, in the event that inclusive we were found to be ungrammatical in the hypothetical context provided.

These questions can only be answered by collecting the relevant data from a language with indexical shift of first person but not second that also has a clusivity distinction. Tamil meets these criteria in its “monstrous agreement” patterns (Sundaresan 2018, 2011).¹⁸ Role shift in sign languages (Quer 2015) that have a clusivity distinction might also be a promising testing ground for potential half-shifts.¹⁹ Because I cannot test these questions in Tsova-Tush, they must remain temporarily unresolved, until a suitable candidate language can be identified.

### 4.4 Embedded deixis in Tsova-Tush discourse

Independent of whether any given speech report containing shifted indexicals is quotation or an instance of genuine indexical shift, it is interesting to look at deixis in embedded contexts in conver-

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¹⁸ Sundaresan (personal communication 2019-10-30) suggested to me that this might be difficult to test in Tamil, since only agreement shifts, while overt pronouns in Tamil do not.

¹⁹ But see Hübl et al. (2019) for a quotational analysis of role shift, based on data from DGS (German Sign Language).
sation and storytelling. The choice to shift or not shift deixis in a speech report is part of the larger story of how referents are tracked in discourse.

4.4.1 Reportative clitic with and without shift

Throughout this discussion, I have been glossing the marker =ain(ʷ)/=en(ʷ) as rep for `reportative.' As noted above, the precise form of this marker varies in pronunciation by speaker. Pronunciations with a diphthong and labialization are more conservative.²⁰ I will use =en (the most innovative form, and most frequently occurring in data I have collected) to represent the reportative in prose in this section, while in examples it will be spelled as I hear it or as it was spelled in the source material.

The patterning of this marker in examples given above raises an interesting question: can =en be used to distinguish among direct quotations, genuine indexical shift, and indirect reports (with unshifted indexicals)? In short: no.

At first glance, =en looks like a potentially grammaticalized marker of the unquote, or the end boundary of a speech report (Klewitz & Couper-Kuhlen 1999). Although cross-linguistically it may be rare for languages to have grammaticalized markers of the unquote (Bolden 2004: 1072), languages of the Caucasus (in all three indigenous families) quite prolifically mark reported speech overtly at the end boundary (Hewitt & Crisp 1986). Like in its neighboring languages, Tsova-Tush typically marks the right edge of a speech report with =ain(ʷ)/=en(ʷ). However, the precise details are more complex than expected for a simple marker of the unquote.

First, both some polysemy and homophony of this morpheme needs to be addressed. The updated dictionary series includes the following definitions for this marker (lightly edited for clarity).

(139) Definitions of მჭიდრობი  შიშ ოჯახში  by Bertlani [გეორგი ბერთლანი] et al. (2012: 54)

(i) ოჯახ. --ოჯობ — postpos. for

²⁰ A likely origin of this form is the speech verb aɬar `say,' particularly the pariticiple form aɬino `spoken.' The other two Nakh languages have reported speech markers of similar form and origin: Chechen álla `having said' (Nichols 1994a: 61), Ingush eanna `having said' (Nichols 1994b: 128). In Tsova-Tush the reduction of final /o/ to labialization or zero is a consistent sound change throughout the language, as is the monophthongization of diphthongs (/ai/ → /e/) among some speakers (see section 2.3.1), but the loss of /v/ would be a unique process in the grammaticalization of this clitic. The full grammaticalization is evident from the fact that the reportative marks not only reported speech, but other types of complements, illustrated in this section.
(ii) ოთხ. --თვით
послел. чтобы
postpos. for (it strengthens the meaning with the infinitive)

(iii) хмабаძვით სიტყვებთან აწარმოებს ზმნისართს
со звукоподражательными словами образует наречие
forms adverbs from onomatopoeias

(iv) მაჯორა მოქანახი მოქანახი --ო
частица косвенной речи Мол
particle that points to other people’s words

The two definitions identifying =en as a postposition can be set aside based on the type of argument they select. The postposition in (i), meaning ‘for,’ behaves like other postpositions in the language, attaching to nominals in dative case.²¹ The postpositional =en with a noun can be found in example (432, Appendix B): maqon=en ‘for bread.’

The postposition listed separately in (ii) actually serves the same function, but with non-finite verbs (both infinitives as in 140 and masdars as in 144 below). Here the English addendum and the Russian translation together clarify that this use patterns similarly to English ‘in order to’ (чтобы).

As discussed in section 3.2.1, in Tsova-Tush ‘(in order) to’ can be expressed with a plain infinitive in a finite-verb-as-main-clause construction. Adding the postposition (ii) does indeed seem to “strengthen” the purpose clause containing the infinitive: compare msxal lexbaⁿ ‘to search for pear(s)’ in (55, repeated below) with msxal leĥban=enʷ ‘in order to collect pears’ in (140), both embedded under the same finite verb (in different tenses), describing the same sequence of actions in the Pear Story. The postposition seems to be used to reinforce the role of the non-finite verb as expressing a purpose clause, especially when intervening material (qeⁿbabʷ in 140) might make the unity of the two clauses less clear.

(55, repeated) ḥal=ο v-aɬ-en
msxal lex-b-aⁿ...
up=& cm(m)-go.up-aor pear(b/d) search.for-cm-inf
‘[He] went up to find pears...’ (BH2-084, Appendix A: 273)

²¹ The dictionary notes that the postposition takes dative or “transformative” (what I call “adverbial”) case, marked with -ɣ, which might be correct. In my data I have not yet encountered the postposition ‘for’ with any case other than dative.
(140) ħal=ô v-eɬ-ʷ qeⁿ babʷ, msxal leh-b-an=en. up=& cm-go.up-prs then old.man(v/b) pear(b/d) gather-cm-inf=for

‘Then the old man goes up again, to collect pears.’ (BH2-088, Appendix A: 305)

Importantly, in this use, the postposition =en has to attach to the non-finite verb, even if word order is scrambled: lehban=en msxal would be permitted, but lehban msxal=en is strictly ungrammatical as a way to express ‘in order to collect pears.’ The selectional properties of the postposition—attaching only to nominals or non-finite verbs—contrast with the other uses of =en, which attaches at the right edge of a phrase, regardless of the lexical category of the host element.

These remaining two definitions of =en look like genuine quotative markers. Definition (iii) is exemplified in (141), where the clitic attaches to an ideophone.²² In this example, the verb ‘go’ introduces the apparent quote, rather than a verb of speaking—a strategy used even in such typologically dissimilar languages as English for the same purpose.

(141) xì rak’-rak’=ainʷ d-uit ’ʷ.
               water(d/d) glug-glug=rep cm-go-prs

‘Water goes glug, glug.’ (Bertlani [ბერთლანი] et al. 2012: 54)

Finally, definition (iv) identifies =en as an “indirect speech” particle (translating from the Russian) or a particle marking someone else’s words (per the English and Georgian definitions), relating the Tsova-Tush particle to Georgian -o and Russian мол mol.²³ To make this definition more precise, it can first be observed that Tsova-Tush reports with =en do not necessarily contain someone else’s words, as shown in example (142), where the speaker is reporting her own speech, not someone else’s. In this example en encliticizes with a finite verb in the report. In this way =en patterns differently from the Georgian reported speech marker -o, which is only used when the report is attributed to a second or third person; when a Georgian speaker reports their own words, the first-person marker -მეთქი -metki is used (Hewitt 1995: 614–615).

(142) as t’q’o? liv-as # xolme, diaxac so martal j-a-s=en.
               1sg.erg still say-1sg.erg # often indeed 1sg.abs correct cm(be)-1sg.abs=rep

‘I still often say, I am indeed correct.’ (BH2-064 00:00:29–00:00:33)

²² This ideophone is shared with Georgian: cf. ღარკ’ რაკ’ ხარ к’ ‘glugging, burbling’; ღარკ’ებს რაკ’ ებს  ‘gurgles, burbles.’
²³ About the latter, Grenoble (1998: 134) refers to Russian мол mol (as well as дескать deskat’) as an evidential particle which signals “that the utterance in which they occur is reported, either direct quotation or as paraphrase” and “a change in footing, but not necessarily a change in speakers.” (See for instance Goodwin (2006) for use of the term ‘footing.’)
Thus in investigating reported speech in Tsova-Tush, we are interested in the latter two definitions in (139). The data paint a complicated picture. As mentioned in section 4.2.1.2, it is unclear under what circumstances the reportative clitic \(=en\) is obligatory, optional, or ungrammatical. In stretches of reported speech, speakers have the option to use the clitic multiple times, suffixing it to the final item in a constituent. In this respect, \(=en\) patterns similarly to Georgian -\(\sim\) -o, which “tends to occur frequently throughout the quote, suffixed to most/all major constituents” (Hewitt 1995: 615)

However, it is easy to find examples where \(=en\) does not show up as predicted. In in (143), the storyteller marks the reported speech twice, at the right edge of the first and second clause, but does not mark the unquote.²⁴

| (143) | pst’uin-čo-v aɬ-in upro sc’orat me sanažlev dil:=ve=en gari wife-OBL-ERG say-AOR more precisely COMP wager(d/d) cm-put=1+2=REP DM menxui-čo-v sob namcvar j-at:=ve=en, le ūk’-i, vum which-OBL-ERG more pastry(j/j) cm-bake=1+2=REP or rhok(j/j)-PL something d-at:=ar. cm-bake-MAS |

‘The wife said more precisely, “Let’s make a wager [to see] who bakes more pastries, or rhoki, to bake something.”’ (BH2-080 00:01:08–00:01:22)

It is further possible to find speech reports with shifted indexicals that lack \(=en\) altogether, as in (144). The postposition \(=en\) ‘for’ here is an example of (ii) in definition (139) with a masdar, expressing a purpose. Although there is no reportative marker on the embedded clause containing shifted indexicals, there is a longer than usual pause following the matrix verb.

| (144) | p’irdap’ir hal=о aɬ-i’. ho v-čev-ar=en v-a-s hač’-v-ien straight up=& say-AOR 2SG.ABS CM(M)-kill-MAS=for CM-be-1SG.ABS send-CM(M)-PPL ‘He] told [him] straightforwardly. “I have been sent to kill you.”’ |

(ECLinG 22_08 ‘story_KV’ 00:05:32–00:05:36)

Even shifted speech reports that continue across several clauses do not necessarily require the reportative marker. In the excerpt in (145),²⁵ the storyteller’s report of the communists’ orders continues for three clauses across two prosodic sentences, none of which is marked overtly with the reportative

²⁴ The food item in this example, rhok, is a crescent-shaped pastry, a traditional dish of the Tsova-Tush people. It has no official spelling; <rh> is my best attempt to anglicize what I believe to be an epiglottal stop, since to my knowledge there is no established strategy for this (unlike, for instance, <kh> for /x/ or <gh> for /ɣ/).

²⁵ This excerpt immediately follows the one given in (76) in section 3.2.2.3.
or any other kind of quotative beyond the initial speech verb. Indexicals are shifted throughout the report, showing that the presence of indexical shift alone does not require the reportative marker.

(145) Excerpt from ECLinG BAV25_16 'Tchkopishvili_GU’ 00:02:09–00:02:25

a. č’q’op’išvili-g aɬ-in me, e he že d-aɬ-aⁿ d-ec’e Chkopishvili-all say-aor comp this 2SG.POSS sheep(d/-) CM-give-INF CM-should txon, so d-ec’e txon d-aɬ-aⁿ. ho-go-(h) mič=reⁿ d-a 1+3.DAT hither CM-should 1+3.DAT CM-give-INF 2SG-ALL-LOC where=from CM-be e že.
this sheep(d/-)

‘[The communists] said to Chkopishvili that “you must give us your sheep, you must give them here.”’

b. ho-go-(h) mič=reⁿ d-a e že. 2SG-ALL-LOC where=from CM-be this sheep(d/-)

“Well did you get these sheep from?”

At the same time, the presence of the reportative marker does not imply the presence of indexical shift. Fully indirect speech reports, where indexicals do not shift, can be marked with =en, as in (146). Thus, it cannot be said that =en is a grammaticalized marker of any particular type of speech report (quotation, indexical shift, or indirect report): the presence of =en does not imply that indexicals are shifted; the absence of =en does not imply that indexicals are not shifted.

(146) so-g meirm-es aɬ-iⁿ me, šariⁿ nan hal den-j-al-in=en 1SG-ALL Mariam-erg say-aor comp 3SG.REFL.POSS mother(j/d) up get.better-CM-INTR-AOR=REP

‘Mariam, said to me that her, mother had gotten better.’

(Shavkhelishvili [Шавхелишвили] & Vamling [Вамлинг] 2012: 14)

In fact, the reportative is used to mark complement clauses that do not resemble either reported speech or thought. Shavkhelishvili [Шавхелишвили] & Vamling [Вамлинг] (2012) call =en both a “suffix of indirect speech” and a “suffix of subordination.” The subordinative use is shown in (147–148) under finite predicates of perception (‘heard’) and pretense (‘hid [information] from’). While these predicates clearly do not refer to reported speech or thought, it could be argued that they report an attitude of some sort (described in section 4.4.2.1).
The embedded indexicals in (148) are unshifted, despite the presence of =en. This use remains distinct from the postposition =en defined in (139, i-ii) above, since the clitic in (147–148) appears at the right boundary of a finite complement clause (not strictly to a nominal or non-finite verb, like the postposition).

Thus, it is clear that the shifting of indexicals and the marking of clauses with =en are independent. The clitic is optionally used to mark finite complement clauses, with or without shifted indexicals, under certain types of embedding verb. This last stipulation is, of course, imprecise: for which complement-taking predicates can the complement be marked with =en? The behavior of complement-taking predicates with respect to the reportative =en and shifted indexicals is addressed in the next section.

4.4.2 Verbs embedding shifted indexicals

Table 4.2 reports data from the available corpora that speak to the following questions: for which complement-taking predicates can the complement be marked with =en? and, which complement-taking predicates can embed shifted indexicals? Because this table was prepared based on corpus data, the shift of indexicals—even when a monstrous interpretation of indexicals can be clearly determined—remains ambiguous as to whether it is an instantiation of genuine indexical shift, quotation, or even Free Indirect Discourse. Regardless of the indeterminacy of the reporting strategy, these data are interesting for starting to unravel when a speaker chooses to align themselves with a non-current perspective. The corpora clearly indicate that Tsova-Tush speakers use quotation or quotation-like shifts in perspective even under predicates that might not traditionally be associated with quotation.

For each of the predicates found in chapter 3 to take finite complements (as listed in Table 3.4), I have noted which predicates were found in the corpora to be associated with the use of non-postpositional =en and the shift of indexicals. In all cases where the clitic and indexical shift are
allowed, both appear to be optional,²⁶ although this optionality did not necessarily covary. As discussed in the previous section, shifted indexicals may occur without the reportative clitic, and the reportative clitic may occur without shifted indexicals.

A statistical approach, of course, might reveal a correlation that I have failed to detect. In Table 3.4 I have chosen to represent only the presence/absence of the phenomena in the corpora due to the impossibility of identifying all instances of the reportative =en or all instances of shift of indexicals. A more quantitatively-oriented study is undertaken with a small sample of the ECLinG corpus in section 4.4.4.

Some generalizations can be observed about the types of complement-taking predicate associated with these reporting features. I found no instances of =en or shifted indexicals with desiderative or achievement predicates, and only one predicate each from the propositional attitude and knowledge categories (dak’lavar ‘think,’ xeʔar ‘know’) co-occurred with these features. On the other end of the spectrum, nearly every predicate that could be construed as an utterance predicate was found both with and without =en and shifted indexicals. The predicates treated as belonging to the commentative and manipulative categories pattern with utterance predicates; thus, separate commentative and manipulative categories might not be meaningful here. Of course, it remains possible there are other commentative and manipulative predicates in Tsova-Tush that in fact pattern as a different subcategory of complement-taking predicates, but that I simply lack the data for them.

In addition to the predicates investigated more systematically in Table 3.4, a search of the dictionaries reveals a few other predicates that can co-occur with the reportative clitic and shifted indexicals, such as d-exk’-d-alar ‘promise’ in example (149), qeblar ‘pass a message to’ in (150), dah ax-d-ar ‘deceive’ (151), dah teš-d-ar ‘convince’ (158, next section), and damukrbad-(d)-alar ‘threaten.’²⁷ Each of these can be construed as utterance predicates, involving a transfer of information from a speaker to their interlocutor. Additional investigations of indexical shift might ask whether predicates like these can embed genuine indexical shift by analogy to aɬar ‘say,’ an utterance predicate shown above to allow this phenomenon. My impression of these dictionary examples in (149–151), however, is that they represent a literary genre; it would be interesting to see if these predicates are used with quotations in more spontaneous discourse.

²⁶ Although I was unable to find clear examples of unshifted complements to dekar ‘call’ and kat’ar ‘complain’), it is likely that unshifted examples merely failed to appear in the dataset, because of the overwhelming preference for indexically shifted reports over indirect reports. I will return to this preference for shifted reporting strategies in 4.4.4.

²⁷ See Bertlani et al. 2012: 192), under damukrbadalar, for an example of shift with the reportative clitic under this predicate.
Table 4.2. Use of reportative clitic and shifted indexicals with predicates taking finite complements

<table>
<thead>
<tr>
<th>Semantic class</th>
<th>Predicate (PFV/IMPV)</th>
<th>Gloss</th>
<th>Rep clitic</th>
<th>Shift</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utterance</td>
<td>aɬar</td>
<td>say</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td></td>
<td>lev-d-ar</td>
<td>say</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td></td>
<td>lavar / levar</td>
<td>say</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td></td>
<td>tebar</td>
<td>say, tell</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td></td>
<td>d-epcar</td>
<td>tell</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td></td>
<td>xat’ːar / xet’ːar</td>
<td>ask</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td></td>
<td>d-ekar</td>
<td>call</td>
<td>+/</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>(da-)mt’k’icba-d-ar</td>
<td>assert, claim / prove</td>
<td>+/-</td>
<td>?</td>
</tr>
<tr>
<td>Propositional attitude</td>
<td>dak’lavar / dak’livar</td>
<td>think</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td></td>
<td>tešar</td>
<td>believe</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>eč’vebalar</td>
<td>doubt</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Commentative (factive)</td>
<td>kat’ar</td>
<td>complain</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>yosxetar</td>
<td>be pleased</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Knowledge and acquisition of knowledge</td>
<td>xeʔar</td>
<td>know</td>
<td>+/-</td>
<td>?/</td>
</tr>
<tr>
<td></td>
<td>vuntxeʔ</td>
<td>not know</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>dak’o-d-ar</td>
<td>remember</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>d-ic-d-alar</td>
<td>forget</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>yan d-agar</td>
<td>dream</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fearing</td>
<td>qerɬar</td>
<td>be afraid</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Desiderative</td>
<td>leʔar</td>
<td>wish</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>imed j-a</td>
<td>hope</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Manipulative</td>
<td>teq’ar</td>
<td>beg</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td></td>
<td>d-exar</td>
<td>request</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td></td>
<td>imed j-aɬar</td>
<td>give hope</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Achievement</td>
<td>d-ic-d-alar</td>
<td>forget to</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Perception</td>
<td>guar / d-agar</td>
<td>see</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>xac’ar</td>
<td>hear, smell</td>
<td>+/-</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>hač’ar / heč’ar</td>
<td>watch, look</td>
<td>+/-</td>
<td>+/-</td>
</tr>
</tbody>
</table>

A plus indicates that one or more example was found with the given feature. A minus indicates that one or more was found without the given feature. +/- indicates that both were attested. A question mark indicates that the only available examples were indeterminate with respect to indexical shift, because the complement contained no clear indexicals.
4.4.2.1 Embedded attitudes (arguably) without attitude verbs

Among those clauses with shifted indexicals and reportative =en, there are some clauses that are apparently embedded under non-attitude verbs, which are not expected to embed either quotation or genuine indexical shift. I have identified indexically shifted clauses under verbs expressing acts of perception, emotion, and even states and actions. Such examples raise the question, from whose perspective are the indexicals interpreted? What determines the attitude holder?

When indexical shift occurs under a speech verb, for instance, it is clear how the context parameters (Author, Addressee, etc.) should shift: the embedded Author (attitude holder) is the subject of the speech verb in the matrix clause; the embedded Addressee is the indirect object in the matrix clause. This shift straightforwardly aligns with the perspective of the attitude holder. However, if there is
no attitude verb, whose perspective determines the new context parameters that will contribute the content of the embedded indexicals?

In example (152), the matrix clause contains a perception verb, \( \text{hač’e}^n \) ‘watched, looked,’ followed by a clausal complement with shifted indexicals apparently representing the thoughts of the experiencer of the perception. The shifted son ‘me’ has to refer to Mito, the only available sentient being in this example.

(152) mit’ʷ xi-lʷ ču hač’-e”, hašk’eč’ č’aːr b-aig-če son=ainʷ.
Mito(v/b) water-ill in look-aor maybe fish(b/d) Cm-see-cvb 1sg.dat=rep
‘Mito looked in the water, “maybe I will see a fish.”’

(I. Bertlani et al. 2018: 104)

I was not able to find any examples of the verb \( \text{hač’ar} / \text{heč’ar} \) ‘look (pfv/impv)’ (nor its plural-ac-
tional form \( \text{hapsar} / \text{hipsar} \) in the corpora with a candidate for an embedded Addressee (e.g., ‘Mito looked at Patima, “maybe I will surprise you/her.”’) However, I observed that it is not uncommon for the aorist tense of this verb to be followed by a shift to present tense in its embedded clause. The possibility of tense shift is illustrated in (153). In (153a), the aorist tense \( \text{hač’e}^n \) ‘looked’ takes a complement clause with a present tense verb. Because the arguments are dropped, it is not clear whether the person indexicals would shift as well (whether reference to Maqvala in the lower clause would be expressed with a first or third person pronoun). In (153b), the tense in the higher and lower clause match, indicating that tense shift under this verb is optional. It thus appears that \( \text{hač’ar} / \text{heč’ar} \) ‘look (pfv/impv)’ can indeed embed some kind of perspective shift—quite likely a stylistic/narrative feature such as Free Indirect Discourse (Sharvit 2008), although quotation and indexical shift have not necessarily been ruled out.

(153) a. t’q’o? j-ux hač’-e” dah me le? qa?-a”...
again cm(f)-back look-aor away comp want overtake-inf
‘[Maqvala] looked back [seeing] that [the woman] wants to overtake [Maqvala].’

(ECLinG 18_02 ‘Maiden_tale’ 00:09:05–00:09:01)

b. hič’-r-as me admien-en k’ic’k’o” daxmareb č’irba-la-r...
look-impf-1sg.erg comp person-dat small help need-intr-impf
‘I saw that the person needed a little help...’

(ECLinG 17_04 ‘dialogue2’ 00:01:38–00:01:41)

Additional examples of tense shift with \( \text{hač’ar} / \text{heč’ar} \) ‘look (pfv/impv)’ can be found in the narratives in the appendices (Appendix A: 239, 297, 343; Appendix B: 429).
These kinds of shift can be observed under other perception predicates as well. In example (154), from a Pear Story, aorist tense is clearly established as the main tense of the narrative: five verbs in aorist tense precede bagiⁿ ‘saw (B).’ In the complement of this perception verb, the tense suddenly shifts to present: lepč ‘is lying,’ similar to the tense shift in (153a). Unfortunately, this complement contains no reference to a potential embedded Author or Addressee, so it is unclear if other indexicals might shift here.

(154) b-ax-en e k’nat-eg, e msxl hal lah-b-o-š lat’eⁿ cm-go.pfv-aor this boy(v/b)-all this pear(b/d) up gather.pfv-cm-prs-cvb help.pfv-aor e k’alat=a mak ot:b-o-š lat’eⁿ e velosip’et’en mak=e this basket(b/d)=& on put-cm-prs-cvb help.pfv-aor this bicycle(j/j)-dat on=& šuin=a b-ixk’-b-al-iⁿ, šuin b-ixk’-b-al-iⁿ, lara? away.pl=& cm-many.go-cm-intr-aor away.pl cm-many.go-cm-intr-aor suddenly b-ag-iⁿ me ese kud lepč t’q’o? i k’nat-eg ah cm-see.pfv-aor comp here hat(b/d) be.lying still that.med boy(v/b)-all down tas-b-al-iⁿ. fall-cm-intr-ppl

‘[They] went to this boy, helped gather these pears, and helped put the basket on the bicycle, and they left, left, suddenly [they] saw that the hat that this boy had fall off is still lying here.’

(BH2-091, Appendix A: 354)

As established in section 3.4.3, this particular perception verb (d-agar ‘see’) can optionally enter into long-distance agreement with a (likely topical) argument in a clausal complement, which is does in this example: bagiⁿ agrees with kud ‘hat’ across a clausal boundary. This long-distance agreement pattern rules out a quotational analysis for the tense-shifted complement of (154): arguments within a quotation cannot enter into dependencies outside the boundaries of the quote. Thus the shift in tense under d-agar ‘see’ (and any other potential shifts under that predicate) appears to be Free Indirect Discourse—pending the collection of parallel examples with potentially shifted indexicals: e.g, ‘the boys saw that the hat we had fall off is still lying here.’

Example (155), from another Pear Story, shows a clear instance of indexical shift under a perception predicate. The verb derlebadar means ‘spy, scout, do reconnaissance’—that is, a directed act of perception undertaken furtively for potentially nefarious purposes.²⁹ The subject of the matrix clause

²⁹ When I asked my consultants about the meaning of derlebadar, their description was paired with gestures drawing attention to the eyes: rapid darting of the eyes back and forth, a flat hand placed above the eyebrows as if shielding the eyes from the sun, or both hands forming an o placed around the eyes, pantomiming binoculars.
is the soon-to-be pear thief, and the first-person agreement on the embedded verb refers back to him. Tense also shifts in the lower clause, which is marked with the reportative clitic.

(155) equs derlebad-ien, derlebad-ien, me co gu-s oquin=enʷ.
     this.one.erg spy-aor spy-aor so.that? not see-1sg yon.one.dat=rep
     ‘He spied, spied that “he doesn’t see me.”’ (BH2-084, Appendix A: 281)

However, one complication with example (155) is that I cannot establish whether the indexically shifted clause is a complement or an adverbial clause. I have no other examples of the verb derlebadar, apparently rarely used, and therefore do not know its argument structure. As discussed in section 3.3, me is used to introduce finite clausal complements, relative clauses, and adverbial clauses, where it means ‘so that.’ Its use as a relativizer in example (155) is ruled out due to word order, but an adverbial clause analysis remains possible.

It is worth being cautious about this, even though the indexical shift literature traditionally does not emphasize whether or not an indexically shifted clause is truly a complement of the attitude verb.³⁰ Consider certain clauses introduced by quotative like in English. Example (156) captures much of the spirit of (155), where the clause following like contains shifted indexicals. The matrix predicate does not take finite complement clauses: ‘‘He looked around that he doesn’t see him.’ The shifted clause must be an adverbial, introduced by quotative like, which is known to introduce less-than-literal reported attitudes in English (D’Arcy 2017, Andersen 2000). That is, while I know of no precedent in the indexical shift literature for genuine indexical shift in an adverbial clause, it is not unprecedented for quotation to be introduced in this way. Whether or not genuine indexical shift occurs in adverbial clauses is an empirical question that merits cross-linguistic investigation.

(156) Some Englishes: He looked around furtively, like, “he doesn’t see me.”

The corpora contain other examples of apparently adverbial clauses with indexical shift, an interesting pattern in its own right. It is currently unclear whether there are restrictions as to which adverbial complements can contain shifted indexicals, or if subordinative me functions much like English quotative like, introducing reported attitudes where the speaker is not strictly committed to producing a literal report.

Example (157) shows such an adverbial clause, where I have translated me with English quotative like. Shifted indexicals are not overtly present in the subordinate clause, but rather implied by the

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³⁰ It is apparently assumed that instances of indexical shift are indeed clausal complements of their matrix verb, although I know of no works where authors take pains to establish complementization vs. other types of subordination.
use of the imperative. The verb korlacdar ‘hold with hands’ is certainly not an attitude verb and does not take clausal complements. The indexically shifted subordinate clause is interpreted from the perspective of the subject of the matrix verb. At present it is unclear what precisely determines the identify of the embedded Author: the matrix subject, the topical argument, or something else.

(157) sani kor-lec-d-in-as me ma j-ut’ ma j-ut’ ċu=enʷ.
   doors(d) hand-hold-cm-aor-1sg.erg so.that don’t cm-go don’t cm-go in=rep
   ‘I held the doors, like, “don’t go, don’t go in.”’

   (ECLinG bav19_08 ‘Nino_story,’ 00:00:41–00:00:43)

Example (158) shows another indexically shifted clause that is apparently not a complement of its embedding predicate. The verb dah teš-d-ar ‘convince’ (a clear attitude predicate) takes an absolute direct object, a convincee, and contact-case indirect object, the idea or proposition the convincer hopes to impart on the convincee. The clause containing an indexically shifted report of that proposition in (158) takes the place of that contact-case argument. Without further context, it is unclear how the arguments in the higher clause align with the shifted indexicals in the lower clause. However, it seems most logical that the friend (the convincer) is serving as the attitude holder, getting first-person reference in the report, while the referent who was a first person in the matrix clause (the convincee) becomes the embedded Addressee.

(158) naq’ bist’-ev dah teš-v-ieⁿ-sʷ, heⁿ nan j-ag-iⁿ
   friend-erg away convince-cm(m)-aor-1sg.abs 2sg.poss mother(j/d) cm-see-aor
   son=ainʷ.
   1sg.dat=rep
   ‘A friend convinced me (M), “I saw your mother.”’

   (Kadagidze [ქადაგიძე] & Kadagidze [ქადაგიძე] 1984: 180)

Setting aside non-complement reports and perception predicates, a few other complement-taking predicates have been observed with an indexically shifted complement, such as yosxetaⁿ dolîⁿ ‘started to be pleased’ in (159) and imed jaɫtⁿ ‘gave hope’ in (160). In the former, a king ([he];i), who would be in dative case if expressed overtly, is pleased that the hero Giorgi ([he];j) had saved the kingdom (us;+3) from a fearsome monster (it;k). The use of ‘us’ in the complement of ‘was pleased’ is indexical shift to the perspective of the king.
Example (160) was taken from the dictionary, so context cues are lacking to definitively resolve the referents of the apparently shifted indexicals in the complement clause. My understanding based on the Georgian translation is that the first-person agreement in the lower clause is interpreted from the perspective of the subject in the higher clause, such that it is the father who will take the utterance-level Author to Tbilisi. That utterance Author then becomes the embedded Addressee referred to with the second-person ho in the complement.

(160) dad-as imed j-al-iⁿ son me, kalik j-ik’-o-s father-erg hope(j/j) cm-give-aor 1sg.dat comp city.dir cm-take-prs-1sg.erg

ho=enʷ.

2sg.abs=rep

‘Father gave me hope that, “I will take you to the city.” ’ (Kadagidze & Kadagidze 1984: 307)

This example is the clearest case of a non-attitude predicate introducing an indexically shifted clause where there are two candidates for the attitude holder—‘father’ and ‘me.’ However, it is unclear whether the shift represents the father’s perspective because he is the matrix subject, because he is topical, or because the semantics of the predicate triggers pragmatic reasoning that ‘I’ must refer to someone other than the utterance Author (since presumably that Author should not need to be given hope about their own ability to take someone to Tbilisi).

In sum, Tsova-Tush allows some type of indexical shift—quotation, free indirect discourse, or genuine indexical shift—in clauses (both complement and adverbial) introduced by verbs not traditionally considered to be attitude predicates. What limitations there may be on the type of predicates allowing this kind of shift remains unresolved, although Table 4.2 made a first attempt at identifying where this data exists for the given complement-taking predicates.

It is also possible that the given predicates are not responsible for introducing shift, but rather the reportative =en might itself be the context shifter—albeit an optional one, as established by examples above where indexicals do not shift in its presence. All examples with shifted indexicals in the present
section included the reportative clitic (additional examples of tense shift under perception predicates without person indexicals in 153a and 154 did not). However, if reportative =en itself is capable of triggering a context shift, it is unclear how a Tsova-Tush listener should understand from whose perspective the shift should be interpreted, since =en has no argument structure of its own. The identity of the attitude holder must be resolved by one or more of the following: the subject of the matrix clause, the topic in a stretch of discourse, or some other pragmatic reasoning. This question would be best answered by collecting additional narratives and conversations, with follow-up sessions asking for acceptability judgments with different possible perspective holders.

The way the use of shifted context can be used as part of reference tracking in discourse will be considered in chapter 5.

4.4.3 Other quotatives

Although the reportative =en is the most clearly grammaticalized morpheme associated with speech reports, speakers use other strategies to signal reports as well. I did not include these quotatives in Table 4.2. However, it is likely that all quotatives in this section derived from verbs of speaking pattern similarly to the more fully grammaticalized =en in their optionality and association with shifted indexicals.

In addition to (or sometimes instead of) using a finite utterance predicate to introduce subsequent reported speech, some partially reduced speech verbs are used following the speech report as well, in place of =en. For past speech acts, the form is often aɬ-iⁿ say-aor, which is typically pronounced as a single unit with the previous word and can undergo some unexpected phonetic changes (e.g., oɬiⁿ).

The corresponding first and second person forms eɬnas, eɬnaħ occur when the embedded speaker is a first or second person. When the speaker wants to highlight that they have only second-hand knowledge of a past speech act, an evidential form is used: eɬ-no-r say-evid-impf. In the present tense, speech verbs liv and tibʷ ‘says’ are commonly used in the same position. Although each of these items can grammatically form a full finite clause on its own, they are never paired with overt subjects when occupying the position of =en and typically undergo some prosodic integration with the preceding report. For that reason I treat these as reportative clitics, although they remain much less grammaticalized than =en, evidenced by the productive marking of person, tense, and evidentiality.

In example (161), an evidential quotative ends the first reported clause, with the reportative =en in the second clause. The first part of the report is a polite imperative.32

32 Some further context may be needed to understand the second half of the report. In the story, Chichoshvili, the man whose speech is reported in (161), had just been confronted by another Tsova-Tush man (the storyteller’s
‘He evidently said that “nobody except you shoot me,” ([he] evidently said), “I will be happy.”’

(ECLinG 22_08 ‘story_KV’ 00:05:37–00:5:42)

Additionally, I have observed two other quotatives that do not derive from verbs of speaking. Both are originally Georgian: -o, the third-person Georgian quotative described above, and k’aco ‘man’ in vocative case. The first occurs quite rarely. In all examples I have encountered so far, quotative -o in Tsova-Tush follows =en and attracts stress, as it does in Georgian (the syllables immediately preceding it are shortened, while -o itself is lengthened). Example (162) contains doubly embedded reported speech with an apparent Georgian -o at the end. Doubly embedded reports are not typically associated with any exceptional marking. When asked, speakers confirm such uses of -o as grammatical and seem to find nothing exceptional about them. More research is needed to determine how well integrated this -o is into Tsova-Tush grammar and what purpose it serves.

‘The mouse said that, “yes [the falcon], said this that, ‘the fox is faster than me;’.”’

(BH2-085 00:01:40–00:01:45)

The discursive/quotative use of k’aco is much more common. I am not aware of any studies on the Georgian discourse marker k’aco. Based on my own data and experiences, Georgian k’aco shows multiple signs of ‘pragmaticalization’ (or ‘routinization’; Kleinknecht (2013)) as a discourse marker. Although it originates as the vocative (-o) form of ‘man’ (კაც-ი k’ac-i in nominative case), it is often used in conversations where the interlocutor is a woman or child, indicating that it has undergone semantic bleaching in this use. It is also often phonetically reduced when used as a discourse marker: [kfśo:] or just [ťśo].

In Tsova-Tush, when k’aco occurs outside of other Georgian speech, it appears in the majority of cases at the initial boundary of reported speech or thought; that is, it marks the ‘quote,’ rather than uncle, who had been released from a Soviet prison camp specifically to kill Chichoshvili (recall example 144). In (161), Chichoshvili accepts his fate to die at the hands of a compatriot he respects.
In its discourse-pragmatic uses in Georgian, my initial observations suggest that k’aco is associated with defiance or surprise (or other types of mismatches in the desire or knowledge state of the k’aco-sayer and another person inspiring the k’aco). I believe that in Tsova-Tush this apparently quotative k’aco retains these associations. In (163), for instance, the speaker is engaging in a defiant act: arguing with a stranger on the internet.³³ In (132), the mouse thinking k’aco was defiantly refusing to enter a cave. The two quotative uses of k’aco in Appendix A (331–332) appear with the reported thoughts of the pear-picking man when he discovers, to his surprise and dismay, that some of his pears had gone missing. That is to say, in these corpora, k’aco in Tsova-Tush is not a neutral quotative, but rather a discourse marker associated with reported speech, defiance, and/or surprise.

As a final thought on k’aco, care should be exercised in claiming that this discourse marker is chiefly used in reported speech, despite this corpus evidence. This high correlation (88-89%) in the

³³ Specifically, this speaker, Revaz Orbetishvili, was advancing his theory that the last phrase in Jesus Christ’s dying words—Eli, Eli, lama sabachthani (Greek) ‘God, God, why have you forsaken me?’ (Matthew 27:46)—was actually spoken in Tsova-Tush: lama sa bek taⁿ ‘call my soul up to the mountains.’
given corpora could be a result of the genres of discourse available. If k’a co is primarily associated with a confrontational stance such as defiance, it would follow that it might appear frequently, outside of reported speech, in confrontations. However, as a genre, genuine confrontation is unavailable for linguistic research at this time. For ethical reasons, language documentation does not often include recordings of confrontations among speakers, and I can confirm that, for the corpora examined here, the discourse scenarios were quite friendly: there was no evidence that the speakers felt particularly defiant toward the interviewers or other speakers present. Thus, if k’a co in part signals defiance, it might appear chiefly in reported speech in these recordings because participants are discussing past instances of confrontation, utterance-context confrontations being excluded. Future research might look at the use of k’a co in simulated confrontational scenarios such as board games.

