

Thematic Suffixes in Şavşat Georgian
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Introduction:

Standard Georgian has a set of Thematic Suffixes (TS) which are also known as a present/future stem formant (P/FSF). This suffix has several allomorphs:

- | | |
|----------------------|----------------|
| (1) a-šen- eb | ‘you build X’ |
| xat’- av | ‘you paint X’ |
| i-cxovr- ob-s | ‘X is living’ |
| a-sx- am | ‘you pour X’ |
| a-l- ev | ‘you use up X’ |

There are different proposals regarding the function of the thematic suffixes (TS) in Modern Georgian.

- Aronson (1990) proposes that they are associated with past/non-past distinction.
- Nash (1995) analyses Georgian thematic suffixes as realizations of Kratzer’s (1994) Voice.
- Cherchi (1996) takes them to be associated with imperfective aspect.
- Hewitt (1995) and Lomashvili (2010) consider them to be dummy elements inserted for morphological well-formedness.
- McGinnis (2016) takes them to be the head of an AspectP which bears the features [\pm bounded].
- Nash (2017), on the other hand, considers TSs to be imperfective markers occupying the head of EventP.
- Flinn (2017) treats them as nominalizers associated with the [+ collective] feature.
- Baker (2020) argues that the distribution of TS is based on manner vs. result features denoted by different verb types.

In this study, we take a look at TSs in Şavşat dialect of Georgian (henceforth Şavşat), which is an endangered dialect spoken in North-eastern Turkey.

We argue that TSs in Şavşat simultaneously mark both **inner aspect** and **outer aspect**, hence they present evidence for the combination of the proposals by McGinnis (2016) and Nash (2017).

2. Thematic Suffixes in Şavşat, and Lexical Aspect

As in Standard Georgian, the TSs have several realizations in Şavşat too, though, the most commonly observed ones are *-eb*, *-ob*, *-av* and *-ev*.

TSs in Şavşat denote imperfectivity both in the present and in the past as in (2):

- | | |
|---|--|
| (2) a. Ahmet-ay saxl a-šen- eb-s . | b. Ahmet-ay saxl a-šen- eb-d-a . |
| Ahmet-Nom house.Dat PV-build-TS-Pres.3sg | Ahmet-Nom house.Dat PV-build-TS-Past-3sg |
| Ahmet is building a house. | Ahmet was building a house. |

In addition to denoting imperfectivity, we also clearly see that TSs in Şavşat interact with the lexical aspect of the verb used. We find *-eb* on verbs denoting accomplishments as in (2). TS *-eb* is also used

with achievements (3a), degree achievements (3b) and verbs of directed motion (3c), which are both bounded eventualities denoting a change of state:

- | | | |
|---------------------------|-------------------------|--------------------------|
| (3) a. sq-d- eb -a | b. tsiv-d- eb -a | c. dabl-d- eb -a |
| pop-Inch-TS-Pres.3sg | cool-Inch-TS-Pres.3sg | descend-Inch-TS-Pres.3sg |
| It is popping. | It is cooling. | It is descending. |

The TS *-ob*, on the other hand, is reserved for statives such as *think, regret, have* as in (4).

- | | |
|----------------------------|-----------------------|
| (4) a. sahab- ob -s | b. pikr- ob -s |
| have-TS-Pres.3sg | think-TS-Pres.3sg |
| S/he has (it). | S/he thinks. |

We also find *-ob* with different types of unergatives: (i) agentive unergatives such as *dance, play, work*, as in (5a), (ii) verbs of sound/light/smell emission, such as *purl, shine, smell*, as in (5b) and (iii) manner of behavior verbs derived from nominal or adjectival bases as in (5c):

- | | | |
|--------------------------|--------------------------|--------------------------------|
| (5) a. sam- ob -s | b. pkriyal- ob -s | c. kal- ob -s |
| dance-TS-Pres.3sg | shine-TS-Pres.3sg | woman-TS-Pres.3sg |
| S/he is dancing. | It is shining. | S/he is behaving like a woman. |

The TS *-av* on the other hand is used for both transitive activities such as *drink, write, sew, wipe* as in (6) and intransitive activities, such as *swim, crawl, run*, as shown in (7).

