

## Tsez beginnings

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### 1. Introduction<sup>1</sup>

**1.1. Basic facts.** Tsez (Nakh-Daghestanian) is an ergative language in which the verb agrees in grammatical class with the absolutive argument, either the subject of an intransitive or object of a transitive clause.<sup>2</sup> This is illustrated in (1) and (2). In (1), the intransitive verb *-ik'a* 'go' agrees in class with the absolutive subject. In (2), the transitive verb *-išra* 'feed' takes agreement prefixes which are determined by the class of the absolutive object.<sup>3</sup>

- (1) a. kid y-ik'i-s  
girl.ABS.II II-go-PSTEV  
'The girl went.'  
b. ziya b-ik'i-s  
cow.ABS.III III-go-PSTEV  
'The cow went.'
- (2) a. kid-ba ziya b-išer-si  
girl-ERG cow.ABS.III III-feed-PSTEV  
'The girl fed the cow.'  
b. ziy-a kid y-išer-si  
cow-ERG girl.ABS.II II-feed-PSTEV  
'The cow fed the girl.'

A verb with a sentential complement in the absolutive position will show class IV agreement. This is illustrated by (3a) where the head of the sentential complement is a nominalized verb, and (3b) where the sentential complement is an infinitival clause.

- (3) a. mu<sup>ɕ</sup>alim-a kid-beq [dunya|gelmačũ  
teacher-ERGgirl-SUPERESS [world round  
yoɕ-xosi-ɕi] r-iyr-er-si  
be-PRS.PRT-NMLZ].IV IV-learn-CAUS-PSTEV  
'The teacher taught the girl that the earth is round.'  
b. [t'ekmabi t'et'r-a] r-igu yoɕ  
[books.ABS.PL read-INF].IVIV-good is  
'To read books is good.'

**1.2. Begin and Continue: Unusual agreement and case-marking.** Two aspectual verbs that take infinitival complements, *-oqa* 'become; begin' and *-ica* 'continue', display a different pattern of agreement. Contrary to the expected (4a) and (5a), where they should agree with the infinitival complement in class IV, *-oqa* and *-ica* show agreement with the subject of the infinitival clause. If the embedded infinitive is transitive, this NP can appear either in the absolutive (4b), (5b) or in the ergative (4c), (5c).

- (4) a. \*kid [ziya b-išr-a] r-oq-si  
 girl.ABS.II [cow.ABS.IIIII-feed-INF].IV IV-begin-PSTEVE  
 ‘The girl began to feed the cow.’
- b. kid ziya b-išr-a y-oq-si  
 girl.ABS.II cow.ABS.III III-feed-INF II-begin-PSTEVE  
 ‘The girl began to feed the cow.’
- c. kid-ba ziya b-išr-a y-oq-si  
 girl-ERG cow.ABS.III III-feed-INF II-begin-PSTEVE  
 ‘The girl began to feed the cow.’
- (5) a. \*kid ziya b-išr-a r-ič-i-s  
 girl.ABS.II [cow.ABS.IIIII-feed-INF].IV IV-continue-PSTEVE  
 ‘The girl continued to feed the cow.’
- b. kid ziya b-išr-a y-ič-i-s  
 girl.ABS.II cow.ABS.III III-feed-INF II-continue-PSTEVE  
 ‘The girl continued to feed the cow.’
- c. kid-ba ziya b-išr-a y-ič-i-s  
 girl-ERG cow.ABS.III III-feed-INF II-continue-PSTEVE  
 ‘The girl continued to feed the cow.’

The unusual constructions with *-oqa* and *-ica* raise the following question: what syntactic structures are associated with the different uses of these verbs? It is known that languages often have different aspectual verbs depending on transitivity, animacy and volitionality of the subject, and the ability of taking both nominal and sentential arguments (Perlmutter 1970; Newmeyer 1975; ter Meulen 1990, among others). In what follows, I will present evidence that Tsez also maintains the distinction between two types of *begin* and *continue*.<sup>4</sup> I will argue that in one of their uses *begin* and *continue* are Raising verbs; in the other use, the two verbs have a more unusual syntax, which I will call Backward Control. After discussing the two construction types associated with the two uses of *begin* and *continue* in Tsez, I will outline further questions raised by their syntax.