4.4.4 Multimodal corpus ministudy

As mentioned with respect to Table 4.2, it is difficult to put a number on how often indexicals are shifted or how often the reportative =en is used in the available corpora. To do a large quantitative study, the former would require a level of annotation I suspect is unavailable for any given corpus: tagging of every indexical as referring either to utterance context or some other context. The latter would require a morphological tagging that consistently identifies =en and other reportative/quotative elements (only available for a small subset of ECLinG and for my own considerably smaller corpus of naturalistic speech).

Nonetheless, it is desirable to get at least a preliminary idea of the frequency of indexical shift under attitude predicts, the use of reportative/quotative elements, and the use of the complementizer me in association with speech reporting strategies. Likewise, because both gesture and prosody have been shown to signal the onset and offset of speech reports (Blackwell et al. 2015, Ivanova 2013, Bolden 2004), it is desirable to gather preliminary data on the multimodal properties of speech reports in Tsova-Tush.

This data was collected from four recordings in the ECLinG corpus in which speakers were recounting biographical events, detailed in Table 4.3. I selected this genre as being likely to contain a large number of speech reports that were not highly rehearsed (in comparison with reports in often-told fairy tales). For the four recordings selected, I reviewed each line in the recording and identified all instances of reported speech, thought, belief, or knowledge. These attitude reports included finite complement clauses embedded under a matrix predicate, as well as some reports that lacked an embedding verb (i.e., unintroduced quotation).

Across approximately 39 minutes of recording, I identified 52 attitude predicates and coded whether each indexical within the report was shifted (first person, second person, third person demonstrative
Table 4.3. Texts in the ECLinG corpus used in ministudy

<table>
<thead>
<tr>
<th>Text ID</th>
<th>Text name</th>
<th>Persistent identifier</th>
<th>Year</th>
<th>Interviewer(s)</th>
<th>Speaker(s) (sex, birth year)</th>
<th># of reports</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>bav11_06</td>
<td>war_story</td>
<td>1839/00-0000-0000-000A-3D73-A</td>
<td>2004</td>
<td>Bela Shavkhelishvili</td>
<td>Eristo Ciskarishvili (M, 1915)</td>
<td>4</td>
<td>00:08:38</td>
</tr>
<tr>
<td>bav22_08</td>
<td>story_KV</td>
<td>1839/00-0000-0000-000A-3DCF-9</td>
<td>2005</td>
<td>Bela Shavkhelishvili Cisnami Dingashvili</td>
<td>Kote Veshaguridze (M, 1935)</td>
<td>33</td>
<td>00:18:46</td>
</tr>
<tr>
<td>BA25_10</td>
<td>relatives_lifestory</td>
<td>1839/00-0000-0000-000A-3DEF-D</td>
<td>2005</td>
<td>Bela Shavkhelishvili</td>
<td>Lamara Abashidze (F, 1933) Giorgi Usharauli (M, 1936)</td>
<td>8</td>
<td>00:08:20</td>
</tr>
<tr>
<td>BA25_16</td>
<td>Tchkopishvili_GU</td>
<td>1839/00-0000-0000-000A-3DAF-E</td>
<td>2005</td>
<td>Bela Shavkhelishvili</td>
<td>Lamara Abashidze (F, 1933) Giorgi Usharauli (M, 1936)</td>
<td>1</td>
<td>00:03:08</td>
</tr>
</tbody>
</table>

Totals: 52  00:38:52

pronouns, other spatial reference, temporal reference), whether a complementizer was used, whether the reportative =en was used at least once, whether any other quotative elements were used. I also took qualitative notes on prosody and gesture during the clause introduced a report, the report itself, and at the unquote.

Speakers whose speech was analyzed³⁴ were between 69–89 years old at the time of recording. Only 9 of the 52 attitude reports identified in these recordings were produced by the female speaker.

Of the 52 attitude reports identified, all indexicals were shifted in 43 (84%). For the remaining 9 attitude reports, it was not possible to determine whether indexicals had shifted for one of three reasons: 1) because the utterance context parameters did not differ from the perspective of the attitude holder (‘In the morning we knew that they took Patso Veshaguridze to Telavi…’ as in 126), 2) the only indexicals present were verbal tense and/or spatial deictics relating to an indeterminate deictic center (‘He understood [that] the soldiers behind are coming with machine guns,’ where it is not clear that ‘come’ does not refer to the storyteller’s utterance-level perspective), or 3) because there were no indexicals (“‘No,” she said’). There were no attitude reports identified in any of these four recordings with unshifted indexicals. That is, in every identifiable instance, speakers chose to use a direct reporting strategy over indirect reports.

Table 4.4 reports on features related to how the attitude reports were embedded in surrounding discourse. In 22–35% of attitude reports, there was no clausal introduction: the report started an intonation unit with no syntactic signal of the (potential) shift in perspective. Among shifted attitude reports that were introduced syntactically, most (64%) were embedded under a form of the speech verb atlar ‘say,’ either ati³³ ‘said’ or etnor ‘evidently said.’ The remainder were embedded under other utterance predicates or, even less commonly, under a non-attitude predicate like ‘waited’ (as discussed in section 4.4.2.1). For the reports that were indeterminate in terms of the shifting of indexicals, the trend was reversed: all three instances of a report introduced by a knowledge predicate fall into this group.

³⁴ Although the interviewers interacted with the participants in Tsova-Tush, I excluded the interviewers’ speech from analysis.
Table 4.4. Features of matrix clauses introducing attitude reports (in sample of 52 reports)

<table>
<thead>
<tr>
<th>Shift in report</th>
<th>N</th>
<th>%</th>
<th>Unintroduced</th>
<th>Introduced</th>
<th>Predicate = form of ‘say’</th>
<th>Other predicate†</th>
<th>Comp me</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shifted</td>
<td>43</td>
<td>83%</td>
<td>15 (35%)</td>
<td>28 (65%)</td>
<td>18 (64%)</td>
<td>10 (36%)</td>
<td>14 (50%)</td>
</tr>
<tr>
<td>Unshifted</td>
<td>0</td>
<td>0</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Indeterminate</td>
<td>9</td>
<td>17%</td>
<td>2 (22%)</td>
<td>7 (78%)</td>
<td>2 (29%)</td>
<td>5 (71%)</td>
<td>4 (57%)</td>
</tr>
</tbody>
</table>

† Other predicates with shifted indexicals include 6 predicates denoting a transmission of information (‘ask,’ ‘send a letter,’ etc.) and 4 that denoted a state or activity (‘make,’ ‘wait’). Other predicates with indeterminate shift included ‘know,’ ‘tell,’ and ‘[the answer] came.’

Irrespective of whether the shift of indexicals could be determined, the complementizer *me* was present in roughly half of all reports that were syntactically embedded.

Table 4.5 reports on a feature of the attitude reports themselves: the presence vs. absence of the reportative *=en* and other clitic-like or particle-like quotative elements. At least one of these reportative/quotative elements were present in 78–84% attitude reports. The reportative *=en* specifically was present in 49–56% of reports. Other quotatives included *=ali^n*, *=oli^n*, *=elnor* (i.e., forms of the speech verb prosodically integrated into the report), the Georgian quotative *=o* (one occurrence), and the discourse marker *k’aco* (four occurrences). Many reports contained multiple reportative/quotative elements or multiple occurrences of the same element.

Table 4.5. Percentages of shifted and unshifted attitude reports with and without complementizers, reportatives, and quotatives from sample of 52 reports

<table>
<thead>
<tr>
<th>Shift in report</th>
<th>N</th>
<th>%</th>
<th>Any REP/QUOT</th>
<th>REP =en</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shifted</td>
<td>43</td>
<td>83%</td>
<td>36 (84%)</td>
<td>21 (49%)</td>
</tr>
<tr>
<td>Unshifted</td>
<td>0</td>
<td>0</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Indeterminate</td>
<td>9</td>
<td>17%</td>
<td>7 (78%)</td>
<td>5 (56%)</td>
</tr>
</tbody>
</table>

My observations regarding prosody and gesture are qualitative and impressionistic, and therefore should be taken as preliminary. The general prosodic pattern for declarative clauses in this genre (biographical/historical storytelling) involves a slight rise in intonation in every non-final clause (where the highest rise tends to occur in the first clause), with a rapid fall in pitch in the final clause of the prosodic sentence. Intonational targets seem to be the first syllable of the final word in a clause (which is often a verb, but not always) or the coordinating clitic *=e* ‘and.’ The complementizer *me*, when present, was always prosodically integrated into the preceding verb, which would receive non-final high tone and optional lengthening on its first syllable: *ā:li^n=me* ‘said that.’

Clause boundaries are typically associated with a brief pause. In some instances speakers introduced additional pauses at other constituent boundaries, apparently for emphatic reasons (especially in 126 above: ‘we found out that.. bound by his hands and feet.. Patso Veshaguridze.. was taken to
Manuscript for defense – Do not circulate

Telavi,’ a dramatic moment in the story). Typically, a slower tempo is used in non-final clauses, with a faster tempo in final clauses. Addenda can be added after a final clause by starting the addendum with a mid-level intonation, roughly equivalent to intonation at the start of the previous clause, but lower than an initial clause.

I found only a few instances of noticeable deviations from these patterns in reported speech in these four recordings. That is, I did not identify any consistent prosodic cues of either quote or unquote. The most prosodically marked reports are given in example (164),³⁵ which contains a reported dialogue without overt syntactic cues as to the identity of the reported speakers.

Although the verb mak tasjelnor ‘she evidently fell upon’ is hardly an attitude predicate, its argument structure sets up the participants in the reported dialogue that follows. Its subject is a distraught mother (identified only by gender marking and topic continuity; see chapter 5) who has just returned by train to the village after a long imprisonment in a Soviet labor camp. The dative indirect object refers to a group of Chaghma-Tush people the mother encountered upon arrival, from whom she has learned of her son’s execution. The first stretch of reported speech is the voice of the mother, where subsequent clauses alternate between the Chaghma-Tushians and the mother without any lexical identifiers of a shift in speaker.

(164) Excerpt from ECLinG bav25_10 ‘relatives_lifestory’ (00:04:25–00:04:34)

a. mak=a tas-j-el-no-r oqarn, vux lev-d-u-iš vux
    on=& fall-cm-intr-evid-impf yon.ones.dat what say-cm-prs-2pl.erg what
    xiɬ d-u-iš=enʷ, moh=en, ho meⁿ d-a=en=e, so
    be.pfv-prs cm-do.prs-2pl.erg=rep how-rep 2sg.abs who cm-be=rep=& 1sg.abs
    oquiⁿ nan j-a-s=en.
    yon.one.gen mother(j/d) cm-be=1sg.abs=rep

    ‘[She] evidently fell upon them, “what are you saying, what have you done,” “what, who are you” and, “I am his mother”.

b. co=en eɬ-no-r, qen=i...
    no=rep say-evid-impf then=&

    “‘No,” [they/she] evidently said, and then...

³⁵ This example immediately follows (133) above.
The reportative clitic *=en* is repeated at every new turn, but also within a turn (*moh=en* 'how'). Reference within the reported speech helps clarify who is speaking: when the mother is speaking, she addresses her interlocutors with plural second-person agreement and refers to herself in the singular (*so* ‘I’); when the Chaghma-Tushians address her, they use singular *ho* ‘you.’

The storyteller also depicts the embedded speakers prosodically. There is a pause between each change of speaker, and to some extent, different voices are used to portray the participants. In her first set of questions, the mother is louder and faster, and the Chaghma-Tushians are portrayed speaking more quietly and less urgently. In the next exchange, the storyteller has the option to return to her original voicing of the mother; however, she does not fully return to the volume level or pace of the first report of the mother’s words.

The storyteller’s gaze also roughly tracks the exchanges. In the mother’s first turn, the storyteller’s gaze is toward the interviewer, and she takes on an emotive facial expression with furrowed eyebrows, shown in the left image of Figure 4.5 (captured at 00:04:27 in BAV25_10, coinciding with ‘what are you saying’ in 164a). She lowers her gaze during the Chaghma-Tushians’ response, shown in the right image of Figure 4.5 (captured at 00:04:29, coinciding with ‘what, who are you’ in 164a).³⁶ She then returns her gaze to the interviewer during the mother’s next turn and leaves her gaze fixed on the interviewer thereafter.

The final turn within the report (164b) is at the start of a new prosodic sentence, and it is not clear who is speaking during this part of the exchange. Syntactically, nothing disambiguates the reported speaker. Prosodically, the shift suggests that the exchange has returned to the Chaghma-Tushians, but gesturally, the storyteller’s gaze suggests she might still be embodying the mother. This type of ambiguity is called “fade-out,” which Bolden (2004) considers to be a resource speakers use when they do not want to commit themselves to the location of the unquote.

Outside of this example, I found few if any prosodic cues for either quote or unquote, not even for other instances of reported dialogue with ambiguous voicing of reported speakers.

The most common gestural cues associated with reported attitudes was a shift in posture (sitting more forward/upright during the report; e.g., Giorgi Usharauli in BAV25_16 00:02:23–00:02:29), which I noted four times. I also noted one instance of an open-palmed hand sweep during the speech verb *aɬiⁿ* ‘said’ (by Lamara Abashidze in BAV25_10 00:03:19–00:03:21), and one additional instance of furrowed eyebrows during a report (by Kote Veshaguridze in bav22_08 00:10:14–00:10:18, one of the indeterminate reports in terms of indexical shift).

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³⁶ The man to the left of Lamara Abashidze is Giorgi Usharauli, her husband. ECLinG participants have consented to use of their images and prefer to be identified by name.
These gestures are consistent with other gestural studies of reported speech in terms of the type of gesture, but reduced with respect to frequency. Goodwin (2006) and Blackwell et al. (2015) find that gestures are strongly coordinated with reported speech, including gaze. In the recordings I studied, gestures were present, but not necessarily more frequent during reports. I also found that gaze rarely tracked reported speech. The storytellers more commonly kept their gaze fixed on an interviewer or on the camera, with breaks between clauses.

There are multiple reasons for the apparent low number of prosodic and gesture cues accompanying speech reports in this data. The first is genre: speakers apparently understood that they were to be the chief storytellers, with occasional interaction from the interviewers, rather than equal conversants. This scenario differs from more conversational data where gesture is found to correlate highly with speech reports. Another reason is that, in at least one recording (BAV25_10), it is clear that the story was familiar to all present parties before the recording session started. If a storyteller knows that their interlocutors are familiar with the story, they might use fewer and more subdued cues for disambiguation. Further, in the last six minutes of bav22_08, the storyteller is holding his granddaughter, suppressing any manual gestures (his facial gestures do not seem to track reported speech even after this point).

Finally, the problem could lie in me as the annotator of prosody and gesture. This preliminary ministudy did not include acoustic analyses of pitch, volume, or tempo. Nor did I statistically analyze the number of gestures that accompany attitude reports vs. non-reported storytelling. Future studies with a quantificational analysis of the multimodality of reported speech would certainly reveal patterns absent in this first impressionistic account.
Nonetheless, it is clear from this data that reported attitudes in Tsova-Tush can be multimodal, and prosodical and gestural cues can accompany or replace syntactic embedding, as has been found for other languages. A full picture of embedded deixis must include reference to prosody and gesture.

Perhaps the most interesting finding of this ministudy is the overwhelming tendency to depict reported perspectives syntactically, by choosing a direct reporting strategy rather than indirect. Even if all 9 cases that were indeterminate for perspective shift were indeed unshifted indirect reports, speakers still chose direct reports in the vast majority (nearly 90%) of cases. This pattern fits with cross-linguistic observations that, in spontaneous discourse, direct reporting strategies are more common than indirect strategies (Tannen 2007: 39). These Tsova-Tush stories overwhelmingly favor direct reports that take the perspective of characters in the stories, at least syntactically. Further study might reveal more about the gestural embodiment of those characters as well.

4.5 Conclusions

This chapter has contributed a description of embedded deixis in Tsova-Tush. Multiple strategies are available for reporting non-utterance-context speech, thought, belief, and knowledge, including non-quotational indexical shift of all contextual parameters under at least the speech verb aɬar, but not under thought verbs. This chapter has provided a broad look at reports containing shifted indexicals in naturalistic data in combination with elicited data and judgments.

Some outstanding questions remain regarding how shifts from utterance context operate with respect to evidentials and de se interpretation of shifted indexicals. If a shifted speech report contains an evidential marker, who serves as the seat of knowledge for the evaluation of that evidential: the Author, or the embedded attitude holder? There has been little study of evidentials in Tsova-Tush, so this question cannot be addressed until we have a more thorough understanding of evidentials in matrix clauses. I have also avoided the question of which indexicals must be interpreted de se under indexical shift, a feature of typological interest in the study of this phenomenon.

Studies of indexical shift reveal that categories like ‘direct quotation’ and ‘indirect reports’ vary cross-linguistically, and many of our assumptions about what separates quotation from an indirect report have limited application outside the languages most familiar to us. What studies such as the present exploration of Tsova-Tush show is that it is perhaps most meaningful to ask, of any new language, what strategies exist for reporting speech and attitudes, and how speakers use these these strategies to align themselves with (or distance themselves from) non-utterance-context perspectives.

This chapter has highlighted some potential problems in using corpus data for studying cross-linguistically uncommon phenomena like indexical shift in understudied and endangered languages.
The study of indexical shift requires subtle judgments on highly complex sentences, which imposes a linguistically—and at times culturally—unusual task on language experts. Indexical shift in languages that shift all context parameters together is resistant to corpus-based study, because the contexts necessary for confirming the boundaries of the phenomenon occur rarely in discourse. Any given indexically shifted clause in a corpus could just as easily be quotation, without independent evidence of its transparency to syntactic and semantic dependencies with the matrix clause. For these reasons, it would of course be preferable if the research were carried out by a native speaker linguist, who could collect and assess data without (or at least with less) mediation by a language of wider communication, which may or may not have a grammatical means for expressing the construction under study.

Further, as described above regarding the discourse marker k’aco, elements associated with reported speech in corpora might actually have no association with reported speech; rather, the interview scenario simply might not be a normal genre for the use of those elements in a non-reported context. Looking at sociolinguistic interviews of English, one might find that invectives are only used in reported speech, simply because there is (hopefully) no reason for the interviewer and interviewee to address abusive language at each other in utterance context. Similarly, the Tsova-Tush discourse marker k’aco is associated with reported speech in the available corpora, but its use as a marker of defiance might go beyond speech reports.

Put differently, in any given corpus of naturalistic speech, utterance context and reported speech crucially differ in terms of genre. In utterance context, the only genre ethically available is “making a recording for a corpus” (with many appreciably different and linguistically interesting subgenres thereof). In reported speech, in contrast, any genre is available that the participant wants to discuss. It is a very different thing to discuss acts of defiance than it is to commit one against a conversational partner. Face-threatening acts in corpora, then, are likely to be associated with reported rather than actual context. Perhaps the most favorable workaround for this limitation would be to pursue somewhat less naturalistic speech by recording consenting participants in a simulated conflict scenario, such as a board game.

Finally, in situations of endangerment, it is possible that the language is facing rapid internal changes due to intensified contact or attrition. Can Tsova-Tush be said to exhibit indexical shift if not every speaker realizes reported speech with the same degree of semantic and syntactic transparency? For Tsova-Tush, future studies might instead see complex syntactic/semantic phenomena like indexical shift reinterpreted into more straightforward categories, as speakers’ grammars respond to increasing outside influence. The value of semantic documentation—which often cannot be recovered even from robust corpora—is indisputable.
Chapter 5
Reference Tracking and Features of Narratives

The previous two chapters looked at grammatical patterns that can be examined, for the most part, without leaving the boundaries of a sentence. The goal of this chapter is to expand on those insights by looking at larger linguistic units. Specifically, strategies for reference tracking are explored in narratives, to start to describe general tendencies in how speakers use more or less explicit forms of reference in discourse. Further, because there has been little (if any) previous descriptions of Tsova-Tush discourse (generally) or narratives (specifically), this chapter also reports some discourse-level linguistic patterns in Tsova-Tush, which are not observable by looking at sentences in isolation.

At the outset of this chapter, based on what has been observed thus far in Tsova-Tush grammar, referential strategies are assumed to be the following (reproduced from section 2.1.3):

- noun phrase
  - with or without demonstrative adjective
  - with or without some other modifier
- overt pronoun
  - third person: demonstrative pronouns (proximal, medial, distal)
  - oha? ‘the same (one),’ šinva? ‘both,’ etc.
  - personal pronouns: so ‘I,’ ho ‘you,’ etc.
  - reflexive pronouns
- pronominal agreement (first and second person only)
- gender agreement
- co-speech gesture
- entirely covert

These referential strategies are listed in approximate order from most explicit to most covert reference (although it is unclear where co-speech gesture should fall in terms of explicitness), drawing
from similar scales and hierarchies discussed in the literature on reference tracking, givenness, and topic continuity (summarized in chapter 2).

This chapter seeks to characterize the conditions favoring more explicit vs. more covert reference in Tsova-Tush narratives. Due to the preliminary nature of this study, co-speech gesture will receive only limited discussion. Further, reference to first and second persons is limited by the nature of the narrative data.

5.1 Narrative data

The narrative data in this chapter was collected by presenting Tsova-Tush speakers with a video stimulus and asking them to then retell the story depicted in the video. This type of data collection results in a genre of its own, in contrast to the kinds of narratives speakers might be more accustomed to telling, such as personal histories or fairy tales. While narratives of the latter type are available in the ECLinG corpus, I have chosen to look instead at this more controlled, less naturalistic genre—narratives based on video stimuli—for my present purposes. There are two major motivations for this choice: control over research conditions, and comparability of stories told by multiple speakers.

In terms of control, video stimuli allow the researcher to collect a storyteller’s relatively unrehearsed account of the narrative. Unlike fairy tales or personal histories, which a potential participant might have retold an unknowable number of times, narratives based on video stimuli represent a speaker’s first attempt to tell a story, limiting the effect rehearsal might have on the linguistic forms used. Further, with video stimuli, the exact content of the story is known to the researcher, unlike stories that describe events in the storyteller’s life—be they real, embellished, or imagined—that the researcher was not present for. Thus the researcher knows what events the speaker is more or less attempting to relate to their audience when a video is used as the stimulus. Finally, videos can specifically be chosen to increase the likelihood of certain linguistic features: e.g., stories with multiple characters of the same gender or animacy to look at reference tracking in a crowded common ground, or stories with a twist ending or mistaken understanding to encourage mirative marking (each of which will be described in more detail below).

Additionally, the use of video stimuli allows a researcher to collect multiple storyteller’s accounts of the exact same events, providing insights into interspeaker variation in how the same scenario is described. This same level of comparison cannot be achieved with real life events, since each person’s role in that event will differ, while each speaker telling a story based on a video has an identical role: one of a video watcher / linguistic experiment participant. Purely by coincidence, I have a recording of a conversation among three Tsova-Tush speakers in which one speaker describes the same series
of events that I believe a different speaker described in a recording produced through the ECLinG project. However, the stories are told from different perspectives and for different purposes. The linguistic differences between them might be due to the contrasting storytelling scenarios or due to interspeaker variation, with no definitive way to sort among the confounds. A comparison of these stories would nevertheless be interesting, but would not yield as controlled a starting point for the study of Tsova-Tush discourse.

For these reasons, I have chosen to limit the present study to narratives based on video stimuli at this early step, to minimize the unknowns that accompany stories that speakers are more accustomed to telling. The cost of this decision is that these narratives are less culturally grounded and potentially less natural than the stories that participants might have chosen to tell me if I had given them an open choice. In other words, the narratives studied in this chapter are not necessarily better or worse than other types of stories, but they are certainly different.

Four different videos were used in data collection and will be used in examples in this chapter, listed in Table 5.1. However, at present only two sets of narratives, the pear stories and the donkey stories, have been fully transcribed with the assistance of Tsova-Tush speaking consultants, and only these narratives are included in the reference tracking study described below. Narratives based on the other stimuli, ‘Snack Attack’ and ‘The Present,’ are consulted for illustrative examples of other discursive phenomena, but are unsuitable for the study of reference tracking without native speaker judgments regarding the deictics used in the stories.

All four videos are described in the next subsection, followed by some notes on methods in data collection, before turning more specifically to the reference tracking study in section 5.2.

### 5.1.1 Description of the video stimuli

All of the videos used as stimuli depict stories with multiple characters who either do not speak during the story, or (in ‘The Present’) whose speech is not important for understanding the sequence of events, meaning that these videos are suitable for linguistic elicitation regardless of which languages the participants speak, although there may be cultural reasons one or another video might not be
suitable for some communities. The absence (or near absence) of speech in the videos means that speakers’ retellings of the events are not biased by the linguistic form of the stimulus.

The ‘Pear Film,’ which has now served as a stimulus for the collection of narratives in numerous languages worldwide, was specifically designed for the study of language and cognition across cultures (Chafe 1980). In the video, a man is shown picking some pears from a pear tree. While he is up in the tree, another man walks by with a goat. Then, a boy sneaks up on his bicycle and steals one of his baskets of pears. As the boy rides away, a girl on a bicycle rides past him, catching his attention. He falls over as a result, spilling the pears and losing his hat. A nearby group of boys help him put the pears back in the basket. As they part, one of the boys in the group finds the first boy’s hat and whistles to get his attention to give it back to him. The first boy rewards the second boy for finding his hat by giving him enough pears for each of the boys in the group. At the end of the video, the man who was picking pears climbs down from the tree to find that one of his baskets is missing. At the same time, the group of boys walks past, each eating a pear, resulting in a look of puzzlement from the pear farmer.

The wide use of the ‘Pear Film’ in linguistics owes to its clever design. In spite of the lack of dialogue, the events and the motivations of the characters are easy to interpret. The cast of characters makes this film ideal for investigating reference tracking: there are multiple referents of potentially the same gender and animacy status, motivating speakers to use disambiguation strategies (such as my use of ‘the first boy’ vs. the ‘second boy’ in the descriptive above). The final scene shift back to the pear-picking man necessitates the reactivation of a referent (this pear farmer), who was previously active in the common ground, but who has been inactive for several sequences of events.

That said, in my data collection, I found variation in stimuli to be useful for maintaining community engagement. As a guest in the community, it is most appropriate for me to be escorted to potential participants’ houses by my host family and neighbors, meaning that one of my hosts in particular (Revaz Orbetishvili) is present for nearly all recording sessions. Although each screening of the ‘Pear Film’ is new for the next storyteller, my generous hosts sit through multiple screenings, so using a variety of video stimuli keeps the task more interesting for all of us for longer.

Unlike the ‘Pear Film,’ the other three videos I have used so far have not been widely used for linguistic data collection. At present, all three videos are freely available online and can be downloaded, but they remain the intellectual property of their respective creators (given in Table 5.1) and could be removed without warning. Also in contrast to the ‘Pear Film,’ which was live action, these three videos are animated.

In ‘Mariza the Stubborn Donkey,’ a fisherman is shown loading his donkey with baskets of fish to carry uphill to a market. When the donkey refuses to walk any further, the fisherman tries hitting
and pushing the animal to no avail. Finally, he pulls out a cassette player and turns on a lively Greek song, inspiring the donkey to dance up the mountain with him. When the two reach the marketplace at the summit, the fisherman looks victorious, until he discovers that the baskets are empty—the fish having flown out of the baskets due to their vigorous dancing. As the man is overcome with dismay, the donkey sheepishly offers him the cassette player, and the two resume dancing.

In ‘Snack Attack,’ an elderly woman in a train station attempts to buy the last package of cookies in a vending machine, but the package does not initially drop, inspiring an angry struggle with the vending machine. After she finally obtains her purchase, she puts the package in her purse and sits on a bench on the platform. While waiting for her train, the woman reads a newspaper and reaches for a cookie, but a teenager sitting next to her takes and eats that same cookie first. The woman gets angry, and the two take turns eating cookies from the packet between them, until only one cookie remains. The woman attempts to yell at the teenager for eating her hard-earned cookies, but loud music playing through his headphones drowns the woman out. He takes the last cookie, eats half, and offers the other half to her. The woman angrily crumbles up his peace offering and gets on her train. However, when the conductor comes to check her ticket, the woman discovers her packet of cookies in her purse, still unopened, and realizes with some chagrin that she had eaten the teenager’s cookies, not the other way around.

In ‘The Present,’ a mother comes home from work to find her son playing video games. She encourages him to go outside and gives him a box containing a present. When a puppy pops out of the box, the boy is initially pleased, until he sees that the puppy only has three legs. Seemingly disappointed by the defective gift, the boys tosses the puppy aside and continues playing video games. The puppy scampers around clumsily and finds a ball to play with. The boy tries to ignore the puppy’s antics, but the more relentlessly the puppy scurries around in spite of its missing leg, the more charmed the boy seems by his new pet. He finally turns off the video game and gets up to take the puppy outside to play, at which point it is revealed that the boy is also missing a leg.

My participants found each of these videos to be interesting, easy to understand, and enjoyable. Several asked me to link them to the videos online so that they could show their family later, and many commented on the quality of the animation or soundtrack. The story in ‘The Present’ elicits a more emotional reaction that the others and should perhaps be screened with caution.

There are a few aspects of these videos that elicited data of specific linguistic interest. First, ‘Snack Attack’ depicts several technologies (coin-operated vending machine, headphones, cell phone) that might be new enough in some communities that a term will need to be borrowed or coined. In Tsova-Tush, this fact provided insights into how speakers assign gender to potentially new nouns. The words storytellers used for ‘vending machine’ and ‘headphones,’ as far as I can tell, are unattested in available
corpora, although it remains possible that they are established in the community. Regardless of the word chosen, speakers used /j/ agreement for these technologies, rather than default /d/ agreement, hinting at a partial semantic basis for /j/ gender assignment.¹ My data elicited with the ‘Snack Attack’ video are too preliminary for further commentary on this point; however, videos such as this one could be useful stimuli for exploring how novel nouns are nativized in Tsowa-Tush and other languages.

Further, these three videos each contained a twist ending, which resulted in the mirative use of evidential verb marking, to be discussed in section 5.3.4.

At the same time, these stories contained fewer potentially conflicting referents that would compel speakers to use more explicit referential strategies for disambiguation. In a language with gendered pronouns, there is one ‘she’ in ‘Snack Attack’ (the elderly woman who bought cookies); the only other animate referents would be ‘he’ (the teenager, the conductor). Likewise, in narratives based on ‘Mariza the Stubborn Donkey,’ storytellers could in theory refer to the fisherman as ‘he’ for the entire story after his first mention, if ‘donkey’ belongs to a different gender for them (‘it’). These videos by themselves, then, would not be highly useful for investigating reference tracking. However, as discussed below, the arrangement of referents in the donkey stories provides a useful point of comparison to the cast of characters in the pear stories, allowing the comparison of referential strategies when the common ground is more or less crowded.

At present, my narrative data collected in this manner remains limited, although I see animated shorts such as these as beneficial in future data collection, both for increasing the variety of linguistic forms present in the narratives, as well as for sustaining the interest of collaborators and participants.

5.1.2 Recording and transcription methods

The favored methodology for collecting pear stories, as laid out by Chafe (1980), is to screen the ‘Pear Film’ for one participant at a time, twice in a row, and then to have the participant recount the events of the film to a native speaker-interviewer who has not seen the film (or who the participant believes to have not seen the film). This requirement that participant-storytellers have an interlocutor who presumably does not already know the material is necessary to encourage storytellers to consider their interlocutor’s state of mind in the choices they make for reference and information management. If storytellers know that their addressees are familiar with the content of the video, they might use less explicit referential strategies than typically needed, treating the video contents as if already part of the common ground.

¹ These observations are similar to findings by Bellamy & Wichers Schreur (2019), Wichers Schreur (forthcoming), whose research on gender assignment of novel borrowings is ongoing.
In data collection, I strayed from this ideal to accommodate community preferences for how linguistic research should be conducted. I initially suggested that we keep one native speaker ‘in the dark,’ not allowing them to be present for the screening of the videos, so that storytellers could later describe the videos to a naive interlocutor. My participants preferred a “more efficient” methodology (their words), which was to play the video twice for multiple native speakers at the same time, who would then take turns describing the video to the camera. They also preferred to be present for each other’s narratives.

This deviation from the ideal certainly impacted the degree to which my recorded data would match more naturalistic storytelling in terms of referential choice; I will make remarks on specific instances where I believe the data collection methods to have impacted speaker decisions at various points in this chapter. That said, in most instances, it seems that speakers approached the task in good faith, as if they were telling a naive listener a new story, somewhat in the style of a fairy tale. Storytellers generally spent time on scene-setting (‘it was autumn in a village, a rooster crowed...’) and added descriptions (‘a white apron,’ ‘a little girl,’ ‘a moustachioed old man’), which are superfluous if the story is already known to all.

Thus, while these narratives undoubtedly constitute a genre of their own and therefore represent somewhat different choices than speakers would typically make, I believe the data investigated in this chapter represents genuine aspects of these speakers’ grammars and provides a good, initial look at Tsova-Tush discourse.

After storytellers’ pear stories (based on the ‘Pear Film’) and donkey stories (based on ‘Mariza the Stubborn Donkey’) were recorded, the audio was segmented (partially automated) and transcribed in ELAN (2019). I wrote first-pass transcriptions based on my own Tsova-Tush language abilities (greatly facilitated by the fact that the content of the narratives was known ahead of time). The transcript was then corrected, improved, and further annotated with the help of a native speaker, which provided me sufficient information to prepare a morpheme-level glossing for the the narratives. Remaining uncertainties in the narratives are those that native speaker collaborators also could not explain.

These transcribed, translated, annotated, and glossed texts were coded for the reference-tracking study according to the methods described in section 5.2.1. Additional narratives that have not been fully corrected with the help of a native speaker are used in some illustrative examples in this chapter, but full transcripts are not yet available.
5.2 Reference tracking

The questions addressed in this study are: how do speakers assimilate new referents into the common ground (i.e., how are referents encoded at their first and second mention) \(5.2.2.1 - 5.2.2.3\); how does the degree of activation of a referent and its syntactic position affect the form speakers use to refer to it \(5.2.2.4 - 5.2.2.5\); what other conditions facilitate covert reference \(5.2.2.6\); and how do grammatical gender, within-story contexts (i.e., attitude reports and other forms of perspective taking), and deictic distance help or hinder reference tracking \(5.2.2.7 - 5.2.2.9\)?

Before answering these questions, section 5.2.1 details how the data was prepared and coded for analysis.

5.2.1 Data and coding

The appendices contain glossed transcripts of the seven pear stories (Appendix A) and five donkey stories (Appendix B) used in the reference tracking study. Two additional donkey stories were collected, but are not used in the reference tracking study: one was excluded because the storyteller was judged by other Tsoda-Tush consultants as using atypical or ungrammatical referential strategies; one was excluded because the storyteller struggled to remember the content of their intended story.

The pear stories were recorded (audio and video) between May and August of 2019. The seven stories together total 185 prosodic sentences (defined below), each on separate numbered lines in the appendices, of which 169 sentences were used in analysis.² Those 169 sentences contained 510 clauses (defined below), of which 491 clauses were analyzed.³

The donkey stories were recorded (audio only) in July 2018. The five stories together total 93 prosodic sentences, of which 74 sentences were used in the reference tracking study.⁴ Those 74 sentences contained 186 clauses, of which 182 were used in analysis.⁵

Table 5.2 summarizes the number of sentences and clauses in each speaker’s story. One speaker, DE, was recorded telling both stories. Donkey stories were on average shorter than pear stories (a mean of 14.8 sentences vs. 24 sentences). For the reference tracking study, these stories were recorded and analyzed.

² Sixteen sentences in the pear stories were excluded for the following reasons: there was no verb (7); the sentence was part of introductory scene-setting (5) or an outro (2); the sentence was abandoned (2); the sentence was unintelligible (1).
³ Nineteen clauses in the pear stories were excluded for the following reasons: the clause contained no (clear) referents (8); the clause was a digression (7); or the clause belonged to introductory scene-setting (4).
⁴ Nineteen sentences in the donkey stories were excluded for the following reasons: the sentence was abandoned (6); the sentence contained no verbs (6); the sentence was part of an outro (3); the sentence was an interruption by someone else present (2); the sentence contained no referents (2).
⁵ Four clauses in the donkey stories were excluded for the following reasons: there were no referents (3); or the clause was a parenthetical (1).
### Table 5.2. Narrative data for analysis of reference tracking

<table>
<thead>
<tr>
<th>Text</th>
<th>Appendix</th>
<th>Archival locator</th>
<th>Speaker</th>
<th>Age when recorded</th>
<th>M/F</th>
<th>Sentence</th>
<th>Clauses</th>
<th>Audio duration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pear stories</strong></td>
<td>A.1</td>
<td>BH2-082</td>
<td>DE</td>
<td>57</td>
<td>M</td>
<td>16</td>
<td>50</td>
<td>00:02:58</td>
</tr>
<tr>
<td></td>
<td>A.2</td>
<td>BH2-083</td>
<td>RS</td>
<td>61</td>
<td>M</td>
<td>26</td>
<td>58</td>
<td>00:02:24</td>
</tr>
<tr>
<td></td>
<td>A.3</td>
<td>BH2-084</td>
<td>RO</td>
<td>61</td>
<td>M</td>
<td>32</td>
<td>90</td>
<td>00:02:29</td>
</tr>
<tr>
<td></td>
<td>A.4</td>
<td>BH2-088</td>
<td>GB</td>
<td>62</td>
<td>M</td>
<td>35</td>
<td>95</td>
<td>00:03:17</td>
</tr>
<tr>
<td></td>
<td>A.5</td>
<td>BH2-091</td>
<td>TaB</td>
<td>67</td>
<td>F</td>
<td>30</td>
<td>97</td>
<td>00:03:33</td>
</tr>
<tr>
<td></td>
<td>A.6</td>
<td>BH2-093</td>
<td>BP</td>
<td>71</td>
<td>F</td>
<td>15</td>
<td>48</td>
<td>00:02:48</td>
</tr>
<tr>
<td></td>
<td>A.7</td>
<td>BH2-095</td>
<td>TT</td>
<td>61</td>
<td>F</td>
<td>15</td>
<td>53</td>
<td>00:02:34</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>169</td>
<td>491</td>
<td>00:20:03</td>
</tr>
<tr>
<td><strong>Donkey stories</strong></td>
<td>B.8</td>
<td>BH2-063</td>
<td>TQ</td>
<td>93</td>
<td>F</td>
<td>10</td>
<td>34</td>
<td>00:01:38</td>
</tr>
<tr>
<td></td>
<td>B.9</td>
<td>BH2-067</td>
<td>OA</td>
<td>62</td>
<td>M</td>
<td>18</td>
<td>46</td>
<td>00:01:49</td>
</tr>
<tr>
<td></td>
<td>B.10</td>
<td>BH2-068</td>
<td>KD</td>
<td>59</td>
<td>F</td>
<td>17</td>
<td>39</td>
<td>00:01:48</td>
</tr>
<tr>
<td></td>
<td>B.11</td>
<td>BH2-075</td>
<td>DE</td>
<td>56</td>
<td>M</td>
<td>12</td>
<td>26</td>
<td>00:01:43</td>
</tr>
<tr>
<td></td>
<td>B.12</td>
<td>BH2-077</td>
<td>DK</td>
<td>59</td>
<td>M</td>
<td>17</td>
<td>37</td>
<td>00:02:27</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>74</td>
<td>182</td>
<td>00:09:25</td>
</tr>
<tr>
<td><strong>Grand total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>243</td>
<td>674</td>
<td>00:29:28</td>
</tr>
</tbody>
</table>

annotated in terms of several morphological, syntactic, and discursive categories, described in the following subsections.

