

Chapter 4

Backward vs. forward control/raising: A case of Lak aspectual verbs

Nina Radkevich

University of York

This paper presents novel data from Lak exemplifying morpho-syntactic properties of aspectual verbs ‘to begin’ and ‘to finish’. The aspectual verbs in Tsez (Polinsky & Potsdam 2002), a language related to Lak, have been analysed as either backward control or raising depending on a number of their syntactic characteristics. When applied to Lak, the same tests produce a different result – the Lak aspectual verbs do not pattern with either control or raising. It is suggested that the aspectual construction is an example of clause union. The evidence in support of this proposal comes from A'-movement, agreement, and transitivity harmony.

1 Introduction

The phenomenon of control and raising has been one of the most discussed topics in syntax (Hornstein 1999, Landau 2001, 2003, 2004, Martin 2001, Boeckx & Hornstein 2003, 2004, Davies & Dubinsky 2004, Wurmbrand 1999, 2001, 2007) covering such issues as the nature of null elements (PRO, copies, traces, etc.) and complement sizes.¹ The recent shift of attention to a more cross-linguistic perspective has enriched the typology of attested types of control and raising constructions providing us with a better understanding of their syntactic and semantic properties. One such discovery started with a seminal work by Polinsky & Potsdam (2002) which reported a previously unattested “backward control” construction from Tsez, Nakh-Dagestanian, as in (1) where the subject bears the

¹The list of references is not intended to be exhaustive but for the reasons of space I have chosen just a small representative subset of the literature on control and raising.



case determined in the embedded clause. Polinsky & Potsdam (2002) analyse the construction in (1) as an instance of backward control, as schematically shown in (2). Interestingly, backward raising is also attested cross-linguistically, e.g., in Adyghe, North West Caucasian (Potsdam & Polinsky 2012).

- (1) Kid-bā ziya b-išr-a y-oq-si.
girl.II-ERG cow.III.SG.ABS III.SG-feed-INF II.SG-begin-PST.EVID
'The girl began to feed the cow.' (Polinsky & Potsdam 2002: 248)
- (2) [PRO_{ABS} [XP DP_{ERG} (DP_{ABS}) V_{INF}] begin]

In this paper, I will discuss one construction found in Lak,² a language related to Tsez, where the subject of the main clause has its case determined by the embedded verb, as in (3).³

- (3) Rasul-lu-l lu buwk:un-nu q:urtal b-un-ni.
Rasul-OS-ERG book.III.SG.ABS <III.SG>read-PRF.GER finish III.SG-do-PST.3
'Rasul finished reading a/the book.'

Despite some surface similarities between the two constructions in Lak and Tsez, I will show that in Lak we deal with a mono-clausal structure. Capitalizing on the seminal work by Wurmbrand (2001, 2004, 2007), I will argue that the aspectual verbs ('to begin' and 'to finish') in Lak are restructuring verbs that can take complements of a much smaller size than CP/IP (cf. their Tsez counterparts). The paper is organized as follows. First, I present a short sketch of Lak morpho-syntax to help the reader navigate through the data presented in the paper. In the next section, I introduce the key properties of the aspectual verb construction and compare its properties to the Tsez backward cases. Then, I will present additional data from Lak that has to do with so-called "transitivity concord/agreement" attested in various languages of the world (Zariquiey 2014). The phenomenon of "transitivity agreement" observed in the Lak aspectual verb construction provides further evidence for its mono-clausal nature. Finally, I summarize the findings of the paper and identify directions for future research.

2 Basics of Lak morpho-syntax

Lak is a Nakh-Dagestanian (or North East Caucasian) language spoken in the Republic of Dagestan in Russia. According to the 2010 census of the Russian Federation, there are 145,895 speakers. Lak forms its own branch of the Nakh-Dagestanian language family but shares many key morpho-syntactic properties with

²All the Lak data in the paper are from author's fieldnotes.

³I use the <...> notation in glosses to indicate that class agreement is realized as an infix.

other members of the family previously studied formally: Tsez (Tsezic branch) and Archi (Lezgian branch). For more detailed descriptions of Lak morphosyntax discussed in this section, I refer the reader to grammars of Lak (Zhirkov 1955, Murkelinskij 1971) and a comprehensive overview of Lak syntax in Kazenin (2013).

One of the most prominent features of Nakh-Dagestania is its nominal class system: all nouns belong to one of the classes. The nominal class system is only partially determined by semantics (for humans). Importantly, the class is not overtly marked on nouns themselves but is revealed via agreement on other verbal and non-verbal elements of the clause. The number of classes across the family varies from 0 in Lezgian (Haspelmath 1993), Aghul (Magometov 1970), Udi (Harris 2002), and some dialects of Tabasaran (Magometov 1965) to 8 in Batsbi (Desheriev 1967). Lak has a system of four nominal classes where Class I is comprised of male human individuals, Class II is used for older females, Class III consists of nouns referring to females, animates, concrete and abstract concepts, and Class IV is made up of most abstract and some concrete nouns.

Furthermore, Lak has a rich system of case marking which can be split into two: core and spatial cases, with the latter being an instance of PPs (see Radkevich (2010) for more detail and discussion). As for the core cases, Lak has absolutive, ergative, genitive, and dative cases. Some clarifications are in order here: (1) as common for Nakh-Dagestania, absolutive is unmarked; (2) genitive and ergative are syncretic for nouns but not for pronouns; (3) non-absolutive forms of nouns usually have an additional morpheme between the root and the case exponent which is called an “oblique stem marker”. Similarly to other members of the family, Lak is a head final morphologically ergative language where arguments of all intransitive verbs pattern with internal arguments of transitive verbs with respect to case marking, i.e., absolutive, whereas external arguments of transitive verbs⁴ can be either ergative or dative. Consider the following examples.

- (4) Ninu d-urkun-ni.
mother.II.SG.ABS II.SG-⟨II.SG⟩come.PRF-PST.3
‘Mother came.’
- (5) Ninu d-i:zun-ni.
mother.II.SG.ABS II.SG-get.up-PST.3
‘Mother got up.’
- (6) Rasul-lu-l q:u dirχ:un-ni.
Rasul-OS-ERG field.IV.SG.ABS ⟨IV.SG⟩dig.PRF-PST.3
‘Rasul dug up the field.’