- | | |
|--------------------------|-----------------------|
| (6) a. ker- av -s | b. tser- av -s |
| sew-TS-Pres.3sg | write-TS-Pres.3sg |
| S/he is sewing (it). | S/he is writing (it). |

- | | |
|--------------------------|-------------------------|
| (7) a. boç- av -s | b. sv- av -s |
| crawl-TS-Pres.3sg | drink-TS-Pres.3sg |
| S/he/it is crawling. | S/he/it is drinking it. |

Finally, transitive achievements specifically require *-ev*, such as with verbs like *throw, topple, ignite*, as in (8). Note that these verbs encode two separate temporal phases (Krifka, 2004; Rappaport Hovav, 2008; Osswald *et al.*, 2012), where the agent acts upon the theme and initiates the event in the first phase and in the second phase the event unfolds on its own without the control of the agent:

- | | |
|---------------------------|------------------------|
| (8) a. i-kn- ev -s | b. a-kts- ev -s |
| PV-throw-TS-Pres.3sg | PV-topple-TS-Pres.3sg |
| S/he is throwing it. | S/he is toppling it. |

As the above data show, the TSs in Şavşat seem closely associated with the lexical (inner) aspect of the root they attach to.

Then, an important question is: To what extent do these TSs *synchronically* manifest inner aspect? We argue that Şavşat presents shifts of the kind we expect to find. For example, the introduction of an end point to an activity verb via spatial prefixes leads to a change in the TS selection.

To illustrate, when the spatial preverb *ga-* is introduced to the activity verbs in (6b) and (7a), the TS –*av* turns into –*eb*, as shown in (9a) and (9b), respectively. This is expected given that –*eb* is the TS required by accomplishments.

- (9) a. **da-tser-*eb*-s**
 PV-write-TS-Pres.3sg
 S/he is writing it up.
- b. **ga-boç-d-*eb*-a**
 PV-crawl-Inch-TS-Pres.3sg
 S/he/it crawls to a certain point.

Table 1 below summarizes the general pattern we have introduced so far regarding the distribution of TSs in Şavşat with respect to lexical aspect and argument structure.

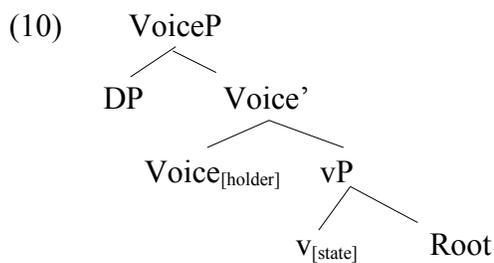
Table 1. Syntactic and Semantic Correlates of the Thematic Suffixes

TS	Lexical Aspect	Argument Structure
-ob	States	Transitive, Unergative
-eb	Achievements, Accomplishments	Unaccusative, Transitive
-av	Activities	Transitive, Unergative
-ev	Two-Phase Achievements	Transitive

There is one notable systematic exception in the table above:

Some unergative verbs take the TS –*ob* that states take. At first, this might look surprising.

These unergatives are verbs of emission, non-directional agentive unergatives, and manner of behavior verbs. Nash (2018) proposes that Georgian unergatives are headed by an underlyingly monovalent stative verb with an external Holder argument. Nash (2017b) analyzes *ob*-unergatives as underlyingly stative having the structure of stative predicates as shown in (10), where the external argument introduced by Voice_[holder]” (Nash 2017b:9):



Nash proposes that the dynamicity of *ob*-unergatives should be structurally built. In the imperfective, dynamicity is achieved via viewpoint aspect shift. In accordance with Rothstein's (1999) semantic analysis, *ob*-unergatives undergo a viewpoint aspect shift and the DP in Spec, VoiceP_[holder] is re-interpreted as an Agent, similarly to the case in English *John is being nasty*.

The proposal that unergatives have a stative core is in line with Hale and Keyser (2002), who argue that a large number of unergative verbs in English are actually denominal. If the above mentioned unergatives have a stative core in Şavşat as well, then it is no longer surprising to find the TS *-ob* with them, which is the TS selected by regular stative verbs in Şavşat.

It has been argued that TSs in Standard Georgian do not depict a neat picture in terms of their overlap with lexical aspect, as documented in detail by Baker (2020). This pattern is what has led Hewitt (1995) and Lomashvili (2010) to consider them to be dummy elements inserted for morphological well-formedness:

(11) Standard Georgian:

- eb: mitsvaldeba “die” (change of state)
tskhovreba “exist, live, be alive” (states)
kashkashebs “shine brightly” (verbs of emission)
miit’q’ap’eba “mourn, weep for” (activity)
- ob: mushaobs “work” (activity)
Adnobs “melt sth” (change of state)
Kitxulobs “read” (activity)
Pikrobs “think” (state)
- av tsuravs “swim” (activity)
brts’q’inavs “shine, glitter” (verbs of emission)
beravs “inflate” (change of state)

We do not make any claims about Standard Georgian. But we have anecdotal evidence that in many instances where Şavşat has the expected TS while Standard Georgian has an idiosyncratic TS that does not reflect inner aspect.