## 2. *Begin* and *Continue* as Raising Verbs

For sentences such as (4b) and (5b), I would like to claim that their structure involves subject-to subject raising,<sup>5</sup> schematically shown in (6b) for transitive infinitives and (7b) for intransitives:<sup>6</sup>

- (6) a. kid ziya b-išr-a y-oq-si  
 girl.ABS.II cow.ABS.III III-feed-INF II-begin-PSTEVE  
 ‘The girl began to feed the cow.’ (=4b)
- b. kid<sub>i</sub> [t<sub>i</sub> ziya b-išr-a] y-oq-si  
 girl.ABS.II cow.ABS.III III-feed-INF II-begin-PSTEVE
- (7) a. kid y-ik’-a y-oq-si  
 girl.ABS.II II-go-INF II-begin-PSTEVE  
 ‘The girl began to leave.’
- b. kid<sub>i</sub> [t<sub>i</sub> y-ik’-a] y-oq-si  
 girl.ABS.II II-go-INF II-begin-PSTEVE

Several arguments prove that the Raising analysis is correct.

**2.1. Agreement.** The Raising analysis immediately accounts for the agreement facts. Recall that Tsez verb must agree with the absolutive argument, either intransitive subject, or direct object of transitive. Under Raising, the matrix verb agrees with the absolutive NP which raises to subject from the infinitival clause, and the embedded infinitive agrees with the absolutive in the infinitival clause. This is particularly clear in cases such as (4b) and (5b), where the embedded verb is transitive, and the two absolutive arguments belong to distinct noun classes.

**2.2. Case-marking.** The Raising analysis of *begin* and *continue* also explains why the subject of the embedded transitive clause appears in the absolutive and not the ergative case. In Tsez, all intransitive verbs take the absolutive subject (in other words, there is no split ergativity). As subject raising verbs, *begin* and *continue* are intransitive, the raised subject of these verbs must appear in the absolutive.

**2.3. Relativization.** As a result of Raising, the absolutive NP becomes part of the clause where *-oqa* or *-ica* is the predicate. The raised NP must be able to participate in the syntax of that clause and interact with other constituents of this clause. Passivization and relativization are among standard arguments that the raised NP bears a grammatical function in the target clause. Tsez does not have passives. As for relativization, it confirms that the absolutive NP undergoes Raising. Compare (6c), repeated below, and (8b):

- (8) a. kid<sub>i</sub>            [t<sub>i</sub> ziya            b-išr-a]            y-oq-si  
           girl.ABS.II        cow.ABS.III        III-feed-INF        II-begin-PSTEV  
           ‘The girl began to feed the cow.’ (=6c)
- b. [Rel t<sub>i</sub>        [ziya            b-išr-a]            y-āq-ru ]            kid<sub>i</sub>  
                           cow.ABS.III        III-feed-INF        II-begin-PST.PRT        girl  
           ‘the girl that began to feed the cow.’

**2.4. Scrambling.** The raised NP can scramble freely with the constituents of the higher clause, as shown by (9). To follow the examples in (9) and (10), it is crucial to know that although Tsez is head-final, it permits postverbal NPs in the finite declarative clause. Thus, (9c) is well-formed.

- (9) a. ħuɬ            kid<sub>i</sub>            [t<sub>i</sub> ziya            b-išr-a]            y-oq-si  
           yesterday    girl.ABS.II        cow.ABS.III        III-feed-INF        II-begin-PSTEV
- b. kid<sub>i</sub>            ħuɬ            [t<sub>i</sub> ziya            b-išr-a]            y-oq-si  
           girl.ABS.II    yesterday        cow.ABS.III        III-feed-INF        II-begin-PSTEV
- c. ħuɬ            [t<sub>i</sub> ziya            b-išr-a]            y-oq-si            kid<sub>i</sub>  
           yesterday        cow.ABS.III        III-feed-INF        II-begin-PSTEV    girl.ABS.II  
           ‘Yesterday, the girl began to feed the cow.’

In the meantime, the constituents of the infinitival clause cannot scramble with the constituents of the higher clause, as shown by the ungrammatical examples in (10). Unlike finite clauses, infinitival clauses must be strictly head-final—compare the well-formed (9c) with the ungrammatical (10c), where an NP follows the infinitive:

- (10) a. \*ħuɬ            ziya            kid            b-išr-a            y-oq-si

- |    |   |             |              |                |                |
|----|---|-------------|--------------|----------------|----------------|
|    | yesterday                                   | cow.ABS.III | girl.ABS.II  | III-feed-INF   | II-begin-PSTEV |
| b. | *ħuɫ  | kid         | b-iřr-a      | y-oq-si        | ziya           |
|    | yesterday                                   | girl.ABS.II | III-feed-INF | II-begin-PSTEV | cow.ABS.III    |
| c. | *ħuɫ  | kid         | [b-iřr-a     | ziya]          | y-oq-si        |
|    | yesterday                                   | girl.ABS.II | III-feed-INF | cow.ABS.III    | II-begin-PSTEV |
|    | 'Yesterday the girl began to feed the cow.' |             |              |                |                |