⁴In this paper I will use the term *external argument* to refer to external arguments of transitive verbs only excluding external arguments of unergative verbs.

- (7) T:u-n ga k:awk:un-ni.
1.SG.III-DAT he.I.SG.ABS <I.SG>see.PRF-PST.3
'I saw him.'

In (4) and (5), the sole arguments of intransitive verbs are absolutive marked. The situation is different in transitive clauses: in (6) and (7), the internal arguments are absolutive, while the external ones are ergative and dative, respectively. Another important property of Lak is absolutive controlled agreement: agreement can only be controlled by absolutive marked arguments. Most Nakh-Dagestanian languages have class/number agreement which is also true for Lak: class/number agreement is realized as prefixes, if vowel initial, as in (4–5), and/or infixes in the perfective aspect, as in (4), (6), and (7). This type of agreement is encoded with Roman numerals in the glosses. Furthermore, Lak has developed a person agreement system found on finite verbs: this type of agreement is also controlled by absolutive arguments and is realized as suffixes (glossed with Arabic numerals), as illustrated below.

- (8) Na zu b-uwhunu b-ur-u.
1.I.SG 2.I.PL I.PL-<I.PL>catch.PRF.GER I.PL-AUX-1/2PL
'I caught you.'
- (9) Na ga Ø-uwhunu Ø-ur-Ø.
1.I.SG 3.I.SG.ABS I.SG-<I.SG>catch.PRF.GER I.SG-AUX-3
'I caught him.'

Furthermore, Lak has contexts where the regular ergative-absolutive alignment in transitive clauses breaks down, i.e., the so-called cases of split ergativity. Lak has two types of split ergativity: aspect and person/tense based. In this description of Lak morpho-syntax, I will focus only on the former as the person/tense split ergativity is a very complicated phenomenon and is not directly relevant to the issue under discussion.

The aspect based split ergativity arises in imperfective durative (progressive) forms. External arguments of agentive verbs do not get their expected ergative marking, instead they appear absolutive marked. Furthermore, there are two agreement controllers where the internal argument controls class/number agreement on the lexical verb, while the absolutive marked external argument controls class/number and person agreement on the auxiliary verbs. Consider the examples in (10) and (11).

4 Backward vs. forward control/raising: A case of Lak aspectual verbs

- (10) Rasul č:itu b-uh-laj Ø-ur-Ø.
 Rasul.I.SG cat.III.SG.ABS III.SG.ABS-catch-DUR.GER I.SG-AUX-3
 ‘Rasul is catching a/the cat.’
- (11) Rasul-lu-l č:itu b-uwhunu b-ur-Ø.
 Rasul.I.SG-OS-ERG cat.III.SG.ABS III.SG-⟨III.SG⟩catch.PRF.GER III.SG-AUX-3
 ‘Rasul caught a/the cat.’

In (10), the verb ‘to catch’ is used in the progressive aspect and its external argument ‘Rasul’ is absolutive marked, whereas it is ergative in non-progressive contexts, as in (11). Furthermore, the lexical verb agrees in class/number with the internal argument ‘cat’, whereas the auxiliary verb agrees with the absolutive marked external argument. In (11), however, all agreement is controlled by the internal argument č:itu ‘cat’. Importantly, the aspect based split ergativity does not affect the so-called dative verbs, as in (12).⁵

- (12) a. Rasul-lu-n matematika q:a-d-urč’laj
 Rasul.I.SG-OS-DAT math.IV.SG.ABS NEG-IV.SG-understand.DUR.GER
 d-ur-Ø.
 IV.SG-AUX-3
 ‘Rasul does not understand math.’
- b. * Rasul matematika q:a-d-urč’laj Ø-ur-Ø.
 Rasul math.IV.SG.ABS NEG-IV.SG-understand.DUR.GER I.SG-AUX-3

The final aspect of Lak morpho-syntax that is directly relevant for this paper is word order and A’-movement. Like many other Nakh-Dagestian languages, Lak has a relatively free word order within the clause, as illustrated below.

- (13) a. Rasul-lu-l q:u dirχ:un-ni.
 Rasul.I.SG-OS-ERG field.IV.SG.ABS ⟨IV.SG⟩dig.PRF-PST.3
 ‘Rasul dug up the field.’
- b. q:u Rasul-lu-l dirχ:un-ni.
 c. Rasul-lu-l dirχ:un-ni q:u.
 d. dirχ:un-ni Rasul-lu-l q:u.

However, long-distance scrambling is impossible, as shown in (14).

⁵There are many other intricate properties of the Lak aspect based split ergativity but their discussion goes beyond the scope of the paper. For a more detailed discussion and analysis I refer the reader to Gagliardi et al. (2014).

- (14) a. Rasul-lu-l buwsun-ni [A^ʃli-l pu^ʃrun
 Rasul.I.SG-OS-ERG <III.SG>say.PRF-PST.3 Ali.I.SG-ERG glass.IV.SG.ABS
 yawy-šiwu].
 <IV.SG>break.PRF-MSD
 ‘Rasul said that Ali broke the window.’
- b. *Rasul-l-ul pu^ʃrun_i buwsun-ni, [A^ʃli-l
 Rasul.I.SG-OS-ERG glass.IV.SG.ABS <III.SG>say.PRF-PST.3 Ali.I.SG-ERG
 t_i yawy-šiwu].
 t <IV.SG>break.PRF-MSD
- c. *Pu^ʃrun_i Rasul-lu-l buwsun-ni [A^ʃli-l
 glass.IV.SG.ABS Rasul.I.SG-OS-ERG <III.SG>say.PRF-PST.3 Ali.I.SG-ERG
 t_i yawy-šiwu].
 t <IV.SG>break.PRF-MSD

Furthermore, the same locality restrictions are found in *wh*-questions: namely, *wh*-word can optionally front to the sentence initial position, as in (15), but it cannot cross the clausal boundary, as in (16).