- | | | |
|--|-------------------|----------------------------------|
| (12) a. atar- eb -s
S/he is carrying X | Standard Georgian | -eb not expected with activities |
| b. zid- av -s
S/he is carrying X | Şavşat Georgian | -av is expected with activities |

Our claim about Şavşat comes from a survey in Okumuş (2019) who reports the distribution of TSs in Şavşat based on a sample of ~200 verbs.

- 46 verbs take the TS -av no exceptions, all transitive or intransitive activities
- 12 verbs take the TS -ev no exceptions, all two-phase achievements
- 38 verbs take the TS -ob can be argued to share a stative core (psych, denominal, emission)
- 98 verbs take the TS -eb 92/98 denote bounded events (some exceptions: *call, beg*)

Given the distribution of TSs in Şavşat summarized in Table 1, there are certain accounts that we can exclude:

- It is safe to claim that TSs in Şavşat do not necessarily reflect information regarding argument structure. Hence we do not think they should be associated with *voice* as proposed in Nash (1995).
- Moreover, given the picture in Table 1, we do not think a dummy stem formant analysis along the lines of Hewitt (1995) and Lomashvili (2010) is compatible for the TSs in Şavşat.
- Finally, they are available both under present and past tenses as long as the outer aspect is imperfective. Hence a tense based analysis proposed by Aronson (1990) would not account for their distribution, either.

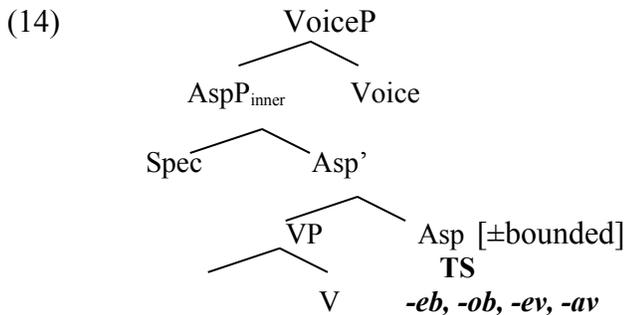
Rather, what we see is that the TSs systematically reflect **lexical aspect** in Şavşat, even though they also denote imperfectivity across different tenses.

Notably, TSs are also found in *masdars* and deverbal nouns in Şavşat, as shown in (13).

- (13) a. a-şen-eb-a ‘(the act of) building’ (masdar)
 b. a-m-şen-eb-eli ‘the builder’
 c. a-şen-eb-u-li ‘the built thing’

The fact that TSs “survive” in nominals derived from a verbal root indicates that TSs have a very local relation with the root of the verb. Hence, unlike what Nash (2017) assumes for Standard Georgian, TSs in Şavşat cannot be directly heading an EventP (~ImpfP) just to denote imperfectivity.

Given this pattern we take TSs in Şavşat to be markers which are directly merged into an inner aspect head, Aspect_{inner} (cf. Travis 2010), introduced in between VoiceP and VP, as shown in (14):



The head Aspect_{inner} will be endowed with the feature [±bounded], as proposed by McGinnis (2016) and the TS will be selected according to the value it has. Additionally, in the case of [+bounded] events, as in achievements and accomplishments, the inner argument will raise into the Spec, Aspect_{inner} to check this feature (cf. Travis 2010).

Next, we discuss the relationship between TSs in Şavşat and outer aspect.

3. Thematic Suffixes and Imperfective Aspect

In the previous section, we have argued that TSs are merged structurally low, heading the inner AspectP.

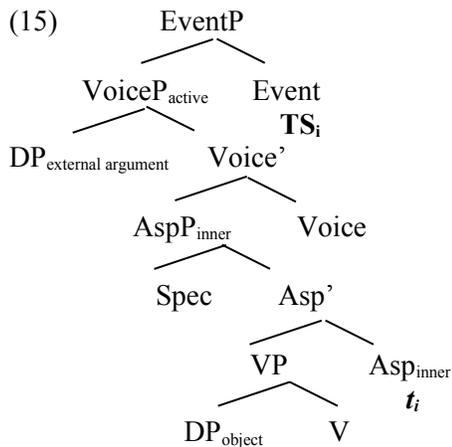
- This position is justified by the observation that the selection of TSs is likely synchronic and driven by inner aspect.

- Furthermore, the fact that TSs survive in building deverbal nominals supports the idea that TSs are inherently associated with a low position in the verbal functional sequence.

While there is evidence for a low merge site for TSs in Şavşat, there is also data that suggest a higher position for them. As we have mentioned, the presence of TSs in the present and in the past tenses consistently encodes an outer aspect feature, namely imperfectivity, in Şavşat.

In order to resolve this apparent inconsistency due to the double nature of TSs, we argue that TSs are indeed derivationally linked to distinct positions in the verbal functional sequence.

