

# Embedded finite complements, indexical shift, and binding in Tsez<sup>1</sup>

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## 1 Introduction

This report presents a description of embedded finite complements in Tsez (Dido, ddo), a Nakh-Dagestanian language spoken primarily in the Tsunta district of Dagestan (Lewis et al. 2014), with a particular emphasis on indexical shift. I do not however develop an analysis of the indexical shift—that would be the next step, one that would build on the facts reported in this paper.

Tsez is a morphologically ergative head-final language with extensive argument drop. The word order in root clauses is quite flexible, but embedded clauses are strictly verb-final. Tsez has four genders (noun classes) in the singular, and predicates agree with the absolutive noun phrase in gender; see Plaster et al. (2013) for details of gender assignment in Tsez. Gender agreement prefixes on verbs and adjectives are identical:

### (1) Agreement prefixes

	Singular	Plural
I	NULL	b-
II	y-	r-
III	b-	
IV	r-	

Only a subset of Tsez verbs show agreement overtly; these are most (but not all) verbs with a vocalic onset; in the material below, these verbs are shown as AGR-*lexeme*. Although only 27% of Tsez verbs agree, these agreeing verbs are highly frequent. In a corpus of child-directed speech (see Gagliardi and Lidz 2014 for details), 60% of the verbs showed agreement; i.e., the majority of verbs that appeared in the corpus were agreeing verbs. Within tokens (the number of occurrences), the number is even higher: 84% of verbs uttered in the corpus were marked for agreement (Gagliardi and Lidz 2014: 68).

The majority of Tsez clausal complements are non-finite. However, the language also exhibits finite complement clauses marked with the quotative enclitic =*λin*; in what follows, I will report on the main findings concerning those clauses.

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A number of examples used in this paper have been culled from the corpus of folklore texts in Tsez (Abdulaev and Abdullaev 2010); these texts, with interlinear glossing and translations, are also available online: <http://tsezacp.clld.org/>. In citing text examples, I provide the name of the text and the number of the line from the online resource; when no text citation is given, the examples are from my elicitation work.

This paper is structured as follows. In section 2, I present a general description of the quotative enclitic *=λin* and identify the finite clauses that it can attach to. In section 3, I present arguments in favor of the dual function of this enclitic as a marker of direct quotations and embedded finite clauses. Section 4 presents some observations on indexical shift patterns in Tsez; the phenomenon of indexical shift has been documented for languages outside the Caucasus but has not received a systematic investigation in Nakh-Dagestanian or other Caucasian language families. The impetus for presenting this material here is to stimulate research on similar phenomena in the rich linguistic environment of the area. Section 5 is a short summary of the paper.

## 2 Finite clauses with the enclitic *=λin*

The quotative enclitic *=λin* (glossed as QUOT) serves to mark clausal complements. This enclitic probably developed from a truncated form of the verb *eλin* ‘say.PST.NON-WITNESSED’ (root *eλ-*), but synchronically the derivation is obscured. In addition to combining with finite clauses, a function that I will examine below, *=λin* can also combine with quoted fragments smaller than a clause. In particular, it always appears on proper names when those names are used predicatively, as in the following example:<sup>2</sup>

- (2)    Nesi-λ’                      ci-gon                      ζUmarqilič=*λin*  
          DEM.I-SUPER.ESS        name.ABS.IV-CONTR.TOP        Umarqilič=QUOT
- zow-n.  
 be.PST-PST.nWIT  
 ‘His name was Umarqilič.’ (ζAliqilič:1)

This usage is likely to be related to the presence of the verb *eλ-* ‘say’ in the resultative participial form (as shown in the example below), although this participle is more often than not omitted.

- (3)    Sis        zow-n=*λax*                      [Goqi=*λin*    eλ-äsi]                      miskinaw  
          one    be.PST-PST.nWIT=QUOT        Goqi=QUOT    say-RES.PTCP    poor
- žek’u.  
 person.ABS.I  
 ‘Once there lived a poor man called Goqi.’ (Goqin zirun:1)

Clauses marked with *=λin* are widespread and are selected by a wide variety of verbs, from verbs of speech to propositional attitude verbs to a large number of control verbs. It is probably easier to list the verbs that do not take quotative complements; these include some restructuring

<sup>2</sup> The list of abbreviations is given at the end of the paper.

predicates, the modal and aspectual verbs that head monoclausal restructuring predicates, subject control verbs, the verb AGR-*uλ*- ‘fear; be afraid’, the verb AGR-*egir*- ‘send; order’, and the verbs *ruhun* AGR-*oq*- ‘learn’/*ruhun* AGR-*od*- ‘teach’. Examples (4) and (5) illustrate some of these restrictions; note that the acceptability of *=λin* does not change if the verb is finite, as in (4b) and (5b), so the restrictions have to do with selection and not with finiteness per se:

- (4) a. \*El-ä paprus λis-a=λin r-āy-inči.  
 1PL-ERG cigarette.ABS.IV pull-INF=QUOT IV-must-PRS.NEG
- b. \*El-ä paprus λis-xo=λin r-āy-inči.  
 1PL-ERG cigarette.ABS.IV pull-PRS=QUOT IV-must-PRS.NEG  
 (‘We must not smoke.’)
- (5) a. \*Babi-y-ä sult’an šahar-y-ā-γor Ø-egira-ani-x= λin  
 father-OS-ERG Sultan.ABS.I city-OS-IN-VERS I-send-MASD-AD.ESS-QUOT  
 hukmu b-oy-s.  
 decision.ABS.III III-do-PST.WIT  
 (‘Father decided to send Sultan to the city.’)
- b. \*Babi-y-ä sult’an šahar-y-ā-γor Ø-egira-xo=λin  
 father-OS-ERG Sultan.ABS.I city-OS-IN-VERS I-send-PRS-QUOT  
 hukmu b-oy-s.  
 decision.ABS.III III-do-PST.WIT  
 (‘Father decided that he is sending Sultan to the city.’)

In texts, the embedding verb can be omitted, leaving *=λin* as the only signal of reported speech or embedded structure; such omissions are particularly common with verbs of speaking and propositional attitude verbs. As a result, a sentence may contain multiple occurrences of *=λin* in the absence of a matrix verb, as in the following example. The first and final clauses in (6) appear with *=λin*, and both represent reported speech, presumably embedded under a presupposed verb of speaking.

- (6) [Ø-eynoy-xo-zo gurow žek’u-r dā-de idu Ø-ič-a  
 I-work-PRS-ATTR.OBL except person-LAT 1SG-APUD.ESS home I-stay-INF  
 moči ānu=λin], [eni-babiy-ä nesi-s nesi-r  
 place.ABS.III be.PRS.NEG-QUOT parents-ERG DEM.I-GEN1 DEM.I-LAT  
 λeli-n teλ-no], [Ø-eye-ni užī maħor  
 lamb-ABS.III-and give-PFV.CVB I-young-DEF boy.ABS.I outside-LAT  
 Ø-ox-ir-no], [debe-r r-āti-z-a Ø-ik’i-n  
 I-run-CAUS-CVB 2SG-LAT IV-want-ATTR.OBL.DIST-VERS I-go-PFV.CVB  
 ſumru b-od-o=λin].  
 life.ABS.III III-do-IMPER-QUOT

‘ “There is no place at my home except for those who work,” the parents [said], gave him his little lamb, and chased the youngest son out, [telling him] that he should go where he wants and live [there].’ (Λelä bečed ädiru miskin žek’u:8)

The clause identified by =*λin* is finite, as shown by the presence of tense marking and polarity suffixes on the predicate. The examples below show that clauses marked by =*λin* can include interrogative marking (7), (10) or imperative marking (6) on the embedded predicate (the declarative is not marked in any special way). Although exclamatives in Tsez do not have a dedicated marker, they can also appear with =*λin*, as shown in (8).

- (7) [Yıla                      čant-ā-kin                      an-ä                      r-ac’-ani-x  
DEM.nI                      bag-IN.ESS-FOC                      be.PRS.NEG-INTERR                      IV-eat.TR-MASD-AD.ESS  
  
šebin=*λin*]                      rok’-λ’o-r                      r-ay-n.  
thing.ABS.IV-QUOT                      heart-SUPER-LAT                      IV-come-PST.nWIT  
‘(He) tried to recall whether there was something to eat in that very bag.’ (lit.: recalled wasn’t there something to eat... ) (Ceyes sayyat:37)
- (8) [Wah    žigon    šebi-tow                      nesi-r                      r-eti-n=*λin*]  
whoa    again    what.ABS.IV-FOC                      DEM.I-LAT                      IV-want-PST.nWIT-QUOT  
  
esir-no                      neł-ä.  
ask-PST.nWIT    DEM.nI-ERG  
‘ “Whoa, what else does he want!” she exclaimed.’ (C’irdux:36)

Clauses marked by =*λin* can be coordinated. For example,<sup>3</sup>

- (9) Di                      šuλ’-ir-si                      [*pro*    magazine-y-ā-γor  
1SG.ERG                      forget-CAUS-PST.WIT                      store-OS-IN-VERS  
  
y-ik’-ān=*λin*]-no                      [*pro*    kayat                      y-eger-ān=*λin*]-no.  
II-go-FUT.DEF-QUOT-and                      letter.ABS.II                      II-send-FUT.DEF-QUOT-and  
‘I (woman speaking) forgot to go to the store and to mail a letter.’ (lit.: forgot that I was going and that I was sending...)