**2.5. Clitic placement.**<sup>7</sup> Tsez has certain second position clitics which can appear only in the matrix clause. One such clitic is *-uy* that agrees in grammatical class with the absolutive. The clitic *-uy* roughly means ‘indeed, definitely’, which suggests that it may function as a validator indicating the evidential status of the reported event. This clitic can follow the raised absolutive NP, which confirms that this NP is in the matrix clause. This is illustrated in (11a); (11b) shows that *-uy* cannot appear in the embedded clause, even if the second-position criterion is met.<sup>8</sup>

- |      |    |  |         |                      |                |                |
|------|----|--|---------|----------------------|----------------|----------------|
| (11) | a. | kid                                      | y-uy    | [t <sub>i</sub> ziya | b-iřr-a]       | y-oq-si        |
|      |    | girl.ABS.II                              | II-VAL  | cow.ABS.III          | III-feed-INF   | II-begin-PSTEV |
|      |    | 'The girl indeed began to feed the cow.' |         |                      |                |                |
|      | b. | *[ziya                                   | b-uy    | b-iřr-a]             | y-oq-si        | kid            |
|      |    | cow.ABS.III                              | III-VAL | III-feed-INF         | II-begin-PSTEV | girl.ABS.II    |
|      |    | 'The girl began indeed to feed the cow.' |         |                      |                |                |

**2.6. Absence of selectional restrictions.** It is well known that raising verbs do not impose any semantic constraints on the raised NP—this accounts for the raising of parts of idioms or inanimate nouns. In Tsez, parts of idiomatic expressions occur with *begin* and *continue*, which is another indication that these are raising verbs. Compare (12a) and (12b), where the idiom is ‘darkness eats the sun’:

- |      |    |                                  |                     |             |               |
|------|----|----------------------------------|---------------------|-------------|---------------|
| (12) | a. | t’ont’oħ-a                       | buq                 | b-ac’-xo    |               |
|      |    | darkness-ERG                     | sun.ABS.III         | III-eat-PRS |               |
|      |    | 'The sun has eclipsed.'          |                     |             |               |
|      | b. | t’ont’oħu <sub>i</sub>           | [t <sub>i</sub> buq | b-ac’-a ]   | b-aq          |
|      |    | darkness.ABS.III                 | sun.ABS.III         | III-eat-INF | III-begin.FUT |
|      |    | 'The sun will begin to eclipse.' |                     |             |               |

In (13), the idiomatic expression involves the absolutive NP, and evidence for Raising in (13b) comes from the scrambling facts—the raised NP and the infinitival clause are on different sides of the verb *-oqa*.

- |      |    |   |              |                |            |
|------|----|---|--------------|----------------|------------|
| (13) | a. | eniw-s  | debe-ħ’      | rok’u          | r-ay-x     |
|      |    | mother-GEN 2SG-SUPERESS   | heart.ABS.IV | IV-come-PRS    |            |
|      |    | 'The mother relies on you (lit.: The mother’s heart comes upon you).' |              |                |            |
|      | b. | [t <sub>i</sub> debe-ħ’   | r-ay-a]      | r-oq-si        | eniw-s     |
|      |    | 2SG-SUPERESS  | IV-come-INF  | IV-begin-PSTEV | mother-GEN |
|      |    | rok’u <sub>i</sub>  |              |                |            |
|      |    | heart.ABS.IV  |              |                |            |
|      |    | 'The mother began to rely on you.'                                    |              |                |            |

**2.7. Cyclicity.** Subject-to-subject raising can be cyclic, that is, the raised subject may undergo raising into an even higher clause (super-raising). Such cyclicity is observed for Tsez as well. In (14), the NP ‘girl’ first raises from the subject of the embedded infinitival clause to the subject of *continue* and then into the next clause, to the subject of *begin*.<sup>9</sup>

- (14)        kid<sub>i</sub>     [t<sub>i</sub><sup>2</sup> [t<sub>i</sub><sup>1</sup> xabar        es-a]        y-ic-a]        y-oq-si  
               girl.ABS    story.ABS    tell-INF     II-continue-INF    II-begin-PSTEV  
               ‘The girl began to continue telling the story.’

If the Raising analysis did not apply, it would be impossible to account for the agreement on both *continue* and *begin* in (14). Under the Raising analysis, the agreement on the finite verb is trivially determined by the super-raised NP, and the agreement on the intermediary verb indicates that the NP ‘kid’ has a representation in that clause too.

To summarize, the following arguments indicate that *begin* and *continue* can be raising verbs. First, the raised NP functions grammatically as a constituent of the clause into which it raises. This is shown by agreement facts, case marking, relativization, scrambling, and the interaction with the validator clitic *-uy*. Second, as raising verbs, *begin* and *continue* do not impose any selectional restrictions on the raised NP, which can be an idiom chunk, an inanimate noun (see also below), and a weakly quantified noun (example (27) below). Finally, one raising verb may be embedded under the other, leading to super-raising.