Proposal: TSs are first merged into Asp_{inner} , but to derive an imperfective, Asp_{inner} raises into the head of an EventP. We follow Nash (2017a) in taking EventP to be host the imperfective aspect.



The EventP in this analysis is adopted from Ramchand & Svenonius (2013).

- They argue that while the perfective belongs to a higher zone, imperfective (e.g. the progressive in English) belongs in the lower verbal zone located in the projection called EventP introduced above the merge position of the external argument.

- What is argued to justify this position is that the imperfective aspect may impose selectional restrictions on the lexical aspect of the verb.

Why two positions for TSs?

There is suggestive evidence for a derivational link between a low position for TSs and a high position for TSs. This comes from cases in transitive causativization where we see double TS realization in Şavşat.

Causativization exhibits quite an intricate pattern across different verb classes.

- Causativization always requires the prefix *a-* and the TS *-eb* regardless of the lexical aspect.
- In addition, we observe an overt realization of the causative head *-(n)i* when a **transitive** verb is causativized. See (17).
- However, **intransitives**, including both unaccusatives and unergatives, do not take the causative suffix *-(n)i*. See (16).
- More importantly, when there is an overt causative suffix, we observe **double realization of TSs** if the causativized event is [+bounded].

(16) <u>Intransitive V</u>	<u>Present</u>		<u>Pres. Causative</u>	
a. think	pikr- ob -s		a-pikr- eb -s	no causative suffix ==> single TS
b. get red	tsilt-d- eb -a		a-tsilt- eb -s	no causative suffix ==> single TS
c. run	çen- av -s		a-çen- eb -s	no causative suffix ==> single TS
(17) <u>Transitive V</u>	<u>Present</u>		<u>Pres. Causative</u>	
a. build	a-şen- eb -s		a-şen- eb-i - eb -s	overt causative suffix ==> double TS
b. throw	i-kn- ev -s		a-kn- ev-ni - eb -s	overt causative suffix ==> double TS
c. write	tser- av -s		a-tser- i - eb -s	overt causative suffix ==> single TS

When we take a look at Table 2 we see certain co-occurrence restrictions for the TSs under causativization.

- Transitive verbs requiring the TS *-eb* and *-ev* which denote accomplishments and achievements respectively lead to double TS realization under causativization.
- Transitive activities requiring *-av*, even though they require the causative suffix *-(n)i*, do not permit double TS realization.

Table 2: Realization of TSs under causativization

<u>Verb Type</u>	<u>Original TS</u>	<u>Double TS Realization</u>
Unergative	-ob	*-ob...-eb
Unaccusative	-eb	*-eb...-eb
Transitive Activity/Unergative	-av	*-av...-eb
Transitive Achievement	-ev	-ev...-eb
Transitive Accomplishment	-eb	-eb...-eb

To summarize, the generalization here (assuming there is one to make) seems to be making reference to two notions:

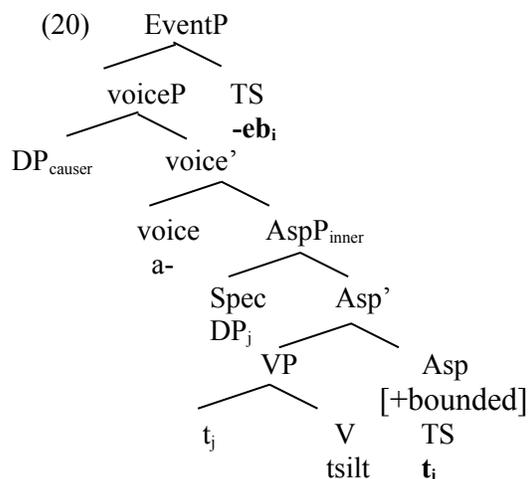
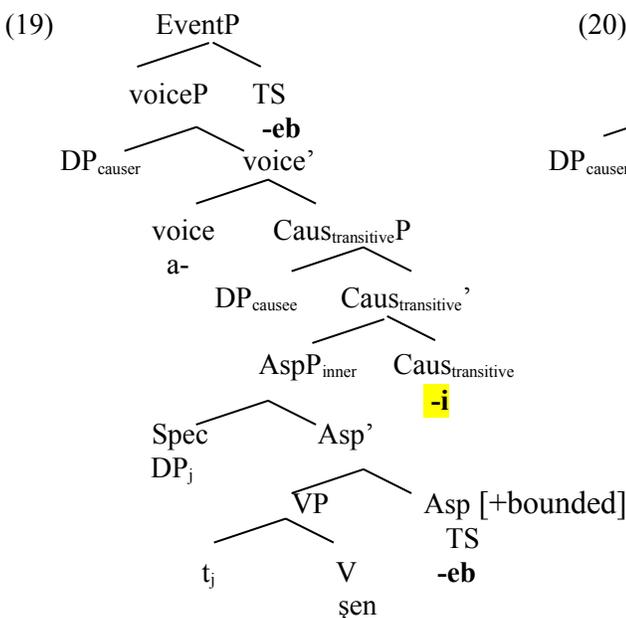
- the presence of the causative suffix <== the **transitivity** of the base that causativization targets
- double TS realization <== the **boundedness** of the transitive base

What does this data highlight?