#### 5.2.1.1 Linguistic units: Sentences and clauses

Two linguistic units are relevant for the narrative data: the prosodic sentence and the clause. **Prosodic sentences** were defined in the same way as has been used throughout this dissertation, such that the end boundary was identified by a final prosodic break: rapidly falling intonation, sometimes accompanied by a pause, with a return to neutral intonation in the start of the next sentence. Prosodic sentences are separated by numbered lines in the appendices, with non-final prosodic breaks (typically rising intonation) represented by commas.

**Clauses** were defined syntactically: any unit containing a verb instantiating its own argument structure. This includes all finite verbs, all converbs, some masdars, and some infinitives. Masdars were considered a clause only when they represented a separate event from surrounding clause (i.e., when used as a reason clause).

Infinitives were considered clauses in finite-verbs-as-main constructions (defined in section 3.2.1), but were treated as part of the same clause as the finite verb when the finite verb was an auxiliary.

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⁶ In the present data, there were only two masdars, one of which qualified as a clause by these definitions (‘for bringing the hat back’ in line 226). The other masdar was a noun.
This definition of ‘clause’ is slightly more inclusive than the definition given by Berman & Slobin (1994) and adopted by other reference tracking studies such as Azar & Özyürek (2015) and Perniss & Özyürek (2015): “any unit that contains a unified predicate,” where a unified predicate (verb or predicate adjective) expresses a single activity, event, or state (Berman & Slobin 1994: 660). My main departure from this practice is allowing some infinitives that represent the same event as a finite verb (‘he started to gather pears’) to be treated as separated clause. I chose to treat infinitives separately in order to preserve information about gender agreement patterns: as discussed in section 3.2.1, infinitives in finite-verb-as-main-verb constructions can reflect the gender of a different argument than the one the finite verb agrees with. Because Tsova-Tush infinitives are always same-subject constructions, coding them as separate clauses did not interfere with tracking switch reference (defined below), but simply allowed more granularity in examining gender agreement as a possible reference tracking strategy.

Because sentence was defined by prosody while clause was defined by syntax, most sentences contain more than one clause, but some sentences contain zero clauses (i.e., no verb). The latter occurred in cases of addenda, where a speaker provided additional information in a new prosodic sentence; e.g., the addendum regarding the bicycle in (317) ‘There, from in front, a different child is coming, a girl.’ (318) ‘By bicycle.’

5.2.1.2 Coding categories and definitions

<table>
<thead>
<tr>
<th>Clausal coding category</th>
<th>Possible values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreement slot on clausal predicate</td>
<td>Present, absent</td>
</tr>
<tr>
<td>Clause type</td>
<td>Finite matrix, converb, infinitive, masdar, adverbial, relative, complement, attitude</td>
</tr>
<tr>
<td>Switch reference</td>
<td>Same subject, different subject, tail-head linkage</td>
</tr>
<tr>
<td>Scene</td>
<td>See Table 5.4</td>
</tr>
</tbody>
</table>

The pear and donkey studies were examined clause-by-clause and referent-by-referent. The following features were coded for each clause (summarized in Table 5.3): the presence/absence of a slot for gender agreement marking on the clausal predicate, clause type, switch reference, and scene (pear stories only).

Coding of whether a clause contained a slot for agreement marking (cM, for class marker) is straightforward: either the verb contained a slot for a cM (present) or it did not (absent).

Most of the clause types in Table 5.3 have been defined elsewhere in this dissertation, but ‘attitude’ requires further clarification. A clause was considered an attitude if it had at least one of the

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5 This is a reminder to myself to confirm this later and add pointers to relevant sections. qqq
Table 5.4. Scenes defined for the pear story

<table>
<thead>
<tr>
<th>Scene</th>
<th>Description</th>
<th>In narratives (of 7)</th>
<th>Average clauses per narrative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro</td>
<td>Any scene setting clauses: ‘there was a village, it was morning...’</td>
<td>3</td>
<td>2.7</td>
</tr>
<tr>
<td>Pear gathering</td>
<td>From first mention of the pear farmer, until appearance of the passerby</td>
<td>7</td>
<td>11.3</td>
</tr>
<tr>
<td>Goat man</td>
<td>From arrival through departure of the passerby and his goat</td>
<td>4</td>
<td>4.3</td>
</tr>
<tr>
<td>Theft</td>
<td>From appearance of the thief boy until his departure from the orchard</td>
<td>7</td>
<td>12.0</td>
</tr>
<tr>
<td>Collision</td>
<td>From appearance of the girl on a bicycle until entrance of the group of boys</td>
<td>7</td>
<td>9.7</td>
</tr>
<tr>
<td>Assistance</td>
<td>From appearance of the group of boys until discovery of the fallen hat</td>
<td>7</td>
<td>10.3</td>
</tr>
<tr>
<td>Hat exchange</td>
<td>From discovery of the fallen hat until return to the pear farmer</td>
<td>7</td>
<td>12.4</td>
</tr>
<tr>
<td>Missing basket</td>
<td>From reappearance of the pear farmer until reappearance of the group of boys</td>
<td>6</td>
<td>6.8</td>
</tr>
<tr>
<td>Pear confusion</td>
<td>From reappearance of the group of boys until any outro or until the end</td>
<td>6</td>
<td>9.3</td>
</tr>
<tr>
<td>Outro</td>
<td>Any remarks indicating the conclusion of the story: ‘And that was that.’</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

following: shifted indexicals, shift from past tense in the previous clause to present tense in the attitude, or the presence of the discourse markers k’aco (see section 4.4.3) or jev (a native Tsova-Tush discourse marker similar to the borrow k’aco), or an interjection such as bā! or hwa! (roughly ‘hey!’ or ‘what the?’). Some attitudes were clausal complements of a finite matrix verb; some attitudes were unembedded. The use of reported attitudes will be discussed in section 5.2.2.8.

In terms of switch reference, clauses were coded as same subject (SS) when they had the same subject as the previous clause, different subject (DS) if the subject differed from the subject of the previous clause, and as tail-head linkage (THL; see below in 5.3.1) in cases of whole or partial clausal repetition across a sentence boundary. For switch reference purposes, clause type was not considered in coding a clause as SS or DS. In a sentence like, ‘The boy thought, “he can’t see me,” so he took one basket,’ both the clauses defined by the predicate ‘will steal’ and the predicate ‘took’ would be coded as DS. As discussed below, it is not clear that treating the intervening attitude as an interfering clause for switch reference purposes accurately reflects speakers’ strategies in such cases (i.e., in terms of referential strategy used, the ‘took’ clause resembles SS clauses more than DS).

For the pear stories, scenes were defined, prior to coding, based on my perception of separate groupings of events depicted in the video stimuli, typically coinciding with the entrance or departure of a character. Clauses in the intro or outro were excluded from analysis, because they were predefined in such a way as to exclude any referents of interest. Only 4 of 7 speakers described the goat man scene, and when this scene was included, it was the shortest.

Comparable scenes could not be defined for the donkey stories, because of a key difference in the nature of the story: all possible referents in the donkey story were continually present from their first mention until the end, so it was not possible to use the entry or departure of a character to mark a scene change. I initially coded scenes in the donkey story instead by events (the donkey’s sudden refusal to move, the fisherman’s clever solution, their arrival at the marketplace), but these scene breaks are not comparable to the ones defined for the pear story, so they will not be discussed further.
Table 5.5. Concrete referents with more than two mentions in the pear and donkey stories

<table>
<thead>
<tr>
<th>Referent</th>
<th>No. of references</th>
<th>Referent</th>
<th>No. of references</th>
</tr>
</thead>
<tbody>
<tr>
<td>thief boy</td>
<td>194</td>
<td>fisherman</td>
<td>122</td>
</tr>
<tr>
<td>group of boys</td>
<td>145</td>
<td>donkey</td>
<td>91</td>
</tr>
<tr>
<td>pear farmer</td>
<td>140</td>
<td>fish</td>
<td>31</td>
</tr>
<tr>
<td>pear(s)</td>
<td>127</td>
<td>market</td>
<td>11</td>
</tr>
<tr>
<td>basket(s)</td>
<td>83</td>
<td>music</td>
<td>10</td>
</tr>
<tr>
<td>bicycle (the thief’s)</td>
<td>48</td>
<td>basket(s)</td>
<td>10</td>
</tr>
<tr>
<td>hat</td>
<td>28</td>
<td>cassette player</td>
<td>5</td>
</tr>
<tr>
<td>girl</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>passerby</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>goat</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>stone</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>apron</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bicycle (the girl’s)</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These categories were coded for each clause, which contained between one and four referents; additional categories were coded for each referent.

**Referents** were concrete entities within the stories: humans, animals, objects. Nominals referring to locations (‘road,’ ‘slope’), time, or abstract concepts (‘attention’) were generally ignored at the coding stage, since they occurred only as obliques and were not expected to interfere with the tracking of other referents. That is, I do not expect a phrase such as *eq droh* ‘at this time’ to interrupt a speaker or listener’s ability to identify the girl or the bicycle in the pear story, even with minimally explicit reference strategies—even though each of these nouns (*dro* ‘time,’ *joh* ‘girl,’ *velosip’et* ‘bicycle’) would trigger the same class marker, *j*.

A partial list of referents is provided for the narratives in Table 5.5. Referents are given in order of how many times they were referred to, regardless of whether that reference was overt or covert. When a reference is truly covert, such that not even gender agreement signals that an argument is present (but simply dropped), it is necessary to make judgment calls regarding which and how many covert referents might be present in a clause.

Covert reference was determined by the argument structure of the verb defining the clause. Intransitives were assumed to have a subject, even if that subject received no explicit mention. That is, verbs such as *hal qeṭe*‘got up’ or *dah haċ’e* ‘looked away’ were treated as having some subject, which was either clear from context or clarified by a native speaker consultant in the transcription process. Transitives were assumed to have a subject and direct object.

Seven verbs were treated as ditransitive, taking a subject, direct object, and indirect object (a recipient or goal): *d-ata*‘to give (something to someone),’ *darigbad-d-ar* ‘to distribute (something
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Table 5.6. Coding categories at the referent level

<table>
<thead>
<tr>
<th>Referent coding category</th>
<th>Possible values</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM (class marker)</td>
<td>b, d, j, v</td>
</tr>
<tr>
<td>Referent is agreement trigger</td>
<td>yes, no</td>
</tr>
<tr>
<td>Syntactic role</td>
<td>A, S, DO, IO, all-loc experiencer, (other) oblique, within modifier</td>
</tr>
<tr>
<td>Number of mentions</td>
<td>first mention (1), second mention (2), additional mentions (3+)</td>
</tr>
<tr>
<td>Activation status</td>
<td>introduction, continuous activation, scene activation, reactivation</td>
</tr>
<tr>
<td>(C)overness</td>
<td>overt, null</td>
</tr>
<tr>
<td>Referential strategies</td>
<td>noun/substantive, indefinite determiner, demonstrative adjective, demonstrative pronoun, reflexive, ohaʔ, šinvaʔ, disambiguating modifier, shifty pronouns, shifty agreement</td>
</tr>
</tbody>
</table>

among some recipients),’ d-agitar ‘to show (something to someone),’ d-ilːar ‘to put (one thing in something),’ d-oxk’ar ‘to put (many things in something),’ d-otːar ‘to put (something on something),’ and qap’t’ar ‘to offer something to someone.’ One verb was assumed to be an intransitive with an indirect object: lat’ar ‘to help (someone).’

Because argument dropping is so prolific in Tsova-Tush, it is not clear that there is a syntactic reason to treat these verbs as inherently taking two or three arguments at every use. One could argue that, if the Tsova-Tush sentence states merely, ‘The boy gave the hat,’ that no recipient of the giving action has been instantiated and therefore that recipient should not be treated as a reference being tracked. However, these verbs all represent events that logically require a certain number of participants, regardless of whether they are explicitly stated. Thus, in a sentence like ‘They saw that a boy had fallen off a bicycle, they helped [him],’ it is my assumption that the verb ‘help’ sufficiently activates a referent who receives the help, even if the helpee’s explicit mention is not syntactically required.

The risk in coding my data in this way, of course, is that the number of references might be artificially inflated, particularly the number of covert references. Since the coding of covert references required the most subjective decision making, multiple approaches to describing covert vs. overt reference strategies will be discussed in section 5.2.2.6.

For each referent in each clause, I coded it for the features listed in Table 5.6, described below.

Among syntactic roles, there were two types of subject: A (subject of a transitive) and S (subject of an intransitive). I coded only ergative subjects as A. Dative subjects of perception/experience verbs (described in section 3.1) were coded as S. Other syntactic roles included direct object (DO), indirect object (IO), locative-of-allative experiencers (all-loc), other obliques (OBL), and ‘within modifier.’ The latter category was used when a referent was present in a participle describing another referent: e.g., ‘goat-leading man.’

Within the domain of a sentence, animacy is relevant to Tsova-Tush grammar only in terms of gender, which is partially based on animacy. It is not ungrammatical, for instance, for an inanimate
referent to serve as the ergative subject of a transitive verb, nor is it ungrammatical for an animate to serve as an instrument, although it might be expected that agentive subjects are more likely to be animate than instruments. I coded animacy separately from gender, because of the likelihood that animate referents across discourse would differ from inanimates in terms of how often they appear in different syntactic roles. Humans and living animals (the goat in the pear story, the donkey in the donkey story) were treated as animate, with all other referents assumed to be inanimate (including the fish in the donkey story).

Table 5.7. Syntactic role of referents by animacy, all mentions in both sets of narratives

<table>
<thead>
<tr>
<th>Syntactic role of referent</th>
<th>Animate</th>
<th>Inanimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transitive subject (A)</td>
<td>190</td>
<td>0</td>
</tr>
<tr>
<td>Intransitive subject (S)</td>
<td>337</td>
<td>76</td>
</tr>
<tr>
<td>Direct object</td>
<td>19</td>
<td>161</td>
</tr>
<tr>
<td>Indirect object</td>
<td>45</td>
<td>0</td>
</tr>
<tr>
<td>ALL-LOC experiencer</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>Other oblique</td>
<td>28</td>
<td>76</td>
</tr>
<tr>
<td>Within modifier</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>634</strong></td>
<td><strong>317</strong></td>
</tr>
</tbody>
</table>

As Table 5.7 shows, animate and inanimate referents were indeed distributed differently across syntactic roles in these narratives. If a referent was animate, it was a subject roughly 83% of the time (53% S, 30% A), an indirect object roughly 7% of the time, with less than 5% of mentions of animate referents at each other syntactic role. If a referent was inanimate, it was a direct object 51% of the time, the subject of an intransitive 24% of the time, and an oblique 24% of the time.⁸ That is, inanimates were more likely to be direct objects, while animates were more likely to serve as subjects, and only animates appeared as the subject of transitive verb.

Figure 5.1 provides a graphical representation of the same data in Table 5.7, showing what percentage of each syntactic role was comprised of animates vs. inanimates (instead of the prose in the last paragraph, which discussed what percentage of animates and inanimates fell into each syntactic position). Asymmetries in the distribution of referents by animacy are relevant for aspects of reference tracking reported below.

**Activation status** was coded for each referent at each reference (whether overt or covert). Referents were coded as ‘continuously active’ when they had been mentioned in the immediately preceding clause. Referents were coded as ‘scene active’ when they had been previously active within the same

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⁸ Because of the rules I used to determine covert reference, these data are biased to inflate the number of subjects and potentially underestimate objects and obliques (because all verbs were assumed to have subjects, but considerably fewer were considered to require arguments of other types). However, these biases should apply equally regardless of animacy.
scene, but were not continuously active. Referents were coded as ‘reactivated’ at their first mention in a new scene, when they had been introduced in a previous scene. The exception is when a referent was continuously active across a scene boundary (which were semi-arbitrary, as discussed above); in such instances, the referent was coded as continuously active. Thus, both scene activation and reactivation are a type of reintroduction of a previously active referent, but with different types of interference: both entail the interference of at least one clause, while ‘reactivated’ further includes the interference of a scene boundary.

For overt referents, I tracked which referential strategy was used, with additional details about the nature of the referential strategy. Indefinite determiners were (cha ‘one’ or vunax ‘some’). Demonstrative adjectives and pronouns could be proximal, medial, or distal. Less common referential strategies included reflexives, the pronouns ohaʔ ‘the same’ and šinvaʔ ‘both,’ a disambiguating modifier (e.g., ‘the first boy,’ ‘a different man’), or shifty pronouns or pronominal agreement (in attitudes only). If none of these strategies was used, but the referent was considered activated by the argument structure of the verb (as discussed above), it was considered covert, even when gender agreement clearly signalled the presence of the referent: v-axen ‘[m] went’ would be coded as having a null subject, even though it is clear from the gender marker that the subject is a human male).

My first-pass coding of referential strategies was highly detailed, resulting in some strategies that were used very few times; e.g., šinvaʔ ‘both’ was used only twice in the dataset. In reporting my
findings, these strategies are sometimes binned into larger groups (lexical vs. pronominal vs. null, or indefinite-plus-noun vs. definite-plus-noun vs. bare noun, etc.) when appropriate.

5.2.2 Findings

5.2.2.1 Introduction of referents

In the pear stories, there were two main strategies for the introduction a referent: a bare noun, or a noun preceded by a marker of indefiniteness: cha ‘one’ or vunax ‘some(thing).’ Of the 88 first mentions of a referent in the pear stories, 66 were bare nouns, 15 were preceded by cha, 4 were preceded by vunax, 2 involved some other modifier with a noun, and one was preceded by cha vunax together. The latter occurred for the introduction of the goat man in (273): cha vunax st’ak’ vayor ‘one other man was coming.’ That is, some marker of indefiniteness was used in roughly 22% of first mentions of a referent in pear stories; the use of a bare nominal seems to be preferred.

However, these numbers include first mentions of all referents, regardless of animacy. Of the 20 referents first introduced with cha or vunax ‘one,’ only one was inanimate: vunax qer ‘some stone,’ suggesting that indefinite marking is more likely to be used with animate referents. If only animates are considered, the bare noun introduction strategy is used for 19 first mentions, and a marker of indefiniteness is used in 19 first mentions—an even split of the 38 introductions of animate referents.

Table 5.8. First mentions of referents by animacy in both sets of narratives

<table>
<thead>
<tr>
<th>Animate</th>
<th>Donkey stories</th>
<th>Total (all narratives)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pear stories</td>
<td>38</td>
<td>10</td>
</tr>
<tr>
<td>Inanimate</td>
<td>50</td>
<td>23</td>
</tr>
<tr>
<td>Total (all referents)</td>
<td>88</td>
<td>33</td>
</tr>
</tbody>
</table>

These facts suggest that one function of the numeral cha is to serve as an indefinite determiner, particularly for animate referents: at the first mention of the pear farmer, storytellers are saying ‘a man’ rather than ‘one man.’ Additional support for its indefinite properties comes from one instance of the use of cha to introduce the group of boys in (165), where the indefinite marker is apparently not used as a numeral in the same way that qo-dľiv? ‘three to four’ is used in the same noun phrase.

(165) ...divhrena cha qo d-ľiv? pešk’ar d-ay-or, qeni pešk’r-i.
from.there one three cm-four child(d/d) cm-come-impf other child(d/d)-pl
‘...from there some three-four children were coming, other children.’

(TaB, pear story: 352)
Further, although I excluded references to time or location from the reference tracking study, speakers commonly used cha (in its oblique form: chen) in the ‘intro,’ when the time and location for the story was established, as in (166). It seems that one use for cha, then—in addition to its literal meaning as the number one—is to identify key elements of a story, where the storyteller signals to the audience that they are not expected to know the referent ahead of time (the pear farmer is not a specific man that the listener should be able to identify), yet that those elements marked with cha are important to understanding the story further.

(166)  
\textit{One morning in one village, one man, in a pear tree um... with a ladder propped against [it], was gathering pears.'}  

The donkey stories differ from the pear stories in this respect. Of 33 introductions of referents in the donkey stories, cha was only used once: \textit{cha bab’ vare... ‘there was an old man, and...’} in (437). In general, speakers did less scene setting in the donkey stories, and there were only two animate referents (the fisherman and the donkey) in these stories. Given the association of indefinite marking with animate referents in the pear stories, it is perhaps not surprising that cha and \textit{vunax} were not used as frequently in the donkey stories.

It should be noted that one storyteller (TQ) introduced the fisherman in the donkey story with null reference, starting her story thus: ‘There was a donkey, [null] went by donkey to catch fish.’ TQ recounted her narrative immediately after her husband had told the same story (his narrative is not included for reasons discussed above). Perhaps because she had been present for her husband’s donkey story (and in fact, had participated it its devilery by prompting his memory), she perceived some referents as sufficiently activated in the common ground that covert reference was permitted.

A strategy not observed for the first mention of referents is the use of demonstrative adjectives. There was only one instance of a possible first mention of a referent with a demonstrative adjective in any of the narratives, and there is reason to suspect that this instance is not a good representation of introduction strategies. In (167), storyteller GB remarks that the pear thief injured himself when he fell.
Table 5.9. Overt vs. null second mentions for all referents in both sets of narratives

<table>
<thead>
<tr>
<th></th>
<th>Pear stories</th>
<th>Donkey stories</th>
<th>Total (all narratives)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overt</td>
<td>46</td>
<td>13</td>
<td>59</td>
</tr>
<tr>
<td>Null</td>
<td>24</td>
<td>11</td>
<td>35</td>
</tr>
<tr>
<td>Total (all referents)</td>
<td>70</td>
<td>24</td>
<td>Total 2ⁿᵈ mentions: 94</td>
</tr>
</tbody>
</table>

(167) e kok’ lac’-o-b e pešk’-r-ev....
this leg(b/j) hurt-PRS-CM this child(d/d)-ERG
‘This child hurts this leg....’

(GB, pear story: 321)

Technically this mention of e kok’ ‘this leg’ is the first mention of the referent ‘(the thief’s) leg.’ However, body parts are known to pattern differently in terms of definiteness in many languages. It seems likely that the mention of a human referent automatically entails the existence of expected human body parts, so that the boy’s leg is in some sense already active in the listener’s mind even before it is ever explicitly mentioned. It is further possible that this demonstrative adjective is used exophorically here. In the video recording of this narrative, it appears that GB might be pointing to his own leg, although the view is obstructed by the table he is seated at.

Setting this example aside, these narratives then contain zero instances of a referent with a demonstrative adjective at first mention, suggesting that (endophoric) demonstrative adjectives in Tsova-Tush are reserved exclusively for previously mentioned entities.

5.2.2.2 Strategies for the second mention

There are two paths a referent can take at its second mention: it can continue to receive explicit reference, or it can become covert. Of 94 second mentions in both sets of narratives, 59 (63%) were overt, and 35 (37%) were null. If only animate referents (45 total across the narratives) are considered, there is a nearly even split in (co)overtness: 22 second mentions are overt, and 23 are covert.

Multiple strategies for explicit reference are used at the second mention of a referent, with some clear differences between the two sets of narratives. In the pear stories, of the 42 overt second mentions for all referents, 19 (45%) were expressed with the same noun used at the first mention with the addition of a demonstrative adjective: proximal e ‘this’ (7), medial i ‘that’ (2), or distal o ‘yon’ (11). Seventeen (40%) were expressed with a bare noun (the same used at the first mention). Five were expressed with a pronoun (3 with o ‘yon one,’ 2 with ohaʔ ‘the same’). Three second mentions occurred in relative clauses, where the referent was required to be encoded as a relative pronoun. One second mention was expressed with a reflexive plus noun: šariⁿ gazaⁿ ‘his own goat.’ One was
expressed with a synonym: *ah xet’ben* 'the plucked (ones)' (example 368 below), referring to pears first mentioned as *msxal* ‘pear’.

Thus, in the pear stories, the use of a demonstrative adjective—which never occurred with first mentions—was the most common strategy for overt second mentions. Demonstrative adjectives were used both when the referent was initially introduced with the indefinite *cha*, as in examples (168–169), as well as when it was introduced as a bare noun.

(168) ...laraʔ c’ʕairk’o osi mindr-e ra.tkma.unda, kor gazaⁿ lac-b-i-en
suddenly suddenly there field-LOC of.course hand.OBL goat(b/d) hold-CM-TR-PPL
cha st’ak’=a v-ay-or.
one man(v/b)=& CM-come-IMPF

‘...suddenly there, in the field of course, a man leading a goat was also coming.’

(TaB, pear story: 340)

(169) o st’ak’, q’uradyeb(d/d?) co mikceva-d-i-eⁿ e bab-uigo-(h)...
yon man(v/b) attention(d/d) not pay-CM-TR-AOR this old.man(v/b)-ALL-LOC

‘That man, didn’t pay attention to this old man...’

(TaB, pear story: 341)

More concretely, of the 19 second mentions with a demonstrative adjective, 6 had been originally introduced with *cha*, as above, and 13 had been introduced with a bare noun. In those latter cases, the transition from a first mention to second mention apparently involves an *increase* in the overall markedness of the referential strategy. For instance, from the first mention of a basket by storyteller BP in example (170) to the second mention in (171), apparently more effort is made to explicitly identify the referent in the second instance (o k’alat) than in the first (simply k’alat). The equivalent transition in (168–169), from *cha st’ak’* to *o st’ak’* involves neither an increase nor a decrease in the effort of the referential strategy, although there is a clear difference in definiteness.

(170) ...xen=mak=ren ah xet’-b-en k’alat-e groba-b-or.
tree(b/d)=on=from down pluck-CM-PPL basket(b/d)=LOC gather-CM-IMPF

‘...[he] was gathering the ones plucked from the tree in a basket.’

(BP, pear story: 368)
The function of these demonstrative adjectives appears to be to transition the referent from indefinite to definite status. More broadly, demonstrative adjectives mark definiteness, an observation further supported by the fact that they never appeared with referents at their first mention. The availability of a verbose referential strategy (cha plus noun, demonstrative adjective plus noun) for both first and second mentions can be explained by the interplay between accessibility and identifiability (Chafe 1976). At first mention, a referent is neither accessible to the listener nor identifiable, potentially triggering an indefinite cha. At second mention, the referent should be accessible, but the speaker further wants the listener to identify it as the same referent that was previously mentioned, potentially triggering a demonstrative adjective.

The next most common strategy for overt second mentions was to use a bare noun, which occurred only with referents that had been introduced with (the same) bare noun. In all 17 instances where speakers used this strategy, the referent was inanimate, serving either as a direct object or oblique. Because of the correlation between animacy and syntactic role, it is not clear to me which of these factors better characterizes the use of the bare noun strategy for second mentions.

The third most common strategy for overt second mentions was a pronoun, either o ‘yon one’ or ohā’ ‘the same.’ Pronouns were only used for the second mention of human referents (the group of boys, the girl).

In the donkey stories, there were only 13 overt second mentions of a referent (vs. 11 null). Among overt second mentions, one was a distal demonstrative pronoun (for the second mention of the fisherman by storyteller KD); the other 12 were bare nouns. The demonstrative adjective strategy was never used for second mentions in the donkey stories. With limited data, it is difficult to say why this might be the case.

5.2.2.3 The transition from first to second mention

Based on these observations, a trajectory for the introduction of a referent into the common ground can be observed. Table 5.10 lists the referential strategies observed so far, in order of how often the given strategy is used for the first or second mention. As discussed above, if the three overt strategies
for second mentions are binned together as ‘overt,’ they outnumber null second mentions; however, there were more null second mentions than any subtype of overt second mention.

Table 5.10. Referential strategies at first and second mention in both sets of narratives

<table>
<thead>
<tr>
<th>First mention</th>
<th>Second mention</th>
</tr>
</thead>
<tbody>
<tr>
<td>bare noun</td>
<td>dem. adj. + noun</td>
</tr>
<tr>
<td>cha, vunax + noun</td>
<td>overt</td>
</tr>
<tr>
<td></td>
<td>bare noun</td>
</tr>
<tr>
<td></td>
<td>pronoun</td>
</tr>
<tr>
<td>null</td>
<td></td>
</tr>
</tbody>
</table>

Examining first and second mentions in this way has provided some initial insights regarding how Tsova-Tush referents are entered into the common ground. However, it should be noted that not all second mentions are the same. In some instances, the second mention of a referent occurs in the clause immediately following its first mention, bearing a cognitive activation status of ‘continuously active.’ In other instances, the second mention occurs after some interference by intervening clauses—either ‘scene active’ or ‘reactivated,’ in my coding system. In the next section, referential encoding strategies will be examined in terms of the activation status of the referent.

5.2.2.4 Referential strategies at different levels of activation

As a first look at the effect of activation status on referential choice, referential strategies can be divided broadly into overt and null. Figure 5.2 illustrates, for each activation status, the proportion of referents that were overt vs. null. The same data⁹ is reported numerically in tabular form in Table 5.11. Because scenes could not be defined in the donkey stories in a way analogous to the scenes of the pear stories, there is no distinction between scene activation and reactivation in the donkey stories.

As discussed in secion 5.2.2.1, referents were overt when first introduced. (Recall that the activation status ‘introduction’ is identical to first mention.) When a referent was continuously active, however, it was covert nearly three quarters of the time. No other activation status came close to this high a proportion of null reference.

Both scene activation and reactivation involve some degree of interference, and both result in a higher proportion of overt reference than in situations of continuous activation in the pear stories. Reactivation, with a higher degree of interference (at least one clause boundary and at least one scene boundary), shows a greater tendency for overt reference than scene activation (at least one clause boundary since last mention); at the same time, there were some instances of covert reference in situ-

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⁹ Figure 5.2 and Table 5.11 exclude ‘co-first’ mentions, where a referent was introduced with twice in the same clause; e.g., ‘Another child was coming, a girl.’ First mentions of a part of a previously mentioned referent are also removed; e.g., if pears had already been mentioned, the first mention of one pear is excluded.
Figure 5.2. Comparison of overt vs. null reference to referents by activation status

Table 5.11. Overt vs. null reference to referents by activation status

<table>
<thead>
<tr>
<th></th>
<th>Pear</th>
<th></th>
<th>Donkey</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overt</td>
<td>Null</td>
<td>Overt</td>
<td>Null</td>
</tr>
<tr>
<td>Introduction</td>
<td>88</td>
<td>0</td>
<td>32</td>
<td>1</td>
</tr>
<tr>
<td>Continuous activation</td>
<td>135</td>
<td>313</td>
<td>36</td>
<td>134</td>
</tr>
<tr>
<td>Scene activation</td>
<td>122</td>
<td>43</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Reactivation</td>
<td>107</td>
<td>12</td>
<td>51</td>
<td>30</td>
</tr>
</tbody>
</table>

ations of reactivation. Scene-active referents patterned between continuously active and reactivated referents.

In the donkey stories, where only one degree of interference was measured, the patterns were nevertheless quite similar. There was a higher proportion of null reference for both continuously active and reactivated referents in comparison with the pear stories.

Of course, referential choice is not as simple as overt vs. covert reference. Overt reference can be expressed with varying degrees of explicitness and definiteness. Figures 5.3 (pear stories) and 5.4 (donkey stories) list referential strategies in the following order: marked indefinites (i.e., those with cha or vunax), nouns not marked as either indefinite or definite, marked definites (i.e., nouns with a demonstrative adjective), third-person pronouns, and covert reference. Reference via shifted personal
pronouns or agreement was not included in these tables (resulting in minor differences in the totals here vs. in Table 5.11).¹⁰

As a visual aid, gradient cell shading highlights the most common referential strategies for each activation status: more saturated colors represent the strategy that accounted for the greatest number of references at that activation status. Totals are provided to orient the eye to maximal saturation of each color gradient. Shading, then, represents a normalized scale for each column, while cells contain unscaled values.

These figures help to establish differences in the overt referential strategy chosen for different activation levels. Referential choice was most constrained for introductions of referents. While null reference was the preferred strategy for continuously active referents, each overt referential strategy that did not include an indefinite marker was used roughly equally in the pear stories. In the donkey stories, overt continuously active referents tended to be bare nouns.

Reactivated referents were characterized by the use of a noun with or without a demonstrative adjective. Scene-active referents in the pear stories seemed to involve a mix of strategies used for continuous activation and reactivation, consistent with the intermediate degree of interference defined for this activation status.

¹⁰ Modifiers were not used often enough to merit separate categories (e.g., bare nouns vs. modifier + noun); binning them as I have done here resulted in no changes to the generalizations that can be drawn from this data. In a larger dataset, it would be interesting to keep these strategies separate.
Thus, at all activation levels, speakers have a choice in referential strategy. However, that choice is not unconstrained, and tendencies emerge from the data. An interesting insight from the choice among overt strategies is the fact that bare nouns in Tsova-Tush are evidently underspecified in terms of definiteness: bare nouns are used both for introductions (patterning with marked indefinites) and for other activation status, at those levels patterning roughly with marked definites (those with demonstrative adjectives).

Another insight is that scene activation patterns at times like continuous activation (getting null reference) and at times like reactivation (receiving more explicit reference). Given that this status was predefined to be an intermediary level of interference, this fact is perhaps not surprising. However, it raises the question whether looking more closely at the type of interference might lead to clearer preferences in referential choice.

A numerical approach to interference (as in Bickel (2003), Clancy (1980), Forker (2007)), might look at the exact number of clauses since a referent’s previous mention, or at the number of intervening referents since the last mention. However, numerical measures of interference are complicated by the problem of covert reference: should dropped arguments count toward interference scores? If a referent is instantiated in a clause’s argument structure but not referred to explicitly, does it have the same ability to interfere with speakers’ and listener’s abilities to access mental representations of previous activated referents as overt arguments have?

Because this study of Tsova-Tush is preliminary, it is not clear to me that a numerical approach to interference can be properly motivated, given the currently available information. However, what is revealed by quantitative approaches to interference, among other things, is how crowded the reference space is in a given scene of the narrative—that is, how many referents are more or less activated within that stretch of narration. In this Tsova-Tush data, then, it might be informative to look at the use of overt reference by scene.

Figures 5.5 and 5.6 illustrate scene-based differences in the choice to use overt or covert reference. In figure 5.5, it can be seen that overt reference outnumbered covert reference in most scenes in the pear story. In two pear story scenes, overt and covert reference were exactly equal, and in one scene of the pear story, as well as in the donkey story, covert reference actually outnumbered overt reference.

Figure 5.6 reports the same percentages represented in the stacked bar chart above. This figure further attempts to capture scene-based differences by highlighting where one type of reference outnumbers the other. In the ‘Difference’ column, a color gradient is used for negative values (i.e., where covert reference occurred more often than overt), such that the most negative value (-16%) is the most saturated red color. Positive values are graded such that the most positive value (33%) is the most saturated shade of cyan.
This figure highlights the fact that the donkey story patterns like the first scene of the pear story in terms of the choice to use covert reference. Three other scenes in the pear story (goat man, collision, pear confusion) pattern most obviously in the opposite direction. What do these scenes have in common?

Throughout the pear gathering scene, there is one human referent (the pear farmer) and two main inanimate referents: pears and baskets. Similarly, throughout the donkey story, there is one human referent (the fisherman), one animal (donkey), and two main inanimate referents: fish and baskets.

The parallels in reference space are clear. In both narratives, a singular man has collected his harvest (pear or fish) in baskets. These conditions favor covert reference, because the referential space is so uncrowded: there is no competition among multiple human characters for topic status. This uncrowded reference space contrasts with later scenes of the pear story, where there are multiple human characters requiring disambiguation.

Indeed, the three pear story scenes most tilted in favor of overt reference have high competition among referents of a single category. In the goat man scene, there are two prominent adult male characters who must be contrasted; additionally, there is a goat. In the collision scene, there are two

---

11 Some speakers mentioned additional inanimate referents here, such as the man’s apron, or the kerchief around his neck.

12 A cassette player and music appear later, but are never mentioned more than twice.
children and two bicycles, as well as other inanimate referents (stone, baskets, pears). In the pear confusion scene, the main tension is between the pear farmer and the resurfacing group of boys—specifically, how the latter acquired the former’s pears.