- (15) a. Rasul-lu-l ci dirχ:un-ni?
 Rasul-OS-ERG what.IV.SG.ABS <IV.SG>dig.PRF-PST.3
 ‘What did Rasul dig?’
- b. Ci Rasul-lu-l dirχ:un-ni?
 what.IV.SG.ABS Rasul-OS-ERG <IV.SG>dig.PRF-PST.3
- (16) a. Nit:i-n k’ul-s:a-r-iw, [Rasul ci
 mother-DAT know-PART-PRES.3-Q Rasul.I.SG.ABS what.IV.SG.ABS
 d-ullaj-s:a-r-iw]?
 IV.SG-do.DUR.GER-PART-PRES.3-Q
 ‘Does mother know what Rasul is doing?’
- b. *Ci_i nit:i-n k’ul-s:a-r-iw, [Rasul t_i
 what.IV.SG.ABS mother-DAT know-PART-PRES.3-Q Rasul.I.SG.ABS t
 d-ullaj-s:a-r-iw]?
 IV.SG-do.DUR.GER-PART-PRES.3-Q
- c. *Nit:i-n ci_i k’ul-s:a-r-iw, [Rasul t_i
 mother-DAT what.IV.SG.ABS know-PART-PRES.3-Q Rasul.I.SG.ABS t
 d-ullaj-s:a-r-iw]?
 IV.SG-do.DUR.GER-PART-PRES.3-Q

Having discussed the key properties of Lak morpho-syntax, in the next section I will present data from the aspectual verb construction and compare it to its Tsez counterpart highlighting many differences between the superficially similar constructions in the two languages.

3 Aspectual verbs in Lak and Tsez

In their seminal work, Polinsky & Potsdam (2002) study two interesting constructions with aspectual verbs in Tsez to conclude that one of them involves the so-called backward control, while the other is an instance of raising. The two structures in question are in (17) and (18).

- (17) Kid-bā ziya b-išr-a y-oq-si.
 girl.II-ERG cow.III.ABS III-feed-INF II-begin-PST.EVID
 ‘The girl began to feed the cow.’

- (18) Kid ziya b-išr-a y-oq-si.
 girl.II.ABS cow.III.ABS III-feed-INF II-begin-PST.EVID
 ‘The girl began to feed the cow.’ (Polinsky & Potsdam 2002: 248–249)

There are two surface differences between the two sentences that have to do with case marking and agreement: (i) in (17) the DP ‘girl’ bears ergative case associated with the embedded verb, while in (18) the same DP is absolutive marked; (ii) the agreement on the main verb ‘to begin’ is controlled by the ergative DP, which is unattested in Tsez and in other Nakh-Dagestanian languages, whereas in the second sentence the controller is the absolutive DP ‘girl’. Polinsky & Potsdam (2002) propose that the two sentences under discussion have two different structures and, thus, represent different phenomena (control vs. raising).

- (19) [PRO [DP_{ERG} DP_{ABS} V_{INF}] begin] (=17)
 (20) [DP_{ABS} [t DP_{ABS} V_{INF}] begin] (=18)

The structure in (19) is a schematic representation of backward control where the null element (PRO) is in the main clause rather than in the embedded one as it would be in the run of the mill cases of forward control.⁶ Polinsky & Potsdam (2002) draw this conclusion based on a number of tests that contrast the two constructions. Interestingly, the verbs that can have backward control in Tsez

⁶It is important to point out that Polinsky & Potsdam (2002) treat control as movement (Hornstein 1999) and the ergative DP is an instance of the pronunciation of the lower copy.

are so-called aspectual verbs ‘to begin’, ‘to continue’, and ‘to stop/finish’. The Lak aspectual verbs ‘to begin’ and ‘to finish’ also show unexpected patterns of case marking: they can only bear the case assigned by the embedded verb.⁷ In the rest of the chapter, I will discuss some properties of the Lak aspectual verbs with special attention to case distribution and then I apply the tests used for Tsez in Polinsky & Potsdam (2002) to the Lak aspectual verbs to show that Lak aspectual verbs do not fit the patterns displayed by their Tsez counterparts.

3.1 Case distribution in the Lak aspectual construction

The two Lak aspectual verbs (‘to begin’ and ‘to finish’) share a lot of similarities with respect to the distribution of case. The two aspectual verbs take gerunds as their complements: the verb ‘to begin’ takes gerunds in imperfective aspects, whereas the verb ‘to finish’ takes perfective gerunds. Furthermore, they behave identically with respect to case distribution when used without gerundial complements. Consider the following sentences illustrating case marking for the verb ‘to begin’.

- (21) Bawa-l cila žahil-nij-s:a χawar
grandmother.II-ERG self.II.SG youth.IV-LOC-ATTR story.III.SG.ABS
b-ajbiwxun-ni.
III.SG-⟨III.SG⟩begin.PRF-PST.3
‘Grandmother began her story about her youth.’

The same pattern of case distribution holds for the verb ‘to finish’ as well. Consider the data below. In (22), similarly to (21), the external argument is ergative.

- (22) Bawa-l cila žahil-nij-s:a χawar q:urtal
grandmother.II-ERG self.II.SG youth.IV-LOC-ATTR story.III.SG.ABS finish
b-un-ni.
III.SG-do-PST.3
‘Grandmother finished her story about her youth.’

Whenever the verb ‘to begin’ is used on its own, i.e., without an embedded verb, (21), its external argument is ergative but when it is used with the gerundial complement in (23), the external argument of the embedded verb *bawa* ‘grandmother’ is absolutive marked. This case marking is compatible with the Lak case

⁷Unlike Tsez, Lak does not have a verb ‘to continue’: its meaning is realized via aspectual marking.

marking in durative (imperfective) contexts, i.e., split-ergativity. Note that the main verb is in the perfective aspect which is impossible with the absolutive marked external argument. Furthermore, if the embedded verb has a dative alignment, it is preserved in the aspectual construction. Given the data in (21–24), the case marking is determined in the embedded clause.

- (23) Bawa o^ʃl t:izlaj
 grandmother.II.SG.ABS cow.III.SG.ABS milk.DUR
 d-ajdirxun-ni.
 II.SG-⟨II.SG⟩begin.PRF-PST.3
 ‘Grandmother began milking a/the cow.’

- (24) A^ʃli-n matematika d-urč’laj
 Ali-DAT math.IV.SG.ABS IV.SG-understand.DUR
 d-ajdirxun-ni.
 IV.SG-⟨IV.SG⟩begin.PRF-PST.3
 ‘Ali began to understand math.’

Furthermore, the verb ‘to finish’ takes perfective gerunds as its complement and that aspect is incompatible with split ergativity, i.e., the external argument cannot be absolutive, as can be seen in (25).

