The morphosyntax of thematic suffixes in Georgian

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1.   Introduction

Georgian verbs bear a thematic suffix, sometimes known as a present/future stem formant (P/FSF). This suffix has several allomorphs:

(1)

eb	a-šen-**eb**	'you build X'
av	xat'-**av**	'you paint X'
i	targmn-**i**	'you translate X'
ob	a-tb-**ob**	'you warm X'
am	a-sx-**am**	'you pour X'
op	q-**op**	'you divide X'
Ø	tex-**Ø**	'you break X'

The thematic suffix appears in Series I, the perfect, and the nominalization (masdar) form, but is dropped in Series II and the pluperfect:
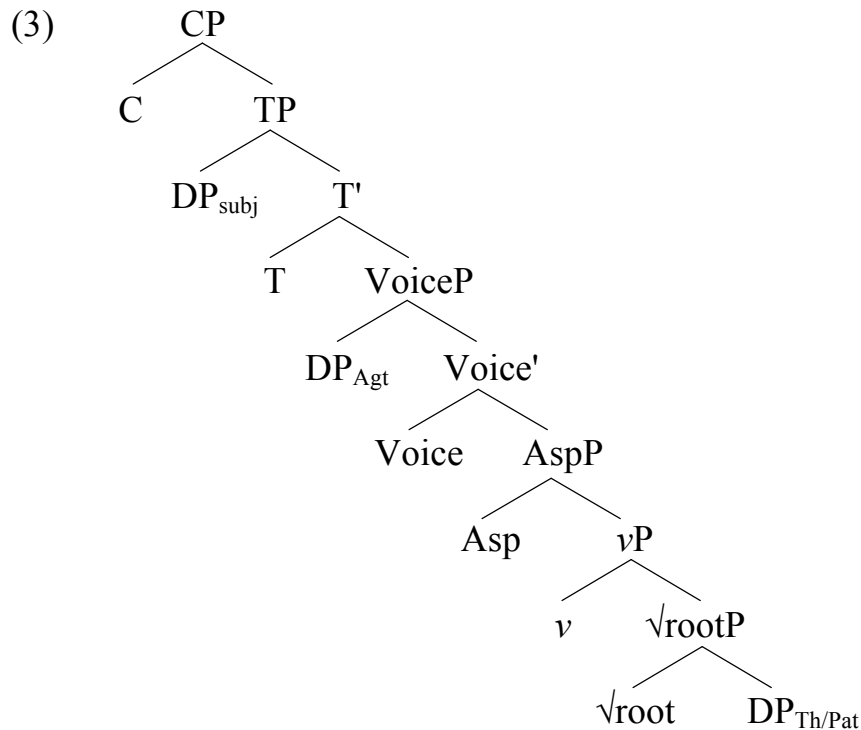
(2)

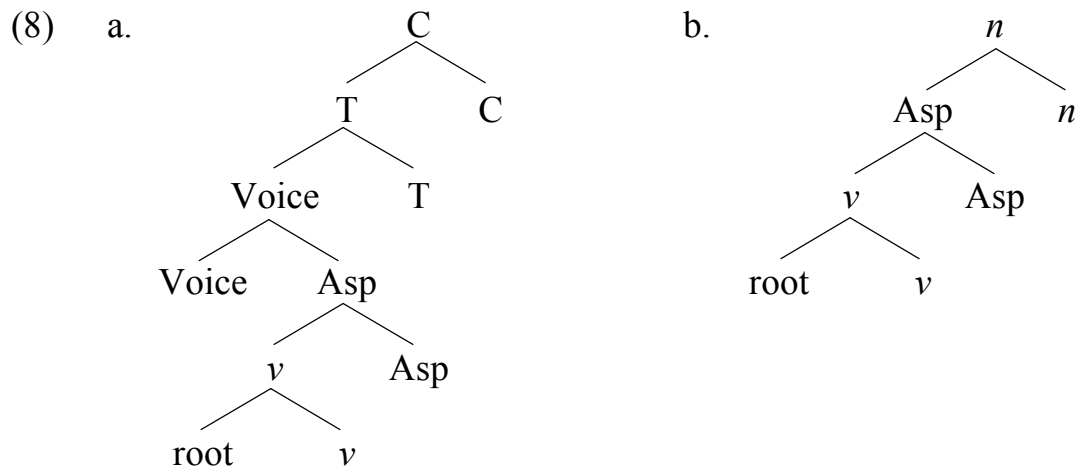| Series I	Present (imp)		xat'-**av**-s	'(s)he is painting it'
	Future (prf)	da=	xat'-**av**-s	'(s)he will paint it'
	Imperfect		xat'-**av**-d-a	'(s)he was painting it'
	Conditional	da=	xat'-**av**-d-a	'(s)he would paint it'
	Conjunctive (imp)		xat'-**av**-de-s	'if (s)he were painting it'
	Conjunctive (prf)	da=	xat'-**av**-de-s	'if (s)he will paint it'
Series II	Aorist (prf)	da=	xat'___-a	'(s)he painted it (result)'
	Aorist (imp)		xat'___-a	'(s)he painted it (activ.)'
	Optative	da=	xat'___-o	'that (s)he paint it'
Series III	Perfect	da=u-xat'-**av**-s		'(s)he has painted it'
	Pluperfect	da=e-xat'___-a		'(s)he had painted it'
Masdar		da=	xat'-**v** -a	