However, if crowding of the reference space is truly what explains higher rates of overt reference, why does the assistance scene—similarly crowded—not pattern more closely with the other other scenes favoring overt reference? In this scene, the thief boy does not compete for topic status. This scene is told almost exclusively from the perspective of the group of boys, who see the thief, help him get up, gather his pears, etc. These clauses are often tightly linked within a single prosodic sentence. In this way, the assistance scene bears some similarities to the theft scene and the missing basket scene, which storytellers also typically told from one character’s perspective with multiple, tightly linked clauses. This question of perspective will be discussed again in section 5.2.2.8.

Thus, in lieu of quantitative measures of interference, looking at ‘referential crowding’—how many characters and props of interest are present in a given scene—provides some insights as to why overt referential strategies might be used in scenarios when covert reference should be felicitous, and vice versa.

### 5.2.2.5 Discourse ergativity

In any given comparison made in a reference-tracking study, there is a high risk of confounding factors, as well as of the collinearity of one proposed measure of a reference-tracking property with others. Factors influencing speakers’ referential choices are numerous and interconnected—a fact that becomes apparent when breaking down the activation statuses examined in the previous section in terms of syntactic position.
Not all syntactic positions are equally suitable for different activation statuses, as illustrated in Figure 5.3, showing the distribution of referents across syntactic roles in just the pear stories. This figure shows inanimate and animate referents separately, because, as mentioned above (cf. Table 5.7), there are animacy-based differences in how referents are distributed among syntactic positions as well. Animate referents (left of Figure 5.3) were used a subject (either A or S) with high frequency at all levels of activation, while inanimate referents (right) rarely served as subjects of intransitives (S) and were never observed as subjects of transitives in these stories. Similarly, animates rarely served as direct objects in these narratives, while inanimates often served as direct objects when continuously active or activated within a scene.

![Figure 5.7. Distribution of referents across syntactic roles at different activation levels in the pear stories](image)

Focusing on the animate referents, further patterns emerge in the type of subject. Referents were least likely to serve as an ergative subject when first introduced and when reintroduced after a scene break. These patterns accord with Du Bois’s (1987) observations on Preferred Argument Structure, which are summarized in Table 5.12.

<table>
<thead>
<tr>
<th>Table 5.12. Du Bois’s Preferred Argument Structure constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quantity</strong></td>
</tr>
<tr>
<td><strong>Role</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>


The comparatively lower number of ergative subjects at introduction and reactivation in the Tsowa-Tush data reflects the pragmatic constraint ‘Avoid new A.’ The proportion of introductions that were
ergative subjects was higher in the Tsova-Tush data (roughly 17% in the pear stories) than in Du Bois’s (1987) Sacapultec Mayan pear stories (where 3.2% of new arguments were A). However, this difference appears to be an initialization bias. Across all narratives, only two referents were introduced as ergative subjects: the pear farmer in the pear stories, and the fisherman in the donkey stories. Both of these referents were always the first concrete human introduced.¹³ These ergative introductions, then, might be better explained by the tendency sometimes observed for speakers to treat new information as given at the beginning of a story (Du Bois 1985, 1980), in which case it must be concluded that Tsova-Tush in fact adheres very strictly to the ‘Avoid new A’ constraint.

If the role of A is restricted to given information, it makes sense that the position would favor covert reference, since, (as observed in section 5.2.2.4) continuously active arguments were the most often covert. Indeed, the Tsova-Tush data also reflected the ‘Avoid lexical A’ constraint, as shown in Figure 5.8, where A arguments had the lowest portion of overt reference.

*Figure 5.8. Distribution of lexical, pronominal, and covert reference by syntactic role in the pear stories*

The Tsova-Tush data also exhibited Du Bois’s two quantity constraints. Figure 5.9 confirms the avoidance of multiple lexical NPs in a clause. Most clauses in the pear stories had either zero or one lexical NP.¹⁴ Figure 5.10 confirms the avoidance of multiple new referents in a clause. The vast

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¹³ One storyteller, TaB, who did the most extensive scene setting in her pear story, first introduced some non-specific humans: ‘...in a village it is autumn, a rooster started to crow, people started out to work,’ before introducing the pear farmer: ‘...and an old man grabbed some baskets...’ in (337).

¹⁴ The one clause that contained four lexical NPs was in (377) in BP’s pear story: ‘the children put this basket on this boy’s bicycle...’ The NPs were in ergative, absolutive, dative, and oblique cases respectively.
majority of clauses contained zero new referents. Among clauses that contained a new referent (i.e., considering only the three rightmost bars in figure 5.10), there was exactly one new referent in roughly 74% of cases and two new referents in 25% of cases. That is, the tendency was for introductions to be spread across different clauses.

![Figure 5.9. Number of lexical NPs per clause in the pear stories](image-url)

The proportions are quite similar to those observed by Du Bois (1987) in Sacapultec pear stories. He found that 46–49% of clauses had zero lexical NPs and 50–52% of clauses had one lexical NP (Du Bois 1987: 820); in the Tsova-Tush pear stories, 41% of clauses had zero and 46% had one lexical NP. Likewise, 72–72% of clauses in Sacapultec had zero new referents and 26–28% had one new referent (Du Bois 1987: 825). In the Tsova-Tush pear stories, the proportions were more extreme: 86% of clauses contained no new referents, 11% contained one new referent, and 4% contained two new referents.

### 5.2.2.6 Additional conditions favoring covert reference

In the previous sections, the following conditions were observed to favor null reference: low referential crowding, continuous activation, and serving as the subject of a transitive verb (A). The latter two factors correlate with (and partially duplicate) same-subject environments across clauses, and appearing as A further correlates with animacy.

Figure 5.11 confirms that subjects were null in well over three quarters of same-subject clauses, but were overt in nearly three quarters of different-subject clauses. Continuity of the subject across clauses was a condition that favored covert reference; switch reference favors the use of more explicit strategies.
Figure 5.10. Number of new referents per clause in the pear stories

But what about other syntactic positions? Are continuous objects more likely to be covert than objects that differed from the object in the previous clause? This question is more difficult to answer directly than questions about subject switch reference, because, although every clause must have a subject, not every clause has a direct object. The interspersing of transitive and intransitive verbs reduces the number of instances where same-DO vs. different-DO clauses could be tracked.

However, the coding of activation status in this dataset allows an indirect look at whether, for lack of a better term, mention continuity favors null reference, even if syntactic position is not held constant. Figure 5.12 is similar to figure 5.2 above, but with a much more restricted set of the data. Figure 5.12 looks only at different-subject contexts in the pear stories, including only A, S, and DO, as these were the arguments for which my coding rules most consistently permitted the possibility of null reference (i.e., I coded very few null indirect objects and obliques, and no nulls for any other syntactic position). Only DS clauses were included, because the effect of SS environments in favoring null reference is so strong it could overpower any effects of activation status in DS environments.

Continuously active referents were those that were referred to (overtly or covertly) in subsequent clauses, thus capturing continuity of reference independent of syntactic position. That is, the pears might have been a subject in one clause and a direct object in the next. Figure 5.12 thus asks whether mere continued reference favors covertness of an argument, regardless of whether syntactic position is held constant.
The frequency of overt reference for continuously active referents was indeed lower in the pear stories than at other activation statuses, but perhaps not much lower: subjects and direct objects were overt in 57% of DS clauses where they were continuously active, and 67% where they had been introduced in the scene, but had not been continuously referenced. Because the subset of data represented in this figure is so small, and because the difference in the pattern is also small, the likelihood that this difference is due to chance is high enough that no generalizations about this pattern can be drawn at this time.¹⁵

Another factor favoring covert reference is animacy of the referent, shown in Figure 5.13. Animate were overt at higher rates than inanimate referents. Because animacy correlated with syntactic position, and syntactic position (particularly A) correlated with covertness, this observation partially recapitulates the tendencies observed in section 5.2.2.5.

In sum, the ideal covert referent is (i) continuously active, (ii) in particular, the subject in a SS environment, (iii) more specifically, an ergative subject, (iv) animate, and (v) in a scene or story with

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¹⁵ A chi-square test of independence was performed to compare overtness of the continuously active and scene active referents represented in figure 5.12. This test resulted in a failure to reject the null hypothesis ($H_0$: there is no difference in overtness at these activation levels for the given subset): $\chi^2 (1, N = 158) = 1.290, p = .256$. At the same rates of overtness, between twice to three times as many data points would be needed to confirm a difference between these activation levels.
low referential crowding. These factors often correlate with or reduplicate each other, making it difficult to conclude which might be the factor triggering covert reference, and which is simply a correlate of the causative factor.

It is clear that referential choice involves a highly complex decision making process. It is worth asking whether any additional linguistic resources available in the Tsova-Tush grammar help speakers navigate these referential choices.

### 5.2.2.7 The role of gender in reference tracking

As discussed in section 2.1, gender can be exploited as a reference tracking strategy, sometimes with outstanding success in languages with elaborate gender categories (e.g., Yimas as described by Foley & Van Valin (1984: 325–333)). Comrie (1989), for instance, observes,

> In languages that have a gender/class system, it is often possible for the referent of a noun phrase to be tracked without resorting to explicit mention of the noun phrase in question, simply by using some morphological form that explicitly encodes the gender/class of the noun phrase in question—always assuming, of course, that there are no potentially conflicting referents belonging to the same gender/class. (Comrie 1989: 39)
This raises the question: can evidence of the use of gender as a reference tracking strategy be found in these Tsova-Tush narratives?

The Tsova-Tush gender system was described in section 2.3.2. Briefly, up to eight genders in Tsova-Tush can be distinguished by the four class markers (cm) they trigger on an agreement target in singular and plural: \( b-, d-, j-, \) and \( v- \). Two of the agreement groups represent “natural” gender: gender \( j/d \) contains only female humans, and \( v/b \) contains only male humans. Three inquorate genders—\( b/b, b/j, d/j \)—are limited to 21 or fewer nouns each (footwear or body parts only). Gender \( d/d \) is used for some nouns referring to humans, animals, inanimates, intangible concepts, mixed groups, and default agreement. The remaining genders—\( b/d, j/j \)—contain only animals, inanimates, and intangibles, with few semantic generalizations regarding their membership.

As Foley & Van Valin (1984) note, gender is most effective (or possibly, only effective) for reference tracking when referents can be unambiguously distinguished by an agreement marker. In the quote above, Comrie (1989) assumes the referents must in fact be of different genders, but in Tsova-Tush, because of syncretism in the form of the agreement marking, simply belonging to different genders is likely insufficient for disambiguating two referents. That is, while \( k’nat \) ‘boy’ of \( v/b \) gender and \( kud \) ‘hat’ of \( b/d \) gender seem to be distinct, in practice the cm \( b- \) is ambiguous when a plural group
of boys (k’nati) and a singular hat are both active in the common ground (e.g., in the hat exchange scene of the pear story).

To explore gender as a possible reference-tracking strategy in Tsova-Tush, the first step would seemingly be to establish which of the four cms is triggered by each referent. However, this question is not as straightforward as it appears. Most referents in these narratives in fact trigger different cms (and even belong to entirely different genders) at different times, depending on the noun phrase used to refer to them. One might instead ask which cm each noun triggers; unfortunately, this too leads to complications.

Tables 5.13 and 5.14 list the most frequent nouns used to encode the key referents in the pear stories and donkey stories respectively, together with the cm they trigger. In the pear stories, four referents are always associated with the same cm. The hat always triggered the cm b-; the bicycle always triggered j-; and both adult men always triggered v- (masculine singular). All other referents had the potential to trigger multiple cms at different points.

There are two reasons for this variability in agreement marking: how the number of the referent is encoded, and whether the referent has a real-world gender that conflicts with the grammatical gender of the noun used to refer to it. In terms of number, the descriptions given thus far paint a simple picture: when a referent is plural, its plural cm is used. The reality is more complicated. While singular nouns can never trigger plural agreement, semantically plural referents trigger a singular cm when quantified by a numeral or treated as a collective. When the group of boys was encoded as k’nati ‘boys,’ the agreement marker was b-, the plural marker of masculine v/b gender. However, when they were encoded as qo k’nat ‘three boys,’ the agreement marker was v- (masculine singular).

Further, two referents in the pear stories—pear(s) and basket(s)—had the potential to be treated as collective entities. The pears were referred to in the singular (msxal, triggering b- agreement) far more often than in the plural (msxali, d-), even in scenarios where it was clear that the storyteller had multiple pears in mind: ‘the farmer was gathering pear,’ ‘the baskets were full of pear,’ ‘this pear spilled all over the road.’ Collective singular reference to the baskets was far less common, but did occur: ‘he was gathering pear in basket.’

Variability in gender agreement also arose when multiple nouns (belonging to different genders) were used to identify the same referent. All of the children in the story could be referred to either with a noun belonging to masculine (v/b) or feminine (j/d) gender (i.e., ‘boy’ or ‘girl’), or with a generic noun meaning ‘child’ that belongs to default d/d gender.¹⁶ This latter case led to even more instability in gender as a possible reference tracking mechanism, owing to the tension between the real-world

¹⁶ Inanimate referents occasionally had variable gender in this way as well: the referent stone was referred to typically as qer, gender b/d, but once as gox, gender j/j. Such cases were limited.
Table 5.13. Nouns (singular and plural) and gender markers associated with referents in the pear story

<table>
<thead>
<tr>
<th>Referent</th>
<th>Noun</th>
<th>Gloss</th>
<th>CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>thief boy</td>
<td>k’nat</td>
<td>boy</td>
<td>v</td>
</tr>
<tr>
<td></td>
<td>pešk’ar</td>
<td>child</td>
<td>d</td>
</tr>
<tr>
<td></td>
<td>voh</td>
<td>boy, son</td>
<td>v</td>
</tr>
<tr>
<td></td>
<td>bader</td>
<td>child</td>
<td>d</td>
</tr>
<tr>
<td>group of boys</td>
<td>badri</td>
<td>children</td>
<td>d</td>
</tr>
<tr>
<td></td>
<td>pešk’ri</td>
<td>children</td>
<td>d</td>
</tr>
<tr>
<td></td>
<td>k’nati</td>
<td>boys</td>
<td>b</td>
</tr>
<tr>
<td></td>
<td>(Num.+ pešk’ar)</td>
<td>child</td>
<td>d</td>
</tr>
<tr>
<td></td>
<td>(Num.+ k’nat)</td>
<td>boy</td>
<td>v</td>
</tr>
<tr>
<td></td>
<td>naq’bist’i</td>
<td>friends</td>
<td>d</td>
</tr>
<tr>
<td></td>
<td>(Num.+ voh)</td>
<td>boy, son</td>
<td>v</td>
</tr>
<tr>
<td>pear farmer</td>
<td>babʷ</td>
<td>old man, grandfather</td>
<td>v</td>
</tr>
<tr>
<td></td>
<td>st’ak’</td>
<td>man</td>
<td>v</td>
</tr>
<tr>
<td></td>
<td>dad</td>
<td>man, father</td>
<td>v</td>
</tr>
<tr>
<td>pear(s)</td>
<td>msxal</td>
<td>pear</td>
<td>b</td>
</tr>
<tr>
<td></td>
<td>msxali</td>
<td>pears</td>
<td>d</td>
</tr>
<tr>
<td>basket(s)</td>
<td>k’alat</td>
<td>basket</td>
<td>b</td>
</tr>
<tr>
<td></td>
<td>godor</td>
<td>basket</td>
<td>b</td>
</tr>
<tr>
<td></td>
<td>k’alti</td>
<td>baskets</td>
<td>d</td>
</tr>
<tr>
<td></td>
<td>godri</td>
<td>baskets</td>
<td>d</td>
</tr>
<tr>
<td>bicycle (thief’s)</td>
<td>velosip’et’</td>
<td>bicycle</td>
<td>j</td>
</tr>
<tr>
<td>hat</td>
<td>kud</td>
<td>hat</td>
<td>b</td>
</tr>
<tr>
<td>girl</td>
<td>joh</td>
<td>girl</td>
<td>j</td>
</tr>
<tr>
<td></td>
<td>pešk’ar</td>
<td>child</td>
<td>d</td>
</tr>
<tr>
<td>passerby</td>
<td>st’ak’</td>
<td>man</td>
<td>v</td>
</tr>
<tr>
<td>stone</td>
<td>qer</td>
<td>stone</td>
<td>b</td>
</tr>
<tr>
<td></td>
<td>gox</td>
<td>stone</td>
<td>j</td>
</tr>
</tbody>
</table>
gender associated with the human referents and the use of a noun belonging to d/d gender (which does not encode a natural gender) to refer to them.

Nouns in d/d gender denoting humans are perhaps best thought of a underspecified for natural gender. Such nouns include naq’bist’ ‘friend,’ mezobel ‘neighbor,’ the two words for ‘child’ used in the pear stories—each denoting a human that might be of any natural gender. Likewise, in English, if I start discussing ‘my friend,’ my interlocutors do not know, based on the noun I chose, the gender of that friend, typically until I use a pronoun to refer to him, her, or them.

In Tsova-Tush, however, while pronouns are not gendered, agreement within the clause is strictly tied to the noun used. When that noun is underspecified for gender, agreement has to be d/d—an agreement pattern typically used for non-humans. Perhaps for that reason, speakers exhibited a disinclination to continue d- agreement for a human referent introduced with a noun of d/d gender beyond one or two clauses. Subsequent agreement quickly changed to match the natural gender of the referent.

Examples (172–173) illustrate a transition in agreement from the referring noun’s gender (d/d) to the referent’s inherent gender (v/b, masculine). Storyteller RO introduces the pear thief as pešk’ar, ‘child,’ triggering the cm d- in the same clause, as well as the following clause within the same prosodic sentence. In the next prosodic sentence, however, RO uses the agreement marker v- for the same referent, without introducing a noun of v/b gender (e.g., k’nat ‘boy’) to facilitate the switch.

(172) qeⁿ cha pešk’ar gu<d>aɬ-en, velosip’et’-ev d-aɣ-or.
then one child(d/d) appear<cm—aor bicycle(j/j)-ins cm—come—imperf
‘Then a child appeared, was coming by bicycle.’ (RO, pear story: 276)

(173) v-eʔ-en, v-eʔ-en, ese b-ag-in me godr-ev mxař-i
cm—come—aor cm—come—aor here cm—see—aor comp basket(b/d)-ins pear(b/d)-pl
latː-er.
stand—imperf

‘[He] approached and approached, saw here that pears were sitting around in baskets.’
(RO, pear story: 277)

This strategy was common for the introduction of the thief boy especially: in all cases when he was introduced with a d/d noun, masculine v- agreement was used in the first agreeing predicate outside the prosodic sentence containing his introduction.
In cognitive terms, when a speaker introduces a human referent with one of the ungendered nouns that denote humans, the speaker apparently conjectures that their interlocutor nonetheless expects that the human referent have a gender, and therefore will not be surprised or confused when their inherent gender takes over agreement.¹⁷

In the donkey stories (Table 5.14), the picture is somewhat simpler. There was a one-to-one relationship between the referent 'fisherman' and the cm \( \nu \)-. The fisherman, once introduced, could in theory be encoded unambiguously by gender alone for the remainder of the story (although no storytellers chose to do this). The donkey was always encoded in a way that triggered the cm \( \delta \)-, but this same marker was triggered by the fish and the baskets at times as well. The casette player always triggered \( j \)- and was the only concrete noun to do so; this marker was also triggered by nouns referring to music and the marketplace (not in the table).

The fish and the baskets presented the most potential ambiguities: these two referents were always present together (since the fish were inside the baskets until the final moment), and all nouns referring to them belong to \( b/d \) gender (except \( \text{telzi} \) ‘saddlebags,’ which I believe to be \textit{plurale tantum}, always triggering \( \delta \)-). It is not clear to me, however, that the same-gender membership of these referents in fact increases their ambiguity in the donkey stories. A storyteller could certainly say, e.g., ‘The fisherman had collected \textit{fish} in his \textit{baskets}, and he took [B] up the mountain to sell [B].’ However, it seems unlikely that a listener would have trouble understanding the second clause with its dropped referents, since it makes sense regardless of whether the baskets or the fish were intended.

¹⁷ As a comparison for English speakers, I find the following an acceptable use of gendered pronouns in English: (my friend Sarah speaking to me over the phone) “I got a new pet \textit{snake}! \textit{Her} name is Mittens.” I would have no trouble resolving the gendered pronoun to its intended referent, even though I might typically imagine a snake as being an ‘it.’
The variability in referent gender that I described in the pear stories was observed in the donkey stories only when the fisherman and donkey were coordinated (e.g., ‘The fisherman put the baskets on the donkey, and they left for the market.’) When coordinating two nouns of different genders, the default agreement marker *d-* is typically used, and two storytellers (KD and OA, who are married to each other) indeed used *d-* agreement when the fisherman and donkey were coordinated. However, the other three storytellers used *b-* agreement for ‘the fisherman and the donkey,’ which can only be understood here as masculine plural agreement, even though the donkey is not a human and cannot be referred to with *v/*b agreement under normal circumstances.

The use of a human gender for the donkey likely occurs because of its (or apparently, “his”) somewhat anthropomorphic status in the story. The donkey is clearly depicted as rational: it suddenly refuses to move only when it realizes that their journey will take them up a long, steep road on a hot day; it is inspired to dance when it hears music; it recognizes the fisherman’s distress at the loss of his fish and offers to dance again to cheer him up. Although its status as a rational being never results *v*-agreement for the donkey in the singular, it is apparently sufficiently rational to serve as a member of a plural human male group, triggering *b*-agreement for three of five storytellers.

Human gender agreement for anthropomorphized animal characters is not limited to the donkey stories. Example (174) was elicited by presenting speakers with a picture-based story (called ‘The Snoring Cave’), in which a group of animals argued about which one of them should have to go explore a frightening cave. At the end of the story, the badger (normally *d/*d gender) gets fed up with the other animals’ fighting and suggests that they all go explore the cave together. In (174a), the badger is referred to with a noun that normally triggers *d*-agreement, although (as a dative experiencer) it does not serve as an agreement trigger in this clause.¹⁸ However, in (174b), the verb shows human male gender agreement.

(174) a. maič-uin, dok’a-deʔ-en.
   badger(d/d)-DAT get.angry-AOR
   ‘The badger, got angry.’ (BH2-085 00:03:06–00:03:09)

   b. vašbar v-ek-in ham-ego....
      together cm-call-AOR everyone-ALL
      ‘[He] called everyone together....’ (BH2-085 00:03:10–00:03:14)

¹⁸ The verb *dok’a-deʔ-en* does contain a *cm*, or at least it did historically. This idiomatic predicate means more literally, ‘[D] came into the heart of [DAT],’ where the agreement is presumably triggered by the stimulus of the anger. In all examples I’ve collected, the stimulus is unstated, so I am unsure whether this agreement slot is still active.
I have not studied gender assignment of anthropomorphic characters in detail; this topic would be an interesting avenue for future research. At present, it is at least clear that non-humans that do not belong to *v/b* gender can sometimes trigger *v/b* agreement when behaving rationally, leading to some complications for how gender can be used for reference tracking in narratives like the donkey story.¹⁹

Thus, there is potential for ambiguity in both sets of narratives, in terms of which available referent an agreement marker might refer to. There is yet another set of complications impeding the potential use of gender for tracking referents: how often a clause contains an agreeing predicate, and how likely any given noun is to serve as the agreement trigger.

Not all verbs have slot for agreement marking. Across all narratives, 71% of clausal predicates were able to reflect gender agreement. The proportion of agreeing predicates was higher in the pear stories (74%) than in the donkey stories (60%)—a difference likely due to chance. Counts for agreeing vs. non-agreeing clausal predicates are given in Table 5.15.

Table 5.15. Frequency of clausal predicates with and without a slot for agreement marking in both narratives

<table>
<thead>
<tr>
<th>Narrative</th>
<th>Slot for cm</th>
<th>No cm</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pear stories</td>
<td>364 (74%)</td>
<td>126 (26%)</td>
<td>490</td>
</tr>
<tr>
<td>Donkey stories</td>
<td>110 (60%)</td>
<td>72 (40%)</td>
<td>182</td>
</tr>
</tbody>
</table>

Additionally, only one referent per clause can serve as the agreement trigger—the subject if the verb is intransitive, or the direct object if transitive. If gender is a reference tracking strategy, it might then be expected that S and DO should permit null reference more often than other syntactic positions, since only these positions can control gender agreement. However, the opposite tendency was found in section 5.2.2.5: both S and DO were overt at higher frequencies than A, a position that does not control agreement (cf. Figure 5.8).

Figure 5.14 illustrates this tendency more pointedly, comparing the ratio of overt to covert reference when the referent serves as the agreement trigger. In both narratives, overt reference (blue) was actually higher when the referent controls agreement—exactly the opposite of what would be expected if gender agreement facilitated reference tracking. Forker (2007) reported similar findings for the reference-tracking properties of gender in Hiuq. Referential density was actually higher for verbs with class markers than for those without.

This unexpected tendency should raise suspicion. If we accept the simple likelihood that gender is not a good strategy for reference tracking in Tsova-Tush—due to the many complications just outlined—we would expect the height of the blue bars to be roughly equal. That is, we should expect

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¹⁹ It would be interesting to learn under what conditions, if any, a non-human might be assigned *j/d* gender (feminine).
any differences in overtness of reference in agreement triggers vs. non-triggers to be due to chance. The fact that referents that control agreement were more frequently overt points to the presence of one or more confounding factors.

One confounding factor appears to be animacy. The two syntactic positions that control agreement, S and DO, are not evenly split between animates and inanimates. Because the distribution of referents across syntactic positions is dependent upon animacy (cf. Table 5.7), it can be predicted that not all referents were equally likely to serve as agreement triggers.

Table 5.16 lists concrete referents in both sets of narratives that were mentioned at least 10 times, in order of how often those referents served as the agreement trigger in their clause. Generally speaking, the referents that controlled agreement most often were inanimate, while animate referents controlled agreement between 23% of the time (the pear farmer) and 58% of the time (the girl in the pear stories). The inanimate referents running counter to this tendency were the bicycles (which were almost always in instrumental case: ‘by bicycle’), the market (usually in locative or directional case), and music (usually the direct object of the verb toxar ‘to play,’ which contains no slot for a CM).

In other words, inanimate referents controlled agreement more often in these stories, which is precisely what we should predict based on earlier observations on differences in the frequency of different syntactic roles by animacy. Inanimate referents appeared in direct object position far more often than in any other position, while animates rarely occurred as direct objects. Meanwhile, the
Table 5.16. How often referents in both sets of narratives served as the agreement trigger for the clausal predicate

<table>
<thead>
<tr>
<th>Referent</th>
<th>Pear Stories</th>
<th>Freq. as agreement trigger</th>
<th>Donkey Stories</th>
<th>Freq. as agreement trigger</th>
</tr>
</thead>
<tbody>
<tr>
<td>pear(s)</td>
<td></td>
<td>80%</td>
<td>fish</td>
<td>81%</td>
</tr>
<tr>
<td>hat</td>
<td></td>
<td>71%</td>
<td>basket</td>
<td>50%</td>
</tr>
<tr>
<td>basket(s)</td>
<td></td>
<td>63%</td>
<td>donkey</td>
<td>42%</td>
</tr>
<tr>
<td>girl</td>
<td></td>
<td>58%</td>
<td>fisherman</td>
<td>36%</td>
</tr>
<tr>
<td>goat</td>
<td></td>
<td>55%</td>
<td>music</td>
<td>10%</td>
</tr>
<tr>
<td>passerby</td>
<td></td>
<td>40%</td>
<td>market</td>
<td>9%</td>
</tr>
<tr>
<td>thief boy</td>
<td></td>
<td>33%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>group of boys</td>
<td></td>
<td>30%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bicycle (the thief’s)</td>
<td></td>
<td>27%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>farmer</td>
<td></td>
<td>23%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A position (not an agreement trigger) was reserved exclusively for animates; when inanimates were subjects, they were subjects of intransitives—i.e., potential agreement triggers.

If these frequencies are assumed to reflect general tendencies in Tsova-Tush regarding the likelihood of certain types of referents controlling agreement, it would appear that gender would be a more viable reference tracking strategy for inanimate referents than for animates.

Figure 5.15 provides potential support for that possibility. Animate referents show the same trend as above, such that the proportion of overt reference was higher when that referent controlled agreement. However, inanimates show the reverse tendency, the one predicted if gender serves some reference tracking function. Inanimate referents were more often overt across the board, even when only S and DO positions are considered: inanimate S and DOs were overt 77% of the time, while animate S and DO were overt 40% of the time. Yet, among inanimates, the proportion of null reference was higher when the inanimate reference served as an agreement trigger than when it did not.

It remains unclear to me why animate referents are more likely to be overt when serving as an agreement trigger. This tendency remains even if only animates in S and DO positions are considered (such that the animate referent would control agreement in every case where the verb had a slot for a CM)—even then, animates were overt at a higher rate when an agreeing CM was present and covert at a higher rate when there was no CM to identify them (i.e., the general shape of the bar charts in Figure 5.15 remains the same, even if only S and DO are considered).

Given the enormous number of interconnected factors that affect a speaker’s referential choice, it is unlikely that this question of whether speakers are in fact using gender in limited cases for tracking (largely inanimate) referents can be fully answered from the current dataset. To investigate this question quantitatively, it would be necessary to collect a narrative with a very specific arrangement of characters and props, to reduce the number of confounding factors. Ideally, such a narrative would
Figure 5.15. Proportion of overt reference of animate and inanimate referents when the referent controls agreement include one adult man, who would trigger v-agreement consistently throughout the narrative, but whose reference would probably not be tracked by agreement very often, given the likelihood that he would often appear in A position, which does not control agreement. The remainder of concrete referents in the story should be limited to three objects that trigger two agreement markers, b- and j- (that is, two bs and one j, or vice versa). If gender can be used for reference tracking, the object that uniquely triggers an agreement marker should covert more often than the two objects competing to trigger the other agreement marker.

Unfortunately, analogous situations do not arise in either set of narratives under the present study. There are simply no inanimate referents that uniquely control an agreement marker—the referential space is too crowded.

Qualitatively, however, there are some instances in these narratives that look like reference tracking accomplished by gender alone, as well as some instances that look like opportunities for gender to track reference, but where it fails to. I will make no attempt to compare these numerically, but a couple of illustrative examples are worthy of inclusion.

Example (175) immediately follows examples (172)–(173) above. The subject, the thief boy, has been the subject of every clause since his introduction, so his reference remains covert thanks to topic continuity. It is less clear what allows the boy’s bicycle to assume null reference here, as it lacks any of the other conditions found thus far to favor null reference.
The bicycle is inanimate, and inanimates have already been shown to have high rates of overt reference. At this moment in the narrative, the bicycle has been mentioned only once, four clauses earlier (i.e., it is scene active, but not continuously active), as an oblique. In the first clause of (175), it is a direct object—the syntactic position that favored most overt reference in figure 5.8. This action occurs in the theft scene, which in figure 5.6 was shown to have a 50:50 ratio for overtness of reference.

None of these factors is particularly favorable for covert reference, and yet the bicycle here is covert. It appears that the only condition favoring its covert encoding in this example is its status as the only mentioned referent (thus far) that triggers j-agreement. The verb happens to have a slot for gender agreement, allowing the bicycle to be encoding exclusively through the appearance of the j-marker on the verb. Example (175), then, looks like reference tracking accomplished through gender agreement alone.²⁰

I have some reservations about this example because of the verb used. The verb otː-d-ar, when used in the sense ‘stop,’ takes a means of conveyance as a direct object (the trigger of gender agreement). The bicycle is also the only means of conveyance referenced in the story, and it has already been established that the boy had arrived by bicycle. Essentially, there is nothing else for the boy to ‘stop’ in this scene: pears (b/d) cannot be stopped, nor can baskets (b/d). A bicycle-riding boy can only stop j-ly. The storyteller could have chosen to leave this direct object covert not out of his confidence that gender agreement would resolve the referent for his interlocutor, but simply because there is no ambiguity about what the boy stopped.

Another potential example of reference tracking by gender occurs later in the same pear story, in the pear confusion scene. The object of the verb b-eḥin ‘stole B’ is the pear farmer’s stolen basket, godor, gender b/d, which had not been referenced for 6 clauses prior to this verb. Apparently gender alone is meant to disambiguate what object had been stolen.

²⁰ In RS’s pear story, at this same moment and under nearly identical conditions in (242), he mentions the bicycle explicitly: ču ot:jie velosip’et’.
This null basket is particularly surprising if gender is the culprit, however. There are two, perhaps three, competing referents that would trigger the gender agreement on the verb. Most obviously, *bˈark’ eye,* belonging to the inquorate class, is mentioned in the first clause of this example and trigger masculine plural agreement: *b-.* Additionally, the group of boys (who the pear farmer is keeping his eyes fixed on) would trigger masculine plural agreement: *b-.* Further, those boys are eating pears, *b/d* gender, although those pears were discussed in the sentence preceding (176) in the plural, so it is less clear that they might be competing for *b-* agreement.

That is, if the storyteller intends for his interlocutor to rely on gender agreement alone to identify the stolen basket, he has made a poor choice to do so here, where the referential field is so crowded with *bs.* However, I suspect that, as before, the semantics of the verb might be doing the disambiguation work, rather than the agreement marker. A reasonable, naı̈ve listener probably would not conclude that ‘*the pear farmer* realized that someone had stolen *his eye / the boys.*’ The most recent available candidates for theft were the pears that the boys were eating (possibly *b-*, likely *d-*) and the basket.

Further, I believe it is important that this clause is a reported attitude of the farmer.²¹ This storyteller had set up the referential field for the farmer’s thoughts in the four sentences immediately preceding (176), shown in (177). The sentence in (177b) is already the reported thoughts of the farmer (albeit not explicitly introduced as such): there is a sudden shift to present tense, and the speaker used a discourse marker *jev* associated with reported attitudes in narratives. In line (177c) the farmer’s actions are described (looking around, a predicate known to be associated with attitudes in Tsova-Tush; cf. section 4.4.2.1), before returning to his thoughts about the missing basket.

²¹ For the reference-tracking study, I did not code the third clause in (176) as having the clause type ‘attitude,’ because it did not meet the criteria listed in section 5.2.1. Nevertheless, semantically, the complement of a verb like ‘realize’ is a reported thought.
(177) Expanded excerpt from RO’s pear story (BH2-084, Appendix A: 295–296)

a. ah v-os-en e st’ak’, msxal hal– hal-o v-et-če t’q’o?, me.
down cm-go.down this man(v/b) pear(b/d) fs up=& cm-go.up-cvb again comp

‘This man came down, up the pear tree— having gone up again, like.’

b. qo godor b-a-r, is ši b-a=g, jev.
three basket(b/d) cm-be-impv there.med two cm-be=anymore dm

‘There were three baskets, here are two, man.’

c. so hač’-en, dah hač’-en, cha— da b— cha eš.
hither look-aor away look-aor one fs fs one lack

‘[He] looked here, looked away, one— is is— one is missing.’

d. mičk’ b-ex-er-l=enʷ, eserna pešk’-i d-axk’-e,
wherever cm-go-impf-evid=rep from.here child(d/d)-pl cm-many.come-prs
qor— msxal-i lec-d-i-en, msxal-i d-aq’-o-š.
apple(b/d) pear(b/d)-pl hold-cm-tr-aor pear(b/d)-pl cm-eat-prs-cvb

“‘Wherever did [it] go,” from here the boys are coming, [they] were holding apple— pears, eating pears.’

The continuation of the farmer’s thoughts in (177d) is explicitly marked with the reportative clitic. This is the final invocation of the farmer’s thoughts before the gender-encoded reference to the stolen basket in (176), and in the farmer’s thought-world, b- unambiguously refers to his stolen basket at this point. I believe that when the speaker uses inexplicit reference to the stolen basket in (176), despite the multiple competing b- triggers, he is returning to the referential field of the farmer’s thoughts, where that b- reference is limited to the stolen basket. I will discuss the role of attitudes in reference tracking again in section 5.2.2.8.

Thus, I find it more likely that the speaker expects the listener to use either logical reasoning from verbal semantics, or an understanding about the farmer’s thoughts (or a combination thereof), to disambiguate the basket in (176), than that the speaker is attempting to track the referent with gender alone.
These examples are not the only instances of potential reference tracking by gender agreement. Other examples are similarly complex, such that the potential gender tracking could potentially be accounted for by some other factor. Ultimately, judgments about each individual example amount to speculation, due to the complexity of the data, which leads to a perhaps disappointing conclusion: evidence for gender as a reference-tracking strategy was not found in these narratives.

This is not to say that gender is not a reference-tracking strategy in Tsova-Tush, but merely that I have failed to provide convincing evidence for its use as such from these narratives. I find it unsurprising that such evidence is difficult to obtain. As observed above, these narratives are simply not ideal for examining gender in Tsova-Tush—there are too many referents controlling the same agreement markers that are active within the same scene.

More importantly, however, I find it likely that gender in Tsova-Tush, given the myriad of complications outlined above, is simply a very poor candidate for a reference-tracking device. The Tsova-Tush gender system is “non-canonical” (in terms of Corbett (2014)) in two important ways. First, only one gender is distinguished by a unique marker (v/b, the only gender to use v-), while the other genders are “non-autonomous,” sharing a marker with another gender-number combinations (Corbett’s (2014) Criterion 1). Second, agreement targets do not uniformly have the ability to agree (Criterion 4). As observed in the Tsova-Tush narratives, roughly 71% of clausal predicates were able to bear agreement marking, meaning that in 29% of clauses in these narratives, attempts to track reference via gender would fail or be blocked outright.

Comrie (1989) surmised that the properties that make gender systems valuable for reference tracking are that gender is “inherent” and “global.” Gender is “inherent” to the noun in the sense it does not depend on syntax or discourse position, even if gender is not assigned based on some innate feature of the referent itself. That is, there need not be an independent reason why a hat is b/d but an apron is j/j; those genders are inherent to the nouns kud and k’alta respectively. Gender is a “global” device in the sense that its scope is not limited to the clause, but in fact can extend throughout the entire text.