<sup>3</sup> In this example, the subject in both embedded clauses is a null pronominal. This null pronominal is understood as coreferential with the speaker, which may give an impression that the embedded clauses are in fact control complements. However, the null pronominal can freely alternate with an overt pronominal. Coreference between the matrix first person singular subject and the null pronominal is enhanced by the tense form of the embedded verbs. Tsez distinguishes two types of grammatical future, future definite, shown in this example, and future indefinite. The future forms have an almost complementary distribution across persons: the definite is used with first person, the indefinite is used with second and third (Comrie et al. 1998). Both embedded verbs in (9) appear in the future definite form, hence the preferred interpretation of the null pronominal as first person.



Preminger and Polinsky 2015).<sup>4</sup> For example, in (13), the matrix verb ‘know’ agrees with the absolutive noun phrase *elus y<sup>w</sup>ay* ‘our dog’ contained in the embedded nominalized clause (shown in brackets):

- (13) Dä-r [elu-s y<sup>w</sup>ay k’et’u-za-l xizay k’āhi-ru-hi]  
 1SG-LAT 1PL-GEN1 dog-ABS.III cat-PL.OS-CONT.ESS behind run-PST.PTCP-NMLZ  
 b-iy-x.  
 III-know-PRS  
 ‘I know that our dog was chasing cats.’ (lit.: ran behind cats)

An absolutive constituent inside a quotative complement can never induce long-distance agreement, making these clauses distinct from the nominalized complements shown in (13). Example

(14b) is minimally different from

(14a) in that the complex matrix verb *harizi AGR-od-* agrees with the embedded absolutive *baša* in gender III, rendering the sentence ungrammatical.

- (14) a. [Behizi r-oq-nāy, dā-q baša  
 possible IV-become-COND.CVB 1SG-POSS.ESS finger.ABS.III  
 b-ati-n=λin] di debe-q harizi r-oy-x.  
 III-put-PROH-QUOT 1SG.ERG 2SG-POSS.ESS request IV-do-PRS  
 ‘If possible don’t touch me, I am begging you.’ (Xanno, nesisgon f’ono užin:108)
- b. \*[Dä-q baša b-āti-n=λin] di  
 1SG-POSS.ESS finger.ABS.III III-put-PROH-QUOT 1SG.ERG  
 debe-q harizi b-oy-x.  
 2SG-POSS.ESS request III-do-PRS

No material from a finite complement can be dislocated into the matrix clause. Compare the well-formed example (7) above and its ungrammatical counterpart below, where the locative constituent *yila čantākin* ‘that bag’ is dislocated to the matrix clause:

- (15) \*[An-ā r-ac’-ani-x šebin=λin]  
 be.PRS.NEG-INTERR IV-eat.TR-MASD-AD.ESS thing.ABS.IV-QUOT  
 yila čant-ā-kin rok’-λ’or r-ay-n.  
 DEM.nI bag-IN.ESS-FOC heart-SUPER-LAT IV-come-PST.nWIT  
 ‘(He) tried to recall whether there was something to eat in that very bag.’)

Typically, a clause marked with =λin linearly precedes the verb that takes it as a complement, but the complement clause can also appear further to the left of its selecting verb. Whether a clause

<sup>4</sup> This phenomenon is sometimes referred to as “transparent agreement” (see Corbett 2006:65).







1SG.ERG forget-CAUS-PST.WIT 1SG.ABS(.II) store-OS-IN-VERS

y-ik'-ān=*λin*].

II-go-FUT.DEF-QUOT

'I (woman speaking) forgot to go to the store.' (lit.: that I was going to the store)

- b. \*Di šuλ'-ir-si [magazine-y-ā-γor  
1SG.ERG forget-CAUS-ST.WIT store-OS-IN-VERS-QUOT

y-ik'-ān di=*λin*].

II-go-FUT.DEF 1SG.ABS(.II)-QUOT

'I (woman speaking) forgot that I have to go to the store.'

- c. \*Di šuλ'-ir-si [di y-ik'-ān  
1SG.ERG forget-CAUS-PST.WIT 1SG.ABS(.II) II-go-FUT.DEF

magazine-y-ā-γor=*λin*].

store-OS-IN-VERS-QUOT

Doubling of the enclitic, as in (20), is impossible:

- (22) Di šuλ'-ir-si [di=(*\*λin*) magazine-y-ā-γor  
1SG.ERG forget-CAUS-PST.WIT 1SG.ABS(.II)-QUOT store-OS-IN-VERS

y-ik'-ān=*λin*].

II-go-FUT.DEF-QUOT

'I (woman speaking) forgot to go to the store.' (lit.: that I was going to the store)

The difference between 'complain' and 'forget' is that the latter verb requires a genuine embedded clause, i.e., a clausal complement, whereas 'complain' (as well as 'say') is more flexible, being compatible with both a complement clause and a direct quotation. Consider a similar contrast in English:

- (23) a. She complained, 'Oh, I need to go to the grocery store'.  
b. She complained that she needed to go to the grocery store.
- (24) a. \*She forgot, 'Oh, I need to go to the grocery store'.  
b. She forgot that she needed to go to the grocery store.

The enclitic =*λin* appears in both contexts, introducing a complement clause and introducing direct quotation (DQ). The enclitic therefore serves two distinct functions: (i) marking genuine complementation, as a complementizer introducing a finite clausal complement (FCC below); and (ii) introducing quoted direct speech (DQ). Unambiguous embedding predicates such as 'forget' and 'want' require strict verb-final word order in their embedded clauses, consistent with the word order of all other Tsez embeddings (see Comrie and Polinsky 1999 on relative clauses, Polinsky and Potsdam 2001 on nominalized complements, and Polinsky and Potsdam 2002 on

infinitival clauses). When  $=\lambda in$  appears with a direct quotation, on the other hand, that clause is not embedded; thus, all the word orders that are permissible in independent (root) clauses remain available.<sup>6</sup>

If we now turn to those verbs that allow both finite complement clauses and direct quotation, an important question arises: how can complementation and direct quotation be distinguished? Unless the word order is straightforward, as in (25) below, the function of  $=\lambda in$  in a particular case (and, consequently, the nature of the embedded clause — DQ or FCC) may be unclear.

- (25) [Dä-z              ža-s              halmay-bi              yoł      yizi= $\lambda in$ ]  
          1SG-GEN2      son-GEN1      friend-PL.ABS.IPL      be.PRS    DEM.IPL.ABS-QUOT
- esi-n              nes-ä              Ražbadin-qo.  
          say-PST.nWIT    DEM.I-ERG      Rajbaddin-POSS.ESS
- “‘They are my son’s friends,” said he to Rajbaddin.’ (Ražbadinno, Tawadin:165)

Thus, a large body of clauses marked with  $=\lambda in$  are ambiguous between a finite-complement-clause interpretation and direct quotation. A similar functional ambiguity is observed in Tatar, where the respective quotative marker is ambiguous between a complementizer and an introducer of direct speech (Podobryaev 2014).

In looking for other diagnostics, we can capitalize on the fact that exclamatives and imperatives resist embedding (see Portner and Zanuttini 2000; Zanuttini and Portner 2000, on exclamatives; Sadock 1974; Sadock and Zwicky 1985; van der Wurff 2007 on imperatives), although this generalization is not exceptionless.<sup>7</sup> So if we encounter a sentence like the one below, how can we tell, without being circular, that this it includes a direct quotation, not a finite

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<sup>6</sup> An anonymous reviewer suggests that direct quotations are also complements of their selecting verbs, but unlike their rigidly predicate-final counterparts, they have a more elaborate syntactic structure. On that approach, the quotative marker could be analyzed as introducing embedded finite complements of two different types: a lower-level finite root clause with fixed word order, and a higher-level clause elaborated by additional projections to accommodate external topic constituents (hence the additional word order possibilities). To represent this proposal schematically,

- (i)      Matrix Verb [<sub>CP</sub> [<sub>TP</sub> ..... ]  $\lambda in$ ]              EMBEDDED MINIMAL FINITE CLAUSE
- (ii)     Matrix Verb [<sub>CP</sub> [<sub>CP</sub> [<sub>TP</sub> ..... ] ]  $\lambda in$ ]        EMBEDDED ELABORATED FINITE CLAUSE

Although I will not be discussing this approach in detail, let me offer some considerations. First, the embedded clause in (i) can also include topics, but the topics have to appear on the left, not on the right. Second, and more importantly, it is less clear how this approach can account for the differences in indexical shift that I discuss in section 4 below. To anticipate that discussion, indexical shift is possible in (i) but not in (ii), but nothing in the structure of (ii) prevents shifting.