- (25) a. A^ʃjšat-lu-l huqa buruw:un-nu q:urtal
 Ajšat.III-OS-ERG dress.III.SG.ABS ⟨III.SG⟩sew.PRF-PRF.GER finish
 b-un-ni.
 III.SG-do-PST.3
 ‘Aishat finished sewing a/the dress.’
- b. *A^ʃjšat huqa buruw:un-nu q:urtal
 Ajšat.III.SG.ABS dress.III.SG.ABS ⟨III.SG⟩sew.PRF-PRF.GER finish
 b-un-ni.
 III.SG-do-PST.3

To show that it is indeed the embedded clause properties that determine case marking, we can have the main verb in the durative aspect where the split ergativity (absolutive marking on external arguments) arises. This configuration makes straightforward testable predictions: 1) if the case is determined in the embedded clause, the external argument will be in ergative; 2) if the case is determined in the matrix clause, the external argument will be absolutive. Now consider the example in (26): the external argument ‘Aishat’ is ergative marked, consequently, the case of the external argument originates in the embedded clause.

- (26) A^ʃjʃat-lu-l huqa buruw:un-nu q:urtal
 Ajʃat.III-OS-ERG dress.III.SG.ABS <III.SG>sew.PRF-PRF.GER finish
 b-awaj b-ur-∅.
 III.SG-do.ITER.DUR.GER III.SG-AUX-3
 ‘Aishat is finishing sewing a/the dress.’

Having determined that the external argument in the aspectual constructions in Lak gets its case in the embedded clause, it is important to establish the position of this argument, i.e., whether it stays in the embedded clause or moves to the main clause.

3.2 Position of the external argument

Polinsky & Potsdam (2002) apply a number of tests to show that in the case the backward control construction the external argument stays in the embedded clause, whereas in the case of raising, it moves to the matrix clause. To determine this, they use the following tests: (1) A^ʃ-movement (scrambling and wh-movement); (2) event quantification; (3) second position validation clitic; (4) complement ellipsis. In this paper, I will use only the first two tests since Lak does not have any item similar to the Tsez second position validation clitic and the phenomenon of complement ellipsis gives rise to more complications, a proper discussion of which goes beyond the scope of the current paper.

3.2.1 A^ʃ-movement in the Lak aspectual construction

In Tsez and in Lak, A^ʃ-movement is clause-bound as discussed in §2 (see examples in (13–16)). This locality restriction on movement allows us to test the position of arguments in the aspectual constructions and decide whether the structure is mono-clausal or bi-clausal. Consider the following two examples used as a base for applying the movement tests.

- (27) A^ʃli q:at:a b-ullaj ∅-ajiwxun-ni.
 Ali.I.SG.ABS house.III.SG.ABS III.SG-do.DUR.GER I.SG-<I.SG>begin.PRF-PST.3
 ‘Ali began building a/the house.’
- (28) A^ʃli-l lu buwk:un-nu q:urtal b-un-ni.
 Ali.I-ERG book.III.SG.ABS <III.SG>read.PRF.GER finish III.SG-do-PST.3
 ‘Ali finished reading a/the book.’

Interestingly, (27) and (28) allow any word order combinations, thus suggesting that the structure is actually mono-clausal, as shown in (29) and (30).⁸ Since it is a mono-clausal structure, the discussion of the position of the external argument in terms of embedded/matrix clauses is inapplicable.

- (29) a. Q:at:a A^ʕli b-ullaj Ø-ajiwun-ni.
 b. A^ʕli b-ullaj q:at:a Ø-ajiwun-ni.
 c. A^ʕli Ø-ajiwun-ni q:at:a b-ullaj.
 d. A^ʕli Ø-ajiwun-ni b-ullaj q:at:a.
- (30) a. Lu A^ʕli-l buwk:un-nu q:urtal b-un-ni.
 b. A^ʕli-l buwk:un-nu lu q:urtal b-un-ni.
 c. A^ʕli-l q:urtal b-un-ni lu buwk:un-nu.
 d. A^ʕli-l q:urtal b-un-ni buwk:un-nu lu.

In this section, I have shown that the aspectual construction is mono-clausal as it allows scrambling compatible with the mono-clausal structure.⁹

3.2.2 Event quantification

Polinsky & Potsdam (2002) use an event quantification test to argue for the two structures (backward control and raising), namely, they show that a temporal adverbial can be interpreted as either modifying the matrix or the embedded verb. Interestingly, the two constructions with the linearly identical position of the adverb can have two distinct interpretations. Consider the following pair to illustrate this point.

⁸An anonymous reviewer raises a question of whether the following word order is possible, as in (i). The ungrammaticality of (i) is not surprising since the complex verb *q:urtal ban* forms a morpho-phonological unit which cannot be split even in clearly mono-clausal structures, as in (ii).

- (i) *Lu b-un-ni A^ʕli-l buwk:un-nu q:urtal.
 book.III.SG.ABS III.SG-do-PST.3 Ali.I-ERG <III.SG>read.PRF-PRF.GER finish
- (ii) *χawar q:urtal bawa-l b-un-ni.
 story.III.SG.ABS finish grandmother.II-ERG III.SG-do-PST.3
 ‘Grandmother began her story.’

⁹In this paper I do not test wh-questions in the Lak aspectual construction as it requires a more detailed discussion which is impossible due to the space limits. Thus, I leave it for future research.

- (31) [kidbā uyrax āliru ziya bišra] yoqsi.
 girl.ERG fourth time cow feed began
 ‘The girl began to feed the cow for the fourth time.’ (=4 feedings)
 *‘The girl began for the fourth time to feed the cow.’ (=4 beginnings)
- (32) kid uyrax āliru ziya bišra yoqsi.
 girl.ABS fourth time cow feed began
 ‘The girl began to feed the cow for the fourth time.’ (=4 feedings)
 ‘The girl began for the fourth time to feed the cow.’ (=4 beginnings)
 (Polinsky & Potsdam 2002: 255)

In (31) and (32), the adverbial is placed after the external arguments ‘girl’. If DP ‘girl’ is in the embedded clause, the adverbial is located there as well, thus it can only modify the embedded predicate. If the DP is in the matrix clause, the adverbial can modify either the matrix or the embedded verb. In (31), the only available interpretation is that ‘the girl fed the cow four times’, i.e. the adverbial modifies the embedded clause, while (32) is ambiguous between ‘the girl fed the cow four times’ and ‘the girl had four beginning of cow-feeding’, i.e., the adverb modifies the matrix verb. To see how the same test fares in the Lak aspectual construction consider the following examples.