Here too the Tsova-Tush gender system strays from this ideal. Examples discussed above saw that properties of the referent could interfere with the consistency of gender tracking throughout the discourse. The “inherent” d/d gender of pešk’ar ‘child’ clashes with the real-world v/b gender of the pear thief. Inconsistency in whether semantically plural referents were encoded as morphologically plural interrupted the “global” property of gender, since quantified nouns and nouns conceived of as collectives trigger singular agreement.

Morrison (2018) observes a similar counterexample to Comrie’s (1989) “inherent” and “global” gender as a reference-tracking device in Bena, a Bantu language of Tanzania. She finds that speakers
actively manipulate the supposedly inherent class of nouns to achieve numerous nuanced goals, including reference tracking but also stance-taking. Although my Tsova-Tush data is too preliminary to make similar conclusions, speakers’ choices regarding gender assignment of referents do show evidence of deliberate manipulation of gender categories. It may be the case that speakers occasionally choose to use the plural of pears (b/d gender), even though multiple pears can be referred to collectively in the singular, simply to utilize a d- marker in scenarios when too many referents are b-.

Additional study would be necessary to answer this question.

Thus, given the grammatical expression of gender in Tsova-Tush, it is no wonder that clear cases of it as a reference-tracking device are hard to come by. For a speaker to intentionally utilize gender agreement to track referents would in fact require complex reasoning that seems too cognitively taxing to be sustainable. Figure 5.16 roughly conceptualizes some of the (unconscious) decisions a speaker would have to make in choosing whether the availability of gender tracking would facilitate null reference.

The referent speakers imagine by box 2 represents 42% of referents in the narratives examined in this chapter; other referents are either the argument of a predicate that lacks a cm or do not control agreement of a predicate with a cm. By box 3, only 38% of referents in the narratives are represented. That is, less than half of references even reach the point where a speaker would have to consider competition from other active referents (in this schematization, least); gender tracking is eliminated for most referents before this point.

Given the complexity of the decision making process, compared with how few referents it would be useful for, it seems unlikely that a speaker juggles all of these factors in their mind while planning referential choices. Most likely, gender tracking would have to be a more consistent possibility for it to be a viable tracking strategy, justifying this cognitive load.

It is possible, of course, that speakers do not actively consider all these factors in making decisions. Perhaps speakers only track whether a referent will be S or DO and consider it a candidate for gender tracking even if the verb happens not to have a slot for a cm. If that were the case, the result would be a (probably small) number of failed attempts at tracking a referent by gender: sometimes inappropriately inexplicit reference would be chosen when agreement marking is unavailable on the verb. Additional study would be necessary to learn more about the actual decisions speakers make regarding gender-based reference tracking.

Why even have a gender system, if it is so poorly suited for reference tracking? Harris & Samuel (2011) found that Tsova-Tush gender is in fact counterproductive for processing: word recognition in their study was slower for verbs with one agreement marker, and slower still for those with mul-
Figure 5.16. An improbable flow of decisions speakers must make in determining whether to use inexplicit reference.
multiple agreement markers. If gender actively slows down speakers’ processing and serve little if any reference-tracking function, why does the gender system exist and persist?

I have two speculative answers to this question. The first lies in the counter-pressure of discourse ergativity. Null reference is favored for subjects of transitive verbs (A)—a position that does not control gender agreement. Indeed, Tsova-Tush verbs exhibit ergativity in agreement, which is controlled by S and DO (i.e., typically the absolutive arguments, except in the case of ergative-subject intransitives; cf. section 3.1). It almost appears as if the constraint against lexical A and gender agreement with S and DO are in fact two sides of the same coin. Du Bois (1985: 355) states that “…discourse pressure to mark new information motivates ergative-absolutive morphology,” and as observed across languages as well as in the present study of Tsova-Tush, new information appears most canonically as S and DO.

Rather than tracking increasingly inexplicit reference, then, Tsova-Tush gender marking appears to bear the opposite function: to assist in the identification of a new referent. If this arrangement is not accidental, the purpose of Tsova-Tush v-, for instance, is not to remind the interlocutor: “remember a he that we’ve been discussing.” Rather, its purpsoe would be to alert: “here comes a new he.”

My other speculation is that gender in Tsova-Tush serves a social function. Anecdotally, speakers react strongly when a gender agreement error occurs. If a participant in one of my recordings, for instance, accidentally used b/d agreement (the gender that includes horses, cows, and goats) for vir ‘donkey’—which should be d/d gender—this mistake would elicit laughter and amusement among my transcription consultants. Similarly, of all the many egregious mistakes I make when attempting to speak Tsova-Tush, none is so swiftly corrected nor the source of so much friendly teasing as when I make an agreement error.

Although the linguistic function (if one exists) of gender in Tsova-Tush at present remains unclear, it certainly serves social function: speakers of Tsova-Tush know that donkeys belong to d/d gender, while horses and cows belong to b/d, and variation on that point is socially monitored.

### 5.2.2.8 Perspective taking and reference tracking

Not all parts of these narratives were described from the same perspective, nor from the same context (cf. chapter 4)—where utterance context includes the storyteller as the Author, the interviewer as Addressee, the recording location (storytellers’ homes in Zemo Alvani Georgia) as Location, and the recording time as Time. In terms of ‘perspective,’ I mean which character the storyteller most closely aligns themselves with at any given moment, whose point-of-view becomes the projected deictic center (Levinson 1983: 64) for a stretch of discourse. Under unmarked conditions, the Author is the deictic center, and deixis is interpreted from an egocentric perspective, where ‘here’ refers to an area
in close proximity to the Author (i.e., utterance Location). Speakers often choose to treat another location as a symbolic deictic center, to accomplish various pragmatic or social goals (Levinson 1983), and indeed, this type of recentering of the deictic space did occur in these Tsova-Tush narratives.

Assuming a character’s perspective—treating that character as a symbolic deictic center—is a matter of degree and need not be as drastic as shifting all context parameters to that of a character in the story. Storytellers might choose to recenter location only, as in (178):

(178) ...ese e p’ap’aš xen=mak=ren e msxal leh-b-i-eⁿ.

suddenly here this dad(v/b) tree(b/d)=on=from this pear(b/d)

‘... here this dad gathered these pears from the tree.’ (TaB, pear story: 358)

It would make no sense for ese ‘here’ to refer to utterance Location (the speaker’s living room). Spatial deixis is interpreted rather from some perspective within the story (apparently the pear farmer’s).

There was one instance where both time and location shifted, but person definitively did not shift, shown in (179).²² As before, ese ‘here’ must refer to a location proximal to a character in the story (the fisherman). Further, the verb in the second clause is in present tense, rather than the past tense narration the storyteller had been using. This present tense again reflects the fisherman’s perspective, for whom the scattered fish were a current problem.

(179) ...aħ-o v-oc’-v-al-iⁿ, ese b-at’ šariⁿ č’aːr

down=& cm-follow-cm-intr-aor down=& cm-follow-cm-intr-aor here cm-be.spread

naq’=mak.

3.refl.poss

‘...[the fisherman] went down, here his fish are scattered across the road.’

(OA, donkey story: 430)

However, although the fisherman serves as the deictic center for both time and location, he is not treated as the deictic center in terms of person reference. Reference to him in this clause is via a third person reflexive (šariⁿ ‘his own’). If all parameters had shifted, first person (‘here my fish are scattered’) would be used instead. The use of the reflexive, whose antecedent must be in the matrix clause, further shows that this partially shifted clause is transparent to syntactic operations across the clause boundary.

²² There were numerous other instances of shift of time or location that simply contained no reference to either the utterance Author/Addressee or a shifted author/addressee with respect to a symbolic deictic center.
Finally, at times storytellers chose to shift all deictic parameters to match the perspective of a character within the story. Example (180b) represents the thoughts of the donkey as it offers the casette player to the fisherman. This arrangement of characters and props was set up in the previous sentence, in (180a). In the donkey’s thoughts, all parameters have shifted. The pronoun used for the casette player is a proximal demonstrative, even though the casette player was not proximal to the utterance Location. The verb is in either present or future tense,²³ a shift from the perfective past of the previous sentence. The pronoun used to refer to the fisherman is a second-person pronoun, treating him as the addressee of the donkey’s thoughts.

(180) a. \ldots vir-ev ħal ec-in magnet’opon dah=a qap’t’-j-i-eⁿ. \@\@\@
donkey(d/d)-erg up take-aor casette.player(j/j) away=& offer-cm-tr-aor

‘...the donkey took the casette player, offered [it] [to the fisherman]. \@\@’

(DK, donkey story: 489)

b. equšuelbad-o hon=enʷ. \@\@\@

this.one.erg assist-prs 2sg.dat=rep

“‘This one will assist you.” \@\@’

(DK, donkey story: 490)

In addition to complications arising from the gradient nature of encoding shifted perspectives, there are often questions about exactly whose point-of-view is projected (in the sense of Lyons (1977: 579)) as the deictic center, particularly in instances of spatial deixis in matrix clauses (as in 178). An attempt to examine how storytellers manipulate spatial deixis for reference tracking is undertaken in section 5.2.2.9. The current section first addresses the role of more clearly shifted perspectives in reference tracking.

Per the coding rules described in section 5.2.1, clauses were considered reported attitudes if they contained at least one of the following: shifted person indexicals, shift from past tense in the previous clause to present tense in the attitude, or the presence of certain discourse markers or interjections associated with reported attitudes. For these narratives, I considered two discourse markers to be reasonably reliable indicators of an attitude report: k’aco (described in section 4.4.3) and jev. I know of no dedicated studies on the use of jev. Bertlani \[\text{ბერთლანი}\] et al. (2012: 385) identifies it as “form of address between men,” which they translate in English as “hey, man”; in the Georgian, they equate

²³ The tense is unclear because the base is a Georgian borrowing (from \text{შველება} šveleba ‘to assist’), and its interpretation as present or future tense in Tsova-Tush depends on whether the speaker considers this to be a perfective or imperfective root.
jev to Georgian k’aco. In normal Tsova-Tush conversation, jev is used frequently (and not exclusively among men), where it is not necessarily a marker of a quotation or other attitude report. However, in these narratives, where there was no utterance-context reason for speakers to use jev in its dictionary sense as a form of address, my strong impression was that speakers used jev to capture a character’s frustration in attitude contexts.

I considered interjections to be reasonably reliable indicators of an attitude report for the same reason. When speakers were exclamatory, they did so in alignment with surprise, frustration, or consternation of a character within the narratives.

Thus, examples (179) and (180b) were considered attitudes. Example (178), where only ese ‘here’ shifted in a matrix clause, was not coded as an attitude—if the mere use of a non-distal demonstrative were sufficient to instantiate an attitude, a surprisingly high portion of the narratives would be considered reported attitudes.²⁴

By these definitions, 36 clauses across both sets of narratives were attitudes. An additional 14 clauses were coded as non-attitude complements, discussed in this section for the purpose of comparison. This section addresses the following questions: (5.2.2.8.1) what scenes do attitudes occur in and whose perspectives were represented (i.e., who was the attitude holder); (5.2.2.8.2) what types of shift occurred and how they were introduced (embedded) into the surrounding discourse; and (5.2.2.8.3) how do these attitudes serve to facilitate or interfere with reference tracking.

5.2.2.8.1 Whose perspectives are taken and when

Table 5.17 shows how the 36 reported attitudes were distributed in the narratives and which character served as the attitude holder.

<table>
<thead>
<tr>
<th>Narrative</th>
<th>Scene</th>
<th>No. attitudes</th>
<th>Attitude holder(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pear stories</td>
<td>3 theft</td>
<td>6</td>
<td>thief boy</td>
</tr>
<tr>
<td></td>
<td>4 collision</td>
<td>2</td>
<td>thief boy</td>
</tr>
<tr>
<td></td>
<td>5 assistance</td>
<td>2</td>
<td>group of boys</td>
</tr>
<tr>
<td></td>
<td>6 hat exchange</td>
<td>3</td>
<td>group of boys</td>
</tr>
<tr>
<td></td>
<td>7 missing basket</td>
<td>14</td>
<td>pear farmer</td>
</tr>
<tr>
<td></td>
<td>8 pear confusion</td>
<td>4</td>
<td>pear farmer</td>
</tr>
<tr>
<td>Donkey stories</td>
<td>latter half</td>
<td>5</td>
<td>fisherman (3), donkey (2)</td>
</tr>
</tbody>
</table>

Interestingly, in the scenes of the pear story, only one character’s attitude was ever represented in any given scene, consistent across speakers. These attitude holders can also be conceptualized as

²⁴ Because in my coding I only counted demonstrative adjectives and pronouns, but not demonstrative adverbs, I cannot say precisely how many clauses contain at least one proximal or medial demonstrative.
the ‘main character’ within those scenes. From the point when the pear thief arrives in the orchard, until he is discovered, having crashed, by the group of boys, the thief is the main character as well as the deictic center.

The deictic space is recentered when the group of boys is introduced. Their introduction involved a version of the verb *d-aɣar* ‘to come’ in five of the seven stories; the other two storytellers introduced the boys as ‘standing there’ (distal)’ or as playing ‘there near-ish to him.’ That is, all introductions of the boys involved positioning them with respect to the former deictic center. At their second mention, a verb of perception (either *d-agar* ‘see’ or *ḥač* ‘look, watch’) was used, from which point the deictic center was realigned from their perspective.

The final recentering occurred at the pear farmer’s introduction, from which point his perspective was the chief one represented for the remainder of the story. He was introduced either as ‘getting down’ from the tree (*ah d-osar*) or with a verb of perception as he discovered the theft of his basket.

In line with what was observed in chapter 4, perception verbs appear to be an important part of instantiating embedded perspectives.

Reported attitudes in the donkey story occurred at three points: when the fisherman devised a plan to compel the donkey to move (‘he thought, “I will turn on music”…’), when the fisherman discovered the loss of his goods (e.g., 179), and when the donkey tried to cheer up the fisherman (e.g., 180). Both clauses from the perspective of the donkey were from the same speaker, the second one apparently a self-correction—he replaced the borrowed Georgian verb with a native term.

### 5.2.2.8.2 Types of shift and types of embedding

For each attitude clause, I tracked whether the following parameters were shifted: person, tense, and location. Often shift of one or more these parameters was indeterminate. Shift of person could not be determined when the attitude holder or addressee of the attitude were not referred to in the attitude clause; i.e., there were no opportunities to use first-person or second-person pronouns or agreement. Shift of tense could not be determined for storyteller GB, who told the majority of his story in the present tense. Shift of location was rarely clear, for reasons discussed more thoroughly in section 5.2.2.9—chiefly because shifts in spatial deixis could be attributed to the physical movement of referents.

The types of shift observed in these narratives can be described as follows: full shift of all context parameters (quotation or indexical shift), time and location shift where no persons were encoded, free indirect discourse (time/location shift with unshifted persons), and marginal/indeterminate shift.

Shift of person indexicals occurred in 13 clauses (3 in the donkey stories). In all but two of these clauses, the reportative *=en* was used. Example (181) shows such an attitude with the reportative,
where the thief was the attitude holder. All 13 of these could be interpreted as quotations, in that all indexicals present in the attitude shift together, and no part of the attitude clause enters into any semantic dependencies with surrounding clauses.

(181) \textit{dak}'lav-iⁿ, cha godor be— godor b-eh-o-s=enʷ, vux šabala=enʷ.} \textit{think-aor one basket(b/d) FS basket(b/d) cm-steal-PRS-1SG=REP what go.wrong=REP}

‘[He] thought, “I will st— will steal one basket, what could go wrong?”’

\textit{(RS, pear story: 241)}

In terms of embedding, attitude clauses of this type were introduced with a clear attitude verb (or were a continuation of an attitude introduced by such verbs) 7 of 13 times. Attitude clauses with shifted person indexicals were preceded by perception verbs three times and by a verb of emotion once (example 213 in section 5.3.6). In one instance, the attitude was not introduced at all (example 180b), and in one instance (182), it was preceded by \textit{ħal qetːen} ‘got up,’ which does not appear to be an attitude verb.

Examples (181) and (182) provide a nice comparison of embedded strategies. Both boundaries of the attitude in (181)—the quote and the unquote—were marked explicitly. The quote was marked with a verb of thought, and the unquote was marked with the reportative clitic. In contrast, the first attitude clause in (182) is not as clearly separated from the surrounding discourse. The preceding predicate does not appear to be the type that can embed an attitude report (but see section 5.3.3), and the reportative clitic is not used until the second attitude clause in this sentence, even though a non-attitude (‘[he] looks back and forth’) intervenes. That is, there was variation in how speakers delineated a reported attitude from surrounding discourse, ranging from perfectly unambiguous demarcation to near total integration with non-shifted clauses.

(182) \textit{ħal qetː-en, vux d-o-s, so-daḥ hič’ vux d-o-lo-s=en=e....} \textit{up get.up-aor what cm-do-1 hither-away look what cm-do-SUBJ-1=REP=&}

‘[He] got up, “what am I doing,” looks back and forth, “what should I do”..’

\textit{(TaB, pear story: 352)}

For 16 attitudes, tense shifted (as well as potentially spatial deixis), where no references were made to persons who might be encoded with a shifted indexical. Of these, only one included the reportative clitic =en: the clause \textit{vux šabala=enʷ} “what could go wrong” in (181) above, clearly a continuation of the quotation. Thus, it can be observed that the reportative occurred in these texts only in the presence of
shifted person indexicals (although not all clauses with shifted person indexicals were marked with the reportative clitic).

The other 15 clauses that have shifted tense but no reportative marker could be treated as quotation, but they differ from the quotation-like attitudes just discussed. These clauses were introduced by a verb of perception (or were a continuation of an attitude introduced by such verbs) 8 of 15 times and were entirely unintroduced three times. Other clauses of this type were preceded by ah osen ‘[he] got down,’ dak’arbie‘[he] counted [them],’ and lat: išt’e ‘[he] stood like this.’ These attitudes were able to enter into dependencies with surrounding clauses, exemplified by the long-distance agreement in example (183).

(183) b-ag-i’n me ese msxal b-at’…. cm-see-aor comp here pear(b/d) cm-spread
‘[They] saw that here pears are spread around….’ (RO, pear story: 287)

That is, tense-shifted attitudes lacking shifted person indexicals look considerably less like quotation, due to the lack of reportative clitics, the higher frequency of introduction with a perception predicate or non-attitude predicate, and their accessibility to long-distance agreement patterns. For these reasons, I hesitate to call these quotations. Such clauses are either indexical shift or, more likely, free indirect discourse (as discussed in chapter 4).

Two additional attitude clauses look like free indirect discourse, in that an attitude is reported but a pronoun referring to the attitude holder fails to shift: (179) above, and (184) below. This latter example, apparently reporting the perspective of the farmer, is less clearly an attitude. Tense shift cannot be established, because this speaker chose to tell his story using the present tense throughout. Only the presence of discourse markers (which this speaker uses quite exuberantly in attitudes) seem to suggest that this is an attitude at all. The pronoun that refers to the attitude holder is a third-person distal demonstrative; if this were a quotation or indexical shift, first person would be expected.

(184) bā, hič’, jev, bā, oquin msxal b-aq’ jev qa k’nat-ev.
hey look dm hey yon. one.gen pear(b/d) cm-eat dm three.obl boy(v/b)-erg
‘Hey, [he] looks, man, hey, three boys, man, are eating his pears.’ (GB, pear story: 335)

Two other attitude clauses from this same speaker (lines 331 and 332 in Appendix A) appear to be of the tense-shift (but not person-shift) type, although that tense shift is not detectable. These marginal attitudes are identified by discourse markers alone.
5.2.2.8.3 Attitudes and reference tracking: Help or hindrance?

It is clear that storytellers use characters’ perspectives not only to set up spatial reference within the narrative; they also encode these perspectives in reported speech and thought—even though the video stimuli contained no speech—using shifted indexicals. Shifts of person indexicals especially seem to disrupt the stability of reference. A referent that had been previously referred to as ‘a child’ or ‘this one’ is suddenly encoded as ‘I’ or ‘me,’ occasionally with very little fanfare to announce the shift. Do such shifts hinder speakers’ and listeners’ ability to track referents, or do attitudes facilitate reference tracking in some way?

This question, like all questions about speakers’ cognitive states, cannot be addressed directly.²⁵ However, it is possible to compare the explicitness of encoding of referents on either side of the attitude and ask whether reference becomes more explicit or less explicit than expected after the reported attitude. An unexpected increase in explicitness would suggest that the attitude might have disrupted reference tracking; an unexpected decrease would suggest that the attitude facilitated the continued activation of referents in the interlocutors’ minds.

Of the 36 attitudes in these narratives, 21 were instances of switch reference, where the subject within the attitude differed from the subject of the clause immediately following it (e.g., ‘the man looked, one basket is missing, he saw some boys coming…’). As was found in section 5.2.2.6, DS environments strongly favored explicit reference, while SS environments strongly favored null reference. Following these 21 DS attitudes, then, it would be expected that speakers would return to explicit encoding for any referents not mentioned in the attitude.

Among these 21 attitudes, I found only two that appeared to disrupt the cohesion of the discourse. One was example (179) above (‘[he] went down, here his fish are scattered across the road’), an apparent instance of free indirect discourse. Immediately following this clause, the fisherman is suddenly referred to explicitly for the first time after a remarkable 22 clauses of null encoding. This return to explicit reference, shown in (185), begins a sort of ‘winding down’ in this speaker’s story, where he reflects on the fact that this “moustachioed” old man (a description used several clauses later) is left hungry, unable to sell his fish, unable to earn enough money to buy bread, etc. Both the word order in (185) and the placement of the coordinating clitic on the adjective (rather than the verb) are uncommon. I believe that the speaker’s choices here are stylistic in nature, so it is not entirely clear that the explicit reference to the fisherman in (185) was in fact necessitated by any disruption caused by the free indirect discourse that preceded it.

²⁵ A processing study could be designed to more directly investigate whether attitudes help or hinder processing of (in)explicit reference.
And the old man was left empty-handed. (OA, donkey story: 431)

The other instance is precisely what we would expect if switch-reference attitudes disrupt reference tracking as other DS clauses do. Line (186a) is an uninitroduced attitude from the perspective of the pear farmer, who had been referred to inexplicily four times in consecutive preceding clauses. In (186b) this farmer is referred to explicitly, modified by a demonstrative adjective. (186) a. miče b-a=g cha k’alat, co b-a=g.
   where cm-be=anymore one basket(b/d) not cm-be=anymore
   ‘Where is one basket, it’s missing.’ (TaB, pear story: 360)

b. e saxit’-eⁿ e bab-uin....
   and get.angry-aor this
   ‘And this old man got angry...’ (TaB, pear story: 361)

This instance looks like a genuine disruption to the storyteller’s ability to continue using inexplicit reference for the pear farmer.

Aside from these examples, there were 19 other attitudes that should have caused the same sort of disruption (if attitudes behave like other cases of DS) but did not. For instance, example (187) represents four of those remarkable 22 straight clauses between explicit mentions of the fisherman in OA’s donkey story, mentioned above. The final clause is a tense-shifted attitude and an instance of switch reference: DS with respect to both the preceding clause and the one that follows it. However, following this attitude, the fisherman is encoded as a null subject (S) in the two subsequent clauses. Given that overt encoding should be strongly favored if the attitude counts as switch reference, his continued covert reference is unexpected. (187) bazir hal v-ax-en, ču b-ah-an=en, hač’-eⁿ, č’a:r co b-a.
   market.dir up cm-go-aor in cm-take-inf=for look-aor fish(b/d) not cm-be
   ‘[He] went to the market to take [fish], [he] looked, there are no fish.’ (OA, donkey story: 429)

Considering that the vast majority of attitudes pattern in this way—failing to disrupt inexplicit reference, when a disruption should be expected due to the switch reference—it appears that treating such attitudes as switch reference does not accurately reflect how speakers conceptualize them. It appears more likely that speakers in fact “skip over” attitudes when they track SS vs. DS contexts. Thus
the hypothetical sentence I mentioned above should perhaps actually be treated as a same-subject condition, passing over the attitude: ‘the man looked, one basket is missing, he saw some boys coming.’

This discussion attempted to capture something that became plain to me in the process of reading and annotating these narratives: reported attitudes are either neutral or helpful for facilitating implicit reference, rather than being disruptive. Speakers seem to return to the matrix referential space as it was before the reported attitude more often than they feel the need to remind the interlocutor of what that referential space included.

In fact, I believe that this is precisely the reason why speakers might choose to use reported attitudes instead of more neutral narration: they deliberately use attitudes to place part of the action of the story explicitly within the perspective of the most prominent character, in order to avoid letting the narrated action redefine what is topical. Consider this expanded excerpt from a pear story that was used above in example (181). The final clause in (188a) and the clause in (188b) are both tense-shifted attitudes from the pear thief’s perspective. The thief is the subject of the clause preceding these attitudes, as well as the subject following these attitudes, and he is null both times. Given that two clauses with different subjects intervene, it is perhaps surprising that he is a covert subject in the first clause of (188c).

(188) Excerpt from RS’s pear story (BH2-083, Appendix A: 239–241)

a. so-dah haċ‘-en, e msxal– msxal–eⁿ godr-i lat:.
   hither-away look-aor this fs pear(b/d)-gen basket(b/d)-pl stand
   ‘[He] looked to and fro, these pear—pear baskets are sitting (t)here.’

b. penix comena co d-a.
   nearby nobody not cm-be
   ‘There is no one nearby.’

c. dak’lav-i‘, cha godor be— godor b-eh-o-s=enʷ, vux šabala=enʷ.
   think-aor one basket(b/d) fs basket(b/d) cm-steal-prs-1=rep what go.wrong=rep
   ‘[He] thought, “I will st—will steal one basket, what could go wrong?”’

However, the speaker chose to encode those two intervening DS clauses as attitudes, instead of narrating, thus embedding these facts in the discourse in a way that does not demote the thief’s topicality. That is, perhaps if the speaker had said, ‘[He] looked around, those pears were sitting there, nobody was near the boy / the pears…’, he might have been required to switch to explicit reference for the thief in (188c), because two genuinely intervening subjects would have threatened that character’s
prominence. Instead, the storyteller embedded the information in an attitude, preventing a decay in the thief’s activation.

At present, the hypothesis that speakers deliberately used embedded attitudes for maintaining a referents’ topicality is merely speculation. Additional study is necessary to determine whether speakers can, in fact, “skip over” these clauses in the calculation of switch reference, and whether encoding a character as an attitude holder effectively prevents that referent’s decay in their interlocutor’s mind. Put differently, storytellers’ choices about how and when to shift to embedded perspectives are just one of the myriad, complex, interconnected aspects of how referential choice is accomplished, and we still know little about them.

5.2.2.9 The role of deictic distance in reference tracking

Spatial deixis proved tricky for examination in the previous section. However, given that the grammar of Tsova-Tush offers speakers three options for positioning referents with respect to a deictic center—proximal, medial, and distal—it seems likely that speakers would exploit these distances in their narratives.

What makes gender a good reference-tracking device in English should in theory make deictic distance at least a potential reference-tracking device in Tsova-Tush: the feature is marked on pronouns. Compare example (189a) (originally in Comrie (1989: 39) and repeated from example (2) in chapter 2) and (189b).

(189) Beryl went to the cinema with Charles.

a. It was the first time he had been able to persuade her to go out with him.

b. It was the first time that one had been able to persuade this one to go out with that one.

Reference is tracked in (189a) because gender is marked on pronouns. In Tsova-Tush, pronouns are marked not for gender, but for three levels of deictic distance: e ‘this (one),’ i ‘that (one),’ and o ‘yon one.’ This raises the question as to whether these deictic distances can be used in reference tracking, approximately as in (189b).

If distance can be used for reference-tracking purposes, it should be expected to be less stable than gender in English, because distance (unlike English gender) is neither an inherent nor a global property of any referent. It is not clear a priori which referent in (189) should be tracked proximally and which should be tracked distally. Speakers and listeners would have to use some context-dependent reasoning to resolve the referents: either some understanding of physical distance (e.g., Beryl is closer
to the speaker of (189b) than Charles is) or some discourse-pragmatic conditions (e.g., topics are distal, contrastive referents are proximal)—not unlike obviation, as discussed in section 2.1.1.

Further, reconfigurations of physical space are possible in narratives. The referents themselves might move. What happens if distal Charles is described as approaching the speaker of (189b)—does he become proximal? It is also possible for storytellers to switch from one deictic center to another. As observed in the previous section, the deictic center seems to be based on which character was most prominent in a given scene, subject to change as different characters enter the story and take over the embedded perspective.

So deictic distance might not be an ideal reference-tracking strategy in Tsova-Tush. However, it is interesting for the sake of comparison with grammatical gender, because in one sense, deictic distance in Tsova-Tush succeeds in having a property that Tsova-Tush gender did not: distance is always marked on demonstrative pronouns and adjectives, while gender is not always marked on verbs. In every instance where a speaker chooses to use a demonstrative pronoun or adjective, they must commit to a deictic distance—so why not exploit that feature for reference tracking?

Thus, one outstanding question is whether Tsova-Tush speakers utilize these three levels of deictic distance to track referents. An independent question is whether the narratives investigated in this chapter offer conditions where that kind of reference tracking could be detected.

There are three potential complications: changes in referent prominence/topicality resulting in a reconfiguration of the deictic center; changes in physical location of important referents in the narratives; and the recording conditions. The first complication was discussed in the previous section, where it was found that both stories permit perspective changes.

Likewise, in both stories, important characters move. The most stationary character is the pear farmer, who only moves up and down his pear tree. In the hat exchange scene, for instance, it is difficult to conceptualize either the group of boys or the pear thief as consistently proximal or distal: in the beginning of the scene, they are parting from each other, but at the discovery of the hat, they approach each other again. Even if the deictic center stays constant, various referents can change from proximal to distal or vice versa as things get rearranged.

Finally, as Downing (1980) observed, the recording methods for the pear story (and by extension, the donkey story) are not ideal for studying spatial deixis. She states of her study American English and Japanese pear stories: “Because our subjects were not personally involved in the incidents which formed the subject matter for their narratives, our transcripts in general provide few examples of the use of deictically based terms” (Downing 1980: 114).

The narratives I collected contained a total of 203 demonstrative pronouns and adjectives across the three deictic distances, which is indeed too limited for meaningful statistical comparisons. Nonethe-
less, a few tendencies can be observed, to inform future controlled studies of deictic distance as a reference tracking strategy.

Table 5.18. Demonstrative pronouns and adjectives in both sets of narratives

<table>
<thead>
<tr>
<th></th>
<th>Adjective</th>
<th>Pronoun</th>
<th>Row totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximal</td>
<td>76</td>
<td>9</td>
<td>85</td>
</tr>
<tr>
<td>Medial</td>
<td>21</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>Distal</td>
<td>61</td>
<td>36</td>
<td>97</td>
</tr>
<tr>
<td><strong>Column totals</strong></td>
<td><strong>158</strong></td>
<td><strong>45</strong></td>
<td><strong>Grand total: 203</strong></td>
</tr>
</tbody>
</table>

Table 5.18 indicates that medial demonstratives were far less common than proximal or distal demonstratives, which were used four to five times more often than medials. Demonstrative adjectives were used more than three times as often as demonstrative pronouns.

A difference was observed between the narratives, as shown in Figure 5.17. The vast majority of deictic demonstratives appeared in the pear stories. Only 15 demonstrative adjectives or pronouns were used in the donkey stories. This lower use of demonstratives likely relate to both the lower competition among referents and to the low number of reintroductions (reactivation) of referents in the donkey story; cf. Figure 5.3, where the use of a demonstrative adjective was one major strategy for reintroductions. That is, the donkey stories in general required less explicit reference, and demonstratives are a (partially) explicit referential strategy.

Among the pear stories, striking differences among speakers can be observed, shown in Figure 5.18. Just three speakers accounted for all 21 medials listed in Table 5.18; the other speakers
used only proximal and distal distances. Speaker TaB far outpaced the other storytellers in her use of proximal demonstratives. Most other speakers used more distals than proximals, and one speaker (RS) used these demonstratives at equal rates.

![Figure 5.18](image-url)

**Figure 5.18.** Proximal, medial, and distal demonstrative use compared across storytellers (pear stories)

The question of interest is, of course, whether certain referents were paired consistently with a deictic distance. I will limit this discussion to the three main human referents in the pear story: the thief boy, the group of boys, and the pear farmer. Because of the wide interspeaker variability, the next subsections look at each speaker’s tracking of these referents in terms of deictic distance individually.

### 5.2.2.9.1 DE

For all three main characters, DE favored distal reference. He only used a proximal for any of these characters once: for the thief boy in the hat exchange scene, in example 190. In the translation line, I put distal reference in italics and proximal reference in bold. In the gloss line, the proximal pronoun referring to the thief is in bold.
When *yon one* fell *yon one* evidently had [his] hat fall off, *yon* boys turned back, brought **this** hat back, gave [it] [to him], **this one** got up, gave [them] *yon* pears, one pear each, for bringing **this** hat back.’ (DE, pear story: 226)

As will become clear throughout these sections, the hat exchange scene causes the most disruptions in deictic distance, precisely because of the exchange of items among the boys. In this instance, I believe DE’s switch of the thief from distal to proximal is motivated by a property of the verb *dalar* ‘give,’ which seems to prefer placing the giver and the recipient at different deictic distances. Here the clausal predicate *hal qeten* ‘got up’ is not literal, but rather serves to mark a major moment of switch reference in this saturated sentence, setting up the thief as the proximal giver of distal pears to presumably distal boys (although the boys are null in this clause).

It seems that DE did not use deictic distance as a reference-tracking device for the main characters in these narratives. He rather preferred the distal demonstrative as a default third person pronoun.

5.2.2.9.2 RS

RS used a distal demonstrative once each for the thief boy, the group of boys, and the pear farmer. He used a proximal twice, both times at moments of reintroduction: when the farmer reappeared in the missing basket scene, and when the group of boys reappeared in the pear confusion scene. It appears then that RS used deictic distance not to track referents, but perhaps instead to direct attention: only the moments requiring the strongest redirection of the listener’s attention to a previously activated referent got a proximal demonstrative adjective.

²⁶ Non-literal uses of this verb are discussed in section 5.3.3
5.2.2.9.3 RO

RO potentially used distance for reference tracking: the thief boy was proximal with only one exception, and both the group of boys and the pear farmer were distal, with one exception each.

The thief boy’s one distal mention was in the assistance scene, where the perspective of the group of boys might have caused the shift, in lines (287–288): ‘[The boys] saw that here pears are spread around, a boy fell. They helped yon one.’ The clause immediately following ‘saw,’ at least, is a report from the boys’ perspective. Aside from this example, RO treated the boy as proximal.

The group of boys, on the other hand, were distal, except in one instance. Their one appearance as a proximal is interesting, shown in 191. This example occurs at the moment the boys part definitively. The thief boy, now exiting the story, ‘went away,’ while the group of boys (who pop up again later), ‘are coming.’ RO is apparently manipulating deictic distance to highlight their parting in separate directions, and perhaps also to hint that the group of boys has not yet left the story.

(191) šaro šarn v-ax-e”, e pešk’r-i d-ay-o, msxal b-aq’-o-š=e.
    self.erg away cm-go-aor this child(d/d)-pl cm-come-prs pear(b/d) cm-eat-prs-cvb=&

    ‘He himself left, and these children are coming, eating pears.’ (RO, pear story: 294)

The pear farmer, like the group of boys, was distal except for one use with a proximal demonstrative adjective. This exception occurred at the farmer’s reintroduction in the missing basket scene—exactly the same moment where RS had also used proximal distance for the pear farmer. The use of proximal for reintroductions like this appears to be a strategy for directing the listener’s attention.

Thus, with minor exceptions, RO seems to track the thief boy in with proximal demonstratives, and the other main characters with distal demonstratives.

5.2.2.9.4 GB

GB uses proximal reference for the thief boy until the appearance of the group of boys, who receive distal reference initially. In the assistance scene, they swap distance, after which point the both are treated as either distal or medial. It is unclear whether this is reference tracking or simply movement tracking in these scenes.

In the final scenes, GB apparently uses deictic distance to signal reported attitudes. An example is shown in (192). The group of boys are referred to with a distal pronoun in the matrix clause, but a proximal pronoun in the indexically shifted thought report.
(192) ...qeⁿ babʷ ma: išt’en gak’virbad-al-in, hiċ’ t’q’u̯iḥ ha oqarn, bā, then old.man but like.this surprise-intr-aor look behind therefore yon.ones.dat hey miċ=reⁿ b-a eqar-go-(h) seⁿ msxal. where=from cm-be these.ones-all-loc 1sg.gen pear(b/d)

‘... then the old man is suprised like so, then looks back at yon ones, “hey, where did these ones get my pears?”’

(GB, pear story: 336)

Thus, it is unclear whether GB uses deictic distances for reference tracking, but he apparently uses these demonstratives for signaling attitude reports.

5.2.2.9.5 TaB

As noted above, TaB alone preferred proximal demonstratives over distal demonstratives. All three main characters were proximal the majority of the time. Medial and distal marking was only used for them in special circumstances: in the hat exchange scene, and for the final mention of the pear farmer.

This latter exception is particularly interesting. Examples (193–194) are the last two sentences in TaB’s pear story. In (193), both the boys and the farmer are proximal, TaB’s typical usage. In (194), she switches both to distal reference. This sentence takes a different tone than the rest of her story: she is no longer narrating action, but providing a review or a moral to the story. Her choice to use distal demonstrative adjectives here might be, in part, to signal the passage of these characters out of active discussion, the end of the story.

(193) e badr-i=a šuin d-ixk’-d-al-iⁿ e babo osi this child(d/d)-pl=& away.pl cm-many.go-cm-intr-aor this old.man(v/b) there v-is-en chak’van=e. cm-stay-aor alone=&

‘These children also went away, and this old man stayed there alone.’

(TaB, pear story: 365)
‘Such... a wise and fair man was yon old man that [he] didn’t say to yon children, “you stole pears from me, you’re eating my pears.”’ (H2-091, Appendix A: 365)

Thus, TaB apparently does not use deictic distance for reference tracking. She prefers proximal reference for human referents and uses distal as a contrast, as needed.