The use of *begin* and *continue* as raising verbs is cross-linguistically well-attested—see Perlmutter (1970) for English, McCloskey (1983) for Irish, Kibrik (1987, 1999: 492-514) for other Nakh-Daghestanian languages. Unlike some languages but rather like English, Tsez does not permit *begin* and *continue* to occur in the construction without Raising—the structures in (15a, b) are ungrammatical:

- (15)    a. \**expletive* [kid-ba        ziya        b-išr-a]        r-oq-si  
                               girl-ERG    cow.ABS.III    III-feed-INF    IV-begin-PSTEV  
                               ‘The girl began to feed the cow.’  
           b. \**expletive*        [kid        y-ik’-a] r-oq-si  
     girl.ABS.II    II-go-INF    IV-begin-PSTEV  
     ‘The girl began to leave.’

I believe that the ungrammaticality of (15a, b) can be explained by the restricted use of expletives in Tsez, but a full discussion of this question is beyond the scope of this paper.

### 3. The Other Use of *Begin* and *Continue*

Let us now turn to the other structure with *begin* and *continue*, repeated here for convenience:

- (4)        c. kid-ba        ziya        b-išr-a        y-oq-si  
               girl-ERG    cow.ABS.III    III-feed-INF    II-begin-PSTEV  
               ‘The girl began to feed the cow.’

Two facts are intriguing about this construction. First, the aspectual verb agrees in grammatical class with a semantic argument of the embedded infinitival clause. Second, it seems to agree with the ergative NP, an otherwise unattested possibility in Tsez. Even if the ergative NP *kidba* raised into the matrix clause, its ability to trigger class agreement on *-oqa* would still be mysterious. However, the raising analysis is completely implausible—constituency tests show that the ergative NP remains in the embedded infinitival clause.

**3.1. Overt subject in the embedded clause: Evidence from constituency.** The ergative NP can scramble with the constituents of the embedded infinitival clause, as shown by (16a). This indicates that it is a constituent of the embedded infinitival clause. Now recall that finite clauses are not strictly verb-final. As the ergative NP and the remainder of the infinitival clause form a single constituent, this constituent can either precede or follow the finite aspectual verb. This is demonstrated by (16b) and (16c):

- (16) a.  $\text{ħu}\ddot{\text{z}}$  [ziya kid-ba b-iřr-a] y-oq-si  
 yesterday cow.ABS.III girl-ERG III-feed-INF II-begin-PSTEV  
 ‘Yesterday the girl began to feed the cow.’  
 b.  $\text{ħu}\ddot{\text{z}}$  [kid-ba ziya b-iřr-a] y-oq-si  
 yesterday girl-ERG cow.ABS.III III-feed-INF II-begin-PSTEV  
 ‘Yesterday the girl began to feed the cow.’  
 c.  $\text{ħu}\ddot{\text{z}}$  y-oq-si [kid-ba ziya b-iřr-a]  
 yesterday II-begin-PSTEV girl-ERG cow.ABS.III III-feed-INF  
 ‘Yesterday the girl began to feed the cow.’

More crucially, the ergative NP cannot scramble with the constituents of the higher clause, containing the aspectual verb. This is illustrated by the ungrammatical (17a, b):

- (17) a. \* $\text{ħu}\ddot{\text{z}}$  kid-ba<sub>i</sub> y-oq-si [t<sub>i</sub> ziya  
 yesterday girl-ERG II-begin-PSTEV cow.ABS.III  
 b-iřr-a]  
 III-feed-INF  
 b. \*kid-ba<sub>i</sub>  $\text{ħu}\ddot{\text{z}}$  [t<sub>i</sub> ziya b-iřr-a] y-oq-si  
 girl-ERG yesterday cow.ABS.III III-feed-INF II-begin-PSTEV  
 ‘Yesterday the girl began to feed the cow.’

**3.2. Silent element in the matrix clause.** In addition to the indications that the ergative NP is inside the infinitival clause, there are several arguments that the higher clause contains a silent absolutive NP co-indexed with the lower subject.

**Depictives.** Tsez depictives such as *sixxoli* ‘alone’, *xizaz* ‘last’, *adaz* ‘first’ have two crucial properties: 1) they can be oriented towards the subject regardless of its case-marking or towards the absolutive; 2) they can follow the word they modify or they can be dislocated to the right--but not to the left--of that word. For example, in (18a), *sixxoli* is oriented towards ‘girl’ but not ‘cow’; in (18b), its orientation is ambiguous. In the meantime, (18c) is ungrammatical because the depictive precedes the word towards which it is oriented.