- (33) Amudada k’ilč̣in o¹l t:izlaj
 grandmother.II.SG.ABS twice cow.III.SG.ABS milk.DUR.GER
 d-ajdirxun-ni.
 II.SG-<II.SG>begin.PRF-PST.3
 ‘Amudada began milking the cow for the second time.’ (two beginnings,
 #two milkings)
- (34) Bawa-l k’ilč̣in cila χawar
 grandma.II-ERG twice self.II.SG story.III.SG.ABS
 b-uwsu-nu q:urtal b-unni.
 III.SG-<III.SG>tell.PRF-PRF.GER finish III.SG-do-PST.3
 ‘Grandmother finished telling her story twice.’ (two finishings, #two
 stories)

The data in (33) and (34) parallel the examples from Tsez in (31) and (32): the adverbial follows the external argument. Interestingly, both Lak sentences are unambiguous: they can only mean ‘two beginnings’ and ‘two finishings’, respectively. In other words, the adverbial cannot modify the embedded verb, thus indicating that the external argument is in the matrix clause.

Having applied the test of the event quantification to the Lak aspectual verb construction, I conclude that the aspectual constructions are mono-clausal which further corroborates the results reported in §3.2.1.

3.3 Types of external arguments

Polinsky & Potsdam (2002) provide another piece of evidence for teasing the two constructions (control vs. raising) apart: the two types of verbs vary with respect to what types of external arguments they can have which is due to differences in their thematic structure. First, they note that only control predicates are compatible with such adverbs as ‘intentionally’, whereas raising verbs are only possible with adverbs like ‘accidentally’. When applied to the Lak aspectual verbs, a different picture emerges: both verbs are compatible with both types of adverbs.

- (35) Rasul ma^ʃžannugu ok:inu duklaj
 Rasul.I.SG.ABS on.purpose bad study.DUR.GER
 Ø-ajiw^{xun}-ni.
 I.SG-⟨I.SG⟩begin.PRF-PST.3
 ‘Rasul on purpose began not to study well.’
- (36) A^ʃli cakunu Ø-ajiw^{xun}-ni q:at:a
 Ali.I.SG.ABS unexpectedly I.SG-⟨I.SG⟩begin.PRF-PST.3 house.III.SG.ABS
 b-ullaj.
 III.SG-do.DUR.GER
 ‘Ali unexpectedly began building the/a house.’
- (37) A^ʃjšat-lu-l huqa b-uruw^{xun}:un-nu
 Ajšat.III.SG-OS-ERG dress.III.SG.ABS III.SG-⟨III.SG⟩sew.PRF-PRF.GER
 ma^ʃžannugu/cakunu q:urtal b-un-ni.
 on.purpose/unexpectedly finish III.SG-do-PST.3
 ‘Aishat finished sewing a/the dress.’

Furthermore, it is also shown in Polinsky & Potsdam (2002) that control verbs can have animate subjects, whereas raising verbs can only have inanimate subjects, as expected if they are only compatible with the adverbs like ‘accidentally’. In Lak, however, both aspectual verbs are possible with inanimate subjects, as in (38) and (39).

- (38) Mar^x:ala baws:u-nu q:urtal xun-ni.
 snow.III.SG.ABS ⟨III.SG⟩melt.PRF-PRF.GER finish become-PST.3
 ‘Snow finished melting/Snow has melted.’

- (39) Marχ:ala baslaj b-ajbiwxu-ni.
snow.III.SG.ABS melt.DUR.GER III.SG-⟨III.SG⟩begin-PST.3
'Snow started melting.'

Finally, based on Farkas (1988), Polinsky & Potsdam 2002 also argue that raising verbs cannot be used in imperatives. The Lak aspectual verbs can be used in the imperative construction, as shown below.

- (40) ∅-ajixu balaj t'ij!
I.SG-begin.IMPER song.III.SG.ABS say.DUR.GER
'Start singing!'
- (41) Q:urtal d-u-wa t'aħni-k'ič'u šu¹ršu-nu!
finish IV.SG-do-POT2 crockery.IV.SG ⟨IV.SG⟩wash.PRF-PRF.GER
'Stop washing dishes!'

The data presented in this section show that the Lak aspectual verbs behave neither like control nor like raising verbs: on the one hand, the external arguments are in the matrix clause but inherit case from the embedded clause being compatible with the raising structure, while on the other hand, the aspectual verb are compatible with animate and inanimate subject, volitional and non-volitional adverbs, and can be used in imperatives. To accommodate all of these properties of the Lak aspectual verbs, I propose that these verbs form a complex predicate with their embedded verbs (something similar to the serial verb construction). Additional evidence to support this proposal comes from agreement and transitivity harmony.

4 Analysis: Aspectual verbs as restructuring

In the previous section I have applied several tests to Lak that are used by Polinsky & Potsdam (2002) to show that the aspectual construction in Tsez can be analysed either as (backward) control or raising. Unlike Tsez, its Lak counterparts behave neither as control nor as raising. In this section, I propose that the Lak aspectual construction is a case of restructuring (clause union). I base my proposal on the following pieces of evidence. First, as shown in §3, this construction behaves as a mono-clausal structure with respect to A'-movement: scrambling is freely available despite this phenomenon being clause bound in Lak. Second, the Lak aspectual construction differs from Tsez in another important characteristic, namely agreement, which I will discuss later in this section. The final piece of evidence comes from a phenomenon strongly resembling the so-called "transitivity harmony".