5.2.2.9.6 BP

BP generally used distal reference for the thief boy, except during the collision scene. In contrast to the girl in this scene, the thief was proximal. After her departure, the thief returned to distal reference, while the group of boys were mostly medial, as in example (195). If BP is tracking reference with these choices (rather than these characters’ physical locations), she is the only speaker to use all three deictic distances for that purpose.

(195) ...i badr-i lat'-en o vah-on, msxal hal lah-b-o-š.

‘...those children helped yon boy gather the pears.’ (BP, pear story: 376)

The farmer was only referred to in a way that encoded deictic distance once: at his reappearance in the missing basket scene. BP generally used medial demonstratives more often than other storytellers. I am not sure why this is the case.

5.2.2.9.7 TT

TT uses distal vs. proximal distance for contrast. In the assistance and hat exchange scenes, she positions the group of boys as distal when the thief is proximal and vice versa, exemplified in 196. Throughout this sentence, the boys are referred to with the distal pronoun, and the thief is marked with the proximal demonstrative adjective. The pears and basket are also in a distal opposition.
Thus it appears that TT is purposefully manipulating deictic distance for reference-tracking purposes, at least some of the time.

As for the pear farmer, TT mentions him once with a proximal pronoun in the theft scene—actually reintroducing him after a multi-clause digression. In all other instances where she marks the farmer for deictic distance, he was distal (in the pear confusion scene).

5.2.2.9.8 Summary: Observations on deictic distance

These observations are preliminary due to the complexity of the data and the limited number of examples. Preliminary evidence points to two or three strategies speakers use for deictic distance.

One strategy is to select one category (distal for DE, proximal for TaB) as the generic pronoun for all referents, and to use the opposing distance for contrast only as needed, when multiple referents are present together: essentially, needs-based reference disambiguation.

Another strategy is to select one category for a main character (e.g., RO’s proximal thief) and to leave other characters at opposing distances, switching distance only as needed for the change of perspectives or for referentially crowded scenes. This strategy tracks the prominence of a character on top of what is accomplished in the previous strategy. In the sense that one character in particular seems to be given privileged status, this strategy lightly resembles obviation.

A third strategy is to vary the distances of referents throughout the story, apparently for a number of purposes beyond what I can fully account for here. Some of those purposes include (probably) reference tracking, signaling a reported attitude, and marking moments when a character has exited the story.
Additionally, the proximal demonstrative adjective (and occasionally the medial as well) is particularly useful for reintroductions of referents that have had the most time to decay in the listener’s mind. The proximal might be considered especially contrastive or attention getting.

I have only considered deictic distance with respect to demonstrative adjectives and pronouns. The same three deictic distances are encoded in the demonstrative adverbs. Some verbs and preverbs also have a directional nature. I have already mentioned the tendency I noticed that \textit{da-alar ‘give’} seems to pair with arguments at different deictic distances; there may be other verbs of that type, in addition to the usual deictic verbs such as \textit{d-ayar ‘come’} and \textit{d-axar ‘go’} (and their pluractional counterparts), which I also did not formally include in this study. The same is true of directional preverbs like \textit{so ‘hither,’ dah ‘away,’} which could be involved in the positioning of referents at different deictic distances.

In spite of these limitations, this data offers promising hints that deictic distance can be manipulated for reference-tracking purposes, among other goals the speakers may have. Additional study would be interesting, especially if data were gathered in a way that allows better control of characters’ physical location and shifts in perspective.

5.2.3 Summary: Referential choices

At the beginning of this chapter, I provided a list of referential strategies in Tsova-Tush in terms of (in)explicitness. It is now possible to state these strategies more concretely, illustrating how Tsova-Tush follows Givón’s (1983a) topic continuity hierarchy, as in 5.19.

<table>
<thead>
<tr>
<th>Continuity/accessibility</th>
<th>Category</th>
<th>Tsoua-Tush</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most continuous/accessible topic</td>
<td>zero anaphora ✓</td>
<td>gender? person agreement?</td>
</tr>
<tr>
<td></td>
<td>bound pronouns, grammatical agreement</td>
<td>bare N</td>
</tr>
<tr>
<td></td>
<td>definite NP</td>
<td>distal demonstrative + N</td>
</tr>
<tr>
<td></td>
<td>cleft/focus constructions</td>
<td>proximal demonstrative + N (no data)</td>
</tr>
<tr>
<td></td>
<td>referential indefinite NPs</td>
<td>bare N</td>
</tr>
<tr>
<td></td>
<td></td>
<td>\textit{cha, vanax} + N</td>
</tr>
</tbody>
</table>

There are of course numerous outstanding questions regarding topic continuity in Tsova-Tush. It remains unclear to me just how effective gender marking on verbs is for contributing to the accessibility of a referent. Further, because Tsova-Tush only marks person agreement (“bound” pronouns) on verbs for first and second persons, these narratives only included 6 instances of person marking.
on verbs (shifty first-person and second-person marking in reported attitudes), so the relative accessibility of such referents cannot be meaningfully tested in this narrative data.

Additionally, my differentiation of three levels of definite NP in Tsova-Tush is at least partially speculation. In multiple pear stories, the proximal demonstrative was used for the strongest reintroductions (i.e., those occurring after the longest lapse in mention of that referent), when that speaker either generally preferred a distal demonstrative, or when the speaker had generally been using a distal demonstrative for that same referent. This suggests to me that proximals might be associated with lower accessibility of a referent, for at least some speakers.

Finally, I have not addressed cleft and focus constructions in these Tsova-Tush narratives. Clefts are indeed possible—and in fact occur in the narratives a handful of times—but there were too few instances of unambiguous cleft constructions in the data to be useful. However, it would be possible to compare word order in each clause as a way of examining focus. I have no doubts that word order is an important part of Tsova-Tush reference tracking and information structure, but unfortunately, this topic fell beyond the scope of the present study.

### 5.3 Features of narratives

This section contributes observations regarding some discourse-level linguistic patterns in Tsova-Tush, which (to my knowledge) had not been reported before. Specifically, I describe tail-head linkage (involving repetition across sentence boundaries), intra-sentential repetition, a non-literal verb with similarities to English pseudo-coordination, evidentials used as miratives, pluractional verbs with singular arguments, and locative-of-allative experiencers. Many of these phenomena apparently serve pragmatic or social purposes that cannot be answered in the present study. I hope that by identifying them and providing an initial description, future research into Tsova-Tush discourse and pragmatics can be facilitated.

#### 5.3.1 Tail-head linkage

These narratives included an interesting type of clausal repetition has been called *tail-head linkage* or, in Guérin (2019), *recapitulative linkage*. It involves the repetition of the final phrase of one sentence as the first phrase in the next sentence. As Guérin & Aiton (2019: 16) point out, the recapitulated clause is never a verbatim repetition of the original (the ‘tail’): it is minimally accompanied by intonational changes, but it can also be recapitulated with additions, omissions, substitutions, or changes in word order (described also by de Vries (2005: 363)).
Tail-head linkage is most often discussed in languages with overt switch-reference marking on verbs (van Gijn et al. 2014), typically in Papuan languages (de Vries 2005, Jendraschek 2009) or languages of the Amazon (Overall 2014, Guillaume 2011). However, as Guérin & Aiton (2019) point out, the phenomenon can actually be found in a typologically diverse sampling of languages around the globe. Tail-head linkage is known to intersect with other aspects of reference tracking in language with overt switch-reference marking (Guérin & Aiton 2019: 25). For instance, Overall (2014) observes that different types of dependent clauses, tail-head linkage, and nominalized clauses work together with other parts of grammar as part of reference tracking system in Aguaruna, a Jivaroan language of Peru.

Another major function of tail-head linkage relates to discourse cohesion. While overt switch reference functions to link clauses, tail-head linkage functions to link sentences. Jendraschek (2009) identifies tail-head linkage as a strategy for linking sentences in languages without clausal coordination. Other functions of this phenomenon include to mark the sequentiality of events in discourse (Guérin & Aiton 2019).

Although this phenomenon has not been reported before in Tsova-Tush, Forker & Anker (2019) describe recapitulative linkage in Tsezic languages, suggesting it may be a feature of the whole Northeast Caucasian family. They find that bridging constructions (a larger category including tail-head linkage and other, similar phenomena) are prominent feature of traditional fictional narratives, but not of historical or autobiographical texts.

As Forker & Anker (2019) predicted, it is indeed possible to identify tail-head linkage in Tsova-Tush narratives. An example is shown in (197), the beginning of a speaker’s description of ‘The Present.’ In (197a), the main character is introduced with cha ‘one’ acting as an indefinite determiner. In (197b), the now-definite boy is marked with a distal demonstrative (o vahov ‘that boy (erg)’). His initial action, playing with a ball,²⁷ is introduced with clause-final falling intonation in (197b) and repeated with clause-initial rising intonation, in (197c), where the subject (‘that boy’) has been dropped.

(197) Excerpt from ‘The Present’ story by TC (BH2-097 00:00:04–00:00:26)

a. cha voh– cha voh v-a-r šair nan-ego-(h).

one boy(v/b) one boy(v/b) CM-be-IMPF 3SG.REFL.POSS mother-ALL-LOC

‘There was a boy— a boy with his mother.’

²⁷ In the video, the boy was playing video games. The speaker, in her eighties, has remembered the sequence of actions differently.
b. o vahov,... labc’-b-ieⁿ burt.
   yon boy-erg play-cm-aor ball(b/d)
   ‘That boy,... played ball.’

c. labc’-b-ieⁿ burt,... qeⁿ nan-as sačukar ah d-e?-eⁿ.
   play-cm-aor ball(b/d) then mother-erg present(d/d) down cm-bring-aor
   ‘[He] played ball,... then [his] mother brought down a present.’

d. sačukar d-e?-en, osi=ren phu hal b-ax-en, chen k’ok’
   present(d/d) cm-bring-aor there.dist=from dog(b/d) up cm-go-aor one.obl leg(b/j)
   bi– a– cha k’ok’ eš-u-š...
   fs fs one leg(b/j) lack-prs-cvb
   ‘[She] brought a present, from there a dog came out, one leg b– a– missing one leg...’

The sequence in (197c) continues with the mother’s actions. As before, her action which ended the sentence in (197c) is partially repeated at the start of the next intonational sentence in (197d). These partially repeated clauses at the beginning of a new intonational sentence are examples of tail-head linkage.

In (197), both instances of tail-head linkage occur where the next action in a sequence was enacted by a different character; i.e., a switch-reference context. In comparison, lines (197a–197b) had the same subject, and the transition there involved no repetition of the predicate across the sentence boundary. Thus it initially appears that one function of tail-head linkage in this narrative is similar to what is accomplished by switch-reference verbal morphology in some languages: tracking the change in subject in a series of actions.

This use of tail-head linkage accords with Comrie’s (1998) observations regarding topic continuity in discourse and markedness: across clauses, topic continuity is expected, and therefore a change in topics is less expected and more marked. In Tsova-Tush, this more marked transition is assisted by tail-head linkage.

Not all instances of tail-head linkage involve a change in subject, however. In (198), the pear farmer is the subject of every clause. Nevertheless, the storyteller uses tail-head linkage, with a modified word order, in the transition from the first sentence to the second. Its purpose here cannot be for managing switch reference, given the continuity of the pear farmer’s subject status. Here the domain of reduplication is slightly larger, encompassing two clauses (one finite and one infinitival).

(198) Excerpt from TaB’s pear story (BH2-091, Appendix A: 338–339)
In spite of counterexamples like (198), tail-head linkage in my data generally occurs in DS contexts. I identified 21 instances of tail-head linkage across four sets of narratives (representing 7 different speakers), the majority of which were associated with switch reference either to the left (i.e., comparing the clause preceding the ‘head,’ to be recapitulated) or to the right (i.e., comparing the recapitulated ‘tail’ and the clause that follows it). As shown in Table 5.20, 62% of instances of tail-head linkage had different subjects than the clause preceding it, and (a partially distinct) 62% of instances has different subjects than a subsequent clause. Only 19% of instances of tail-head linkage had the same subject as both preceding material and following material. It seems likely that either tail-head linkage serves in part to mark switch reference, or it has a different function which overlaps with DS contexts.

Example (200), from a ‘Snack Attack’ narrative, highlights another potential function of tail-head linkage: to turn a foregrounded action into a backgrounded one (which would correlate with shifts in topic). Prior to this excerpt, the speaker had mentioned the woman, her pastries, and her newspaper. In (200a), a new character, the snack-eating teenager, arrives on the scene. He transitions from indefinite marking (cha voh ‘a boy’) in (200a) to definite marking (o vahov ‘that boy (erg)’ in (200b),
Table 5.20. Tail-head linkage (THL) in Tsova-Tush narratives and its association with switch reference (DS)

<table>
<thead>
<tr>
<th></th>
<th>No. THL</th>
<th>DS: prev. clause &amp; THL</th>
<th>DS: THL &amp; next clause</th>
<th>DS: before or after</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pear stories</td>
<td>11</td>
<td>8</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Donkey stories</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>‘The Present’</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>‘Snack Attack’</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>21</td>
<td>13 (62%)</td>
<td>13 (62%)</td>
<td>17 (81%)</td>
</tr>
</tbody>
</table>

at which point he is eating the aforementioned pastry. In the beginning of (200c), the boy’s action is repeated, before the speaker returns her attention to the woman, who is referred to with just a distal demonstrative pronoun. However, in the repetition of the boy’s action, there is a transition both in the preverb (from dah ‘away’ to hal ‘up’) and in the aspect of the verb, from imperfective to perfective. These types of substitutions have been reported for other languages with tail-head linkage (Guérin & Aiton 2019: 16). This transition from imperfective to perfective apparently serves to highlight the sequencing of events and to pass the teenager’s eating of the cookie into the background.

(200) Excerpt from ‘Snack Attack’ story by TC (BH2-098 00:00:22–00:00:33)

a. v-ax-eⁿ osivh cha voh.
   cm-go-aor to.there.dist one boy(v/b)
   ‘A boy went there.’

b. o vahov, namcxvar dah=a j-aq’-iⁿ.
   yon boy-erg pastry(j/j) away=& cm-eat.impv-aor
   ‘And that boy, was eating the pastry.’

c. hal=o qal:-iⁿ, oqus magram gazit’=a xet’:-or
   up=& eat.impv-aor yon.one.erg but newspaper=& read.impv-impf
   ‘[He] ate [it] up, that one however was reading a newspaper.’

In the abstract, one can find parallels between this potential usage of tail-head linkage to background such sequences of events with referential strategies used to assimilate new referents into the common ground. The first mention of the event (the ‘head’) is similar to the first mention of a referent: containing new information only identifiable through the listener’s ability to understand the linguistic form and its summary parts. The second mention of the event (the ‘tail’) likewise parallels the second mention of a referent, where the information is now familiar, and at its repetition, a speaker may seek to underscore that this information should be identifiable by the listener from the common ground. That is, abstractly, a recapitulated clause might bear some similarities to those second men-
tions of referents where speakers chose to use a demonstrative adjective to underscore that referent’s definiteness.

Another potential use of tail-head linkage might be stylistic: to heighten the drama. In the pear stories, tail-head linkage was chiefly concentrated in two scenes: collision and hat exchange—scenes where multiple human characters and multiple props changed position in complicated ways. While these recapitulations might serve to facilitate the sequencing of these complicated events, they have the additional effect of increasing the length of the description of the events (both in terms of time and number of clauses), like a linguistic slow motion camera. The excerpt in (201) reads to me both as a careful sequencing of events, as well as the dramatic flair of a skilled storyteller.

(201) Excerpt from TaB’s pear story (BH2-091, Appendix A: 348–350)

a.  
   e  
   jah-og  
   j-ux  
   hač'-er=ai  
   c’airk’o  
   e  
   velosip’et’  
   gox-ex  
   this  
   girl(j/d)-ALL  
   cm-back  
   look-IMPF=&  
   suddenly  
   this  
   bicycle(j/j)  
   rock(j/j)-CON  
   j-iš-j-al-iⁿ,  
   @@,  
   e  
   k’alat  
   so=a  
   b-ek’-iⁿ.  
   cm-hit-cM-INTR-AOR  
   @@  
   this  
   basket(b/d)  
   hither=&  
   cm-many.fall-AOR  
   ‘[He] was looking back at this girl, suddenly this bicycle hit a rock @@, and this basket fell.’

b.  
   k’alat  
   so  
   b-ek’-iⁿ  
   e  
   k’nat-ego-(h),  
   kud=a  
   so  
   basket(b/d)  
   hither  
   cm-many.fall-AOR  
   this  
   boy(v/b)-ALL-LOC  
   hat(b/d)=&  
   hither  
   tas-b-al-iⁿ.  
   fall-cM-INTR-AOR  
   ‘This boy had the basket fall, and [his] hat fell off.’

c.  
   so  
   tas-b-al-iⁿ,  
   e  
   msxal  
   dah  
   b-arž-eⁿ.  
   hither  
   fall-cM-INTR-AOR  
   and  
   pear(b/d)  
   away  
   cm-spill-AOR  
   ‘[It] fell off, and the pears spilled.’

Whatever its precise purposes might be, tail-head linkage is unquestionably an interesting feature of Tsova-Tush narratives, worthy of future inquiry.
5.3.2 Intrasentential repetition

The phenomenon discussed in the previous section was one that bridged sentence boundaries. A similar pattern occurred in these narratives within sentences, which I will call intransentential repetition, for lack of a better term. An example is shown in (202).

(202) \textit{ix-e-lel-i'n} \textit{ix-e-lel-i'n} hal'o qač-e'n bazir šik'e? letx-aⁿ go-LNK-walk-aor go-LNK-walk-aor up=& arrive-aor market(j/j).DIR both dance-INF ix-o-š, o letx-aⁿ ix-če o č'ar-i magram so-dah go-PRS-CVB yon.one dance-INF go-CVB yon fish(b/d)-PL but hither-away ak'-ur.
man.y.fall.IMPV-IMPF

‘[They] went, went, they both arrived at the market dancing, upon dancing, the fish were falling out all over.’ (DK, donkey story: 487)

This repetition pattern differed from tail-head linkage in several ways. First, it typically occurred at the beginning of a prosodic sentence, spanning two or three clauses within a single prosodic contour. Tail-head linkage, on the other hand, was always interrupted by a major prosodic break. Second, intransentential repetitions involved repetition of only a verb phrase, where all its arguments were dropped. The inclusion of arguments in recapitulated THL clauses varied: sometimes arguments were dropped in the recapitulation, sometimes they were preserved exactly as-is, and sometimes new arguments were even added. Third, intransentential repetitions were most often verbs of motion, while tail-head linkage did not seem restricted to any semantic type.

Finally, tail-head linkage occurred within scenes, while intransentential repetition often occurred in the beginning of a sentence in which the scene changed. The coding of scenes in the pear story was done arbitrarily according to my own taste. Nevertheless, my predetermined scene boundaries often aligned nicely with what speakers chose to do, and typically where I delineated a new scene coincided with a new prosodic sentence. However, in nearly every case where my scene changes occurred mid-sentence in some speaker’s narrative, the scene change occurred immediately following two or three repeated verbs. That is, in example (203), I coded the first two clauses headed by \textit{vuit} ‘[he] goes’ as belonging to the theft scene, and the last clause as the first of the collision scene, adhering to the coding guidelines I set for myself.
‘This boy \textit{goes and goes}, on the road [he] meets a girl coming from there on a bicycle.’

(TaB, pear story: 347)

I have not made an attempt to quantify or study these repetitions in detail, but I would surmise that they serve a discursive and/or stylistic function in narratives, perhaps assisting with transitions between different sequences of events.

5.3.3 Non-literal \textit{hal qetːen}

In its literal sense, the phrase \textit{hal qetːen} ‘got up’ is used when its subject has stood up from a sitting or lying position. However, in these narratives, there were numerous examples of this verb phrase’s use in a non-literal sense, where the given referent had not physically gotten up. In this usage, \textit{hal qetːen} often appears at the beginning of a prosodic sentence and seems to signal that the subject’s action in the subsequent verb was decisive.

Example (204) describes the moment in the Pear Story after the group of boys finds the other boy’s hat. In the previous clause, the boys were walking away, and therefore already upright and in motion; thus it would be impossible for them to literally “get up.” Rather, they take the decisive action to grab the boy’s hat and return it to him.

(204) \textit{hal qetː-eⁿ}, o kud=a hal ec-iⁿ, t’q’uih=a dast’venad-i-eⁿ e up get-up-aor that hat(b/d)=& up take-aor behind=& whistle-tr-aor this k’nat-eg, ču ot:-v-i-en e k’nat, aɬ-iⁿ me ai e kud=a boy(v/b)-all in stop-cm-tr-aor this boy(v/b) say-aor comp behold this hat(b/d)=& hen b-a=enʷ.

2.gen cm-be=rep

‘[They] \textit{got up} and took that hat, whistled back to this boy, stopped this boy, said, “look this hat is yours.”’

(TaB, pear story: 355)

Example (205) is from a ‘Snack Attack’ narrative, at the point where both the elderly woman and the teenager are seated on a bench waiting for a train. The speaker has already described how the teenager (here, ‘boy’) had taken and eaten several of the woman’s cookies, and now only one cookie
remains. Again, the boy does not literally “get up” to eat the last cookie, but rather commits this next action decisively.

(205) hal qetː-eⁿ e k’nat-ev je t’q’uihsine cha p’ečenia hal=o ec-iⁿ.
    up get.up-aor this boy(v/b)-erg and last one cookie(j/j) up=& take-aor

    ‘This boy got up and took the last cookie.’ (BH2-092 00:01:37–00:01:41)

Numerous examples of this usage can be found in the ECLinG corpus as well. Example (206) is from one speaker’s retelling of an episode she had read about recently: the trial of Marshal Ney, a commander under Napoleon Bonaparte. She recounts that Ney’s defense lawyer tried to save him from the death penalty by pointing out that Ney was born in Italy, and therefore France, where he was tried, had no jurisdiction to execute him. Ney, however, rejected his lawyer’s defense, choosing to die as a Frenchman. In (206), the speaker describes this moment of Ney’s defiance, in which Ney “got up” and declared himself French. While it is possible that Ney did literally “get up,” it seems unlikely that the speaker would recount this detail for mere descriptive accuracy. Its use here seems to relate to the speaker’s aim to highlight Ney’s decisiveness or defiance.

(206) magram.. nei– is eł-če, nei hal qetː-en, ał-iⁿ me, as but Ney(v/b) this.med say-cvb Ney(v/b) up get.up-aor say-aor comp 1sg-erg ał-iⁿ... so-n=en=ořiⁿ, is zoreiš šeuracq’opel d-a ał-iⁿ, so say-aor 1sg-dat=for=rep this.med very insulting cm-be say-aor 1sg-abs prang v-a-s=ofil=e, so prang-ev v-ec’e-s dah Frenchman(v/b) cm-be-1sg=rep=& 1sg-abs Frenchman(v/b)-ins cm-must-1sg away v-al-aⁿ.
    cm-die-inf

    ‘But Ney– when [they] had said this, Ney got up, said, “I,” [he] said, “for me,” [he] said, “this is very insulting,” [he] said, “I am a Frenchman,” [he] said, “and I must die as a Frenchman.”’ (ECLinG bav08_11 ‘Pocxveri,’ 00:01:23–00:01:37)

This non-literal use of hal qet’en bears some resemblance to non-literal uses of ‘go’ in English. About Marshal Ney, an English speaker might say, ‘he went and got himself executed,’ which is traditionally called pseudo-coordination (De Vos 2005). In addition to being non-literal (Ney did not ‘go’ anywhere), to phrase it this way in English encodes something about the English speaker’s attitude toward his actions; in particular, such a phrasing is only felicitous if the speaker believes Ney to be agentive and at fault in his own demise, a negative evaluation of Ney’s defiance.
My impression of the Tsova-Tush non-literal *hal qeten* is that it is a neutral or positive evaluation. The speaker of (206)’s purpose in telling Ney’s story seemed to be to relate her approval or admiration of his boldness.

Although at least superficially similar to English pseudo-coordination—in that the verb phrase does not contribute its literal meaning, but rather serves to signal the speaker’s stance or evaluation of the actions to take place—the term pseudo-coordination is not entirely fitting for Tsova-Tush non-literal *hal qeten*, because coordinating clitics are not involved. It would only be coordination in the sense that parataxis is an established strategy for coordination in Tsova-Tush.

This verb phrase is also not well-described by the term ‘verb serialization,’ per definitions by Bowern (2008: 162), since the verb phrase typically receives a separate clausal intonation contour, and it does not unite with another verb in a single unit for TAM or polarity marking. It also does not meet Bowern’s (2008) definitions for a ‘light verb,’ in that non-literal *hal qeten* can bear its own argument structure (a subject) (cf. Bowern (2008: 163)).

Future analyses of coordination in Tsova-Tush might reveal similarities or differences of non-literal *hal qeten* to general coordination strategies in the language, perhaps justifying the term pseudo-coordination. Additional research would also be necessary to determine what kind of evaluation non-literal *hal qeten* typically signals.

5.3.4 Mirative use of evidentials

Evidentiality in Tsova-Tush is marked on verbs with one of three evidential morphemes: -lo (or lʷ), -no-, and -d-ano-. The difference between these forms relates at least in part to tense and aspect. It is less clear whether these forms all have the same evidential value, or even what the precise bounds of that evidential value might be. Holisky & Gagua (1994: 180) describes these form as having a “reported” meaning. I have not tested whether these evidentials are restricted to evidence obtained through hearsay, or if they can be felicitously used for knowledge acquired through other means. Because I do not fully understand the differences among these forms in terms of tense, aspect, and evidentiality, I gloss all three equally as evid and translate each as ‘evidently.’

In elicitation, speakers use verb forms without any evidential marking almost exclusively. Exceptions include verbs like yaⁿ d-agar ‘to dream,’ which often gets evidential marking even in elicitation, presumably because the contents of another person’s dreams can only be known through hearsay. Even in conversation and narrative, however, verbs unmarked for evidentiality seem to be the default, with evidential forms occurring most frequently in discussions of the distant past or for second-hand knowledge—i.e., consistent with an analysis of these forms as hearsay evidentials.

³⁸ For now, it can be called pseudo-pseudo-coordination.
In the narratives examined in this chapter, then, it is not surprising that evidentials were not widely used. However, when they did occur, I noticed that their use often seemed to differ from their apparently canonical use to mark second-hand knowledge. In these and other narratives I have collected, evidentials are frequently used in ways better characterized as *mirativity*: “the linguistic marking of an utterance as conveying information which is new or unexpected to the speaker” (DeLancey 2001: 369–370). Miratives are known to be tied to evidential systems in many of the languages where they have been described (DeLancey 2001).

In my Tsova-Tush data, the narrative contexts that most frequently triggered evidentially marked verbs were moments where the storyteller revealed something surprising that a character had previously been mistaken about or unaware of. Such contexts do not necessarily exemplify “hearsay” any better than any other part of a narrative, especially when those narratives were obtained by asking speakers to describe a story they saw in a video. Rather, these uses appear to be mirative in nature.

Both ‘Mariza the Stubborn Donkey’ and ‘Snack Attack’ contain a plot twist that elicited mirative marking on verbs. In the donkey story, this twist comes at the end, when the fisherman discovers, to his horror, that their vigorous dancing had propelled the entirety of the load of fish out onto the road. Example (207) describes this moment with one of the evidential markers, -ano.

(207) so hač’-en dah hač’-en naq’=mak b-at’-b-ano-r din č’aːr.
    hither look-aor away look-aor road.obl=on cm-spread-cm-EVID-IMPF all fish(b/d)
    ‘[They/he] looked here, looked there, all of the fish were **evidently scattered** on the road.’
    (KD, donkey story: 453)

In the ‘Snack Attack’ video, the moment that elicited evidentials was the old woman’s mortification when she realized that her cookies remained in her purse, untouched, and she had in fact eaten the teenager’s cookies. Examples (208) and (209) capture this moment with two different evidentials, -ano (used in the donkey story example above) and -lʷ.²⁹

(208) hač’-er, šariⁿ namcxvar osi j-al:-j-ano-r.
    look-IMPF 3SG.REFL.POSS pastry(j/j) there cm-be.placed.in-cm-EVID-IMPF
    ‘[She] looked, her cookies **were evidently placed in** there.’ (BH2-098 00:00:44–00:00:49)

²⁹ These two speakers watched the ‘Snack Attack’ video and told their versions of it separately, so the similarities between these two examples are not due to influence of one storyteller on the other.
The adverb *turme* in (209) is originally Georgian, where it is used with perfect tenses in Georgian that serve a secondary evidential purpose (Harris 1981, Gäumann 2011).

Such moments of realization in these two video stimuli seem to be strong environments for eliciting mirative uses of the evidentials. In contrast, at the end of the 'Pear Film,' the farmer discovers that his basket has gone missing, and three boys turn up apparently eating his pears, although how they obtained those pears remains a mystery from the farmer’s perspective. This state of confusion did not trigger a mirative evidential in any of the pear stories I collected, even though some speakers described that moment as one of realization. It appears that mere surprise or consternation is not sufficient: perhaps a previous knowledge state must also be corrected to the true state of affairs, which is lacking in the pear story.

A thorough description of Tsova-Tush evidentiality is needed in order to determine how these apparent miratives fit into the overall system of marking states of knowledge and sources of evidence. In any case, the examples in this section do not fit traditionally described uses for these evidential morphemes in Tsova-Tush and are worthy of additional study.

### 5.3.5 Plurational verbs with morphologically singular arguments

As mentioned in section 2.3.3, some verbs have a plurational base, which is used when the subject (if intransitive) or the direct object (if transitive) is plural. Interestingly, in the narratives discussed in this chapter, the plurational form a verb was sometimes used when the relevant argument is morphologically singular but semantically plural. For some inanimate referents, it was common for speakers to treat them as morphologically singular even when they were apparently imagining multiple items (especially ‘pears’ and ‘baskets’). When a plurational verb was available in those cases, speakers used it (‘put many’).

In example 210, the object *msxal* ‘pear’ is morphologically singular. However, the plural-object verb *b-oxk* ‘put many’ is used instead of *b-ol*: ‘put,’ which is used for putting a single item. Further, although the action is plural, the class marker is *b-* reflecting singular agreement with *msxal* ‘pear.’ The only plural marking in this clause, then, appears on the verb, rather than on the noun that denotes the plural entity.
Such examples illustrate that pluractional verbs themselves are not “plural” in the morphological sense, because their use is not limited to instances where they can agree with a morphologically plural argument. It is likely that instead the plurality of the action is important; i.e., a pluractional ‘put’ verb entails many instances of putting, a pluractional ‘fall’ verb involves many instances of falling, etc.

5.3.6 Locative-of-allative experiencer

The basic construction for expressing ownership was described in section 3.1. Briefly, the possessor is expressed in a complex case, locative-of-allative, and the item that is owned (or the person to whom the locative-of-allative subject has a close relationship) is expressed in absolutive case, exemplified in the second clause of (211).

In the pear stories, there was an additional use of the locative-of-allative case: to include a prominent character as an experiencer, in a clause where that character otherwise would not have been mentioned. These locative-of-allative experiencers seem to connote something similar to how one might say in English, ‘My car broke down on me.’

One example of this construction occurred in a tail-head linkage context, shown above in (201) and partially repeated below in (212). The first clause of this example is a recapitulation of a clause that did not invoke the pear thief at all, yet in (212) he suddenly appears in the locative-of-allative case. The fact that the thief was not present in the ‘head’ that this clause recapitulates highlights the fact that he is not a grammatically necessary part of the clause, but a semantically prominent part of the sequence of events nevertheless.
An additional example of a locative-of-allative experiencer appeared in (190) above: ‘When he fell evidently he had (all-loc) [his] hat fall off.’ Multiple speakers included an experiencer with the verb *tas-d-alar* ‘fall’ in this way, in reference to the one pear that ‘the farmer had fall’ in the pear gathering scene, or the boy’s hat, or the stolen basket. This construction was used in the pear stories only about a negative experience (having things fall or get stolen), although that may be an artifact of the story itself.

Example (213) shows another locative-of-allative experiencer. The storyteller has the pear farmer add himself as an experiencer in his reported thoughts, as he realizes he has been the victim of a theft.

(213) e saxit’-eⁿ e bab-ün, et’q’oba e cha k’alat ham-as
and get.angry-aor this old.man(v/b)-dat seem this one basket(b/d) someone-erg
dah b-eh-iⁿ so-go-(h)=en=a....
away cm-steal-aor 1sg-all-loc=rep=&

‘And the old man got angry, “it seems someone stole a basket on me” and…’

(TaB, pear story: 361)

In all of these examples, it would have been possible to encode the possessor of the hat, basket, fallen pear, etc., as a genitive (‘his hat’). It is possible that a speakers’ choice to use the locative-of-allative construction might serve to make that referent more prominent than if the genitive had been used: the locative-of-allative noun in these constructions is not merely a possessor, but one that something has happened to.

More data would reveal whether this construction is more likely about negative events than positive.

### 5.4 Conclusions

This chapter has discussed numerous aspects of reference tracking in Tsova-Tush, including how referents are linguistically encoded at first and second mention, how activation and syntactic position affect referential choice, whether gender or deictic distance can be determined to be reference-tracking devices from the narrative data, and (continuing themes from chapter 4) how storytellers’ alignment with characters’ perspective is encoded linguistically and employed to accomplish narrative goals. By comparing two sets of narratives that differ in the complexity of action and the number of referents activated at any given time, I was able to take into account the crowding of the referential space into my discussion of referent-tracking strategies. I have also outlined some additional features of these narratives that I believe were previously unidentified in Tsova-Tush grammar and discourse.
Several important aspects of discourse are missing from this chapter, but which are nonetheless necessary for a complete picture of how speakers make referential choices in narratives. Foremost is gesture, which is known to assist in the identification and reactivation of referents, among many other important functions that bridge modalities. The present study also ignores word order, which undeniably performs an important role in both reference tracking and information structure in Tsoda-Tush. And of course, for a more complete picture of information management in discourse, it would be desirable to represent more genres beyond narrative, as well as to collect data with more speakers. Additional studies would undoubtedly reveal errors and omissions in this chapter, as well as nuances in storytelling that I have not identified.

Even given these limitations, this chapter has contributed an important first description of reference tracking in Tsoda-Tush discourse, in addition to identifying new grammatical and discursive phenomena of interest to be pursued in future studies.
Chapter 6
Conclusions

This dissertation has delivered a careful examination of patterns in Tsova-Tush syntax, semantics, and discourse relevant to the study of deixis and reference tracking. It is perhaps the first thorough description of Tsova-Tush grammar beyond the sentence level.

Chapter 3 established basic patterns of argument structure, complementation, and question formation. Based on data in available corpora, the case frames of several dozen verbs were tabulated according to Noonan’s (2007) semantic classes. Among complement-taking predicates, complements of verbs of the phasal, achievement, and modal types were found to be the most syntactically integrated into their host clause, while verbs denoting utterances, proposition attitudes, knowledge, manipulation, or acts of perception take the most sentence-like complements. Between the two types of non-finite clauses, infinitives were found to be more verb-like than masdars.

A comparison of subordinate clauses introduced by me ‘that; so that’ revealed an unusual type of subordination, combining properties of complement and relative clauses. Question formation from non-finite complements was shown to be straightforward, while questions formed from finite complements require the duplication of the question word. Negative polarity items were discussed, but found to be in flux, complicating any attempts to utilize this category for diagnosing syntactic and semantic dependencies. One verb, d-agar ‘to see,’ was shown to enter into long-distance agreement with arguments within its complement clause. Taken together, the descriptions in chapter 3 characterize the structure of simple clauses through complex sentences in Tsova-Tush.

Building off of these insights, chapter 4 investigated deixis in embedded contexts, which were typically established within complement clauses. Tsova-Tush was shown to have a restricted type of indexical shift, in which all context parameters shift together under verbs of speech, while the embedded clause containing the shifted indexicals remained available to certain semantic and syntactic operations; namely, descriptions de re and question formation. Beyond indexical shift, other types of perspectival embedding were investigated, including quotation and shifty complements under predicates of perception. The wide range of predicates associated with perspective shift in their
complements suggested that embedded perspectives might play a more prominent role in Tsova-Tush than in the many languages in which perception predicates do not allow the same types of deictic shift.

Quotatives and discourse marked were also described. It was found that the reportative enclitic =en was used for a wide range of clausal complements, with or without shifted indexicals. Therefore, this clitic by itself was not a reliable diagnostic for quotation or indexical shift. The borrowed discourse marker k’aco was shown to have quotative-like properties in the available corpora. Chapter 4 thus underscored the importance of a robust semantic documentation of underdescribed languages, as well as the difficulties of using corpora to investigate semantically and pragmatically nuanced phenomena like indexical shift and shifted perspectives.

Chapter 5 expanded the domain of linguistic study from the complex sentence into longer stretches of discourse. Reference tracking was investigated in thirteen narratives, collected based on two video stimuli: ‘pear stories’ and ‘donkey stories.’ The sets of narratives were compared within their set and across the two sets, illustrating storytellers’ referential choices under slightly differing narrative conditions. In the pear stories, which contained more referents in potential competition with each other, there was generally more explicit reference and more complex interactions among conditions contributing to speakers’ referential choices, in comparison with the donkey stories, which depict a simpler story with fewer referents and scene changes.

An indefinite marker cha ‘one’ was identified as common strategy for introducing animate referents. At a referent’s second mention, it was found that animates are often marked overtly as definite with a demonstrative adjective, with some evidence suggesting that proximal demonstratives are more contrastive, used especially for reintroductions and in complex scenes.

Several conditions favoring covert reference were investigated. Argument dropping was found to be preferred when reference was continuous across clauses and when the referent appeared as the subject of a transitive verb. Further, in contrast to some other languages, gender in Tsova-Tush was shown to be a poor strategy for reference tracking.