- (18) a. kid-ba sixxoli ziya b-iřer-si

- girl-ERG alone cow.ABS III-feed-PSTEV  
 ‘The girl<sub>i</sub> fed the cow<sub>j</sub> alone<sub>i/\*j</sub>.’
- b. kid-ba ziya sisxoli b-išer-si  
 girl-ERG cow.ABS alone III-feed-PSTEV  
 ‘The girl<sub>i</sub> fed the cow<sub>j</sub> alone<sub>j>i</sub>.’
- c. \*sisxoli kid-ba ziya b-išer-si  
 alone girl-ERG cow.ABS III-feed-PSTEV

Now compare the following pair of sentences:

- (19) a. \*sisxoli kid<sub>i</sub> [t<sub>i</sub> ziya bišr-a] y-oq-si  
 alone girl.ABS cow.ABS feed-INF II-begin-PSTEV  
 ‘The girl<sub>i</sub> began to feed the cow alone<sub>i</sub>.’
- b. sisxoli kid-ba ziya bišr-a y-oq-si  
 alone girl-ERG cow.ABS feed-INF II-begin-PSTEV  
 ‘The girl<sub>i</sub> began to feed the cow alone<sub>i</sub>.’
- c. *ec*<sub>i</sub> sisxoli [kid-ba<sub>i</sub> ziya bišr-a] y-oq-si  
 alone girl-ERG cow.ABS feed-INF II-begin-PSTEV

Example (19a), where the depictive precedes the raised NP ‘girl’ is ungrammatical—the depictive must appear on the right of the noun it modifies. The only way to explain why (19b) is grammatical is to assume that there is a silent element preceding *sisxoli* and co-indexed with the ergative NP in the infinitival clause. This means that (19b) should be represented as (19c). The silent element in the matrix clause is in the absolutive position; it matches the embedded ergative in grammatical class and determines the agreement on the verb *-oqa*.

**Long-distance agreement.** The second argument for a silent element in the clause with *-oqa* or *-ica* comes from the so-called LONG-DISTANCE AGREEMENT. Under long-distance agreement in Tsez, a verb may agree with a constituent inside its clausal complement (Polinsky 1999; Potsdam and Polinsky 1999; Polinsky and Potsdam 1999a). A crucial fact about the Tsez long-distance agreement is that it cannot cross multiple clause boundaries—the higher verb can only agree with the absolutive in the next embedding but not lower. For example, in (20a), the higher verb ‘know’ agrees in class with the embedded absolutive ‘cow’, but in (20b), where there is a third level of embedding, the intermediary verb ‘know’ agrees with the embedded absolutive, but the higher verb ‘like’ cannot agree with it.

- (20) a. eni-r [kid-ba ziya  
 mother-DAT girl-ERG cow.ABS.III  
 b-išer-xosi-ʒi] b-iy-x  
 III-feed-PRS.PRT-NMLZ III-know-PRS  
 ‘The mother knows that the girl is feeding the cow.’
- b. obi-r [[kid-ba ziya b-išer-xosi-ʒi]  
 father-DAT girl-ERG cow.ABS.III III-feed-PRS.PRT-NMLZ  
 eni-r b-iy-xosi-ʒi] r-eti-x/\*b-eti-x  
 mother-DAT III-know-PRS.PRT-NMLZ IV-like-PRS/\*III-like-PRS  
 ‘The father likes that the mother knows that the girl is feeding the cow.’

When a construction with *begin* or *continue* is embedded under a higher verb, this verb can show long-distance agreement matching the grammatical class of the overt ergative NP. For example, in (21), the verb ‘know’ can show class II agreement, thus agreeing with the NP ‘girl’.

- (21) eni-r [ec<sub>i</sub> [kid-ba<sub>i</sub> ziya b-išr-a]  
 mother-DATgirl-ERG cow.ABS.III III-feed-INF  
 y-aq-ru-ǰi] y-iy-x  
 II-begin-PST.PRT-NMLZ II-know-PRS  
 ‘The mother knows that the girl began to feed the cow.’

Given the evidence presented earlier, the ergative NP is embedded too deep for the verb ‘know’ to agree with it (let alone that the ergative-triggered agreement is otherwise impossible in Tsez). The long-distance agreement on ‘know’ can be accounted for if there is a silent element in the clause with the verb *begin*, because this clause is immediately dominated by the matrix clause in (21).