<sup>7</sup> Ancient Greek and Slovenian are cited as languages with embedded imperatives (van der Wurff 2007: 26-27).

complement? In other words, does it have just one English equivalent, one with DQ, or two?

- (26) Eɣeni            esi-y- ä                    [kut'yozo-d neλ=λin]                    eλi-n.  
 younger           sibling-OS-ERG           right.hand-INS give.IMPER-QUOT           say-PST.nWIT  
 'The younger brother said, 'Give (it) (to me) with your right hand.' (DQ)  
 'The younger brother said (to her) to give (it) (to him) with her right hand.' (FCC)  
 (ʒOλno esiwn, sis esiyn: 40)

Let me postpone the answer to this question—as I shows below, this answer can actually be obtained, but only on the basis of yet another, more complex diagnostic distinguishing FCC and DQ (and accordingly, the two functions of =λin). This diagnostics stems from the phenomenon of indexical shift, which I examine below.

## 4 Indexical shift in finite complement clauses

### 4.1 Preliminaries

Consider the following Tsez sentence:

- (27) Irbahin-ä            [di                    ʒayibiyaw            yoɬ=λin]                    eλi-x.  
 Ibrahim-ERG    1SG.ABS                    wrong/foolish be.PRS-QUOT           say-PRS  
 (i)            'Ibrahim says that I am wrong.'  
 (ii)           'Ibrahim<sub>i</sub> says that he<sub>i</sub> is wrong.'

The interpretation of this sentence relies on the interpretation of the indexical *I*. In general terms, an *indexical expression* is a word or phrase whose meaning is not determined in the lexicon; instead, its reference is flexible, associating with different referents and different meanings in different circumstances. Indexical expressions include first and second person pronouns and deictic words such as *today*, *now*, *here*, or *that*.<sup>8</sup>

In English, the literal translation of (27) is unambiguous; it can only mean "Ibrahim says that I was wrong". The meaning of *I* is fixed, referring exclusively to *the speaker of the utterance*, and never the *attitude holder* (Ibrahim). In Tsez, however, (27) is ambiguous out of context. It could either mean that the speaker of the utterance is wrong (i) or that Ibrahim, the speaker in the reported context (~attitude-holder), is wrong (ii). In other words, the utterance context calls for interpretation (i), because all the indices in the utterance are interpreted in relation to the speaker (*I*); meanwhile, the local context imposes interpretation (ii). This latter interpretation involves *indexical shift*: a shift in the interpretation of the indexical expression (in this case, *I*) from the (expected) utterance context to the context of Ibrahim's speech act.

<sup>8</sup> Another way to capture the shifting nature of indexicals is to analyze them as having two kinds of meaning (Kaplan 1977/1989, and many others who followed him). The first kind of meaning is often called 'character' or 'linguistic meaning'; the second sort is often called 'content'. Using this terminology, we can say that *I* has a single character (or linguistic meaning), but has different content in different contexts.

(28) *Indexical shift*

The semantic value of an indexical expression can be changed from being determined by the utterance context to being determined by the context of the reported speech act

Under indexical shift, two readings become possible: the expected reading, determined by the context of the utterance (I will be referring to this as the indexical reading, IR), and the shifted reading (SR), which is made available only by the context of the reported speech act, not the overall utterance. Under SR, it is the attitude holder rather than the speaker of the utterance who serves as the reference point.

Although philosophers of language have explicitly rejected the phenomenon of indexical shift on the contention that the semantic values of *I*, *you*, *now*, etc. are innately identified with their referents, this pattern has nevertheless proven quite pervasive across the world's languages. So far, it has been documented in Navajo (Speas 1999), Donno So (Culy 1994), Amharic (Schlenker 1999, 2003), Nez Perce (Deal 2012), Matsigenka (Munro et al. 2012), Slave (Rice 1986), Uyghur (Sudo 2012; Shklovsky and Sudo 2014), Zazaki (Anand 2006; Anand and Nevins 2004), Tatar (Podobryaev 2014), Aghem (Hyman 1988; Hyman and Polinsky 2009), Gokana (Hyman and Comrie 1981), Wan and several other West African languages (Nikitina 2012, 2013), and a number of sign languages (Zucchi 2004, Quer 2005). Within Nakh-Dagestanian, indexical shift (under a different name) has been documented at least in Hinuq (Forker 2013: 662-664), a language closely related to Tsez; in Udi (Schulze-Fürhoff 1994: 500); in Kryz (Authier 2009: 289ff.); in Chechen (Nichols 1994a: 61), and in Ingush (Nichols 1994b: 128; Nichols 2011: 578ff.).

## 4.2 Indexical shift contexts

Tsez clearly belongs on the list of indexical-shifting languages. Indexical shift from the speaker to an attitude holder is permitted in, and only in, finite complement clauses, so only such clauses are ambiguous with respect to the referential interpretation of pronouns. Here, again, the difference between finite complement clauses and direct quotative clauses becomes relevant. Consider the following examples (a variation on example (19) above). The examples in (29a, b) involve direct quotation (indicated by the fact that the quotative-marked clauses are not predicate-final); in these examples, 'I' necessarily refers to the attitude holder (Mariyat). In (30), by contrast, the clause marked by *=λin* is predicate final, and its interpretation is ambiguous between IR and SR:

- (29) a. Mariyat-ā      ʃarza boy-s      [magazine-y-ā-yor  
 Mariyat-ERG    complain-PST.WIT    store-OS-IN-VERS-QUOT

y-ik'-ān      di=*λin*].

II-go-FUT.DEF 1SG.ABS(.II)=QUOT

'Mariyat complained, "I have to go to the store."' = 'Mariyat complained that she has to go to the store.'

NOT: 'Mariyat complained that I have to go to the store.' (IR)

- b. Mariyat-ä      Ğarza boy-s      [di      y-ik'-ān  
 Mariyat-ERG    complain-PST.WIT    1SG.ABS(.II)    II-go-FUT.DEF  
 magazine-y-ā-γor=λin].  
 store-OS-IN-VERS-QUOT  
 'Mariyat complained, "I have to go to the store."' = 'Mariyat complained that  
 she has to go to the store.'  
 NOT: 'Mariyat complained that I have to go to the store.' (IR)
- (30) Mariyat-ä      Ğarza boy-s      [di      magazine-y-ā-γor  
 Mariyat-ERG    complain-PST.WIT    1SG.ABS(.II)    store-OS-IN-VERS  
 y-ik'-ān=λin].  
 II-go-FUT.DEF=QUOT  
 'Mariyat complained that I have to go to the store.' (IR)  
 'Mariyat complained that she has to go to the store.' (SR)

Recall that at the end of section 3 I raised the question of whether imperatives and exclamatives embed under =λin. If imperatives and exclamatives were genuinely embedded, we can expect that such clauses would allow indexical shift, as in (30). If however they represent direct quotation, as in (29a, b), no shift is expected. Consider the following near-minimal pair, where the clause followed by =λin is declarative in (31) and imperative in (32). Only indexical reading is possible with the imperative, which suggests that imperatives in Tsez do not embed—just as they do not embed in many other languages.

- (31) Nes-ä      [dä-q      bašiq<sup>5</sup>oy      r-ukaro-λ=λin]      esir-si.  
 DEM.I-ERG    1SG-POSS.ESS    ring.ABS.IV    IV-show-OPT-QUOT    ask-PST.WIT  
 'He asked (her) to show me the ring.' (IR)  
 'He asked (her) to show him the ring.' (SR)
- (32) Nes-ä      [dä-q      bašiq<sup>5</sup>oy      r-ukar-o=λin]      esir-si.  
 DEM.I-ERG    1SG-POSS.ESS    ring.ABS.IV    IV-show-IMPER-QUOT    ask-PST.WIT  
 'He asked (her), 'Show me the ring.' (SR)  
 NOT: 'He asked (her) to show me the ring.' (IR)

Clearly there is nothing wrong with the verb *es-* 'ask', which allows indexical shift in (31). The availability of indexical shift, therefore, is a diagnostic that allows us to distinguish between direct quotation and finite-clause complementation in a more nuanced way. Indexical shift is possible only in the latter.

Further, finite-clause embedding stands out as the only type of Tsez embedding where indexical shift is possible. Other types of embedded clauses, for example, clausal nominalizations, permit only the non-shifted reading (IR). Compare the finite complement clause in (33a), which allows indexical shift, to the nominalized clause in (33b), which does not.