- that causativizing an already transitive base requires the suffix *-(n)i*. This is perhaps an additional head.
- This overt head, when it is present, seems to be blocking a derivational link between Asp_{inner} and Event heads, making it possible for them to be pronounced separately as we see in (18a). A possible structure for (18) is provided in (19).
- While causativizing an intransitive base, we do not have that intervening head. Then, the derivational link between Asp and Event heads is not blocked and we see a single TS realization.

(18) a. a- $\mathit{\text{şen-eb-i-eb-s}}$
 voice-build-TS-caus-TS-pres.3sg
 S/he is making him/her build it.

b. a- $\mathit{tsilt-eb-s}$
 voice-get.red-TS-pres.3sg
 It is making it get red.



Undoubtedly, the causativization data, due to its intricacy, raise a number of questions. Here are some of those questions which we have only have tentative answers for.

Q: How come we see *-eb* in the head of EventP with causatives? This is so even when the derivational link between Asp_{inner} and Event heads is *not* blocked (i.e. with single TS realization)

The uniform *-eb* realization with causatives suggests *-eb* is a default for the head of EventP. The obligatoriness of *-eb* can be seen as a loss/impoverishment of “information” that is marked in the language otherwise.

From this perspective, it is a kind of syncretism which is perhaps conditioned by the presence of the “causative” prefix *a-*, spelling out *voice* (whenever *voice* is not licensed to be null).

Q: Why don't we find double TS realization in all cases where the causative suffix *-(n)i* appears?

The causative suffix *-(n)i* appears when the base is already lexically transitive. This is a configuration where we would uniformly expect double TS realization, given our assumption that this head intervenes for the raising of the Asp head to the Event head. Rather, we see (17), repeated below.

(17) <u>Transitive V</u>	<u>Present</u>	<u>Pres. Causative</u>	
a. build	a- <i>şen-eb</i> -s	a- <i>şen-eb-i-eb</i> -s	overt causative suffix ==> double TS
b. throw	i- <i>kn-ev</i> -s	a- <i>kn-ev-ni-eb</i> -s	overt causative suffix ==> double TS
c. write	tser- <i>av</i> -s	a-tser- <i>0-i-eb</i> -s	overt causative suffix ==> single TS

We observe that in both cases of double TS realization, AspP_{inner} is endowed with the feature [+bounded] because they are accomplishments and two-phase achievements, respectively. With transitive activity verbs, we do not observe double TS realization in their causativized forms. Notably, for verb roots like *tser* 'write', an inner TS *does* show up if the event is bounded, hence construed as an accomplishment. Compare (21a) and (21b) below.

(21) a.	a-tser- <i>eb-i-eb</i> -s	b.	a-tser- <i>i-eb</i> -s
	voice-write-TS-caus-TS-prs.3sg		voice-write-caus-TS-prs.3sg
	S/he is making him/her write it up .		S/he is making him/her write it.

We tentatively suggest that what forces the overt pronunciation of the head Asp_{inner}P is that the internal argument ends up in its specifier.

Q: How do we know in double TS realization, the inner TS (i.e. *-eb* or *-ev*) is marking the inner aspect while the outer TS (i.e. *-eb*) is marking the outer aspect (realizing the head of EventP)?

In perfective past contexts, the imperfective marking naturally does not appear. So, this context presents an ideal testing ground for the claim above. As we see in the examples below, the TS that survives in perfective past contexts is the inner one, correctly predicted by the hypothesis that they genuinely realize the inner aspect head, remaining there.

(22) a.	ga-a- <i>kn-ev-ni</i> -a	b.	a-a- <i>şen-eb-i</i> -a
	pv-voice-throw-TS-caus-pst.3sg		pv-voice-build-TS-caus-pst.3sg
	S/he made him/her throw it.		S/he made him/her build it.

To summarize, thematic suffixes in Şavşat can serve as both inner aspect markers and outer aspect markers.

- We take them to encode inner aspect because their allomorphic variation synchronically correlates with the values for inner aspect features such as [±bounded].

- We also take them to encode outer aspect because their presence is the unique PF sign for imperfectivity.

- We hypothesize that Şavşat relates the two by raising the head of AspP_{inner} into the head of EventP.

- The evidence for TS-raising comes from cases where it actually fails:

(i) in masdar and participle forms: EventP is not in the structure, with the consequence that TS cannot raise, remaining in AspP_{inner}.