To summarize the arguments presented so far, I have shown that *begin* and *continue* form a construction in which the embedded subject (absolutive or ergative) remains inside the infinitival clause. This subject is co-indexed with a silent absolutive which is the argument of *begin/continue* and which triggers the agreement on the aspectual verb.<sup>10</sup> Schematically, the proposed structure is illustrated in (22b); (22a) repeats the raising structure for *begin* and *continue*:

- (22) a. NP<sub>i</sub> [t<sub>i</sub> VP<sub>inf</sub>] *begin/continue*  
 b. ec<sub>i</sub> [Subject<sub>i</sub> VP<sub>inf</sub>] *begin/continue*

**3.3. Status of the infinitival clause.** Under Raising, *begin* and *continue* are used intransitively. What about their second use? The structure in (22b) has to be intransitive as well, for several reasons. First, the silent element co-indexed with the embedded subject is in the absolutive position, otherwise it would not be able to trigger agreement. If so, it is either the intransitive subject or the direct object; the latter would mean that the infinitival complement should be identified with the transitive subject, a highly implausible situation. This leaves us to conclude that the silent element is the absolutive intransitive subject. Next, the verbs *begin* and *continue* can form imperatives, which indicates that they take a second person animate subject (see Perlmutter 1970: 113 for a similar argument). Imposing selectional restrictions on the subject is incompatible with the syntax of Raising, which means that the imperative of *begin/continue* has to be formed from (22b), not (22a). For certain verb stems, including *-oq-*, Tsez has a morphological contrast between imperatives of intransitives (formed with the zero suffix) and imperatives of transitives, which take the suffix *-o*. If the aspectual verbs in (22b) were transitive, we would expect the imperative of *-oqa* to be *-oqo*, if intransitive— *-oq*. Only the latter form is actually attested, showing again that *begin* is intransitive:

- (23) ziya bišr-a y-oq/\*y-oq-o  
 cow feed-INF II-begin.IMPER.INTR/ II-begin.IMPER.TR  
 ‘Begin to feed the cow.’ (addressing a woman)

This evidence suggests that *begin* and *continue* are intransitive in their second use. The infinitival complement in (22b) should then be interpreted as an adjunct complement



clause. Two arguments support the proposed adjunct status of this complement. First, the infinitival complement can be omitted, which is typical of adjuncts. Second, the aspectual verb *begin* and *continue* cannot be used with non-clausal object. Different verbs have to be used to express something like “They began the project” (*baybik boda* ‘begin (lit.: beginning make)’) or “They continued the project” (*-exorik’a* ‘prolong, continue’).

Having demonstrated that the second use of *begin* and *continue* involves a structure as in (22b), I would like to propose that in this structure the verbs act as subject control verbs.

#### 4. Backward Control

**4.1. Subject control: Identity between the silent element and the lower subject.** The higher absolutive subject and the subject in the infinitival clause cannot be expressed simultaneously. This is shown by (24):

- (24) \*kid<sub>i</sub> [ziya kid-ba<sub>i</sub> bišr-a] y-oq-si  
 girl.ABS cow.ABS girl-ERG feed-INF II-begin-PSTEV  
 ‘The girl began to feed the cow.’

It is equally impossible for *begin* and *continue* to occur in structures where their subject is different from the subject of the embedded infinitival clause—this is demonstrated by the ungrammatical (25a, b):

- (25) a. \*kid [eniy y-ik’-a] y-oq-si  
 girl.ABS mother.ABS II-go-INF II-begin-PSTEV  
 ‘The girl started the mother’s departure.’  
 b. \*kid [eniy-a ziya bišr-a] y-oq-si  
 girl.ABS mother-ERG cow.ABS feed-INF II-begin-PSTEV  
 ‘The girl started the mother’s feeding the cow.’

The requirement that the two subjects be identical further suggests that *begin* and *continue* are subject control verbs. Direct evidence for that comes from selectional restrictions.

**4.2. Subject control: Selectional restrictions.** Control verbs are known to impose selectional restrictions on their arguments. Inanimate NPs, idiom chunks, and weakly quantified (existential) NPs require the Raising construction. The animacy restriction was already mentioned above, in the discussion of the imperatives. Now compare the well-formed Raising sentence in (26a) with the ungrammatical (26b). The contrast between (26a) and (26b) illustrates both the animacy restriction and the fact that idiom chunks can undergo Raising but are impossible in the other construction with *begin* and *continue*.

- (26) a. t’ont’oñu<sub>i</sub> [t<sub>i</sub> buq b-ac’-a] b-aq  
 darkness.ABS.III sun.ABS.III III-eat-INF III-begin.FUT  
 ‘The sun will begin to eclipse.’ (=12b)  
 b. \*ec<sub>i</sub>[t’ont’oñ-a<sub>i</sub>buq b-ac’-a] b-aq  
 darkness-ERG sun.ABS.III III-eat-INF III-begin.FUT  
 ‘The sun will begin to eclipse.’