- (33) a. Žoy-ä      neŋo-qo-r      [babi-y-ä      di  
 lad-ERG      DEM.nI-POSS-LAT    father-ERG    1SG.ABS(.I)

Ø-egir-si=λin] esi-n.

I-send-PST.WIT-QUOT tell-PST.nWIT

(i) 'The youngster told her that the father had sent me.' (IR)

(ii) 'The youngster<sub>i</sub> told her that the father had sent him<sub>i</sub>.' (SR)

b. Žoy-ä neŋo-qo-r [babi-ä di  
lad-ERG DEM.nI-POSS-LAT father-ERG 1SG.ABS(.I)

Ø-egä-ru-li] esi-n.

I-send-PST.PTCP-NMLZ tell-PST.nWIT

'The youngster told her that the father had sent me.' (IR)

NOT: 'The youngster<sub>i</sub> told her that the father had sent him<sub>i</sub>.' (SR)

Next, indexical shift is possible only within complements embedded under certain *propositional attitude verbs* and *speech verbs*. For example, although the compound verb 'try, attempt' in the example below selects for a clause marked with =λin, indexical shift is impossible:

(34) [Di nesi-x y-ik'-inč'u=λin] xan-e-z kid-b-ä  
1SG.ABS(.II) DEM.I-AD.ESS II-go-FUT.NEG-QUOT king-OS-GEN2 girl-OS-ERG

xalbiki b-odi-n.

attempt.ABS.III III-do-PST.nWIT

'The king's daughter tried to make sure that I (woman speaking) would not marry him.'

NOT: 'The king's daughter tried not to marry him.'

The verbs that allow indexical shift are as follows:<sup>9</sup>

- (35) Verbs that allow indexical shift
- AGR-ukad- 'see'; moŋax AGR-ukad- 'see in a dream'
  - bičzi rod- 'explain'
  - buž(z)i AGR-oq- 'believe'
  - eŋ- 'say'
  - es- 'tell'; heresi es- 'lie'
  - esir- 'ask'
  - harizi rod- 'request, ask'
  - kul er- 'hope'
  - λ'iräy AGR-oq- 'apologize' (lit.: pull someone from above)
  - λ'iräy AGR-oq- 'be forgiven' (lit.: from above become)
  - λ'iri ris- 'promise' (lit.: take upon)
  - pikru bod- 'think' (lit.: do thought)

<sup>9</sup> This list may not be exhaustive; it was established on the basis of narrative texts and elicitations, but I cannot exclude the possibility that other verbs may also permit indexical shift.

- m. p<sup>h</sup>aʎanad- ‘brag, lie’
- n. rok’u roʎ- ‘worry’ (lit.: heart hurts)
- o. šuʎ’-/ šuʎ’-ir- ‘be forgotten/forget’
- p. roži teʎ- ‘promise’ (lit.: give word)
- q. teq- ‘hear’
- r. t’et’r- ‘read’
- s. ʕarza bod- ‘complain’ (lit.: make complaint)

Regardless of their semantics, the verbs on the list in (35) have one thing in common: the first person in the embedded clause is interpreted either as the attitude-holder (the agent of speaking, the holder of a belief or attitude) or as the speaker. For example, with predicates like ‘ask’, the first person in the embedded clause refers either to the one who is asking (attitude-holder) or to the speaker, but not to the person who is being asked:

- (36) [Dey                    šeʎ’u-raqa-xosi                    mašina                    b-ukay-nč’-ä=ʎin]  
 1SG.GEN1                    clothes-IV-SEW-ATTR                    machine.ABS.III                    III-see-PST.WIT.NEG-INTERR-QUOT
- esir-si                    kid-be-q                    eni-y-ä.  
 ask-PST.WIT                    girl-OS-POSS.ESS                    mother-OS-ERG
- ‘Mother asked the girl if she had seen my sewing machine.’ (IR)  
 ‘Mother<sub>i</sub> asked the girl if she had seen her<sub>i</sub> (=mother’s) sewing machine.’ (SR)  
 NOT: ‘Mother asked the girl<sub>k</sub> if she had seen her<sub>k</sub> (the girl’s) sewing machine.’

*Personal pronouns* shift, regardless of their function in the embedded clause. I have already presented examples of a shifted pronoun in subject position; in (37), the shiftable pronoun is a possessor, appearing in the adnominal genitive. Thus, the structural position of the pronoun does not affect the possibility of indexical shift.

- (37) [Dey                    uži                    ʕalaq’ Ø-oq-xo                    Ø-ik’i-x=ʎin]  
 1SG.GEN1                    boy.ABS.I                    skinny I-become-IPFV.CVB                    I-go-PRS-QUOT
- neʎ-ä                    eʎi-s.  
 DEM.nI-ERG                    say-PST.WIT
- ‘She said that my son is getting skinnier and skinnier.’ (IR)  
 ‘She<sub>i</sub> said that her<sub>i</sub> son is getting skinnier and skinnier.’ (SR)

Indexical shift is equally possible for second person pronouns. For example,

- (38) Irbahin-ä                    zarema-qo-r                    [mi                    ʎ’ir-āy  
 Ibrahim-ERG                    Zarema-POSS-LAT                    2SG.ABS(.II)                    above-ABL  
 y-oq-si=ʎin]                    esi-s.  
 II-become-PST.WIT-QUOT                    tell-PST.WIT
- ‘Ibrahim told Zarema that you are forgiven.’ (IR)  
 ‘Ibrahim told Zarema<sub>i</sub> that she<sub>i</sub> was forgiven.’ (SR)

- (39) [Debe-r            r-oq-si= $\lambda$ in]                     $\lambda$ 'ir-äy            ža  
 2SG-LAT            nIPL-become-PST.WIT-QUOT    above-ABL            DEM.ABS(.II)

y-oŷ-no.<sup>10</sup>

II-pull-PST.nWIT

‘(They) apologized to her for treating you badly.’ (IR)

‘(They) apologized to her for treating her badly.’ (SR)            (Isis righ:15)

Since Tsez freely allows the omission of argument (and adjunct) noun phrases, a question arises: is the same sentence ambiguous with a null pronoun? As the example below shows, it is not only ambiguous, but also has additional interpretations according to which the addressee of the utterance was wrong, or a third party was wrong:

- (40) Irbahin-ä            [*pro*            řayibiyaw            yoł= $\lambda$ in]            ełi-x.  
 Ibrahim-ERG    1SG.ABS            wrong/foolish            be.PRS-QUOT    say-PRS  
 ‘Ibrahim says that I am wrong.’ (IR)  
 ‘Ibrahim says that you are wrong.’ (IR)  
 ‘Ibrahim<sub>i</sub> says that he<sub>i</sub> is wrong.’ (SR)  
 ‘Ibrahim<sub>i</sub> says that he<sub>j</sub>/she/they is/are wrong.’ (SR)

As the pronominal index shifts, so does the interpretation of some spatial and directional expressions. In particular, Tsez distinguishes two forms of the verb ‘give; sell’, depending on whether the transfer happens from the reference point (e.g., the speaker) toward someone else (*teł-*) or toward the reference point (including the speaker), from someone else (*neł-*).<sup>11</sup> The contrast can be illustrated by the following imperatives:

- (41) a.    *pro*    micxir                    *pro*/där            neł!  
                  money.ABS.III                    1.LAT            give.IMPER  
                  ‘Give me (the) money!’
- b.    *pro*    micxir                    *pro*/nesir            teł!  
                  money.ABS.III                    DEM.LAT            give.IMPER  
                  ‘Give s.o./him (the) money!’

These two verbs, when embedded under = $\lambda$ in, can be interpreted as associated with the attitude holder or with the speaker of the utterance. Thus, they also participate in the pattern of shift. This is illustrated in the following example, where the reference point of *neł-* can be either the utterance speaker or the person who is making the promise:

<sup>10</sup> In the context of the fairy tale from which this sentence it is taken, it is unambiguously interpreted as shifted. The verb AGR-*oq-* ‘become’ is used in the embedded clause of an idiomatic reading; with a lative object, it means ‘to be unpleasant/nasty to someone’.

<sup>11</sup> See the verb *neł-* in example (26) above.



- (42) [Di                    mežu-qo-r      ʔor-qo-r                    ʔono-t'a            yʕuruš  
 1SG.ABS                2PL-POSS-LAT    three.OS-POSS-LAT      three-DISTR      rouble  
  
 neλ-ān=λin]                roži teλ-si                    nes-ä.  
 give-FUT.DEF-QUOT    promise-PST.WIT            DEM.I-ERG  
 'He promised that I will give you three roubles each.' (IR)  
 'He promised that he will give you/them three roubles each.' (SR)

I have also tried to test shifting with expressions denoting right and left, but with mixed results. Speakers accept the shift sometimes and reject it in other contexts, the only difference seeming to be in lexicalizations. In (43), the shifted reading of the embedded clause is possible, and the expression 'left hand' is interpreted in reference to the speaker of the utterance under IR and to the attitude holder under SR.