(ii) blocking by an overt causative head

Next: To corroborate our hypotheses about TSs in Şavşat, we will bring in comparative data from the cognate TS system of Laz, another endangered South-Caucasian language spoken in North-eastern Turkey which has contact with Şavşat.

4. Further evidence: Thematic Suffixes in Laz

There are four different TSs in Laz: *-am*, *-um*, *-e(r)* and *-u(r)*

- (23) Amedi-k toyç'i zd-**am**-s.
Ahmet-erg rope pull-TS-pres.3sg
'Ahmet is pulling/pulls the rope.'
- (24) Ahmedi-k oxori tzopx-**um**-s.
Ahmet-ERG house build-TS-pres.3sg
'Ahmet is building/builds a/the house/houses.'
- (25) Mjora c-ul-**u**-n.
Sun PV-go.down-TS-pres.3sg
'The sun is setting/sets.'
- (26) T'op'i i-kt-**e**-n.
ball VAL-turn-TS-pres.3sg
'The ball is rolling/rolls.'

Identical to the case in Şavşat and Standard Georgian, TSs in Laz render the eventuality temporally present and aspectually imperfective, encompassing both the habitual and the progressive as seen in (23-26).¹ The past tense also denotes perfective aspect as in (27a); the presence of a TS in combination with past tense denotes imperfective aspect in the past as seen in (27b):

- (27) a. Amedi-k oxori tzopx-**u**.
Ahmet-erg house build-past.3sg
'Ahmet built the house.'
- b. Ahmedi-k oxori tzopx-**um**-t'-u.
Ahmet-erg house build-TS-cop-past.3sg
'Ahmet was building the house.'

4.1 *-am* and *-um*

As extensively discussed in Taylan and Öztürk (2014), Demirok (2014), Öztürk and Taylan (2017), Öztürk (2021), the TS *-am* appears on unergatives where the subject bears the macro role of Initiator, bearing ergative case.

¹ Note that Laz has 5 major dialects: Pazar (Atina), Ardeşen, Arhavi, Xopa and Findikli. Our data is from the Pazar dialect. Anderson (1963), Kojima, G. and İ. Avcı Bucak'lışı (2003), Kutscher *et al.* (1995), Lacroix (2009) and Öztürk and Pöchtrager (2011) are some of the major works on the different dialects of Laz.

Note that ergative case in Laz is not dependent on tense or aspect, but is required when the subject bears an initiator/causer role, thus it is thematically oriented.² Verbs which surface as unergatives in Laz cover unbounded atelic activities, such as agentive verbs (28a), as well as verbs of emission (28b):

- (28) a. Bere-k i-bgar-**am**-s
 child-erg val-cry-TS-pres.3sg
 ‘The child is crying/cries.’
 b. Ntsa-k gurgul-**am**-s
 sky-erg clap-TS-pres.3sg
 ‘Thunder claps/is clapping.’

Transitives with unaffected objects also take *-am* and require ergative initiator subjects as unergatives. Their theme object appears as nominative. Such transitives can denote activities (29a), accomplishments as well as two-phase achievements (29c):

- (29) a. Amedi-k t’abaxi çx-**am**-s.
 Ahmet-erg plate wash-TS-pres.3sg
 ‘Ahmet is washing/washes the plate.’
 b. Amedi-k diška mo-ğ-**am**-s.
 Ahmet-erg wood pv-bring-TS-pres.3sg
 ‘Ahmet is bringing/brings wood.’
 c. Arte-k dacxuri o-gz-**am**-s.
 Arte-erg fire pv-bring-TS-pres.3sg
 ‘Artek ignites/is igniting the fire.’

Note that in PL, the notion of affectedness is associated with a visible change in the shape or constituency of the undergoer object pointing to a patient role for the object. Verbs taking such objects take TS *-um* instead of *-am* as in (30).

Given this notion of affectedness, transitives like *bring*, *open/close (the door)*, *etc.* are categorized as events with unaffected objects and take *-am*. Transitives with affected objects, such as *cut*, *fold*, *break*, *fry*, on the other hand, select the TS marker *-um*.

Thus, a verb like *wash* depending on the nature of its undergoer object, i.e. whether it changes its shape or not, is expressed through two different lexical verbs - one associated with *-am* (29a) and the other with *-um* (30a). Thus, the selection of *-um* vs. *-am* roughly maps to patient vs. theme role for the undergoer object.

- (30) a. Ahmedi-k şee-pe nax-**um**-s.
 Ahmet-erg laundry-pl wash-TS-pres.3sg
 ‘Ahmet is washing laundry.’
 b. Bere-k ham tzari ş-**um**-s.
 child-erg this water drink-TS-pres.3sg
 ‘The child is drinking this water.’