Next, existential NPs cannot occur in the structure in (22b). This can be demonstrated using the language-internal contrast between restrictive and non-restrictive adjectives. An NP modified by a non-restrictive adjective must have a weak (existential) construal. Nouns modified by non-restrictive adjectives must occur in the Raising construction (27a) and cannot occur in the control construction with *begin* or *continue* (27b):

- (27) a. aluk'a- $\emptyset$  a $\gamma$ i-bi<sub>i</sub> [t<sub>i</sub> k'enec'yabi et'-a] r-oq-xo  
white-NR bird-ABS.PL egg.ABS.PL pour-INF PL-begin-PRS  
'White birds begin to lay eggs.'
- b. \*ec<sub>i</sub> [aluk'a- $\emptyset$  a $\gamma$ i-za<sub>i</sub> k'enec'yabi et'-a] r-oq-xo  
white-NR bird-ERG.PL egg.ABS.PL pour-INF PL-begin-PRS  
'White birds begin to lay eggs.'

Thus, the selectional restrictions indicate that the verbs *begin* and *continue* function as subject control verbs.<sup>11</sup> They meet, in a peculiar way, the well-known characteristics of obligatory control (there must be a controller; the controller must be the subject; lexical NP cannot be substituted for the silent element). However, the striking fact about *begin* and *continue* as control verbs is that they delete the matrix (higher) subject under identity with an embedded subject. I will refer to this property of *begin* and *continue* as Backward Control (Farrell 1995).

**4.3. On Backward Control.** Backward Control subsumes the following characteristics: 1) both the aspectual verb (*begin* or *continue*) and the infinitive take the referent of the subject as their argument; 2) the aspectual verb assigns its subject the semantic role agent; 3) the subject of the aspectual verb and the subject of the infinitive are identical; 4) the subject of the aspectual verb cannot be expressed by a lexical NP and must be expressed by a null pronominal; 5) the aspectual verb is intransitive—it takes a subject and an adjunct infinitival clause.

These properties account for a number of features observed in the Tsez control structures with *begin* and *continue*. In particular, properties 1 and 2 explain the selectional restrictions observed in the control structures. Property 2 explains the formation of imperatives and may also be linked to various semantic effects associated with the control structure (see fn. 11). Property 3 accounts for the ill-formed sentences where the two subjects do not match. Property 3 also shows that case identity of the higher NP and lower NP does not matter as long as they are both subjects. Property 4 implies that the subject of the aspectual verb must be expressed by *pro*. Property 5 explains why the agent of *begin* or *continue* is in the absolutive case and thus triggers the agreement in the aspectual clause. Property 5 also explains why the infinitival complement seems to lack object properties.

There are several mentions of Backward control (or as it was called earlier, Counter-Equi) in the literature. Backward Object Control has been proposed to account for the syntax of causatives in Japanese (Harada 1973; Kuroda 1978) and in Brazilian Portuguese (Farrell 1995). A Backward Control analysis has also been proposed for the adjunct clauses headed by *tokoro* in Japanese (Harada 1973), and possibly for infinitival control structures in Jacalteco (Craig 1977: 257-8, 323-5). Descriptive studies suggest that at least two other Nakh-Daghestanian languages may have Backward Control: Tsaxur seems to use it with the verbs *begin*, *stop*, *hurry*, and *be afraid* (Kibrik 1999: 499-500),

and Hunzib, a language closely related to Tsez, seems to apply Backward Control with the verb 'can' (van den Berg 1995: 129-30).

In all these cases, just as in Tsez, Backward Control is an option for particular verbs. The relevant verbs include aspectual, volitional, and causative predicates which form a subset of the aspectual, volitional, and causative predicates within a given language. For instance, in Tsez, aspectual predicates other than *begin* and *continue* either form clause union structures (Polinsky and Potsdam 1999b) or embed clausal complements without argument deletion. In addition to Backward Control, Tsez also has regular control structures with such verbs as *promise* and *decide*.

The goals of this paper do not include a comprehensive account of Backward Control. I have demonstrated that it is empirically cogent and would like to conclude with the main issues that this phenomenon raises for linguistic theory. First, Backward Control is problematic for existing theories of control (Williams 1980; Manzini 1983. Sag and Pollard 1991) because it fails to meet the binding criteria on control (see also Farrell 1995: 124). It is not entirely clear if the movement theory of control (Hornstein 1999) can handle Backward Control either.

Whatever theory of control is adopted, it must motivate the choice between regular (subject and object) control and Backward Control. The data from Tsez, Brazilian Portuguese, and Japanese *tokoro*-clauses suggest that the two control types are mutually exclusive and their choice is determined by a specific lexical item or a specific construction type.<sup>12</sup> Some other Japanese data suggest that the two types of control may partially overlap (Kuroda 1978).

Backward Control seems a more restricted option than regular control, and its existence also raises a typological question: What structural properties of a language determine that it will or may have Backward Control? At this point, there is no sufficient theory or empirical base to answer this question.