- (43) [Di                    ža                    keč'o-z                reλ'i-d                ayʕur-o-λ'  
 1SG.ERG                DEM.ABS                left-GEN2                hand-INS                wheel-OS-SUPER.ESS  
  
 eqer-si=λin]                nes-ä                    eλi-s.  
 put-PST.WIT-QUOT      DEM.I-ERG                say-PST.WIT  
 'He said that I had put it on the wheel with my/\*his left hand.' (IR)  
 'He said that he had put it on the wheel with his/\*my left hand.' (SR)

But in the following example, where the expression 'to the right' is adverbial, the only possible construal is the interpretation where the speaker of the utterance serves as the reference point.

- (44) [Kut'yoλ'a      Ø-ik'-ān=λin]                eλi-s                    žek'-ä.  
 to.the.right      I-go-FUT.DEF-QUOT    say-PST.WIT      man-ERG  
 'The man said that I will be going to my right.' (IR)  
 'The man said that he will be going to my/\*his right.' (SR)

Even more categorically, we find that the index of some temporal or locative deictic expressions does not. In (45), *yude* 'tomorrow' could in principle mean 'the day after the moment of the utterance [now]' or 'last Sunday'. Yet even when the sentence below describes Ibrahim's (not the speaker's) plans, it still refers to the day after the time of the utterance, not the Sunday of last week. The adverbial *yude* can only refer to the previous Sunday under the direct-quotation reading.<sup>12</sup>

- (45) [Di                    yude                    kino-me-ł-xor                Ø-ik'-ān=λin]                eλ'i  
 1SG.ABS(.I)                tomorrow                movie-OS-CONT-VERS    I-go-FUT.DEF-QUOT      past  
  
 šamat-λ'o                    eλi-s                    irbahin-ä.  
 Saturday-SUPER.ESS      say-PST.WIT                Ibrahim-ERG

<sup>12</sup> The restriction against shifting the meaning of 'tomorrow' is not unique to Tsez; it is also observed in Navajo (Speas 1999).

- (i) 'Ibrahim said last Saturday that I was going to the movies tomorrow.' (IR)  
(tomorrow from the moment the entire utterance is produced;  
NOT: last Sunday)
- (ii) 'Ibrahim said last Saturday that he was going to the movies tomorrow.' (SR)  
(tomorrow from the moment the entire utterance is produced;  
NOT: last Sunday)
- (iii) 'Ibrahim said last Saturday, "I am going to the movies tomorrow."' (DQ)  
(last Sunday)

Similarly, (46) includes the adverb *elo*, which is potentially ambiguous between 'here' and 'there'. Regardless of the interpretation of the sentence as indexical or shifted, this adverb still has the same interpretation, and the reference point is the position of the speaker, not the attitude-holder.

- (46) [Elo     dā-q                     q'ʰano k'onk'a                     zow-n=λin]  
there 1SG-POSS.ESS two bicycle.ABS.III be.PST-PST.nWIT-QUOT
- nesi-r                     bič'zi                     r-oq-no.  
DEM.I-LAT understand IV-become-PST.nWIT  
'He understood that I must have had two bicycles there/here.'  
'He<sub>i</sub> understood that he<sub>i</sub> must have had two bicycles there/here.'

These data confirm that indexical shift is not a free-for-all process, but is constrained by certain principles. However, relatively little is known about the properties of indexical shift beyond the domain of pronouns, so cross-linguistic generalizations in this domain may be premature.

Overall, indexical shift is very common in texts and in spontaneous discourse. Occasionally, when several clausal complements occur one after another, it is possible to find an embedded complement with demonstratives — for which no possibility of shifting exists — followed by another embedded complement with a shifted first or second person pronoun. Here is a typical example from a text:<sup>13,14</sup>

- (47) Tawad-ā             harizi                     r-odi-n                     Ražbadin-qo  
Tawadi-ERG request.ABS.IV IV-do-PST.nWIT Rajbaddin-POSS.ESS
- [nesi-s-no                     halmay-li-s-no                     siršayʰa                     ḥadur  
DEM.I-GEN1-and friend-NMLZ-GEN1-and horses.ABS.nIPL ready
- r-od-o=λin],  
nIPL-do-IMPER-QUOT

<sup>13</sup> The nominalized word *halmayli* (from *halmay* 'friend') has two meanings, 'friendship' or, less commonly, 'a group of friends (collective)'. Here it is used in the collective reading.

<sup>14</sup> One of the characters in this text is named Tawadi, which is the Georgian word for 'prince'; however, in the Tsez text this word is used just as a regular proper name.

[žedu	howži-tow	xizo-qʼim-e-r	b-uti-n	b-ikʼ-a
1PL.ABS.IPL	now-FOC	back-OS-LAT	IPL-turn-PFV.CVB	IPL-go-INF

b-āy-x=λin].

IPL-must-PRS-QUOT

‘Tawadi<sub>i</sub> asked Rajbaddin<sub>j</sub> to get his<sub>i</sub> and the friends<sub>k</sub>’ horses ready; we<sub>i+j+k</sub> must go back right away.’ (Ražbadinno Tawadin:85)

The first embedded clause (*nesisno halmaylisno siršayʼa ħadur rodoλin* ‘lit.: he and his friends, get the horses ready’) includes a demonstrative, which is interpreted as coreferential with the subject of the main clause (Tawadi); this is consistent with the generalizations outlined above. The addressee is also male, so there is a potential for ambiguity. The embedded clause is closed off by =λin. In the next embedded clause, presumably embedded under the presupposed verb *eλin* ‘said’, we find a shifted first person pronoun, *žedu*, the index of which is associated with the attitude holder and his referential group, not the speaker and hearer of the utterance. Examples like this indicate that indexical shift is clause-bound and does not spread over the entire discourse. However, the order of embedded clauses in which the non-shifted clause precedes the shifted clause is strongly preferred over the opposite order: shift >> no shift.

### 4.3 Properties of indexical shift in Tsez

Previous research on some of the languages listed in section 4.1 has uncovered a number of recurring properties associated with indexical shift. In this section, I will show that several of these properties can be found in Tsez; their presence offers further support for the conclusion that Tsez indeed has indexical shift.

The first such property involves the distinction between *de dicto* (‘what is said’) and *de re* (‘related to a particular thing’) descriptions (Quine 1980). To understand this distinction, consider a situation in which Mary knows of Bill under two guises. Under his guise as the company boss, Mary thinks of Bill as a conscientious character who would not engage in rummaging through people’s offices in the evening and blogging or tweeting about what was found there. However, without knowing it was him, Mary also saw Bill sneaking out of her office late in the evening, and she thinks of the person she saw as a suspicious character nosing around. We can associate the first guise with the term ‘Boss’, and the second with the term ‘Snitch’. Assuming this distinction, the following sentence is false; it is impossible to alternate ‘Boss’ and ‘Snitch’ freely without violating the truth conditions on Mary’s beliefs.

(48) Mary believes that the Boss is the Snitch.

The infelicity of (48) is the key to the semantic distinction between *de dicto* and *de re* construals:

(49) Semantics of *de re/de dicto*: An expression is *semantically de re* just in case it permits substitution of a co-designating term without the violation of truth conditions (*salva veritate*). Otherwise, it is *semantically de dicto*.

Quotations do not support *de re* construal, i.e., the construal under which a noun phrase is interpreted as denoting a specific individual. Imagine that Ibrahim met Ali but does not know that Ali is actually the boss. The English sentence in (50a) would then be inappropriate to describe Ibrahim's encounter, because the noun phrase *the boss* must be interpreted *de dicto*. Instead, (50b) should be used.

- (50) a. Ibrahim said, "I have spoken to the boss of the company."  
 b. Ibrahim said, "I have spoken to Ali."

In Tsez, however, if the speaker wants to describe to a third party that Ibrahim has spoken to Ali, the equivalent of (50) is felicitous:<sup>15</sup>

- (51) [Di                ħakim-qo        xabaryay-si=λin]        dā-q                eλi-s  
 1SG.ABS(.I)        boss-POSS.ESS    talk-PST.WIT-QUOT        1SG-POSS.ESS    say-PST.WIT  
 irbahin-ä.  
 Ibrahim-ERG  
 'Ibrahim told me that he had talked to Ali.' (lit.: I spoke to the boss)

Thus, the description 'the boss' in (51) is interpreted *de re*, despite the presence of the quotative marker on the embedded clause. This indicates that the clause marked by =λin is a genuine embedding and allows indexical shifting.

Next, wh-words in genuine quotatives cannot interact with the material in a higher clause. In the following English sentences, *what* in the quoted question does not take scope over the word *say*; accordingly, these examples do not require an answer, because they are not questions.