² As a language depicting active alignment, case morphology in Laz is thematically oriented; all initiators/causers require ergative case *-k*, undergoers are nominative and zero-marked, and experiencers/benefactives/recipients take dative case *-s*.

Similar to the verbs which select *-am*, verbs taking *-um* also have ergative initiator subjects and nominative undergoer objects. Similarly, this group of verbs denote activities or accomplishments.

In addition to having ergative subjects and nominative undergoers, another property of verbs taking *-am* or *-um* is that the agreement for third person singular is always *-s*.³

4.2 *-u(r)*

The third TS *-u(r)* is used with single argument verbs where the sole DP argument is a nominative Undergoer (both patients and themes are compatible), hence the structure surfaces with an unaccusative pattern. Such verbs express an eventuality where the undergoer has gone through some change of state. Achievements, degree achievements and verbs of directed motion fall into this group:

- (31) a. Xava mts'up-**u-n**
 weather get.dark-TS-pres.3sg
 'It is getting dark.'
- b. Bere ey-ul-**u-n**
 child pv-climb-TS-pres.3sg
 'The child is climbing up.'
- c. Balon-epe t'vats-**u-n**
 balloon-pl pop-TS-pres.3sg
 'The balloons are popping.'

TS *-u(r)* is also used with stative verbs, where a dative argument is introduced to an unaccusative base via applicatives:

- (32) Ali-s para u-**ǧ-u-n**.
 Ali-dat money appl-bring-TS-pres.3sg
 'Ali has money.'

Note that the third person agreement marker for verbs with a nominative subject, selecting the TS *-u(r)* is *-n*, as opposed to *-s* which is used with verbs which take ergative subjects and the TSs *-am* or *-um*.

4.3 *-e(r)*

The fourth TS *-e(r)*, which always appears with the valency marker *i-*, forms intransitive impersonal structures yielding an unaccusative pattern, similar to the ones with the TS *-u(r)*, as the sole overt DP argument is a nominative undergoer.

This construction formed with the TS *-e(r)* and the valency marker *i-* predominantly implies an agentive/animate initiator, yet can be used to meet the readings such as passive/ middle/ anti-causatives.

³Note that we are only referring to third person because first and second persons in the present are zero-marked in PL (cf. Demirok 2013):

- (i) Present Set Agreement Suffixes:
- | | |
|---------|----------|
| 1p & 2p | ∅ |
| 3ps | -n/-s |
| 3ppl | -nan/-an |

It is compatible with verbs selecting TSs *-am* and *-um*, and also with *-u(r)*, as long as what brings about the change is a human agent. Thus, in terms of lexical aspect it is compatible with verbs denoting activity, accomplishment, achievement and states:

- (33) a. Bere-k t'abaxi çx-**am**-s.
 child-erg plate wash-TS-pres.3sg
 'The child is washing/washes the plate.'
 b. T'abaxi i-çx-**e**-n.
 plate val-wash-ts-pres.3sg
 'The plate is being washed.'
- (34) a. Ali-k cami tax-**um**-s.
 Ali-erg glass break-TS-pres.3sg
 'Ali is breaking the glass.'
 b. Cami i-tax-**e**-n.
 glass val-break-ts-pres.3sg
 'The glass breaks/is being broken.'
- (35) a. Ora çod-**u**-n.
 time run.out-TS-pres.3sg
 'Time is running out.'
 b. Ora i-çod-**e**-n.
 time val-run.out-TS-pres.3sg
 'Time is running out.'
- (36) Ali-s layci'i-şe a-şkur-**e**-n.
 Ali-dat dog-abl appl-fear-ts-pres.3sg
 'Ali fears dogs.'

Note that the third person agreement marker for verbs with the TS-*e(r)* is *-n* just as for verbs with the TS *-u(r)*, as opposed to *-s* which is used with verbs which take ergative subjects and the TSs *-am* or *-um*.

Table 3. Syntactic and Semantic Correlates of the Thematic Suffixes

<i>TS</i>	<i>Arg. Structure</i>	<i>Macro-roles</i>	<i>Case</i>	<i>3ps. agr.</i>	<i>Lexical Aspect</i>
-am/-um	Transitive	Initiator Undergoer	ergative nominative	-s	activity, accomplishment, achievement state
-am	Unergative	Initiator	ergative	-s	activity
-ur	Unaccusative	Undergoer	nominative	-n	achievements, state
-er	Unaccusative	Undergoer	nominative	-n	activity, accomplishment, achievement, state

As seen in Table 3, TSs in Laz do not directly reflect the lexical aspect of the predicate unlike what we observe in Şavşat. Instead they reflect information regarding the argument structure of the predicates.