## Conclusion

In this paper, I have examined two constructions with the Tsez aspectual verbs *begin* and *continue* which take infinitival complements. I have shown that one of these constructions involves Subject-to-Subject Raising out of the infinitival clause. The other construction involves a more unusual phenomenon of Backward Control. Under Backward Control, the subject of the embedded clause remains in the embedded clause and must be expressed, and the subject of the aspectual verb must be deleted under coreference with the embedded subject of the infinitive. I have proposed that, when they appear in a Backward Control structure, *begin* and *continue* are still intransitive, taking an agentive subject and an adjunct infinitival complement.

The difference in two structures clearly has semantic correlates (the Raising construction does not impose any restrictions on its subject; and can also have a motion verb interpretation). As I have shown above, inanimate subjects can occur only in the Raising construction. For those NPs that can occur in either construction, further work is needed to determine whether or not semantic factors can predict the choice of a particular structure.

## Notes

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The following abbreviations are used: ABS—absolutive, CAUS—causative, DAT—dative, ERG—ergative, FUT—future, GEN—genitive, IMPER—imperative, INF—infinitive, INTR—intransitive, NMLZ—nominalizer, NON.RESTR—non-restrictive, PL—plural, PRS—present, PRS.PRT—present participle, PST.PRT—past participle, PSTEV—past evidential, SUPERESS—superessive, TR—transitive, VAL—validator. The numerals I through IV indicate noun classes.

<sup>2</sup> For the details of Tsez agreement, see Polinsky and Comrie 1999. To follow the discussion below, the reader should bear in mind that agreement prefixes do not attach to consonant-initial verbs and a small subset of vowel-initial verbs. This restriction is due to the phonotactic rules of Tsez, which I don't review here.

<sup>3</sup> Reflexivization, coreferential deletion across clauses and causative formation prove that the ergative NP is the subject of a transitive clause, something I assume as a given for the purposes of this paper.

<sup>4</sup> I am assuming that Tsez has a single verb *begin* and a single verb *continue*, each of which has two distinct uses. Nothing hinges on this assumption.

<sup>5</sup> Rosenbaum 1967; Postal 1974; Ruwet 1991; Langacker 1995, and many others.

<sup>6</sup> Here and below, I will be using only the verb *-oqa* for illustration; the behavior of *-ica* is identical.

<sup>7</sup> A similar phenomenon is found in Quechua (Cole and Hermon 1979: 79-80).

<sup>8</sup> The contrast between (11a) and (11b) also shows that the structure is biclausal.

<sup>9</sup> Aside from *begin* and *continue*, there are no other raising verbs in Tsez. These verbs do not exactly match semantically, which makes possible examples of Super-raising rather odd.

<sup>10</sup> Until now, I have been using transitive infinitival clauses because those manifest an overt contrast between the intriguing structure in (22b) and the Raising structure in (22a)—only the former features an ergative NP. However, the two structures also make different predictions for embedded intransitives. In (22a), the semantic argument of the embedded clause is the grammatical subject of the higher clause, thus, separate from the infinitival clause. In (22b), the respective absolutive argument is inside the infinitival clause. Recall that finite clauses in Tsez are not strictly head-final. This predicts that the absolutive NP and the infinitival clause can appear on different sides of *begin* or *continue* in the Raising structure (22a), but not in (22b). This prediction is borne out:

(i)	a.	ok'o <sub>i</sub>	[t <sub>I</sub>	b-oš-a]	b-oq-si
		nail.ABS.III		III-bend-INF	III-begin-PSTEV
	b.	[t <sub>i</sub>	b-oš-a]	b-oq-si	ok'o <sub>i</sub>
		III-bend-INF	III-begin-PSTEV	III-begin-PSTEV	nail.ABS.III
	c.	b-oq-si	[t <sub>i</sub>	b-oš-a]	ok'o <sub>i</sub>
		III-begin-PSTEV	III-bend-INF	III-bend-INF	nail.ABS.III
					'The nail began to bend.'

The control structure should not allow orders where the absolutive NP is separated from the infinitival clause or where it follows the infinitive—recall that infinitival complements must be verb-final. This rules out orders such as in (i-b) and (i-c).

<sup>11</sup> The syntax of obligatory control also has semantic correlates. First, starting with the fact that the silent NP in the control structure has the semantic role Agent, certain predictions can be made with regard to the agentivity and volitionality of the subject and the choice between Raising and Control. If the subject of *begin/continue* is clearly volitional, the control structure has to be used (e.g., with the agentive adverbials 'on purpose', 'knowingly', etc.). Second, *-oqa* receives slightly different semantic interpretations in the Raising and in the Control structures—only under Raising does one find the meaning of motion superimposed on the meaning 'begin'. For instance, (4b) is translated as 'the girl set out/went out to feed the cow'. At this point, I have no explanation for this difference in interpretation.

<sup>12</sup> Farrell (1995: 125) motivates the choice in terms of event structure.

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