From this examination of narratives, several interesting discourse-level features were further detailed in chapter 5. Tail-head linkage across sentences and more reduced repetitions within sentences were illustrated as likely having some reference-tracking properties in addition to serving stylistic purposes. The non-literal use of the verb ħal qetːen ‘got up’ was suggested to have discourse-level properties such as highlighting speaker stance. Evidential morphemes were shown to have a function in additional to their typical usage in marking hearsay; namely, they served as markers of mirativity at moments in narratives associated with a revision of a character’s incorrect understanding of the situation.
Narrative data also revealed that pluractional verbs can be used with morphologically singular
arguments, allowing the speaker to effect plurality through the verb stem rather than the noun itself.
It was also found that topical animate referents could be inserted into clauses where they otherwise
would not have been mentioned as an experiencer in the locative-of-allative case.
This dissertation has contributed a multifaceted description of the complexities of Tsova-Tush
speaker’s choices in referential form and perspective-taking. [big picture thoughts.]
This dissertation had limitations....
There are multiple promising directions that future research could take....
Appendices
Appendix A: Pear Stories

A.1 DE (BH2-082)

Speaker: Dantset Echishvili (დანტეს ეჩიშვილი)
Demographics: b. 1962, male
Date of recording: 2019-05-12
Others present during recording: Revaz Orbetishvili, Revaz Shankishvili, Nisa Bakhtarishvili, Bryn Hauk
Link to archive: https://scholarspace.manoa.hawaii.edu/handle/10125/64666

Note: Approximately 7 seconds have been removed from the beginning of this text, during which the speaker starts and abandons a couple approaches to beginning the narratives. In the next line, ‘like this’ refers to those attempted starts to the narrative.

(214) išt’=i d-ec’e-s aɬ-an, vux bedux d-a, jev?
like.this=q cm-should-1.sg say-INF what difference(d/d) cm-be.impv dm

‘Should I say it like this, what’s the difference, man?’

(00:00:21–00:00:24)

(215) mamal d-uɣ-er, cu=i?
rooster(d/d) cm-cry-impf not=q

‘A rooster crowed, right?’

(00:00:24–00:00:25)

(216) st’ak’ v-e?-en, hal v-aɬ-en msxl=mak, leh-b-an=a
man(v/b) cm-come.pfv-aor up cm-go.up-aor pear(b/d)=on gather.impv-cm-inf=&

v-ol-v-al-iⁿ lap’=mak.
cm-start-cm-intr-aor stair(b/d)=on

‘A man came, went up a pear tree, and started to gather [pears] on a ladder.’

(00:00:33–00:00:39)
(217) cha msxal ah tas-b-al-in oqgo-(h).
    one pear(b/d) down fall-cm-intr-aor yon.one.all-loc

‘He had a pear fall.’

(00:00:44–00:00:46)

(218) qeⁿ ah v-os-en, godr-i ču b-oxk’-in, hal=oa
    then down cm-go.down-aor basket(b/d)-dir in cm-put.many.pfv-aor up=&
    v-al-en ošt’i?.
    cm-go.up-aor again

‘Then [he] went down, put [them] in the baskets, [he] went up again.’

(00:00:48–00:00:55)

(219) makdarna pešk’ar d-aʔ-en velosip’et’-ev.
    from.above child(d/d) cm-come.pfv-aor bicycle(j/j)-ins

‘From uphill a child came on a bicycle.’

(00:01:07–00:01:10)

(220) ču ot:j-i-en, hal-ah hač’-en o st’ak’-og, vux d-a-r,
    in stop-cm-tr-aor up-down look.pfv-aor yon man(v/b)-all what cm-be.impv-impf
    mohem d-a-r, ler-v-i-en, macn=e=g o st’ak’-on
    how cm-be.impv-impf spy-cm-tr-aor when=rel=anymore yon man(v/b)-dat
    co gu-r o, cu=i, hal ec-i” cha godor, mak b-il-en
    not see-impf yon.one not=q up take-aor one basket(b/d) on cm-put-aor
    velosip’et’-en, šarn=a v-ax-en.
    bicycle(j/j)-dat away.sg=& cm-go-aor

‘[He] stopped [the bicycle], looked up and down at that man, what was [it], how was [it], did
    reconnaissance, until that man couldn’t see him anymore, right, [he] took one basket, put [it]
    on the bicycle, left.’

(00:01:10–00:01:25)

(221) naq’-av v-ot’-u-š, hatx k’ac’k’o” joh b’am<ar<j>-ax-en, o
    road(b/d).obl-ins cm-go.impv-prs-cvb in.front small girl(j/d) meet<cm>-aor yon
    jah-ov hal ardarevad-v-i-en oha?-i.
    girl.obl-erg up drive.crazy-cm-tr-aor same-?

‘Going along the road, [he] met a young girl, that girl drove him crazy.’

(00:01:28–00:01:36)
Manuscript for defense – Do not circulate

(222) qer-ex v-af-v-al-iⁿ, ah-o v-ož-eⁿ, ah=a stone(b/d)-con cm-run.into-cm-intr-aor down=& cm-fall.pfv-aor down=& b-ek'-in e msxal.
cm-many.fall-aor this pear(b/d)

'[He] ran into a stone, fell down, these pears fell.' (00:01:41–00:01:43)

(223) uisrena k'nat-i b-ay-or, k'ac'k'aⁿ k'nat-i, hal qet:-v-i-eⁿ, from.there boy(v/b)-pl cm-come.impv-impf small.pl boy(v/b)-pl up get.up-cm-tr-aor dah=a lat’-en, o msxal ču b-oxk’-in godr-i.
away=& help-aor yon pear(b/d) in cm-put.many.pfv-aor basket(b/d)-dir

'From there some boys were coming, small boys, [they] got [him] up, helped [him], [they] put those pears in the basket.' (00:01:45–00:01:53)

(224) mak ot:-b-i-en godor, šarn=a hač’-v-i-en.
on put-cm-tr-aor basket(b/d) away.sg=& send-cm-tr-aor

'[They] put the basket on [it] and sent [him] off.' (00:01:53–00:01:55)

(225) o sanam—
yon while

'While–' (00:01:50–00:02:00)
When he fell he evidently had [his] hat fall off, those boys turned back, brought this hat back, gave [it] [to him], he got up, gave [them] those pears, one pear each, for bringing the hat back.

(00:02:01–00:02:13)

[He] sat down, put his basket on [it], left.

(00:02:16–00:02:19)

The man came down, the basket isn’t there anymore.

(00:02:20–00:02:23)

Woah!

(00:02:25–00:02:26)

[He] searched, staggered around, the basket is missing.

(00:02:26–00:02:28)
(231) daħ b-eh-in hanax-čo-v.
away cm-steal-aor someone-oobl-erg

‘Someone stole [it].’ (00:02:29–00:02:30)

(232) ħač’-en bolo=rna pešk’-r-i d-aγ-ɔr, o msxal
look.pfv-aor end=from child(d/d)-pl cm-come.impv-impf yon pear(b/d)
b-aq’-o-š.
cm-eat.impv-prs-cvb

‘[He] saw from below some children were coming, eating those pears.’ (00:02:31–00:02:34)

(233) qeⁿ dak’<v>aɬ-en me hanax-čo-v, jolni(?) oquin.
then realize<cm>-aor comp someone-oobl-erg cheated(?) yon.one.dat

‘Then [he] realized that someone, cheated him.’ (00:02:36–00:02:41)

A.2 RS (BH2-083)

Speaker: Revaz Shankishvili (რევაზ შანქიშვილი)
Demographics: b. 1962, male
Date of recording: 2019-05-12
Others present during recording: Revaz Orbetishvili, Dantes Echishvili, Nisa Bakhtarishvili, Bryn Hauk
Link to archive: https://scholarspace.manoa.hawaii.edu/handle/10125/64667

(234) cħen ṭurden chen phe-h, chen st’ak’-ov, msxal=mak
one.oobl in.morning one.oobl village(b/d)-loc one.oobl man(v/b)-erg pear(b/d)=on
hatx maː... mak lap’, ot:-b-ien-čo-v, msxal leh-b-ɔr.
in.front hes on ladder(b/d) put-cm-ppl-oobl-erg pear(b/d) gather.impv-cm-impf

‘One morning in one village, one man, in a pear tree um... with a ladder propped against [it],
was gathering pears.’ (00:00:02–00:00:13)
(235) partuk’ d-a-r, k’uiⁿ partuk’=e, partuk’ ţib-e apron(d/d) cm-be.impv-impf white apron(d/d)= & apron(d/d) pocket(j/j)-loc lah-b-al-in. gather.pfv-cm-intr-aor

’[He] had an apron, a white apron, and in the apron pocket [pears] were gathered.’

(00:00:13–00:00:16)

(236) laxuš, godr-i lat:-er, godr-i ah-o qeh-or. below basket(b/d)-pl stand-impf basket(b/d)-dir down=& bring.impv-impf

’Below, there stood some baskets, [he] brought [them] down into the baskets.’

(00:00:16–00:00:20)

(237) c’q’e ah v-eʔ-en, ša-c’-loye-š hal=o v-at-en=e. once down cm-come.pfv-aor two.obl-times-nth-advz up=& cm-go.up-aor=&

’One time [he] came down, and the second the time he went up.’

(00:00:22–00:00:25)

(238) e cha pešk’ar d-ay-or velosip’et’-ev. and one child(d/d) cm-come.impv-impf bicycle(j/j)-ins

’And a child approached on a bicycle.’

(00:00:26–00:00:28)

(239) so-dah hač’-en, e msxal— msxal-eⁿ godr-i lat: hither-away look.pfv-aor this fs pear(b/d)-gen basket(b/d)-pl stand

’[He] looked to and fro, these pear— pear baskets are sitting there.’

(00:00:28–00:00:32)

(240) penix comea co d-a. nearby nobody not cm-be.impv

’There is no one nearby.’

(00:00:33–00:00:34)
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(241) dak’lav-iⁿ, cha godor be— godor b-eh-o-s=enʷ, vux
think.PFV-AOR one basket(b/d) FS basket(b/d) CM-steal-PRS-1SG=REP what
šabala=enʷ.
go.wrong=REP

‘[He] thought, “I will st— steal one basket, what could go wrong?”’ (00:00:34–00:00:38)

(242) ču ot:-j-i-eⁿ velosip’et’, hal hač’-en, so hač’-en, dah hač’-en,
in stop-CM-TR-AOR bicycle(j/j) up look.PFV-AOR hither look.PFV-AOR away look.PFV-AOR
comena co gu-r, mak godor ot:-b-i-en, šarn=a v-ax-eⁿ.
nobody not see.IMPV-IMPF on basket(b/d) put-CM-TR-AOR away.SG=& CM-go-AOR

‘[He] stopped the bicycle, looked up, looked here, looked there, didn’t see anyone, put the
basket on [it] and left.’ (00:00:39–00:00:45)

(243) msxl-ex b-uc’-in.
pear(b/d)-CON CM-fill-PPL

‘Full of pears.’† (00:00:46–00:00:47)

(244) msxal-ox.
pear(b/d)-CON

‘Of pears.’ (00:00:48–00:00:49)

(245) msxal-ox b-uc’-in, ra.
pear(b/d)-CON CM-fill-PPL DM

‘Full of pairs, whatever.’ (00:00:49–00:00:50)

(246) je hatx v-ot’-u-š, cha, lamzur joh=ai j-ay-or
and in.front CM-go.IMPV-PRS-CVB one beautiful girl(j/j)=& CM-come.IMPV-IMPF
velosip’et’-ev.
bicycle(j/j)-INS

‘And as [he] was going forward, one, beautiful girl was approaching on a bicycle.’
(00:00:50–00:00:56)
(247) je, oqux heč'-e heč'-u-š, gon j-ax-en, mak. 
and yon.one.con look.impv-? look.impv-prs-cvb mind(j/j) cm-go-aor on

‘And, [he] looked and looked at her, lost [his] mind.’ (00:00:58–00:01:05)

(248) qeⁿ mak=a, hatx qer bʕar<b>ax-en, velosip’et’ mak j-iš-j-i-en, 
then on=& in.front stone(b/d) meet<cm>-aor bicycle(j/j) on cm-hit-cm-tr-aor 
ah-o v-ož-eⁿ. 
down=& cm-fall.pfv-aor

‘Then, in front [he] hit a stone, hit the bicycle [against it], [he] fell off.’ (00:01:05–00:01:11)

(249) e, #
and #

‘And,’ (00:01:11–00:01:12)

(250) godor ehat tas-b-al-iⁿ, msxal so-dah b-arž-en din. 
basket(b/d) then fall-cm-intr-aor pear(b/d) hither-away cm-spill-aor all

‘The basket then fell, the pears all spilled to and fro.’ (00:01:12–00:01:16)

(251) je ese qo pešk’ar ba— d-ay-or naq’=mak je d-ag-iⁿ 
and here three child(d/d) fs cm-come.impv-impf road(b/d).obl=on and cm-see.pfv-aor 
me, pešk’r-en lat’-ar d-ec’, dah=a lat’-en. 
comp child(d/d)-dat help.pfv-mas cm-should away=& help.pfv-aor

‘And here three children were app— approaching on the road and saw that, [they] should help 
the child, [they] helped [him].’ (00:01:18–00:01:26)

(252) msxal hal=o lah-b-i-en. 
pear(b/d) up=& gather.pfv-cm-tr-aor

‘[They] gathered up the pears.’ (00:01:26–00:01:28)
(253) godor mak=a ot-b-i-en, šarn hač’-v-i-en, ma:.
basket(b/d) on=& put-cm-tr-aor away.sg send-cm-tr-aor hes

‘[They] put the baskets on [the bicycle], sent [him] off, um.’ (00:01:28–00:01:33)

(254) t’q’uihe=k’a? kud lax-i”.
back=ish hat(b/d) find.pfv-aor

‘A bit back [they] found the hat.’ (00:01:33–00:01:35)

(255) k’nat-en=e, t’q’uih ah b-ek-in me kud b-ic-b-in-ah=en”.
boy(v/b)-dat=& back down cm-call-aor comp hat(b/d) cm-forget-cm-aor-2sg.erg=rep

‘And to the boy, [they] called back, “you forgot [your] hat”.’ (00:01:35–00:01:38)

(256) kud dah b-aɬ-in, oqus=a qo msxal dah=a b-aɬ-in, hat(b/d) away cm-give.pfv-aor yon.one.erg=& three pear(b/d) away=& cm-give.pfv-aor
qo pešk’ar d-a-r.
three child cm-be.impv-impf

‘[They] gave [him] the hat, and he gave [them] three pears, there were three children.’ (00:01:39–00:01:44)

(257) vun=e kiko? co b-el-l-a-r-o, macn=e hal lah-b-i-en,
why=rel before not cm-give.pfv-subj=-impf=- when=rel up gather.pfv-cm-tr-aor
ravici.
l.dunno

‘Why [he] didn’t give [the pears] [to them] earlier when [they] gathered [them], I don’t know.’ (00:01:44–00:01:48)

(258) je, eq dro-h, e st’ak’ ah=a v-os-en.
and this.obl time-loc this man(v/d) down=& cm-go.down-aor

‘And, during this time, this man came down.’ (00:01:49–00:01:51)
‘[He] had filled the apron with pears, to put in the baskets.’

‘[He] put [them] in, looked around, counted, one basket isn’t there, man.’

‘And as [he] looked and looked, these boys popped out from there, eating pears.’

‘And the man realized that the boys took his basket somewhere.’

‘Someone had stolen [it], because someone gave the pears to those boys.’
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(264) hapsi dalic hapsi.

‘And that is that.’† (00:02:21–00:02:23)

†Notes

• Re: (243), the word msxal ‘pear’ is borrowed from Georgian, and its vowel disappears in certain contexts: msxils c’veni ‘pear (gen.) juice.’ Speaker RS seems to be following the Georgian vowel syncope rule even in Tsova-Tush, treating the word as a class -e- declension. In the next line, speaker DE corrects him, maintaining the vowel in the base and using -o- as the linking vowel; in the following line, RS accepts the correction.

• Re: (264), consultants had particular difficulty translating this turn of phrase. My best guess is that it means something like “The end,” although only one speaker concluded his story that way.

A.3 RO (BH2-084)

Speaker: Revaz Orbetishvili (რევაზ არბეტიშვილი)
Demographics: b. 1958, male
Date of recording: 2019-05-12
Others present during recording: Revaz Shankishvili, Dantes Echishvili, Nisa Bakhtarishvili, Bryn Hauk
Link to archive: https://scholarspace.manoa.hawaii.edu/handle/10125/64668

(265) chen... le urz— lamzur ?urdna j-e-r=e.

one. OBL beautiful beautiful morning(j/j) cm=be. IMPV- IMPF=&

‘It was one... beautiful—beautiful morning.’ (00:00:01–00:00:04)

(266) maml-in d-uɣ-ar xac’-er.

rooster(d/d)-GEN cm-cry-MAS hear-IMPF

‘A rooster’s crow was heard.’ (00:00:04–00:00:06)
(267) e mamal d-uɣ-r-en mak, qe\textsuperscript{n} divh penix cha— msxal-en this rooster(d/d) cm-cry-MAS-DAT on then there nearby one pear.tree(b/d)-DAT k'ik'el dah lap' ot:-b-ien chen st'ak'-ov lap'— msxal under away ladder(b/d) put-cm-PPL one.OBL man(v/b) ladder(b/d) pear(b/d) lex-b-or hal.

search.for-cm-IMPF up

‘When this rooster crowed, then nearby one— under a pear tree, a man propped up a ladder, was gathering ladder— pears.’ (00:00:07–00:00:14)

(268) laxuš qo godor lat:-er.
below three basket(b/d) stand-IMPF

‘Below there stood three baskets.’ (00:00:14–00:00:16)

(269) hal v-aɬ-en-čo-v, pertk’-i grobad-b-or o msxal=e, ah up cm-go.up-PPL-OBL-ERG apron(d/d)-LOC gather-cm-IMPF yon pear(b/d)=& down v-os-en-čo-v godr-i b-exk’-or ċu.

cm-go.down-PPL-OBL-ERG basket(b/d)-DIR cm-put.many.IMPV-IMPF in

‘He, having gone up, was gathering those pears, and he, having gotten down, put [them] in the baskets.’ (00:00:16–00:00:21)

(270) hal v-aɬ-en ša-c’-loye-š, ##, qe\textsuperscript{n} cha ah tas-b-al-iⁿ up cm-go.up-AOR two.OBL-times-n\textsuperscript{th}-ADVZ ## then one down fall-cm-INTR-AOR oq-go-(h).
yon.one.OBL-ALL-LOC

‘[He] went up a second time, ##, then he had one fall.’ (00:00:22–00:00:25)

(271) laxuš=e ah v-os-en-čo-v dah d-ast’-in vunax.
below=& down cm-go.down-PPL-OBL-ERG away cm-untie-AOR something(d/d)

‘At the bottom, having gotten down, he untied something.’ (00:00:26–00:00:29)
‘It was something like a kerchief, [he] wiped [the pear] off, put [the pear] down in.’

(00:00:29–00:00:31)

‘[He] went up to find pears, gathers pears, some other man was coming this way leading a goat.’

(00:00:32–00:00:39)

‘Between that tree... and the pears [he/they] walked.’

(00:00:39–00:00:42)

‘That goat pulled, and [he] didn’t let [it] go toward the pears, and left.’

(00:00:42–00:00:46)

‘Then a child appeared, was coming by bicycle.’

(00:00:47–00:00:50)
‘[He] approached and approached, saw here that pears were sitting around in baskets.’

(00:00:50–00:00:54)

‘[He] stopped [the bicycle], looked here, looked up, looked away.’

(00:00:54–00:00:57)

‘[He] looked up.’

(00:00:57–00:00:58)

‘The man was sitting above, was gathering pears, he doesn’t see.’

(00:00:58–00:01:01)

‘He spied and spied that “he doesn’t see me.”’

(00:01:01–00:01:05)

‘[He] took that one basket, small basket, put [it] on the front of the bicycle, stole it for himself, stole away the pears, was leaving.’

(00:01:05–00:01:12)
'And, [he] was going by bicycle, and from ahead a girl was coming, on a bicycle.'

(00:01:13–00:01:18)

'Having passed side-by-side... [they] nearly crashed into each other, this boy had his hat fall off.'

(00:01:18–00:01:23)

'This boy turned around, looking at the girl, from in front a wheel struck a rock, [he] fell over, the pears spilled out there.'

(00:01:23–00:01:29)

'The pears spilled out, over there nearby, three children were coming, one was playing with a ping pong paddle.'

(00:01:30–00:01:36)
[They] saw that here pears are spread around, a boy fell.  (00:01:36–00:01:39)

[They] helped him.  (00:01:39–00:01:40)

[They] gathered the pears together.  (00:01:41–00:01:42)

[They] put [them] in that small basket, helped this boy, [he] got on the bicycle, put— put the basket [on it], goes, the boys went that way, found the fallen hat near the stone.  (00:01:42–00:01:53)

[They] called [him] here, offered the hat [to him].  (00:01:53–00:01:55)
This boy, satisfied to have been given the hat, got up and gave them pears also.

‘To those three boys.’

‘He himself left, and these children are coming, eating pears.’

‘This man came down, up the pear tree—having gone up again, like.’

‘There were three baskets, here are two, man.’

‘[He] looked here, looked away, one— is is— one is missing.’
"Wherever did [it] go," from here the boys are coming, [they] were holding apple— pears, eating pears.' (00:02:13–00:02:17)

'[He] kept his eyes fixed [on them], only later realized, someone stole [the basket/the pears], those boys eating, eating pears, went home.' (00:02:17–00:02:24)
(301) menux=a ʃal grubad-b-or ʃark’e.
which=REL up gather-CM-IMPF pouch(j/j)-LOC

‘Which he was gathering in a pouch.’

(00:00:11–00:00:12)

(302) ʃal-ə-b ʃal-ə-b ʃab-so, ʃaʃ=e, ʃal dagrab-b-ui-c,
gather.PFV-PRS-REL gather.PFV-CM-PRS old.man(v/b)-ERG when=REL up gather.PFV-CM-PRS-AFF
msxal ə-o v-ui, ʃa ʃaʃ laqiʃna ə-o ʃas-l-a.
pear(b/d) down=& cm-go.down one piece(d/d) from above down=& fall-INTR-PRS

‘The old man gathers and gathers, when, once gathered, [he] goes down, one piece from above falls down.’

(00:00:13–00:00:21)

(303) ə-o v-ois ʃi ʃabʷ, ə ʃark’e-len, msxal ʃaʃ hal— hal
down cm-go.down that.MED old.man(v/b) yon pouch(j/j)-OBL—from pear(b/d) fs up
b-əh-o, ʃu=a b-əxk’, k’alat-e.

‘This old man goes down, from the pouch, [he] takes the pears, puts [them] in a basket.’

(00:00:22–00:00:32)

(304) o ʃaʃ ah ʃas-b-ən msxal ʃaʃ ec-o, dah ʃam-b-o ʃaʃiʃ, ə-
yon one down fall-CM-INTR-PPL pear(b/d) up take-PRS away wipe-CM-PRS well then
ʃu=a b-əl:, ʃiʃ msxal-e-ciə.
in=& cm-put others.OBL pear(b/d)-OBL=with

‘[He] takes that one fallen pear, cleans [it] well, then puts [it] in, with the other pears.’

(00:00:33–00:00:41)

(305) ʃal=ə v-ən ʃabʷ, msxal leh-b-an=ən.
up=& cm-go.up-PRS then old.man(v/b) pear(b/d) gather.IMPF-CM-INF=for

‘Then the old man goes up again, to collect pears.’

(00:00:43–00:00:47)
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(306) mak gu<v>eɬ cha st’ak’, menxui-č-go-(h) ha, tan b-ec’ on appear<cm> one man(v/b) which-obl-all-loc therefore in.tow cm-follow goat(b/d).

‘One man appears, who then has a goat in tow.’ (00:00:47–00:00:51)

(307) nic’q’o? b-ik’-ʷ o gazaⁿ, dačo, je, hič’-ʷ o msxal-i-g by.force cm-take-prs yon goat(b/d) only and look.impv-prs yon.one pear(b/d)-pl-all o, gazaⁿ me, ḥal qalː-ul=e. yon goat(b/d) so.that up eat.pfv-subj=&

‘[He] takes that goat away by force, only, he looks at the pears, should that goat eat [them].’ (00:00:52–00:00:5)

(308) oqus mara nic’q’o? śarn b-ik’-o, mak=a co b-ax-it-ʷ o yon.one.erg of.course by.force away.sg cm-take-prs on=& neg cm-go-caus-prs yon gazaⁿ.

‘He of course takes [it] away by force, doesn’t let that goat go.’ (00:00:58–00:01:02)

(309) mak, k’nat gu<v>eɬ, k’ic’k’oⁿ k’nat gu<v>eɬ, velosip’et’=mak xaʔ-en. on boy(v/b) appear<cm> small boy(v/b) appear<cm> bicycle(j/j)=on sit-ppb

‘There, a boy appears, a small boy appears, seated on a bicycle.’ (00:01:02–00:01:07)

(310) ha=e, ### ise msxal b-a=g, menux=a hal therefore=& ### there.med pear(b/d) cm-be.impv=anymore which=rel up lah-b-i-en=e, k’alat-e b-a ču b-oxk’-in. gather.pfv-cm-tr-aor=& basket(b/d)-loc cm-be.impv in cm-put.many.pfv-ppl

‘And then, ### there the pears, which [he] had gathered, have been put in the basket.’ (00:01:08–00:01:15)

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(311) ši k’alat b-a hal b-uc’-b-i-en uk’ve bab-uigo-(h).
    two basket(b/d) cm-be.impv up cm-fill-cm-tr-ppl already old.man(v/b)-all-loc
    ‘The old man already has two baskets filled.’ (00:01:15–00:01:16)

(312) qa-lyeⁿ b-ašaren b-a.
    three.obl-nᵗʰ cm-empty cm-be.impv
    ‘The third is empty.’ (00:01:16–00:01:18)

(313) b— e pešk’ar, ah d-os-u velosip’et’=mak=reⁿ, ču j-il:o
    this child(d/d) down cm-go.down-PRS bicycle(j/j)=on=from in cm-put-PRS
       velosip’et’, dah yo ese msxal b-a lah-b-i-en.
       bicycle(j/j) away go.fut here pear(b/d) cm-be.impv gather.pfv-cm-tr-ppl
    ‘This child gets down from the bicycle, props up the bicycle, will go, here the pears are gathered.’ (00:01:20–00:01:26)

(314) hal ec-o cha k’alat, velosip’et’=mak mak ot:-b-o, hatx.
    up take-PRS one basket(b/d) bicycle(j/j)=on on put-cm-PRS in.front
    ‘[He] takes one basket, puts [it] on the bicycle, in front.’ (00:01:26–00:01:30)

(315) šarn ah-o.
    away.sg take-PRS
    ‘[He] takes it away.’ (00:01:31–00:01:32)

(316) šarn hoe v-uit’ e pešk’ar, velosip’et’-ev.
    away.sg ? cm-go.impv this child(d/d) bicycle(j/j)-ins
    ‘This child leaves, by bicycle.’‡ (00:01:33–00:01:36)
(317) mak, hatx=ren=a, qena? pešk’ar d-ay, joh. on in.front=from=& another child(d/d) cm-come-IMPV girl(j/d)

‘There, from in front, a different child is coming, a girl.’ (00:01:37–00:01:40)

(318) velosip’et’ev.
bicycle(j/j)-INS

‘By bicycle.’ (00:01:40–00:01:41)

(319) o jah-og me heč’-e, išt’en... o jah-og heč’-u-š
yon girl(j/d)-ALL comp look.IMPV-PRS like.this yon girl(j/d)-ALL look.IMPV-PRS-CVB
išt’en=e, mak, i velosip’et’ mara qer-ex=a j-iš-l-a.
like.this=& on that.med bicycle(j/j) of.course stone(b/d)-CON=& cm-hit-INTR-PRS

‘Looking at that girl, like this... looking at that girl like that, there, and this bicycle of course hits a stone.’ (00:01:42–00:01:49)

(320) qerex j-iš-l-a, e velosip’et’ ah j-ož-ui, i
stone(b/d)-CON cm-hit-INTR-PRS this bicycle(j/j) down cm-fall.PFV-PRS that.med
msxal=a ah tas-l-a din, so-dah b-erž e msxal.
pear(b/d)=& down fall-INTR-PRS all hither-away cm-spill this pear(b/d)

‘[It] hits a stone, this bicycle falls, and these pears all fall down, these pears spill all over.’ (00:01:49–00:01:54)

(321) e kok’ lac’-o-b e pešk’r-ev, hal qet:-ui, hal oc’-e
this leg(b/j) hurt-PRS-CM this child(d/d)-ERG up get.up-PRS up pick.up-PRS
vunax-i, k’aco, e kok’ev, daq’— deq’:-o vunax-i.
something(d/d)-PL DM and on.foot FS examine-PRS something(d/d)-PL

‘This child hurts his leg, gets up, picks up some things, man, on foot, examines some things.’ (00:01:55–00:02:01)
‘There some boys are standing, small children, three.’

(00:02:01–00:02:03)

They come, they help him gather those pears.’

(00:02:04–00:02:07)

‘[They] gather those pears, put [them] in that basket like so.’

(00:02:07–00:02:09)

‘[They] help that child, put the basket on the bicycle, like so, the child leaves, and these children go here separately, these three boys who are going, look there, his hat is lying there.’

(00:02:10–00:02:21)
(326) o chanaw hal ec-o i kud, dast’venad-o oquin me, yon one.erg up take-prs that.med hat(b/d) whistle-prs yon.one-dat comp
dast’venad-o, o so v-erc’-e, e kud b-ag-it-o, dah whistle-prs yon.one hither cm-turn-prs this hat(b/d) cm-see.pfv-caus-prs away
ah-o e kud.
take-prs this hat(b/d)

‘One picks up the hat, whistles to him, whistles, he turns around, [they] show [him] this hat, [they] take this hat.’

(00:02:22–00:02:30)

(327) dah-o e kud, i k’nat-en menxu-ič v-aγ-or msxal
away-prs this hat(b/d) that.med boy(v/b)-dat which-obl cm-come.impv-impf pear(b/d)
b-a-r dah b-eh-in, oqus magram msxal lo
cm-be.impv-impf away cm-steal-ppl yon.one.erg but pear(b/d) give.fut
oquindal:a me o, kud me b-ah-i’n.
because comp yon hat(b/d) rel cm-take-aor

‘[They] take this hat to the boy who was coming, had stolen the pears, but he will give [him] pears because of that, that [he] brought the hat.’

(00:02:31–00:02:39)

(328) dah lo msxal-i, i msxal, šarn=a yo, o šarn
away give.fut pear(b/d)-pl that.med pear(b/d) away.sg=& go.fut yon 3sg.refl.poss
naq’bist’-i-n oqus, hal=o teɬ.
friend(d/d)-obl-dat yon.one.erg up=& give.impv

‘[He] will give the pears, this pear, will leave, he gives [the pears] to his friends.’

(00:02:39–00:02:44)

(329) i msxal=e.
that.med pear(b/d)=&

‘These pears too.’

(00:02:44–00:02:45)
(330) mak i babʷ, uk’ve eq droh-e, ah os-ui, bā!
on that.med old.man(v/b) already this.obl time(d/d)-loc down go.down-prs hey
‘Here this man, already during that time, goes down, hey!’ (00:02:45–00:02:49)

(331) so-dah hiċ’, bā, cha— cha k’alat co b-a=geg, k’aco.
hither-away look.impv hey fs one basket(b/d) not cm-be.impv=anymore man
‘[He] looks around, hey, one— one basket is missing, man.’ (00:02:50–00:02:52)

(332) so-dah b-ax-en, dak’liv išt’en=e, lat.; k’aco, vuxak’ d-af-en.
hither-away cm-go.pfv-aor think.impv like.this=& stand man whatever cm-go-aor
‘[They] went around, and [he] thinks like this, [they] stand here, man, then what happens?’ (00:02:55–00:02:56)

(333) mak i k’nat-i b-ay uisrena, qo k’nat v-ay-o.
on that.med boy(v/b)-pl cm-come.impv from.there three boy(v/b) cm-come.impv-prs
‘Then these boys come from there, three boys come.’ (00:02:55–00:02:58)

(334) lebc’ qapš-i-š, je ta’ msxal b-aq’ daċo=e.
play.impv goof.around?-prs-cvb and in.tow pear(b/d) cm-eat.impv only=&
‘[They] are playing, goofing around, and [they] are just eating pears.’ (00:02:59–00:03:01)

(335) bā, hiċ’, jev, bā, oquin msxal b-aq’ jev qa k’nat-ev.
hey look.impv dm hey yon.one.gen pear(b/d) cm-eat.impv dm three.obl boy(v/b)-erg
‘Hey, [he] looks, man, hey, three boys, man, are eating his pears.’ (00:03:02–00:03:05)
And he is just surprised, looks like this, and those three boys walk away, then the old man is surprised like this, then looks back at them, “hey, where did they get my pears?”

(00:03:05–00:03:14)

‡Notes

• Re: (316), the word peš’ar ‘child,’ for most speakers, takes d/d agreement and can be used for a child of any gender (although, for girls, speakers tend to prefer the gender-specific term, as in the next line). In this example, the speaker used gender v/b agreement (that is, human male) with this word, which other speakers reject as an agreement error.

• Re: (323), because the speaker most recently referred to the boys as peš’ri ‘children,’ which gets d-agreement, rather than k’nati ‘boys,’ which gets b-agreement, other speakers reacted to the use of b- rather than d- on the verb as an agreement error.

A.5 TaB (BH2-091)

Speaker: Taso Baramidze (ტასო ბარამიძე)
Demographics: b. 1952, female
Date of recording: 2019-08-20
Others present during recording: Bryn Hauk
Link to archive: https://scholarspace.manoa.hawaii.edu/handle/10125/64675

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‘In autumn in a village, the sun rose, once, in a village it is autumn, a rooster started to crow, the people started out to work, and one old man grabbed some baskets and went out to gather pears.’

(00:00:03–00:00:21)

‘[He] got up, this man brought the baskets to the field, to his plot of land, and started to gather pears.’

(00:00:22–00:00:29)

‘[He] started to gather pears, filled one basket, filled a second basket, was reaching back and forth up among the branches, then went back up on the ladder to fill the third basket.’

(00:00:30–00:00:40)
This old man gathers and gathers these pears, and suddenly there, in the field, of course, a man leading a goat was also coming.

That man didn’t pay attention to this old man and left with his donkey along his road, suddenly a small child on a bike appeared from there.

And this child comes by bicycle.

Wow! [He] saw that down here stand baskets, full of pears.
'But the old man up there in the tree standing on the ladder is gathering pears.'

(00:01:08–00:01:11)

'This boy looked to and fro, took a liking to these pears.'

(00:01:12–00:01:15)

'[He] took one basket, put [it] on the bicycle, ran away, and left on his bicycle.'

(00:01:15–00:01:22)

'This boy goes and goes, on the road [he] meets a girl coming from there on a bicycle.'

(00:01:23–00:01:28)

'[He] was looking back at this girl, suddenly this bicycle hit a rock @@, and this basket fell.'