While *-am* and *-um* points to the presence of an ergative initiator marked with the agreement *-s*, *-e(r)* and *-u(r)* indicate the absence of such an argument and require the agreement *-n*.

Öztürk and Taylan (2017) argue that TSs in Laz are purely functional elements which are used to denote imperfectivity and are merged directly into EventP scoping over VoiceP. Thus, they are not associated with an inner Aspect position.

If such an analysis is on the right track for Laz, then we can make two predictions:

- i. that TSs would be missing from any kind of nominalization patterns such as masdars as these would lack the EventP layer
- ii. that TSs would not lead to TS doubling in the case of an intervening head as in what we see under causativization in Şavşat.

When we take a look at masdars in Laz, as discussed in Öztürk (2021), we see that the first predication is borne out, hence TSs cannot occur in masdars. This supports the proposal that in Laz TSs are merged at a higher position than the ones in Şavşat, namely in EventP layer, hence, they are not associated with a lower Aspect position:

- (37) a. o-tax-u b. *o-tax-**um**-u
 nomin-break-nomin nomin-break-TS-nomin
 ‘(the act of) breaking’

For the second predication, we will also turn to causatives in Laz. Laz has two causative suffixes *-in* and *-ap*, which occur with intransitive (38b) and transitive predicates (39b), respectively.⁴ Both suffixes would require the valency marker *o-* under causativization. Similar to the case in Şavşat, the EventP head is realized with a default TS *-am* when the predicate is causativized.

- (38) a. Ayşe ğur-u-n
 Ayşe die-TS-pres.3sg
 Ayşe is dying.
 b. Ali-k Ayşe o-ğur-**in**-am-s. *-u(r)* → *-am*
 Ali-erg Ayşe caus-die-caus-TS-pres.3sg
 Ali is killing Ayşe.

- (39) a. Ali-k t’abaxi tax-um-s.
 Ali-erg plate break-TS-pres.3sg
 ‘Ali is breaking the plate.’
 b. Xordza-k Ali-s t’abaxi o-tax-**ap**-am-s. *-um* → *-am*
 woman-erg Ali-dat plate val-break-caus-TS-pres.3sg
 ‘The woman made Ali break the plate.’

As seen in (38b) and (39b), even if the verb denotes a bounded event, causativization does not lead to TS doubling in the case of an intervening causative head in Laz. The TS the predicate originally selects is replaced with the default *-am*. Doubling of the TS would simply lead to ungrammaticality as shown in (40):

⁴ Note that for Şavşat we have introduced the transitive causativizer as a distinct head. This is more transparent in Laz where *-ap* exclusively attaches to transitive bases.

- (40) a. *Ali-k Ayşe o-ğur-**ur-in-am-s**.
 Ali-erg Ayşe caus-die-TS-caus-TS-pres.3sg
 Ali is killing Ayşe.
- b. *Xordza-k Ali-s t'abaxi o-tax-**um-ap-am-s**.
 woman-erg Ali-dat plate val-break-TS-caus-TS-pres.3sg
 'The woman made Ali break the plate.'

As summarized in Table 4 below, the comparison with Laz further supports our claim for TSs in Şavşat that they head an inner Aspect projection. In terms of denoting imperfectivity, while the TSs in both languages pattern identically, we see a clear split between their relation to inner aspect and argument structure.

Şavşat presents evidence for association of TSs with inner aspect, but not with argument structure (cf. Nash 1995). Laz presents evidence for the opposite pattern where with TSs unambiguously indicate the presence/absence of the external argument while [\pm bounded] is not marked by TSs at all.

Table 4. Comparison of TSs in Şavşat and Laz

	TSs in Şavşat	TSs in Laz
are associated with lexical aspect	+	-
denote argument structure	-	+
express imperfectivity	+	+

5. Conclusion

Our investigation of TSs in Şavşat has found support for their dual nature:

- they mark outer aspect (in particular, the imperfective)
- they mark inner aspect (most remarkably, the [\pm bounded] feature)

We have proposed to link the two functions as a derivational link between the Asp_{inner} and Event heads, which “fails” in two configurations

- nominals derived from verbal bases (TSs survive as they remain in Asp_{inner})
- causatives of transitives (raising is blocked and we see TS realization both in Asp_{inner} and Event)

We have tested this correlation against Laz where

- TSs in Laz do not mark inner aspect (e.g. no morphological distinction corresponding to [\pm bounded])
- TSs in Laz mark argument structure (encodes *voice*-related information) and mark the imperfective

Since TSs in Laz do not have a low position, the prediction, then, is that they

- will not survive in nominals derived from verbal bases
- will not exhibit double realization in causatives of transitives.

Both of these predictions are borne out, corroborating our claims about Şavşat.

Needless to say many questions remain.

Thank you!

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