- (52) a. Ibrahim said, "What don't you understand?"  
 b. Did Ibrahim say, "What don't you understand?"

In Tsez, the corresponding sentence involves indexical shift and *šebi* 'what' takes scope over *eλ-* and constitutes a genuine question, calling for an answer.

- (53) Irbahin-ä        [dā-r                šebi                r-iy-x-ānu=λin]  
 Ibrahim-ERG        1SG-LAT                what.ABS.IV        IV-know-PRS-NEG-QUOT  
 eλ-ä?  
 say-PST.WIT.INTERR  
 'What did Ibrahim say that I did not know?' (IR)  
 'What did Ibrahim<sub>i</sub> say that he<sub>i</sub> did not know?' (SR)

Another recurrent property of indexical shift is *shift-together*, according to which the reference of all the shifted expressions in a local domain must be consistent. If a finite clausal complement includes both a first and a second person pronoun, either neither pronoun shifts, or

<sup>15</sup> See Deal (2012) for similar observations in Nez Perce.

both do. In the following sentence, only two interpretations are possible:<sup>16</sup>

- (54) Irbahin-ä      zarema-q-or      [di      dow-λ'o-r  
Ibrahim-ERG      Zarema-POSS-LAT      1SG.ABS(.I)      2SG-SUPER-LAT  
  
bixzi      Ø-oq-si=λin]      eλi-s.  
angry      I-become-PST.WIT-QUOT      say-PST.WIT  
'Ibrahim told Zarema that I was angry with you.' (IR)  
'Ibrahim<sub>i</sub> told Zarema<sub>k</sub> that he<sub>i</sub> was angry with her<sub>k</sub>.' (SR)  
NOT: 'Ibrahim<sub>i</sub> told Zarema<sub>k</sub> that he<sub>i</sub> was angry with you.'  
NOT: 'Ibrahim<sub>i</sub> told Zarema<sub>k</sub> that I was angry with her<sub>k</sub>.'

Likewise, if an embedded clause has two instances of the same pronoun, both have to be indexical or both have to shift. It is impossible to have just one shifted pronoun.

- (55) [Dä-z      eniw=babi-y-ä di      becizi Ø-oy-x=λin]  
1SG-GEN2      parents-ERG      1SG.ABS(.I)      praise I-do-PRS-QUOT  
  
Irbahin-ä      eλi-s.  
Ibrahim-ERG      say-PST.WIT  
'Ibrahim said that my parents are praising me.' (IR)  
'Ibrahim<sub>i</sub> said that his<sub>i</sub> parents are praising him<sub>i</sub>.' (SR)  
NOT: 'Ibrahim<sub>i</sub> said that my parents are praising him<sub>i</sub>.'  
NOT 'Ibrahim<sub>i</sub> said that his<sub>i</sub> parents are praising me.'

These shift-together facts are consistent with observations on indexical shift in other languages (see Anand and Nevins 2006 for Zazaki; Podobryaev 2014 for Tatar). The existence of this constraint suggests that the mechanism that is responsible for indexical shift takes scope over the entire embedded clause, not just a particular pronoun.

The data on plural pronouns are much less clear. Tsez does not have an inclusive/exclusive distinction in the plural, so indexical shift is harder to detect. When a plural personal pronoun is used, there is often a possibility that the attitude holder is included in the relevant group. However, in contexts where the contrast is presented in such a way that the attitude holder and the referents of the plural pronoun are well differentiated, both readings are possible, just like in the singular:

- (56) [El-ä      q'una-n      yedu      halt'i      b-oy-s=λin]  
1PL-ERG      two-COLL      DEM      work.ABS.III      III-do-PST.WIT-QUOT  
  
zarema-λ'o-r      hakim-qo-r      eλi-s      irbahin-ä.  
Zarema-SUPER-LAT      boss-POSS-LAT      say-PST.WIT      Ibrahim-ERG  
'Ibrahim<sub>i</sub> told the boss<sub>j</sub> about Zarema<sub>k</sub> that we (Zarema and the speaker) had done that

<sup>16</sup> The embedded verb in (54) overtly marks gender agreement. If the speaker of that utterance is a woman, ambiguity does not arise and only the shifted interpretation is possible (the embedded verb would have to be marked for gender II to reference the female speaker).

work.’

‘Ibrahim<sub>i</sub> told the boss<sub>j</sub> about Zarema<sub>k</sub> that the two of them<sub>i+k</sub> had done that work.’

- (57) [Elu-s            iħu            telersi    yot=λin]        λirba-z-ä            elu-qo-r  
 1PL-GEN1        river.ABS.III    deep    be.PRS-QUOT    guest-OS.PL-ERG    1PL-POSS-LAT
- bičzi            r-oy-xosi        zow-s.  
 explain        IV-do-PRS.PTCP        AUX.PST-PST.WIT
- ‘The guests were explaining to us that our river is deep.’ (IR)  
 ‘The guests<sub>i</sub> were explaining to us that their<sub>i</sub> river is deep.’ (SR)

Let me now turn to the encoding of third persons. To indicate third person, Tsez uses only demonstratives; there are no third person pronouns except the silent one (*pro*). Embedded demonstratives can never refer to utterance speakers and their addressees. On the other hand, the attitude holder and his/her addressee *can* be expressed by demonstratives in finite embedded clauses. Compare the now-familiar example with a demonstrative in place of the first person pronoun:

- (58) Irbahin-ä        [ža            řayibiyaw            yot=λin]        eλi-x.  
 Ibrahim-ERG    DEM.ABS        wrong/foolish        be.PRS-QUOT    say-PRS
- ‘Ibrahim<sub>i</sub> says that he<sub>i/j</sub> was wrong.’

Example (58) is ambiguous: *ža* may refer to the attitude holder or to yet another third person. Because it is impossible to tell whether an omitted argument was represented by a pronoun or a demonstrative, we find the same type of ambiguity in sentences with argument drop; consider the multiply ambiguous example (35) above.

#### 4.4 Forcing indexical shift: Long-distance reflexives

Repeated below is the sentence that I used to introduce indexical shift in Tsez:

- (59) Irbahin-ä        [di            řayibiyaw            yot=λin]        eλi-x.  
 Ibrahim-ERG    1SG.ABS        wrong/foolish        be.PRS-QUOT    say-PRS
- ‘Ibrahim says that I was wrong.’ (IR)  
 ‘Ibrahim<sub>i</sub> says that he<sub>i</sub> was wrong.’ (SR)

Of course, sentences of the sort discussed here are not always ambiguous, and it takes serious elicitation work to explore the possibilities present in Tsez, or any other language for that matter. In addition to the general context, which comes to the rescue when ambiguities between indexical and shifted interpretations arise, two disambiguating strategies deserve special discussion here: binding and agreement. This section will consider indexical shift in the context of binding.

Tsez has two sets of reflexive pronouns: a compound reflexive which is strictly local, and a reflexive formed with the focus particle *-tow*, which is strictly long-distance. To illustrate the contrast between the two, consider the following pairs of examples. In (60a), we observe a compound (two-word) reflexive composed of the demonstrative in the invariable ergative form

(*nesä*) and the same demonstrative in the form that is appropriate to the case called for by the verb; in this particular example, the reflexive is in the absolutive, so the second element of the compound is the absolutive demonstrative *ža*. This compound reflexive is bound by the ergative DP *Irbahinä*. In (60b), the absolutive position hosts the demonstrative *ža*, and the interpretation must be non-reflexive.

- (60) a.    Irbahin-ä      nesä ža      žek'-si.  
              Ibrahim-ERG   REFL.IABS   hit-PST.WIT  
              'Ibrahim hit himself.'
- b.    Irbahin-ä      ža      žek'-si.  
              Ibrahim-ERG   DEM.ABS   hit-PST.WIT  
              'Ibrahim<sub>i</sub> hit him<sub>k/\*i</sub>/her.'  
              NOT: 'Ibrahim hit himself.'

Let me now compare (60a) with the example below, where a compound reflexive is separated from its binder by a clause boundary. The binding is no longer possible, which indicates that Tsez compound reflexives are strictly local; in the following example, with the antecedent in the matrix clause and the compound reflexive is in the relative clause, binding is impossible:

- (61) \*Kid-b-ä      tungi      [nelä nel-ä      tel      zäw-ru]-zo  
              girl-OS-ERG   jug.ABS.III   REFL.nI-IN.ESS   inside   be.PST-PST.PTCP-ATTR.OBL
- li-d      esay-s.  
              water-INS   wash.TR-PST.WIT  
              ('The girl washed the jug with the water that was in itself.')