Before discussing the analysis of the aspectual construction, it is important to spell out some underlying assumptions regarding case and agreement in Lak. Following Gagliardi et al. 2014 and Radkevich (2017), I assume that in regular (non-split ergative) contexts case is determined within vP, whereas in the biabsolutive construction the case on the external argument is checked higher in the clause (AspP). Additionally, it is important to point out that when the Asp is specified for the [IMPERF] feature, it also has an EPP-type feature which triggers the external argument to move out of vP. I also adopt an approach against multiple probing, i.e., when the same DP is targeted by several heads for feature valuation, as in Polinsky et al. (2017).¹⁰ Furthermore, I follow an analysis of agreement proposed in Polinsky et al. (2017) where each verbal head in the clause bears unvalued [uCL] features which can be valued by the closest absolutive marked DP. Furthermore, Polinsky et al. (2017) propose a system where only the lowest verbal head gets its features valued by the absolutive DP, whereas [uCL] features on all other heads are valued by the closest v, as schematically illustrated in (42) (for similar proposals see Collins 2003, Baker & Willie 2010): v2 gets its features checked by DP2, i.e., the closest absolutive DP, then v2 values the unvalued class/number features of v1 which in its turn values the same features on Asp. Importantly, I assume that feature valuation proceeds only in one direction -downward.

$$(42) \quad [_{\text{AspP}} [_{\text{Asp}'} [_{\text{vP2}} \text{DP1} [_{\text{v}'} [_{\text{vP1}} [_{\text{v}'} [_{\text{VP}} \text{DP2 V}] \text{v1}_{[\text{uCL}}]]] \text{v2}_{[\text{uCL}}]]] \text{Asp}_{[\text{uCL}}]]]]]$$

Going back to the aspectual construction in Lak, I propose that it should be analyzed as a case of restructuring as in (43).¹¹ The aspectual verbs (vP) take a complement as large as AspP since the embedded verb is marked for aspect but smaller than CP and the external argument (DP1) undergoes movement from the embedded to the matrix clause:¹²

$$(43) \quad [_{\text{vP}} [_{\text{v}'} [_{\text{AspP}} [_{\text{Asp}'} [_{\text{vP2}} \text{DP1} [_{\text{v}'} [_{\text{vP1}} [_{\text{v}'} [_{\text{VP}} \text{DP2 V}] \text{v1}_{[\text{uCL}}]]] \text{v2}_{[\text{uCL}}]]] \text{Asp}_{[\text{uCL}}]]] \text{v}_{[\text{uCL}}]]]]]$$

¹⁰For independent motivations for this assumption see Rezac 2003, Baker & Willie 2010.

¹¹Restructuring analyses of constructions resembling backward control have been proposed in Roussou 2009 for Greek and in Greshler et al. 2017 for Modern Standard Arabic. I thank an anonymous review for pointing these references to me.

¹²An anonymous review has raised an interesting question of why DP1 does not get its case in the matrix clause. A possible solution is to assume that the original case of DP1 that it gets in the embedded clause cannot be overridden in the next cycle (matrix clause). Then, the next question is why DP1 moves to the matrix clause. I will leave this question for future research.

The structure in (43) straightforwardly accounts for the agreement facts in the Lak aspectual constructions due to its mono-clausal status. Below I will illustrate how the proposal works with the two aspectual verbs. Consider the following derivation for the verb ‘to finish’ in Figure 1, which is based on (43): the lowest *v* gets its [uCL] features valued by the absolutive DP (DP2), whereas the higher verbal elements get their values for [CL] from the closest verbal head.

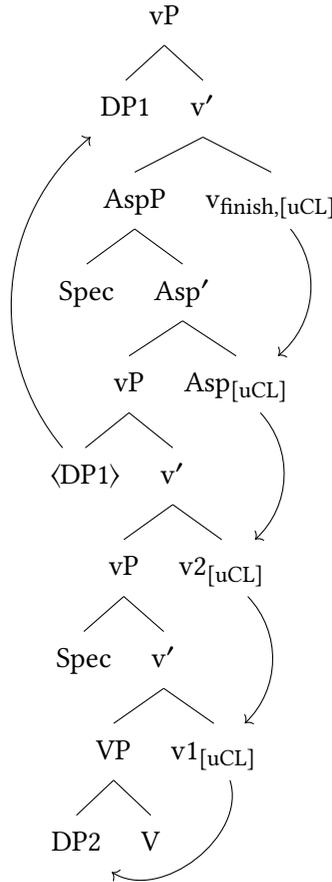


Figure 1: Derivation for the verb ‘to finish’

The situation is slightly different for the verb ‘to begin’ (Figure 2): it has two absolutive arguments (=split ergativity) due to the aspectual specification of the embedded verb. In Figure 2, *v*₁ gets its [uCL/NUM] features valued by the closest absolutive marked DP, the internal argument, then *v*₁ values features on *v*₂, and *v*₂ on Asp.

4 *Backward vs. forward control/raising: A case of Lak aspectual verbs*

Recall that in the system proposed in Polinsky et al. (2017), agreement between heads applies as a last resort operation when there is no absolute marked DP available for agreement. In Figure 2, v_{begin} has [uCL] features which are valued by the absolute marked external argument (DP1).¹³

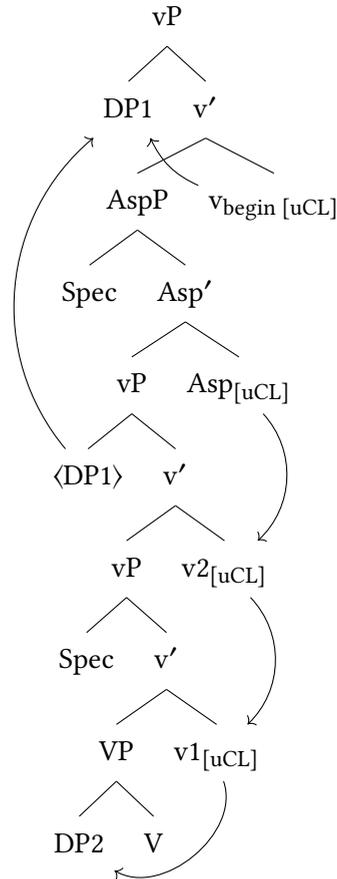


Figure 2: Derivation for the verb ‘to begin’. Recall that the verb ‘to begin’ takes imperfective gerundial complements which give rise to split ergativity. In the analysis of this phenomenon adopted in the paper, the external argument raises to spec,AspP in the split-ergative context. In this diagram I omit this part for the ease of exposition.

¹³The derivation for the verb ‘to begin’ is similar in spirit to the analysis of the biabsolute construction in Lak (Radkevich 2017) and Archi (Polinsky 2016). I refer the reader to these works for further discussion and detail.