(00:01:29–00:01:36)
(349) k’alat so b-ek’-in e k’nat-ego-(h), kud=a so basket(b/d) hither cm-many.fall-aor this boy(v/b)-all-loc hat(b/d)=& hither tas-b-al-i’n. fall-cm-intr-aor

“This boy had the basket fall, and [his] hat fell off.” (00:01:37–00:01:41)

(350) so tas-b-al-i’n, e msxal daḥ b-arž-e’n. hither fall-cm-intr-aor and pear(b/d) away cm-spill-aor

‘[It] fell off, and the pears spilled.’ (00:01:44–00:01:46)

(351) e velosip’et’ aḥ j-oɣ-j-al-i’n e k’nat-ego-(h). this bicycle(j/j) down cm-fall.over-cm-intr-aor this boy(v/b)-all-loc

‘This boy had this bike fall over.’ (00:01:46–00:01:49)

(352) hal qet:-en, vux d-o-s, so-dah hič’ vux d-o-lo-s=en=e, up get.up-aor what cm-do-1 hither-away look.impv what cm-do-subj-1=rep=& lara? divhrena cha qo d-ʕivʔ? pešk’ar d-aɣ-or, qeni suddenly from.there one three cm-four child(d/d) cm-come.impv-impf other pešk’r-i. child(d/d)-pl

‘[He] got up, “what am I doing,” looks back and forth, “what should I do,” from there some three-four children were coming, other children.’ (00:01:50–00:01:56)

(353) e pešk’r-i hač’e’n me e k’nat-ego-(h) k’alat ah this child(d/d)-pl look.pfv-aor comp this boy(v/b)-all-loc basket(b/d) down b-a-r b-oɣ-b-al-in, msxal daḥ b-a-r cm-be.impv-impf cm-fall.over-cm-intr-aor pear(b/d) away cm-be.impv-impf gapant’od-b-al-in. scatter-cm-intr-ppl

‘These children saw that this boy had a basket fall over, pears were scattered around.’ (00:01:56–00:02:03)
‘[They] went to this boy, helped gather these pears, and helped put the basket on the bicycle, and they left, left, suddenly they saw that the hat that this boy had fall off is still lying here.’††
(00:02:03–00:02:16)

‘[They] got up and took that hat, whistled back to this boy, stopped this boy, said, “look this hat is yours.”’
(00:02:17–00:02:24)
(356) o k’nat-en zoreiš yosket-a’n d-ol-i’n, ra.tkma.unda, kud=a yon boy(v/b)-DAT very be.delighted-INF cm-start-AOR of.course hat(b/d)=& dah b-ǝl-ı’n o badr-i-v=e e st’ak’— k’nat-eg— eq away cm-give.PFV-AOR yon child(d/d)-PL-ERG=& this man(v/b) boy(v/b)-ALL this.OBL pešk’r-i-g msxal darigbad-b-i-e’n, hamina? cha-c msxal child(d/d)-PL-ALL pear(b/d) distribute-cm-TR-AOR all.DAT one-REDUP pear(b/d) b-a-g-i’n... b-ag-i’n. cm-see.PFV-AOR cm-see.PFV-AOR

“This boy was very pleased, of course, those children gave [him] the hat, [he] distributed pears to this man— boys— these children, [they] all saw... saw one pear each.’  (00:02:24–00:02:33)

(357) šuın=a b-ixk’-b-al-ı’n e k’nat-i, b-uit’ naq’=mak=e. away.PL=& cm-many.go-cm-INTR-AOR this boy-PL cm-go.IMPV road(b/d)=on=&

‘These boys left and went along the road.’  (00:02:34–00:02:36)

(358) laraʔ ese e p’ap’aš xen=mak=ren e msxal leh-b-i-e’n. suddenly here this dad(v/b) tree(b/d)=on=from this pear(b/d) gather.IMPV-cm-TR-AOR

‘Suddenly here this dad had gathered the pears from the tree.’  (00:02:36–00:02:40)

(359) hal lah-b-i-e’n, k’alta hal j-uc’-j-i-e’n msxal-ex, ah up gather.PFV-cm-TR-AOR apron(j/j) up cm-fill-cm-TR-AOR pear(b/d)-CON down v-os-en laxuš, ah v-os-en laxuš. cm-go.down-AOR below down cm-go.down-AOR below

‘[He] gathered, filled his apron with pears, went down below, went down below.’  (00:02:40–00:02:45)

(360) miče b-a=g cha k’alat, co b-a=g. where cm-be.IMPV=anymore one basket(b/d) not cm-be.IMPV=anymore

‘Where is one basket, it’s missing.’  (00:02:45–00:02:47)
And this old man got angry, “it seems someone stole a basket on me,” [he] stands like this, “what to do,” one basket full of pears is missing.’ (00:02:48–00:02:56)

Suddenly [he] saw the children coming from there.’ (00:02:56–00:02:58)

But these children were coming eating these pears.’ (00:02:59–00:03:02)

[They] are coming, [they] came here, approached this man, eating these pears, the old man saw that those children were eating their own pea— his pears, but didn’t say a word to these children.’ (00:03:03–00:03:14)
Manuscript for defense – Do not circulate

(365) e badr-i=a šuin d-ixk’-d-al-iⁿ e babo osi this child(d/d)-pl=& away.pl cm-many.go-cm-intr-aor this old.man(v/b) there v-is-en chak’van=e. cm-stay-aor alone=&

‘These children also went away, and this old man stayed there alone.’ (00:03:14–00:03:17)

(366) oqumpleⁿ... golin=e ha:nu admien d-a-r o babʷ me that.much.dist wise=& fair person(d/d) cm-be.impv-impf yon old.man(v/b) so.that co a+iⁿ o badr-i-g me es so-go-(h) msxal not say.pfv-aor yon child(d/d)-pl-all comp 2pl.erg 1sg-all-loc pear(b/d) b-ih-en-es=e, es seⁿ msxal b-aq’-u-iš=enʷ. cm-steal-aor-2pl.erg=& 2pl.erg 1sg.gen pear(b/d) cm-eat.impv-prs-2pl.erg=rep

‘Such... a wise and fair man was that old man that [he] didn’t say to those children, “you stole pears from me, you’re eating my pears.”’ (00:03:17–00:03:26)

††Note. Re: (354), there is a pattern in these narratives of suffixing a usual motion verb with -Dalar (that is, with a class marker followed by an intransitivizing suffix) to create a verb of essentially the same meaning. Consultants have told me that these forms sound more colloquial and perhaps a bit ruder. These forms are not found in the dictionary.

A.6 BP (BH2-093)

Speaker: Babulia Paatashvili (ბაბულია პაატაშვილი)
Demographics: b. 1948, female
Date of recording: 2019-08-21
Others present during recording: Bryn Hauk
Link to archive: https://scholarspace.manoa.hawaii.edu/handle/10125/64677

(367) čaq nak’vet-e dad-as msxal leh-b-or. far plot(j/j)-loc father(v/d)-erg pear(b/d) gather.impv-cm-impf

‘Far away on a plot of land, a man was gathering pears.’ (00:00:13–00:00:16)
(368) xek’- m– xen=mak=ren ah xet’-b-en k’alat-e groba-b-or.
    fs    fs tree(b/d)=on=from down pluck-cm-ppl basket(b/d)=loc gather.impv-cm-impf

    ‘[He] was gathering the ones plucked from the tree in a basket.’ (00:00:17–00:00:22)

(369) o k’alat hal b-uc’-u-er dad-as lap’-i-n mak ah
    yon basket(b/d) up cm-fill-prs-impf father(v/b)-erg stair(b/d)-pl-dat on down
    b-ah-o-er abst’ar=mak cu=a ot:-b-or.
    cm-take-prs-impf earth(j/j).obl=on in=& put-cm-impf

    ‘That basket was filling up, the man took [it] down on the ladder, put [it] on the ground.’
    (00:00:22–00:00:28)

(370) qeⁿ k’alat-i macme hal d-uc’-d-i-en bader d-eʔ-en
    then basket(b/d)-pl when up cm-fill-cm-tr-aor child(d/d) cm-come.pfv-aor
    velosip’et’-ev.
    bicycle(j/j)-ins

    ‘Then when [he] had filled the baskets, a child came on a bicycle.’
    (00:00:29–00:00:34)

(371) o cha hal b-uc’in k’alat vah-ov— o badr-ev mak ot:-b-i-en
    yon one up cm-full basket(b/d) son(v/b)-erg yon child(d/d)-erg on put-cm-tr-aor
    velosip’et’-e=mak hatx velosip’et’-en godar-n mak ot:-b-il:-aⁿ mak
    bicycle(j/j)-obl=on in.front bicycle(j/j)-gen basket(b/d)-dat on put-cm-put-inf on
    ot:-b-i-en, šarn vot’—, šarn=a v-ax-eⁿ.
    put-cm-tr-aor away.sg fs away.sg=& cm-go.pfv-aor

    ‘The boy— that child put that one full basket on the bicycle, to put [it] in front in the bicycle
    basket, put [it] on, leav— and left.’
    (00:00:35–00:00:49)

(372) naq’=mak i badr-en ha:.. šeŋaxbad-j-al-iⁿ is am..
    road(b/d).obl=on that.med child(d/d)-dat hes collide-cm-intr-aor whatsit hes
    joh.
    girl(j/d)

    ‘On the road this child um.. collided with a whatsit, um.. girl.’
    (00:00:49–00:00:57)
(373) oha? velosip’et’-ev j-aɣ-or.
the.same bicycle(j/j)-ins cm-come.impv-impf

‘She was also coming by bicycle.’ (00:00:57–00:00:59)

(374) je i k’alat... msxal-a=reⁿ ne, šair k’alt-ev=a
and that.med basket(b/d) pear(b/d)-obl=from and 3sg.refl.poss basket(b/d)-ins=&
e voh ah-o v-ož-eⁿ.
this son(v/b) down=& cm-fall.pfv-aor

‘And this pear-filled basket, and with his basket, this boy fell.’ (00:00:59–00:01:08)

(375) ah v-ož-eⁿ o, oquin divh penix=k’a?, qo bader labc’-ir.
down cm-fall.pfv-aor yon.one yon.onedat there nearby=ish three child(d/d) play-impf

‘[He] fell, on this side of him, three children were playing.’ (00:01:08–00:01:13)

(376) macme v-ag-iⁿ me i velosip’et’=a ah j-ož-en=e,
when cm-see.pfv-aor comp that.med bicycle(j/j)=& down cm-fall.pfv-aor=&
i msxal dah=a m... e... ah m— abst’ar=mak ah
that.med pear(b/d) away=& hes hes down hes earth(j/j).obl=on down
b-ek’-in obi b-axk’-en hal qet:-eⁿ, g— naq’—
cm-many.fall-aor yon.ones cm-many.come-aor up get.up-aor fs road(b/d).obl
i badr-i lat’-en o vah-on, msxal hal
that.med child(d/d)-pl help.pfv-aor yon.one son(v/b)-dat pear up
lah-b-o-š.
gather.pfv-cm-prs-cvb

‘When [they] saw that his bicycle had fallen, and the pears had um... ah... on— fallen on
the ground, they came, got up, ?— road— these children helped that boy gather the pears.’
(00:01:13–00:01:30)
'The children gathered the pears, put [them] in the basket, then got up, the children... put this basket on the boy's bicycle, sent [him] away, by bicycle.' (00:01:30–00:01:44)

'But, when the children, these three boys were going, the hat on the road— when [the boy] had fallen, the hat um... fell from [his] head.' (00:01:44–00:01:53)

'And these children whistled to the boy going by bicycle, whist— he stopped them(?), stopped the bicycle, then... these children gave him that... this... hat back.' (00:01:54–00:02:09)
[They] gave [it] [to him], [he] took these three pears in the basket, gave two— one each to his friends, himself kept one, and got up, these children wiped [it] off on the whatsit— coat, and started to eat these pears.

'And the whatsit— children left, the boys left, and the boy left on his bicycle, and the man was still gathering these pears, [he] came down from the ladder, there were still two full baskets, and an empty one no longer full.'

'And the man ###..’‡‡
‡‡Note. Re: (382), the speaker trailed off into a whisper. I worked with multiple consultants to guess what she said, but everyone agreed that it was inaudible.

A.7 TT (BH2-095)

Speaker: Tinatin Tsiskarishvili (თინათინ ცისკარიშვილი)
Demographics: b. 1958, female
Date of recording: 2019-08-25
Others present during recording: Nisa Bakhtarishvili, Bryn Hauk
Link to archive: https://scholarspace.manoa.hawaii.edu/handle/10125/64679

(383) chen st’ak’-ov xen-ix lap’ ot::bien-č-ov msxal
one.OBL man(v/b)-ERG tree-CON ladder(b/d) put-CM-PPL-obl-ERG pear(b/d)
leh-b-or.
gather.IMPV-CM-IMPF

‘A man with a ladder propped against a tree was searching for pears.’ (00:00:03–00:00:09)

(384) hal yo-er, hal=o v-at-u-er lap’-ev msxal dačo txilaš
up go.FUT-IMPF up=& cm-go.up-PRS-IMPF ladder-ins pear(b/d) only carefully
gočnad-b-o-š.
caress-CM-PRS-CVB

‘[He] was going, was going up the stairs, just gently caressing the pears.’ (00:00:10–00:00:15)

(385) hal lah-b-o-er, lah-b-o-er ah v-eʔ-en
up gather.PFV-CM-PRS-IMPF gather.PFV-CM-PRS-IMPF down cm-come.PFV-AOR
k’alt-a-x ču=a b-exk’-or.
basket(b/d)-PL-CON in=& cm-put.many.IMPV-IMPF

‘[He] gathered and gathered, came down, put [them] in baskets.’ (00:00:19–00:00:20)
dačo goćnad-b-o, dačo perba-la-š, dačo dak’reš leh-b-or e
only caress-cm-prs only pet-intr-cvb only wholeheartedly gather.impv-cm-impf
this qor=e qeⁿ lara? vunax pešk’ar ačena-d-al-in velosip’et’-ev.
apple(b/d)=& then suddenly something child(d/d) appear-cm-intr-aor
dak’reš wholeheartedly leħ-b-or
leha’...
this.

‘[He] just caressed and petted them wholeheartedly, gathered these apples, and then suddenly,
some child appeared on a bicycle.’

ha?, ehat-lo=mcīⁿ vunax ši-lye-š st’ak’ v-oṭ’-ur osi gazaⁿ
yes then-ill=until something two-nº-advz man(v/b) cm-go.impv-impv there goat(b/d)
karsn-ev gazaⁿ b-ik’-or son vunte? meksik’a k’i j-a-l,
tether-ins goat(b/d) cm-take-impv 1sg.dat dunno Mexico(j/j) prt cm-be.impv-subj
vux kveq’ana j-e-r, co xe? soⁿ, magram son co
what country(j/j) cm-be.impv-impf not know 1sg.dat but 1sg.dat not
xe? is vux nax d-a-r-e phe-h obi k’i
know that.med what people(d/d) cm-be.impv-impf=& village-loc yon. ones prt
d-a-r.
cm-be.impv-impf

‘Oh yeah, before that some second man was going there, leading a goat, a goat on a rope (I
don’t know, whether it was Mexico, what country it was, I don’t know, and I don’t know what
people it was, whether they were in a village).’

equus ošt’e— ošt’i? xen=mak v-aɬ-en-č-ov leh-b-o-r
this. one. erg fs again tree(b/d)=on cm-go.up-ppl-obl-erg gather.impv-cm-impf
qor=e vunax pešk’ar d-e?-en velosip’et’-ev.
apple(b/d)=& something child(d/d) cm-come.pfv-aor bicycle(j/j)-ins

‘He, having gone up the tree again, searched for apples, some child came on a bicycle.’
'He looked here and there, looked around that place and, hiding, took that one basket, put it on the bicycle, stole it.' (00:00:58–00:01:06)

'He left.' (00:01:06–00:01:07)

'He was going by bicycle, there on the road [he] met a girl, she was also coming by bicycle.' (00:01:09–00:01:13)

'Looking at that girl, [he] fell, some rock was there, and [he] fell off his bicycle, and those pears fell from that whole basket.' (00:01:14–00:01:26)
(393) aʔ qo bader d-ay-or, qo voh.

charge child(d/d) CM-come.IMPV-IMPF three son(v/b)

‘Three children were coming, three boys.’

(394) oqumplan-i b-a-r-o obi, vune e voh v-a-r

that many.DIST-PL CM-be.IMPV-IMPF? yon.ones what this son(v/b) CM-be.IMPV-IMPF

inc=e obi lat’-e”, o msxal hal lahbi— lah-b-i-en

this=& yon.ones help.PFV-AOR yon pear(b/d) up FS gather.PFV-CM-TR-AOR

velosip’et’ hal ot-j-i-en, mak e k’alat mak=a ot-b-it-i-e

bicycle(j/j) up put-CM-TR-AOR on this basket(b/d) on=& stand-CM-CAUS-TR-AOR

šarn=a v-ax-e e voh.

CM-go.PFV-AOR this son(v/b)

‘They were of the same age as this boy now, and they helped, gathe— gathered those pears, righted the bicycle, and put this basket on, and this boy left.’

(395) v-ot’-ur šer naq’-av=e lara? o qa badr-en, qa

CM-go.IMPV-IMPF 3SG.REFL.POSS road-INS=& suddenly yon three.OBL child-DAT three.OBL

pešk’-en, oqui” kud b-a-g-i” dast’vena-i-en, o kud dah

child-DAT yon.one.GEN hat(b/d) CM-see.PFV-AOR whistle-TR-AOR yon hat(b/d) away

b-aɬ-in oquin equus magram... oqarn qo msxal

CM-give.PFV-AOR yon.one.DAT this.one.ERG but yon.ones.DAT three pear(b/d)

b-aɬ-i”.

CM-give.PFV-AOR

‘[He] was going along his road, suddenly those three children, three children, saw his hat, whistled, gave that hat to him, and he then... gave three pears to them.’
'And [they] parted from each other, he went down his own road, with that basket of stolen pears, and they went toward the direction, direction, where, from where this boy was going.'

(00:02:00–00:02:16)

'That man, however, that dad, that pear farmer, sees three children going, eating his pears, but he didn’t know what happened.'

(00:02:17–00:02:27)

'And this is the whole story, that’s all.'

(00:02:27–00:02:29)
Appendix B: Mariza the Stubborn Donkey

B.8 TQ (BH2-063)

Speaker: Taso Qizilashvili (თასო ყიზილაშვილი)
Demographics: early 90s, female
Date of recording: 2018-07-08
Others present during recording: Revaz Orbetishvili, Pore Qizilashvili, Bryn Hauk
Link to archive: https://scholarspace.manoa.hawaii.edu/handle/10125/58924

TQ told her version of this story right after her husband PQ, who adds commentary at a couple points in her story. Probably because of the recency of listening to her husband’s version, TQ launches into the narrative without mentioning the fisherman, but rather treating him as if he was already in the common ground, identified only by gender agreement on the verb.

(399) vir  d-a-r,  vir-ev  v-ax-en  č’a:r  lec-b-aⁿ.
    donkey(d/d)  cm-be.IMPFIMPF donkey(d/d)-INS  cm-go.PFV-AOR  fish(b/d)  catch.IMPV-CM-INF

‘There was a donkey, [he] went by donkey to fish.’
(00:00:18–00:00:23)

(400) v-ax-en,  č’a:r  lec-b-i-en,  k’alt-i  hal  d-uc’-d-i-en
    fish(b/d)  catch.IMPV-CM-AOR  basket(b/d)-PL  up  cm-fill-CM-AOR

‘[He] went, caught fish, filled baskets with fish, was supposed to take [them] the market to sell [them].’
(00:00:23–00:00:32)
'And the man was coming, the donkey got tired on the road.' (00:00:33–00:00:37)

'[It] got tired, fell down.' (00:00:37–00:00:40)

'[He] petted [it], pe— um— [he] petted [it], [it] didn’t get up.' (00:00:42–00:00:44)

'Struggling, struggling, [he] barely made [it] get up.' (00:00:45–00:00:48)

'[He] made [it] get up, was very delighted, got up, and the man, with fish falling out along the road, with fish falling out along the road, left.' (00:00:48–00:01:00)
Manuscript for defense – Do not circulate

PQ, suggesting an addendum

(406) letx-a$n ix-o-š.
dance-INF go-PRS-CVB

‘Dancing.’

(00:00:59–00:01:00)

TQ, accepting the addendum

(407) letx-a$n ix-o-š.
dance-INF go-PRS-CVB

‘Dancing.’

(00:01:00–00:01:01)

(408) vir hal co get-:en manam sanam musik’a co toxi$n
donkey(d/d) up not get.up-AOR while until music(j/j) not play.PFV-AOR
vin-
donkey(d/d)-DAT

‘The donkey didn’t get up until [he] played music for the donkey.’

(00:01:02–00:01:07)

(409) hal tox-i$n musik’a, yosset-e-š, dačo gayimad-v-al-i$n, v-el-i-š,
up play.PFV music(j/j) be.delighted-PRS-CVB only smile-CM-INTR-AOR CM-laugh-PRS-CVB
vin=ai o st’ak’=ai šuin=a b-ax-en, bazir č’ar
donkey(d/d)=& yon man=& away.pl=& CM-go.PFV-AOR market(j/j).DIR fish(b/d)
dah b-oxk’-a$n.
away CM-sell-INF

‘[He] played music, delighted, [he] just smiled, laughing, that donkey and that man left to sell fish at the market.’

(00:01:14–00:01:18)

(410) is vux gel d-a?
that.MED what called CM-be.IMPV

‘What is this called?’

(00:01:21–00:01:22)
(411) letx-a° ja- 
    dance-INF ?

    ‘Dancing ?–’

(00:01:21–00:01:22)

(412) ha?a!
    yes

    ‘Yes!’

(00:01:22–00:01:23)

(413) ha?, č’a:r=a– lim– 
    yes fish(b/d)=& ?

    ‘Yes, fish and– ?–’

(00:01:23–00:01:25)

(414) o st’ak’=a ta° v-ot’-or o vir-en hatx e ta° 
    yon man(v/b)=& in.tow cm-go.IMPV-IMPF yon donkey(d/d)-DAT in.front and in.tow 
    letx-a° ix-or. 
    dance-INF go-IMPF

    ‘And that man went in front of that donkey and danced together [with it].’

(00:01:25–00:01:29)

(415) equs so-x yazîš j-er ambui. 

    this.one.ERG 1-CON well cm-IMPF story(j/j)

    ‘She told the story better than I.’

(00:01:35–00:01:37)

B.9 OA (BH2-067)

(416) babo-s č’a:r lac-b-i-en bazir b-ah-an=enʷ.
    old.man(v/b)-ERG fish(b/d) catch.PFV-CM-TR-AOR market(j/j).DIR cm-take-INF=for

    ‘An old man caught fish to take to the market.’

(00:00:15–00:00:20)
(417)  mak=a qoxk’-i’ on=& telz-a-x.  
amang.hang-AOR saddlebag(d/d)-PL-CON

‘[They] were hanging in saddlebags.’  (00:00:22–00:00:26)

(418)  telz-i d-a-r-c=i, ha?? saddlebag(d/d)-PL CM-be.IMPV-IMPF-AFF=Q yes

‘[They] were saddlebags, yeah?’  (00:00:26–00:00:27)

(419)  telz-i d-a-r. saddlebag(d/d)-PL CM-be.IMPV-IMPF

‘[They] were saddlebags.’  (00:00:28–00:00:30)

(420)  le godr-i d-a-r, e godr-i d-a-r, or basket(b/d)-PL CM-be.IMPV-IMPF this basket(b/d)-PL CM-be.IMPV-IMPF
godr-a-x.  
basket(b/d)-PL-CON

‘Or [they] were baskets, these were baskets, in baskets.’  (00:00:28–00:00:30)

(421)  v-ot’-ur, v-ot’-ur, v-ot’-ur, babo dah mal-v-al-i’n,  
cm-go.IMPV-IMPF cm-go.IMPV-IMPF cm-go.IMPV-IMPF old.man(v/b) away tire-CM-INTR-AOR  
vir=a dah mal-d-al-i’n.  
donkey(d/d)=& away tire-CM-INTR-AOR

‘[He] went, went, went, the old man got tired, and the donkey got tired.’  (00:00:33–00:00:37)
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(422) dah=:a ot:-eⁿ vir aymart-en mak.
away=& stop-AOR donkey(d/d) slope-DAT on

‘The donkey stopped on the way up.’ (00:00:38–00:00:41)

(423) e babʷ mac’q’ ḥatxrena mac’q’ t’q’uihrena, het’-v-al-iⁿ,
this old.man(v/b) at.times from.front at.times from.behind push-CM-INTR-AOR
het’-v-al-iⁿ, vir mainc.. co d-ot’-ur=e, ču=a d-iš-eⁿ,
push-CM-INTR-AOR donkey(d/d) however not CM-go.IMPV-IMPF=& in=& CM-lie.down-AOR
daħ mal-d-enʷ.
away tire-CM-PPL

‘This old man pushed at times from the front, pushed at times from behind, pushed, and the
donkey however.. didn’t go, [it] lay down, tired.’ (00:00:43–00:00:51)

(424) babo ču xa?-en, oha? dah mal-v-al-iⁿ.
old.man(v/b) in sit the.same away tire-CM-INTR-AOR

‘The old man sat down, he was also tired.’ (00:00:51–00:00:55)

(425) bolos ħal qetː-en, ħatxe het’-v-al-iⁿ, t’q’uihrena het’-v-al-iⁿ,
finally up get.up-AOR in.front push-CM-INTR-AOR from.behind push-CM-INTR-AOR
cha?:com co d-i-en e vir-ev.
absolutely.nothing not CM-TR-AOR this donkey(d/d)-ERG

‘Finally [he] got up, pushed from in front, pushed from behind, this donkey did not budge.’
(00:00:55–00:01:00)

(426) co d-uit’ mainc.
not CM-go.IMPV however

‘[It] doesn’t move anyway.’ (00:01:00–00:01:01)
(427) ču=a čartod-i-eₐ music(j/j)
in=& turn.on-tr-aor music(j/j)

‘[He] turned on music.’

(428) musik'-en mak hal lak-d-al-in, t’link’eb-al-a-š, t’link’eb-al-a-š,
music(j/j)-dat on up jump-cm-intr-aor cavort-intr-prs-cvb cavort-intr-prs-cvb
letx-aⁿ ix-o-š, šarn-o d-ax-eⁿ, šarn d-ax-en, labc’-i-š,
dance-inf go-prs-cvb away.sg=& cm-go.pfv-aor away.sg cm-go.pfv-aor play-prs-cvb
je č’aːr hal=o b-ek’-in.
and fish(b/d) up=& cm-many.fall-aor

‘[They] jumped along with the music, cavorting, cavorting, dancing, [they] left, left, playing, and the fish fell out.’

(429) bazir hal v-ax-en, ču b-ah-an=en, hač’-eⁿ, č’aːr co
market(j/j).dir up cm-go.pfv-aor in cm-take-inf=for look-aor fish(b/d) not
b-a.
cm-be.impv

‘[He] went to the market to take [fish], [he] looked, there are no fish.’

(430) ah-o v-oc’-v-al-iⁿ, ah-o v-oc’-v-al-iⁿ, ese b-at’
down=& cm-follow-cm-intr-aor down=& cm-follow-cm-intr-aor here cm-be.spread
šariⁿ č’aːr naq’=mak.
3.refl.poss fish(b/d) road(b/d).obl=on

‘[He] went down, went down, here his fish are scattered across the road.’

(431) v-ašaren=a v-is-eⁿ babʷ.
cm-empty=& cm-stay-aor old.man(v/b)

‘And the old man was left empty-handed.’
‘[He] could not sell [them], nor could [he] make money, [he] could not make money for bread.’

‘And [he] was left hungry, our old man.’

‘Moustachioed man.’

‘Mustache man.’

‘Thus our tale ended.’

B.10 KD (BH2-068)
(437) cha babʷ v-a-r=e  vir d-a-r  t’q’ob-al-a one old.man(v/b) cm-be.IMPV.IMPF=& donkey(d/d) cm-be.IMPV.IMPF seem-INTR-PRS
q=q-go ra.
yon-one-ALL.LOC DM
‘There was an old man and it seems he had a donkey.’ (00:00:16–00:00:20)

(438) bazir gadac’q’vet’a-d-i-eⁿ v-ax-ar.
market(j/j).DIR decide-CM-PFV-TR-AOR CM-GO.PFV-MAS
‘[He] decided to go to the market.’ (00:00:20–00:00:23)

(439) č’aːr lac-b-ien, godr-a-x ču boxk’-in, bazir=a
fish(b/d) catch.PFV-CM-TR-AOR basket(b/d)-PL-CON in CM-PUT.MANY-AOR market(j/j).DIR=&
b-aħ-eⁿ.
cm-take-AOR
‘[He] caught fish, put [them] in baskets, and took [them] to the market.’ (00:00:23–00:00:29)

(440) b-uit’– b-aq:oⁿ naq’– niq’ b-a-r.
cm-GO.IMPF CM-BIG road(b/d).OBL road(b/d) cm-be.IMPV-IMPF
‘It goes– was a long roa– road.’ (00:00:30–00:00:32)

(441) lal-ien.
walk-PPL.PST
‘Walked.’ (00:00:33–00:00:34)
(442) lal-uin.
walk-ppl.prs

‘Walking.’ (00:00:34–00:00:35)

(443) naq’=mak e vir dah=a ot-e’n.
road(b/d).obl=on this donkey(d/d) away=& stop-aor

‘On the road this donkey stopped.’ (00:00:36–00:00:39)

(444) t’q’ob-al-a dah mal-d-al-in d-a-r=a, šin.. godr-ev
seem-intr-prs away tire-cm-intr-ppl cm-be.impf=& two.obl basket(b/d)-ins
č’a:r b-ot’-o-b.
fish(b/d) cm-carry.impf-prs-cm

‘And it seems [it] had gotten tired, [it] is carrying fish in two.. baskets.’ (00:00:39–00:00:44)

(445) ču=a d-iš-e’n, babʷ duq perbad-v-al-in, duq ħatx t’q’uih
in=& cm-lie.down-aor old.man(v/b) much pet-cm-intr-aor much in.front behind
it’-e’n magram vir-en com xac’-en.
run-aor but donkey(d/d)-dat nothing hear-aor

‘[It] lay down, the old man petted [it] a lot, ran in front and behind a lot, but the donkey didn’t
listen to anything.’ (00:00:44–00:00:52)

(446) mac’q’ gočnad-i-e’n, mac’q’ tepx-i’n, mac’q’ ġarbad-v-al-i’n, mac’q’
at.times caress-tr-aor at.times hit.impf-aor at.times shout-cm-intr-aor at.times
t’q’uihrena ġet’-v-al-i’n, ma vir ču tas-d-al-i’n.
from.behind push-cm-intr-aor but donkey(d/d) in fall-cm-intr-aor

‘At times [he] caressed [it], at times hit [it], at times shouted, at times pushed from behind,
but the donkey fell down.’ (00:00:52–00:01:00)
‘The old man sat down, fell asleep.’

‘When [he] opened [his] eyes, it was evidently morning.’

‘[He] got up, the old man thought, “I will turn on music.”’

‘[He] turned on the music, and this donkey woke up, just dancing playing, [they] went to the city.’

‘To the market.’

‘When [they] came to, there evidently was not a single fish in the basket.’
(453) so hač'-en dah hač'-en naq'=mak b-at'-b-ano-r din č’aːr.
hither look-AOR away look-AOR road(b/d).obl=on CM-spread-CM-EVID-IMPF all fish(b/d)

‘[They/he] looked here, looked there, all of the fish were evidently scattered on the road.’

(00:01:29–00:01:33)

(454) vux d-or gara?
what CM-IMPF DM

‘What could be done?’

(00:01:33–00:01:35)

(455) babo maciⁿ v-is-en=e, vir=a k’maq’opil d-is-eⁿ me
old.man(v/b) hungry CM-stay-AOR=& donkey(d/d)=& satisfied CM-stay-AOR comp

gruz co lel-b-i-eⁿ@.
load(b/d) not carry-CM-TR-AOR

‘The old man was left hungry, and the donkey was left satisfied that it didn’t carry the load.’

(00:01:35–00:01:37)

B.11 DE (BH2-075)

Speaker: Dantes Echishvili (დანტეს ეჩიშვილი)
Demographics: b. 1962, male
Date of recording: 2018-07-16
Others present during recording: Revaz Orbetishvili, Bryn Hauk
Link to archive: https://scholarspace.manoa.hawaii.edu/handle/10125/58936

(456) vir=a..
d-oc’-i'nʷ-
donkey(d/d)=& CM-follow-PPL

‘Followed by a donkey–’

(00:00:17–00:00:20)
The man.. followed by a donkey.. who... who caught fish, who was going to the market.'

(00:00:17–00:00:32)

'And on the way up, the tired donkey, which had stopped, refused to move.'†

(00:00:34–00:00:40)

'What–' (00:00:44–00:00:44)

'What didn’t the man do?''

(00:00:45–00:00:47)

'However much [he] tried.'

(00:00:48–00:00:49)

'He] pushed from behind, pushed from in front.'

(00:00:50–00:00:53)
(463) bolos hal qet:-en e musik’a ču čartod-i-en.
finally up get.up-AOR and music(j/j) in turn.on-TR-AOR

‘Finally [he] got up and turned on music.’ (00:00:53–00:00:56)

(464) ču čartod-i-eⁿ, ra.
in turn.on-TR-AOR DM

‘[He] turned [it] on, I guess.’ (00:01:00–00:01:02)

(465) hal qet:-en vir, letx-aⁿ ix-o-š, t’q’uih=a d-ot’-d-al-iⁿ.
up get.up-AOR donkey(d/d) dance-INF go-PRS-CVB behind=& cm-go-CM-INTR-AOR

‘The donkey got up, dancing, [it] went along behind.’ (00:01:07–00:01:10)

(466) vux tag-d-i-en-oː, letx-aⁿ letx- labc’-i-š d-ot’-u-š, e č’aːr
what do.PFV-CM-TR-AOR-? dance-INF FS play-PRS-CVB cm-go-PRS-CVB and fish(b/d)
vun=e b-a-r-ic telz-eh deniʔ so=a b-ek’-in.
what=REL cm-be.IMPV-IMPF-AFF saddlebag(d/d)-LOC all hither=& cm-many.fall-AOR

‘What did [he] do, dancing danc– playing, going, and what fish they had in the saddlebag all fell out.’ (00:01:15–00:01:23)

(467) so b-ek’-in, edgil-i b-ex-če, chaʔ.com co
hither cm-many.fall-AOR place(j/j)-DIR cm-go.PFV-CVB absolutely.nothing not
d-a=g-er, ču hips je, dah ešar-b-al-in-ava
cm-be.IMPV=anymore-IMPF in many.look and away become.lacking-CM-INTR-AOR-?

‘[They] fell out, having reached the place, nothing at all was left, [the man and donkey] look and flipped out.’ (00:01:23–00:01:30)

(468) vun=e d-a-r-ic ra bazr-e.
what=REL cm-be.IMPV-IMPF-AFF DM market(j/j)-LOC

‘All that there was at the market.’ (00:01:32–00:01:34)
(469) ohaʔ o v-a v-aqːo-x.
the.same yon cm-be.impv cm-big-cmpr

‘That same boss.’ (00:01:35–00:01:36)

(470) qenaʔ osi vux d-a, jev?
another there what cm-be.impv dm

‘What else was there, man?’ (00:01:37–00:01:39)

(471) ar vici, aba.
not I.know dm

‘I don’t know.’ (00:01:39–00:01:40)

†Note. Re: (458), my consultant told me that the word/phrase gakvir oc’ar is used only in reference to animals. Its form might be transcribed incorrectly.

B.12 DK (BH2-077)

Speaker: Davit Kadagidze (დავით ქადაგიძე)
Demographics: b. 1958, male
Date of recording: 2018-07-16
Others present during recording: Revaz Orbetishvili, Bryn Hauk
Link to archive: https://scholarspace.manoa.hawaii.edu/handle/10125/58938

(472) vir=ai meč’ar=ai–
donkey(d/d)=& fisherman(v/b)=&

‘A donkey and a fisherman–’ (00:00:16–00:00:17)

(473) is ebšex el-n-as.
that.med in.vain say.PFV-AOR-1SG.ERG

‘I said that wrong.’ (00:00:19–00:00:20)
(474) meč’ar-ev č’a:r lec-b-i-en.
fisherman(v/b)-erg fish(b/d) catch.impv-cm-tr-aor

‘A fisherman caught fish.’

(00:00:21–00:00:23)

(475) vir-en hal qoxk’-in, šuin=a b-ax-en bazir-i–
donkey(d/d)-dat up hang.many-aor away.pl=& cm-go pfv-aor market(j/j)-dir

‘[He] hung [them] on a donkey, [they] left for the bazaar–’

(00:00:25–00:00:29)

(476) iarmuk’-i, upro sc’orat.
market-dir more precisely

‘For the market, more precisely.’

(00:00:29–00:00:31)

(477) č’a:r dah b-oxk’-aⁿ.
fish(b/d) away cm-sell-inf

‘To sell the fish.’

(00:00:32–00:00:34)

(478) lel-iⁿ, lel-iⁿ, lel-in.
walk-aor walk-aor walk-aor

‘[They] walked, walked, walked.’

(00:00:35–00:00:37)

(479) dah mal-d-al-in aɣmart-in mak, aɣmart-in mak, lel-e-š e
away tire-cm-intr-aor slope-dat on downward.slope-dat on walk-prs-cvb this
vir=è chen edgl-e ču=a d-iš-en.
one.obl place(j/j)-loc in=& cm-lie.down-aor

‘[They] got tired on the way up, on the way down, walking, and in one place this donkey lay down.’

(00:00:40–00:00:44)
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(480) meč’ar duq het’-v-al-iⁿ, magram ču d-iš-en magram, fisherman(v/b) much push-cm-intr-aor but in cm-lie.down-aor but
vir... vir d-a.
donkey(d/d) donkey(d/d) cm-be.impv

‘The fisherman pushed [it], but [it] was lying down however, a donkey... is a donkey.’‡
(00:00:48–00:00:53)

(481) c’q’e d-uxex xa?-en vir, dah co dah keka-d-al-mak’-iⁿ.
once cm-backwards sit-aor donkey(d/d) away not away move-cm-intr-can-aor

‘At once the donkey refused (lit. ‘sat backwards’), [it] couldn’t move. (00:00:54–00:00:57)

(482) vir ču d-iš-en, meč’ar=ai penix ču xa?-en.
donkey(d/d) in cm-lie.down-aor fisherman(v/b)=& nearby in sit-aor

‘The donkey was lying down, and the fisherman also sat down nearby.’ (00:00:59–00:01:02)

(483) buisa osi dah=a t’eg-iⁿ šinva?.
night(j/j) there away=& ?-aor both

‘They both spent the night there.’ (00:01:07–00:01:09)

(484) hal sa xiɬ-en, meč’ar-es magnit’opon=a gu<j>aq-iⁿ,
up soul(d/d) be.PFV-aor fisherman(v/b)-aor casette.player(j/j)=&
@@@ (magnit’opon saertašoris doš d-a).
reveal<cm>-aor casette.player(j/j) international word(d/d) cm-be.impv

‘The sun rose, and the fisherman got out a casette player, @@@ (“casette player” is an international word).’
(00:01:12–00:01:22)

(485) hal=o tox-iⁿ... elade musik’a.
up=& play-aor hellas music(j/j)

‘[He] played Hellenic music.’
(00:01:27–00:01:31)
‘The donkey liked [it] so much, that [it] started dancing behind [its] master.’

(00:01:35–00:01:42)

‘[They] went, went, they both arrived at the market dancing, while dancing, the fish were falling out all over.’

(00:01:45–00:01:54)

‘When the fisherman and the donkey got to the place.. there was not a single fish left.’

(00:01:56–00:02:00)

‘The stunned fisherman didn’t know what to do anymore, and the donkey took the casette player, offered [it] [to him].’

(00:02:08–00:02:17)
(490) equs šuelbad-o hon=enʷ. @@@
    this.one.erg assist-prs 2sg.dat=rep

    "‘This one will assist you.’ @@@’  (00:02:18–00:02:19)

(491) e let’ hon=enʷ ra, upro sc’orat.
    this.one help 2sg.dat=rep dm more precisely

    ‘ ‘This one will help you,” I guess, more precisely.’  (00:02:20–00:02:21)

‡Note. Re: (480), ‘a donkey is a donkey,’ meaning that the donkey was exhibiting one of the essential characteristics of being a donkey: stubbornness.
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