The only way to establish coreference between a non-local binder and an expression inside a different clause is by using a long-distance reflexive. Long-distance reflexives are formed from a regular pronoun (for first and second person) or demonstrative (for third person) and the focus particle *-tow*.<sup>17</sup> Compare the ungrammatical example in (52), where the compound reflexive cannot be bound across the relative clause boundary, and its grammatical counterpart below:<sup>18</sup>

<sup>17</sup> The particle is also found outside reflexive contexts, as can be seen in examples (8) and (47) above. Stated informally, the overall function of *-tow* is the expression of emphasis and contrast (Polinsky 2015: Particles). It appears on those expressions that contradict the expectations created by the preceding discourse or general world knowledge (cf. Forker 2013: 423 for a similar use of the cognate particle in Hinuq). Given that *-tow* has a different interpretation outside of binding contexts, I assume that it is synchronically distinct from the *-tow* that forms long-distance anaphors.

<sup>18</sup> In what follows, I will be glossing the relevant form as LD.REFL—long-distance reflexive, without showing its morphological division.

- (62) Kid-b-ä            tungi            [nelätow            tel            zäw-ru]-zo  
 girl-OS-ERG    jug.ABS.III    LD.REFL.nI.IN.ESS    inside    be.PST-PST.PTCP-ATTR.OBL
- li-d            esay-s.  
 water-INS    wash.TR-PST.WIT  
 ‘The girl washed the jug with the water that was in itself.’

Long-distance reflexives cannot be bound by a clausemate antecedent; compare (60a) above, with a locally bound compound reflexive and its ungrammatical counterpart with a long-distance reflexive below.<sup>19</sup>

- (63) a.    \*Irbahin-ä    žatow            žek’-si.  
           Ibrahim-ERG   LD.REFL.ABS   hit-PST.WIT  
           (‘Ibrahim hit himself.’)
- b.    Irbahin-ä    ža-tow            žek’-si.  
           Ibrahim-ERG   DEM.ABS-FOC   hit-PST.WIT  
           ‘Ibrahim hit HIM/HER.’

A contrast between compound, local, reflexives and long-distance reflexives, formed with a focus or restrictive particle is not unique to Tsez and is quite common across Nakh-Dagestanian languages; see Kibrik (2001: 615-681) for Bagwali, Lyutikova (2000) for Tsaxur, and Alekseev and Ataev (1997) for Avar.

With this contrast in place, I will now explore its role in the choice between indexical and shifted reading. In those contexts where there is a potential ambiguity between indexical reading and shifted reading, the use of the long-distance reflexive forces the switch to a shifted reading.

- (64) If a finite complement clause includes a long-distance reflexive, only the shifted-reading interpretation is possible

To illustrate this phenomenon, compare examples (65a) and (65b) for first person and examples (66a) and (66b) which feature second person expressions. In the (a) examples, where a regular pronoun is used, both indexical and shifted readings are possible. But in the (b) examples, where long-distance reflexives (boldfaced) are used, only the shifted reading is possible.

- (65) a.    Nes-ä            [dä-q            q’<sup>s</sup>anoquno    λeb            yoł=λin]  
           DEM.I-ERG    1SG-POSS.ESS   forty            year.ABS.III   be.PRS-QUOT
- eλi-s.  
 say-PST.WIT  
 ‘He said that I was 40 years old.’            (IR)

<sup>19</sup> Since *-tow* has a life of its own as a focus marker (see fn. 17), this sentence can be interpreted as grammatical as long as the ergative DP and the demonstrative are disjoint and the demonstrative is interpreted as in focus. I indicate the two different readings by glossing *ža-tow* in two different ways.



‘He<sub>i</sub> said that he<sub>i/\*j</sub> was 40 years old.’ (SR)

b. Nes-ä [däqtow q’anoquno λeb yol=λin]  
DEM.I-ERG LD.REFL.1SG-POSS.ESS forty year.ABS.III be.PRS-QUOT

eλi-s.

say-PST.WIT

‘He<sub>i</sub> said that he<sub>i/\*j</sub> was 40 years old.’ (SR)

NOT: ‘He said that I was 40 years old.’ (IR)

(66) a. Di Sult’an-e-r [dow-de sadaq šahar-y-ā-γor  
1SG.ERG Sultan-OS-LAT 2SG-APUD.ESS with city-OS-IN-VERS

Ø-ik’-ān=λin] roži teλ-si.

I-go-FUT.DEF-QUOT word.ABS.IV give-PST.WIT

‘I (man speaking) promised Sultan to go to the city with you.’ (IR)

‘I (man speaking) promised Sultan<sub>i</sub> to go to the city with him<sub>i/\*j</sub>.’ (SR)

b. Di Sult’an-e-r [dowdetow sadaq šahar-y-ā-γor  
1SG.ERG Sultan-OS-LAT LD.REFL.2SG-APUD.ESS with city-OS-IN-VERS

Ø-ik’-ān=λin] roži teλ-si.

I-go-FUT.DEF-QUOT word.ABS.IV give-PST.WIT

‘I (man speaking) promised Sultan<sub>i</sub> to go to the city with him<sub>i/\*j</sub>.’ (SR)

NOT: ‘I promised Sultan to go to the city with you.’ (IR)

Thus, the use of a long-distance reflexive in an embedded clause with =λin blocks the indexical-reading interpretation.

Long-distance reflexive in an embedded clause can be bound by a quantified expression, for example,

(67) Žiwžiw kid-b-ä [nāzon-λ’äy ditow hič’č’a  
every girl-OS-ERG all.OBL-SUPER.ABL LD.REFL.1SG.ABS most

bercinaw yol=λin] pikru b-oy-n.  
beautiful be.PRS-QUOT thought.ABS.III III-do-PST.nWIT

‘Every girl thought that she was the prettiest of all.’ (SR)

NOT: ‘Every girl thought that I was the prettiest of all.’ (IR)

Focus expressions, for instance, phrases occurring under the scope of ‘even’ or ‘only’ can bind long-distance reflexives as well:<sup>20</sup>

<sup>20</sup> The exceptive structure ‘only X’ used in (68) consists of the ad-essive form of the noun followed by the case called for by the predicate (in this example, ergative); the verb in exceptives must appear in the negative form.

- (68) [Ditow                      λ'iri-xor              Ø-ik'i-x=λin] 'Alä-x              'Al-ä  
 LD.REFL.1SG.ABS(.I)    above-AD.LAT    I-go-PRS-QUOT    Ali-AD.ESS              Ali-ERG

eλi-nč'u.

say-PST.WIT.NEG

'Only Ali said that he was going up.' (SR)

NOT: 'Only Ali said that I was going up.' (IR)

- (69) [Ditow                      λ'iri-xor              Ø-ik'i-x=λin] 'Al-ä-kin              eλi-x.  
 LD.REFL.1SG.ABS(.I)    above-AD.LAT    I-go-PRS-QUOT    Ali-ERG-FOC              say-PRS

'Even Ali is saying that he is going up.' (SR)

NOT: 'Even Ali is saying that I am going up.' (IR)

The use of long-distance reflexives in shifted contexts cannot be reduced to simple coindexation. If the binder in the matrix clause is not a constituent the long-distance reflexive cannot be licensed in the complement clause. Compare example (67), where the compound verb *pikru bod-* combines with the ergative subject, and this subject can antecede a long-distance reflexive, with the following example where we find a semantically close expression *rok'λ'or pikru bay-* 'think' (lit.: on heart thought come(s)). The attitude holder can only be expressed as the possessor on the noun *rok'* 'heart', hence it is a subconstituent of a PP in the matrix clause. The binding of a long-distance reflexive in this case is impossible:<sup>21</sup>

- (70) ??Nełai-z              rok'-λ'o-r              pikru              b-ay-n  
 DEM.nI-GEN2    heart-SUPER-LAT              thought.ABS.III              III-come-PST.nWIT

[ditow                      nesi-r              kumak              b-od-ān=λin].  
 LD.REFL.1SG.ERG              DEM.I-GEN              help.ABS.III              III-do-FUT-QUOT  
 ('She thought that she will help him.')

Next, shifted reading is possible as long as one of the constituents in the embedded clause is bound. That seems to be a side effect of the shift-together property that I discussed earlier; the reference of the pronouns with respect to the speaker of the utterance of the attitude holder must be locally consistent. With long-distance binding, if there are several pronouns in an embedded clause, there is a preference for the higher pronoun to appear in the long-distance reflexive form, but speakers also accept a long-distance pronoun in a structurally lower position. Compare the well accepted (71a,b) and the more marginal, albeit not impossible, (71c). In (71a), both referents mentioned in the embedded clause are expressed by long-distance reflexives. In (71b), only the highest (the subject of the embedded clause) is expressed by a long-distance reflexive, and the freestanding pronoun assumes the shifted reading, presumably under the shift-together. And finally in (71c), the structurally lower constituent is expressed by a long-distance reflexive, but the shift-together presumably blocks all the readings incompatible with the shifted

<sup>21</sup> The sentence in (70) is acceptable in the irrelevant reading where *di-tow* is interpreted as a focused first singular pronoun, not a long-distance reflexive. On that interpretation, both the indexical reading and the shifted reading are possible ('She thought that *I* will help him' and 'She thought that *SHE* will help him').

interpretation. In my view, the relevant interpretations arise from a combination of the binding principles and the constraints on interpretation imposed by the shift-together.