The final piece of evidence in favour of the mono-clausal analysis of the aspectual verbs in Lak comes from the so-called transitivity harmony. The term transitivity harmony refers to a linguistic phenomenon describing a situation when two verbs belonging to the same clause agree in transitivity value, i.e., both verbs must be both either transitive or intransitive. As reported in Zariquiey (2014), this phenomenon is found in several Panoan languages, in two Takanan languages, in Tariana (Arawakan), in Nepali, Bangla (Indo-Aryan), Dulong/Rawang, Dumi (both Tibeto-Burman), Kambaata (Cushitic), Wolaitta (Omotic), Wambaya (West Barkly), several Pama-Nyungan and Austronesian languages, and in Hatam (Papuan). It is important to point out that this phenomenon is not uniform across languages. However, there are several languages which exhibit the transitivity harmony with the aspectual verbs ‘to begin’, ‘to stop’, ‘to continue’, etc. Consider the following examples from Shipibo-Konibo (Panoan).

- (44) E-a-ra ransa-i keyó-ke.
 1-ABS-EV dance-SIM.EVENT.SS.SO finish:MID-CMPL
 ‘I finished dancing.’
- (45) E-n-ra (nami) pi-kin keyo-ke.
 1-ERG-EV meat.ABS eat-SIM.EVENT.SS.AO finish-CMPL
 ‘I finished eating meat.’ (Valenzuela 2011: 202)

The two sentences above have the same main verb ‘finish’ which is transitive in Shipibo-Konibo. When this verb is used with an intransitive verb, it must have the same transitivity value. One way to do this is to use the middle voice, as in (44), where the verb ‘to finish’ is used with the intransitive verb ‘to dance’. In (45), the first ‘to finish’ takes another transitive verb ‘to eat’ which agree in their transitivity values. A very similar situation is found in Lak. The Lak aspectual verb ‘to finish’ is a complex verb which consists of a short participle *q:urtal* ‘finish’ and a light verb. Crucially, the light verb can be either *ban* ‘do’ or *xun* ‘become’. The alternation between the two verbs is not unique for the verb to finish: *haz xun* ‘to rise (intr.)’ vs. *haz ban* ‘to rise (trans.)’, *s:uku xun* ‘to move (intr.)’ vs. *s:uku ban* ‘to move (trans.)’, *χi:nil xun* ‘to get scared’ vs. *χi:nil ban* ‘to scare’, *kaj-kaj xun* ‘to fold (intr.)’ vs. *kaj-kaj ban* ‘to fold (‘trans.)’, a.o. (Eldarova 1995: 42). Going back to the discussion of the verb ‘to finish’, it can surface either as *q:urtal xun* or *q:urtal ban* depending on the transitivity of the verb it takes, as illustrated below: in (46), the embedded verb ‘to melt’ is intransitive and the intransitive variant of verb ‘to finish’ must be used, whereas in (47) both verbs are transitive.

- (46) Marχ:ala baws:u-nu q:urtal xun-ni/
 snow.III.SG.ABS <III.SG>melt.PRF-PRF.GER finish become-PST.3/
 *b-un-ni.
 III.SG-do-PST.3
 ‘Snow finished melting/Snow has melted.’
- (47) A¹li-l lu buwk:un-nu q:urtal
 Ali-ERG book.III.SG.ABS <III.SG>read.PRF-PRF.GER finish
 b-un-ni/*xun-ni.
 III.SG-do-PST.3/become-PST.3
 ‘Ali finished reading a/the book.’

The transitivity harmony observed in Lak can only be possible if the structure is mono-clausal. Furthermore, the analysis of agreement proposed above can be extended to the transitivity harmony, namely, the verb ‘to begin’ has an unvalued feature [UTRANS]. Recall that besides this feature, the verb ‘to finish’ also agrees in class/number which it gets from the lower v head, as shown in Figure 1. I suggest that during the valuation of the class/number features the transitivity feature also gets valued. This analysis of the transitivity harmony is similar in spirit to the analysis of voice agreement discussed in Wurmbrand & Shimamura (2017).

5 Conclusion

In this paper I have discussed the aspectual construction in Lak which has some surface similarities with the aspectual construction in Tsez that is analysed as either backward control or raising (Polinsky & Potsdam 2002). By applying the same tests to Lak, I have shown that what we deal with is neither control (backward or forward) nor raising. I have proposed that the aspectual construction in Lak is a case of clause union or restructuring (Wurmbrand (2001, 2004, 2015), a.o) where the main verb takes a complement smaller than CP, namely, AspP. I have backed up my analysis with evidence from A'-scrambling, agreement and transitivity harmony. From the empirical point of view, it would be interesting to compare the Lak aspectual verbs to their counterparts in other languages of the family: for example, in Tanti Dargwa the verb ‘to finish’ has two variants: transitive *taman-ab* and intransitive *taman-b=iχ* (Sumbatova & Lander 2014). In Bagwalal, a similar phenomenon has been described as a case of serial verb construction in Tatevosov (2001: 119–125). A detailed comparative study of the aspectual verbs in Nakh-Dagestanian could provide us with a better understanding of this type of clause union.

Acknowledgements

I want to thank my Lak language consultants Zalmu Abburahmanova and Sagira Sungurova. I am grateful to three anonymous reviewers of this volume and the participants of the Syntax and Semantics Research Group at the University of York for many helpful and constructive comments. Any errors that remain in the paper are mine.

Abbreviations

ABS	absolute case	MSD	masdar
AO	A-oriented	NEG	negation
ATTR	attributive	OS	oblique stem
AUX	auxiliary	PART	participle
CMPL	completive aspect	PL	plural
DAT	dative case	POT	potential mood
DUR	durative aspect	PRES	present tense
EV	direct evidential	PRF	perfective aspect
EVID	evidential mood	PST	past tense
GER	gerund	Q	question marker
IMPER	imperative mood	SIM.EVENT	simultaneous event
ITER	iterative aspect	SG	singular
MID	middle	SO	S-oriented

References

- Baker, Mark C. & Willie Udo Willie. 2010. Agreement in Ibibio: From every head, to every head. *Syntax* 13(2). 99–132.
- Boeckx, Cedric & Norbert Hornstein. 2003. Reply to “control is not movement”. *Linguistic Inquiry* 34(2). 269–280.
- Boeckx, Cedric & Norbert Hornstein. 2004. Movement under control. *Linguistic Inquiry* 35(3). 431–452.
- Collins, Chris. 2003. The internal structure of vP in Jul’hoansi and Hoan. *Studia Linguistica* 57(1). 1–25.
- Davies, William & Stanley Dubinsky. 2004. *The grammar of raising and control*. Malden: Blackwell.
- Desheriev, Yu. D. 1967. Batsbijskij jazyk. In V.V. Vinogradov (ed.), *Jazyki narodov SSSR. Iberijsko-kavkazskie jazyki*, 228–246. Moscow: Nauka.