- I propose that the thematic suffix is not a position in a morphological template, but the head of a syntactic projection (AspP) specified for [±bounded] aspect. Moreover, [+bounded] Asp has a zero allomorph conditioned by [+past] Tense.
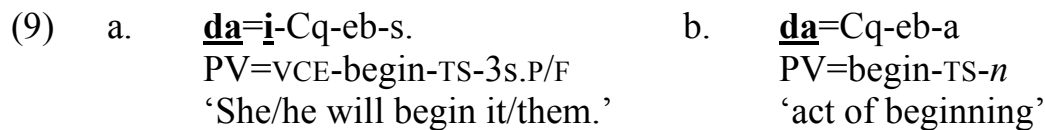
2.   Morphological structure

- Descriptions of the thematic suffix usually treat it as a verb classifier, which occupies a slot in a linear template of Georgian verb morphology.

- For example, Aronson (1990:465) places the thematic suffix (P/FSF) allomorphs after the root (and the conditional -*d* of Class II verbs), and before the causative suffix, which Aronson lists as *(-ev)/-in/(-eb)*.

- By contrast, constructivist theories of morphology like Distributed Morphology (Halle and Marantz 1993) derive morpheme order from syntactic structure.

- In the diagram below, C represents a node associated with mood and/or clause type; T represents tense, and licenses the grammatical subject.

- An agent is introduced by Voice, which also licenses the object (Kratzer 1996). In English, such objects are ACC; in Georgian, they are ACC/DAT or NOM.

- *v* derives a verb phrase from a category-neutral root, which could also appear as part of a noun or adjective (Marantz 1997). I assume the theme/patient is an argument of the root. AspP will be discussed in section 3.

(3)
```
              CP
            /    \
          C       TP
                /    \
           DP_subj    T'
                    /    \
                   T     VoiceP
                        /    \
                   DP_Agt    Voice'
                           /    \
                       Voice    AspP
                              /    \
                            Asp     vP
                                  /    \
                                 v     √rootP
                                      /    \
                                  √root    DP_Th/Pat
```

- Nominalizations (masdars) include only the structure dominated by AspP, plus an *n* head. The absence of C, T, and Voice is supported by nominal properties (Harris 1981, Vamling 1989, Wier 2014), including the absence of:
  - tense, perfect aspect and mood morphology;
  - person and number marking (indicating agreement with Voice and T);
  - transitivizing (*a-*) and detransitivizing (*i-*) Voice prefixes;
  - transitive subjects (except as PPs marked by *mier*)
  - usual Case/licensing for objects, intrans. subj. (prenominal GEN only)

(4) a. da=i-Cq-eb-s.   b. da=Cq-eb-a
         PV=VCE-begin-TS-3s.P/F   PV=begin-TS-N
         'She/he will begin it/them.'   'beginning'

- On the other hand, Georgian nominalizations do allow the thematic suffix. Thus, the thematic suffix cannot be the exponent of the Voice head that licenses object Case in finite clauses.

(5) Givi-s   mo=t'qu-**eb**-a
     Givi-GEN   PV=lie-TS-N
     'Givi's lie'   (Wier 2014)

- Although *v* is often not morphologically expressed, the thematic suffix appears to be separate from it, since it can co-occur with an overt causative suffix *-in*. Such causatives are usually regarded as *v* heads (Pylkkänen 2008).

(6) še=a-ḳer-v-**in**-**eb**-s
     PV=VCE-sew-TS-CAUS-TS-3s.P/F
     'she will have him sew something'   (Aronson 1990:313, n. 10)

- However, I assume the thematic suffix selects *v*, since only deverbal (not root) nouns include the thematic suffix. Indeed, the addition of a thematic suffix to a root indicates that the derived form is a verb, as illustrated below:

(7) a. lamaz$_A$-   b. ga=a-lamaz-**eb**-s
         beautiful   PV=CAUS-beautiful-TS-3s.P/F
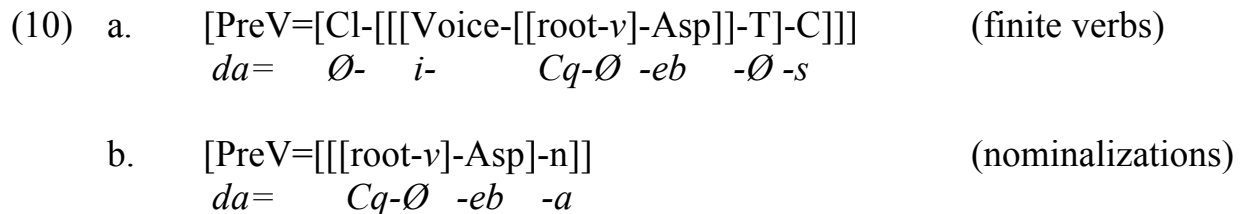   'beautiful'   'beautify'