- (71) a.      Irbahin-ä      Zarema-q-or      [ditow  
                  Ibrahim-ERG      Zarema-POSS-LAT      LD.REFL.1SG.ABS(.I)
- dowλ'ortow**                      bixzi                      Ø-oq-si=λin]                      eλi-s.  
                  LD.REFL.2SG.SUPER.LAT                      angry                      I-become-PST.WIT-QUOT                      say-PST.WIT  
                  'Ibrahim<sub>i</sub> told Zarema<sub>k</sub> that he<sub>i</sub> was angry with her<sub>k</sub>.'                      (SR)
- b.      Irbahin-ä      Zarema-q-or      [ditow                      dow-λ'o-r  
                  Ibrahim-ERG      Zarema-POSS-LAT      LD.REFL.1SG.ABS(.I)      2SG-SUPER-LAT
- bixzi                      Ø-oq-si=λin]                      eλi-s.  
                  angry                      I-become-PST.WIT-QUOT                      say-PST.WIT  
                  'Ibrahim<sub>i</sub> told Zarema<sub>k</sub> that he<sub>i</sub> was angry with her<sub>k</sub>.'                      (SR)
- c.      ?Irbahin-ä      Zarema-q-or      [di                      **dowλ'ortow**  
                  Ibrahim-ERG      Zarema-POSS-LAT      1SG.ABS(.I)      LD.REFL.2SG.SUPER.LAT
- bixzi                      Ø-oq-si=λin]                      eλi-s.  
                  angry                      I-become-PST.WIT-QUOT                      say-PST.WIT  
                  'Ibrahim<sub>i</sub> told Zarema<sub>k</sub> that he<sub>i</sub> was angry with her<sub>k</sub>.'                      (SR)

Looking back at the data presented in this section, it is striking that the binder and the bindee in (65b), (66b), (67), (68), (69) and (71) are in different persons. In (65b), (67), (68), and (69), the binder is a third person but the long-distance reflexive is in first person. In (66b), the binder is again third person, and the bindee is second person. And in (71), we find both first and second person long-distance reflexives with third-person antecedents. As the following example shows, the antecedent does not have to be a third person; here, the binder is a second person:

- (72) [Ditow                      λ'iri-xor                      Ø-ik'i-x=λin]      debe-x                      mi  
                  LD.REFL.1SG.ABS(.I)      above-AD.LAT      I-go-PRS-QUOT 2SG.OS-AD.ESS                      2SG.ERG
- eλi-nč'u.  
                  say-PST.WIT.NEG  
                  'Only you said that you were going up.' (SR)  
                  NOT: 'Only you said that I was going up.' (IR)

This mismatch in person under binding poses an intriguing challenge to the existing theories of binding and anaphora. Even if we assume that binding could be instantiated by means of the Agree operation (cf. Reuland 2011; Hasegawa 2009), there are several major hurdles. The first has to do with the conflict between possible covert movement necessary for binding and the independently attested properties of Tsez movement. Rooryck and Vanden Wyngaerd (2012; 2015) suggest that the syntax of reflexives can be assimilated to that of floating quantifiers in that at some point in the derivation reflexives raise, overtly or covertly, to an adverbial position

from which they c-command their antecedent. With respect to Tsez long-distance reflexives, this would entail the following structure:

(73)  $[_{VP} \text{Ali said } [_{CP} [_{TP} \text{me} \dots]]] \rightarrow$

*Covert adjunction of me to matrix vP*

$[_{VP} \text{me } [_{VP} \text{Ali said } [_{CP} [_{TP} \text{me} \dots]]]]$

However, there is abundant independent evidence that all movement in Tsez is clause-bound (see Polinsky and Potsdam 2001, 2002; Polinsky 2003), which makes the derivation shown in (73) untenable. As an alternative, one could try to posit an intermediary binder, say in the left periphery of the embedded CP, as shown below. However if it is present there, we need to understand why it can only be activated in the presence of a long-distance anaphor.

(74)  $[_{TP} \text{DP}_{\{\phi: 3 \text{ PERSON}\}} [_{CP} \text{Op}_i \dots \text{LD.REFL}_{\{\phi: 1 \text{ PERSON}\}} \dots]]$

$\begin{array}{c} \text{-----} \uparrow \text{-----} \uparrow \\ | \qquad \qquad \qquad | \end{array}$

And finally, even if something along the lines of (74) were established, as shown below, what features are valued under Agree? The mismatch between the person of the antecedent (third person or second person) and the person of bindee remains unaccounted for. Informally speaking, it appears that regular pronouns and demonstratives in the embedded complement clause with *=λin* can be coindexed with any salient antecedent, be it in discourse or in an adjacent clause, whereas long-distance reflexive require a proper c-commanding antecedent.

Given that the contrast between local and long-distance reflexives is quite common in Nakh-Dagestanian, it is important to determine whether other languages related to Tsez show a similar pattern of unusual binding which in turn leads to the shifted interpretation. This area of Nakh-Dagestanian grammars has not been thoroughly researched, but given that a large number of languages in the family have long-distance binding it is possible that the unusual binding observed for Tsez may be found in related languages.

## 5 Conclusions

This short report described the grammatical patterns associated with Tsez finite clauses that combine with the quotative enclitic *=λin*. Based on the distributional properties of such finite clauses and their co-occurrence with different matrix verbs, I suggested that the Tsez *=λin* is structurally ambiguous between a genuine quotative marker, marking direct speech, and a complementizer, heading finite clauses. In the former function, *=λin* can be compared to English *like*, *go* or *all*, as in the examples below (see Buchstaller 2006, 2013, Buchstaller and van Alphen 2012, and further references therein):

(75) She's like, 'I don't know you.'

(76) And he goes, 'So you wanna dance?'

(77) And that lady's all, 'What a moron!'

The quotative does not impose restrictions on the word order of the embedded clause and is compatible with a large set of verbs, including but not limited to verbs of speaking, cognition, and propositional attitude.

As a complementizer heading finite clauses, the marker =*lin* appears on clauses that are strictly predicate-final and attaches directly to that predicate. When selected by propositional attitude verbs, the finite complement clause becomes the context in which the interpretation of pronouns can undergo indexical shift. The pattern of indexical shift in Tsez is in many ways similar to patterns of indexical shift reported for other languages. However, the description of this pattern also adds a novel generalization to the growing body of knowledge about indexical shifts: in Tsez, the shifted interpretation is made obligatory if the embedded clause includes a long-distance reflexive. This usage is particularly surprising given that the binder in the matrix clause and the bindee do not match in person. A formal analysis of this binding is still outstanding, and it is likely that the shift in reading may be just one of its side effects.

All told, we have observed a set of linguistic facts ranging from relatively unsurprising ones that have to do with complementation to the more unusual properties of indexical shift to the unexpected binding results whose explanation is still outstanding.

### Abbreviations

Gender is shown (in Roman numerals) only for absolutive noun phrases, since it is the absolutive determines agreement. Most Tsez nouns are lexically specified for gender; for those noun phrases whose gender depends on the context (epicene nouns, pronouns), that gender is shown in Roman numeral in parentheses.

ABL--ablative  
 ABS--absolutive  
 AD—locative series AD ('by')  
 AGR--agreement  
 APUD—locative series APUD ('near')  
 ATTR--attributive  
 CAUS--causative  
 COLL--collective  
 COND--conditional  
 CONT—locative series CONT ('in mass')  
 CONTR--contrastive  
 CVB--converb  
 DEF--definite  
 DEM--demonstrative  
 DIST—distal  
 DISTR--distributive  
 DQ—direct quote  
 ERG--ergative  
 ESS--essive  
 FCC-- finite clausal complement  
 FOC--focus  
 FUT--future  
 GEN1—genitive 1  
 GEN2—genitive 2  
 IMPER--imperative  
 IN—locative series IN ('in hollow space')  
 INF--infinitive  
 INS--instrument  
 INTERR--interrogative  
 IPFV--imperfective  
 IR—indexical reading  
 LAT—lative  
 LD—long-distance  
 MASD--masdar  
 NEG--negation  
 NMLZ--nominalizer  
 n--non  
 OBL--oblique  
 OS—oblique stem  
 PFV—perfective

PL—plural  
POSS—locative series POSS (‘on, vertical’)  
POT--potentialis  
PROH--prohibitive  
PST--past  
PTCP—participle  
QUOT—quotative  
REFL—reflexive  
RES—resultative  
SG—singular  
SR—shifted reading  
SUPER—locative series SUPER (‘on, horizontall’)  
TOP—topic  
TR--transitive  
VERS—versative  
WIT—witnessed (past)

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