4 Backward vs. forward control/raising: A case of Lak aspectual verbs

- Eldarova, Roza. 1995. *Morfologija lakskogo glagola*. Makhachkala: Dagestanskij Gosudarstvennyj Universitet. (Doctoral dissertation).
- Farkas, Donka. 1988. On obligatory control. *Linguistics and Philosophy* 11(1). 27–58.
- Gagliardi, Annie, Michael Goncalves, Maria Polinsky & Nina Radkevich. 2014. The biabsolute construction in Lak and Tsez. *Lingua* 150. 137–170.
- Greshler, Tali Arad, Nurit Melnik & Shuly Wintner. 2017. Seeking control in Modern Standard Arabic. *Glossa* 2(1). 1–41.
- Harris, Alice C. 2002. *Endoclitics and the origin of Udi morphosyntax*. Oxford: Oxford University Press.
- Haspelmath, Martin. 1993. *A grammar of Lezgian*. Berlin: Mouton de Gruyter.
- Hornstein, Norbert. 1999. Movement and control. *Linguistic Inquiry* 30(1). 69–96.
- Kazenin, Konstantin I. 2013. *Sintaksis sovremennogo lakskogo jazyka*. Makhachkala: Aleph.
- Landau, Idan. 2001. *Elements of control: Structure and meaning in infinitival constructions*. Dordrecht: Kluwer.
- Landau, Idan. 2003. Movement out of control. *Linguistic Inquiry* 34(3). 471–498.
- Landau, Idan. 2004. The scale of finiteness and the calculus of control. *Natural Language and Linguistic Theory* 22(4). 811–877.
- Magometov, Aleksandr A. 1965. *Tabasaranskij jazyk: Issledovanija i teksty*. Tbilisi: Mecniereba.
- Magometov, Aleksandr A. 1970. *Agul'skij jazyk: Issledovanija i teksty*. Tbilisi.
- Martin, Roger. 2001. Null case and the distribution of PRO. *Linguistic Inquiry* 32(1). 141–166.
- Murkelinskij, G. B. 1971. *Lakskij jazyk: Fonetika i morfologija*. Makhachkala: Dagestanskoe uchebno-pedagogicheskoe izdatel'stvo.
- Polinsky, Maria. 2016. Agreement in archi from a minimalist perspective. In Oliver Bond, Greville G. Corbett, Marina Chumakina & Dunstan Brown (eds.), *Archi: Complexities of agreement in cross-theoretical perspective*, 184–232. Oxford: Oxford University Press.
- Polinsky, Maria & Eric Potsdam. 2002. Backward control. *Linguistic Inquiry* 33(2). 245–282.
- Polinsky, Maria, Nina Radkevich & Marina Chumakina. 2017. Agreement between arguments? Not really. In Roberta D'Alessandro, Irene Franco & Ángel J. Gallego (eds.), *Verbal domain*, 49–85. Oxford: Oxford University Press.
- Potsdam, Eric & Maria Polinsky. 2012. Backward raising. *Syntax* 15(1). 75–108.
- Radkevich, Nina. 2010. *On location: The structure of case and adpositions*. Storrs: University of Connecticut. (Doctoral dissertation).

- Radkevich, Nina. 2017. Two types of split ergativity = two sides of the same coin. Paper presented at LAGB Meeting 2017, University of Kent.
- Rezac, Milan. 2003. The fine structure of cyclic agree. *Syntax* 6(2). 156–182.
- Roussou, Anna. 2009. In the mood for control. *Lingua* 119(12). 1811–1836.
- Sumbatova, Nina R. & Yury A. Lander. 2014. *Darginskij govor selenija tanty*. Moscow: Yazyki slavjanskoj kultury.
- Tatevosov, Sergey. 2001. Nekanoničnye glagolnye predikaty. In Alexandr E. Kibrik (ed.), *Bagvalinskij jazyk*, 118–126. Moscow: Nasledie.
- Valenzuela, Pilar M. 2011. Multi-verb predicates and transitivity harmony in Shipibo-Konibo. In Alexandra Y. Aikhenvald & Peter C. Muysken with the assistance of Joshua Birchall (eds.), *Multi-verbal constructions: A view from the Americas*, 185–212. Leiden: Brill.
- Wurmbrand, Susi. 1999. Modal verbs must be raising verbs. In Sonya Bird, Andrew Carnie, Jason D. Haugen & Peter Norquest (eds.), *Proceedings of the 18th West Coast Conference on Formal Linguistics*, 599–612. Somerville: Cascadilla Press.
- Wurmbrand, Susi. 2001. *Infinitives: Restructuring and clause structure* (Studies in Generative Grammar [SGG] 55). Berlin/New York: De Gruyter Mouton.
- Wurmbrand, Susi. 2004. Two types of restructuring: Lexical vs functional. *Lingua* 114(8). 991–1014.
- Wurmbrand, Susi. 2007. Infinitives are tenseless. In *University of Pennsylvania working papers in linguistics: Proceedings of the 30th annual Penn Linguistics Colloquium*, vol. 13, 407–420. The Penn Graduate Linguistics Society.
- Wurmbrand, Susi. 2015. Restructuring cross-linguistically. In Thuy Bui & Deniz Özyıldız (eds.), *Proceedings of the 45th meeting of North Eastern Linguistics Society*, 227–240. Amherst: University of Massachusetts, GLSA.
- Wurmbrand, Susi & Koji Shimamura. 2017. The features of the voice domain: Actives, passives, and restructuring. In Roberta D’Alessandro, Irene Franco & Ángel Gallego (eds.), *The verbal domain*, 179–204. Oxford: Oxford University Press.
- Zariquiey, Roberto. 2014. Transitivity agreement and transitivity harmony in Panoan and elsewhere: Towards a typology of indirect transitivity marking. Handout of a talk at the University of Oregon.
- Zhirkov, Lev I. 1955. *Lakskij jazyk: Fonetika i morfologija*. Moscow: Izdatel’stvo Akademii nauk SSSR.