- The syntactic/post-syntactic combination of the lexical root with other syntactic nodes yields a complex head, shown for both finite verbs and nominalizations:

(8) a.

```
                C
               / \
              T   C
             / \
         Voice   T
         /   \
     Voice   Asp
            /   \
           v     Asp
          / \
       root   v
```

b.

```
              n
             / \
           Asp   n
          /   \
         v    Asp
        /  \
     root    v
```

- A person-marking clitic attaches to the left edge of (8a) from a high syntactic position (spec-Voice/spec-T), absent from nominalizations.

- By contrast, the aspectual preverb cliticizes to the left edge of either structure from a low position—perhaps complement of the root. Thus, it can occur in nominalizations.

(9) a. **da**=**i**-Cq-eb-s.   b. **da**=Cq-eb-a
         PV=VCE-begin-TS-3S.P/F   PV=begin-TS-*n*
         'She/he will begin it/them.'   'act of beginning'

- The resulting morpheme order is illustrated below, where Asp corresponds to the thematic suffix:

(10) a. [PreV=[Cl-[[[Voice-[[root-*v*]-Asp]]-T]-C]]]   (finite verbs)
          da=   Ø-   i-   Cq-Ø -eb   -Ø -s

      b. [PreV=[[[root-*v*]-Asp]-n]]   (nominalizations)
          da=   Cq-Ø -eb   -a

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3. Conditioning by Tense and Aspect

- Thematic suffixes are notably absent from the aorist, which also has ergative case-marking on agents.

(11) a.   Nino   vano-s   surat-s   da=u-xat'-**av**-s.
          nino.NOM vano-DAT picture-ACC PV=APPL-draw-3sg.P/F
          'Nino will draw Vano a picture.'

    b.   Nino-**m**   vano-s   surat-i   da=u-xat'-a
          nino-ERG vano-DAT picture-NOM PV=APPL-draw-AOR.3sg
          'Nino drew Vano a picture.'

- According to Dixon (1994), ergativity tends to be associated with perfectivity and past tense. In some languages, such as Davani (Moghaddam 2016), past tense alone is sufficient.

- As an initial approximation, it appears that ergative case in Georgian is associated with the conjunction of perfective aspect and past tense: for example, ergative is not found with the (perfective) future or the imperfective past.

- Why is the thematic suffix dropped in ergative contexts?

- Nash (1995) postulates that the thematic suffix is an imperfectivizing morpheme, comparable to the English progressive (cf. Harris 1985), while ergativity is associated with perfective aspect; thus, the two are incompatible.

- I propose that the thematic suffix is realized as a zero allomorph in the context of an aspectual feature [+bounded] found in the aorist.

- [+bounded] is distinct from [+perfective] and [+perfect]; thus, an overt thematic suffix can co-occur with both the perfect, and with preverbs (like *da=* below) marking perfective aspect.

(12)

Future (prf)	da= xat'-**av**-s	'(s)he will paint it'
Conditional	da= xat'-**av**-d-a	'(s)he would paint it'
Conjunctive (prf)	da= xat'-**av**-de-s	'if (s)he will paint it'
Perfect	da=u-xat'-**av**-s	'(s)he has painted it'

- The thematic suffix can also appear with stative verbs, which are [–bounded], but incompatible with the progressive in English.

(13) m-Gvidz-**av**-s   'I am awake'
      m-e-Gvidz-**eb**-a   'I will be awake'   (Aronson 1990:337)

- The thematic suffix can also appear with both event and result readings of Georgian nominalizations. I propose that the event reading involves a [–bounded] event, while the result reading involves a [–bounded] result state.

(14) a.   da=c'q-**eb**-a   'act of beginning' (not 'a beginning')
      b.   gamo=tkv-**m**-a   'act of pronouncing' or 'a pronunciation'
      c.   da=mtavr-**eb**-a   'act of finishing' or 'an end(ing)'
      d.   cxovr-**eb**-a   'life'

- By contrast, the thematic suffix does not occur in the aorist, whether perfective or imperfective.[1]

(15)

Aorist (prf)	da= xat'___ -a	'(s)he painted it (result)'
Aorist (imp)	xat'___ -a	'(s)he painted it (activ.)'

- I propose the following analysis (cf. Nash 2015):
  - The aorist has [+past] Tense and [+bounded] Asp; the imperfect is [+past, –bounded] (progressive or habitual); the present is [–past, –bounded]; and the future is [–past, +bounded].
  - The [+past, +bounded] context is associated with both the dropping of the thematic suffix, and ergative case-assignment from Voice to its agentive specifier (see Preminger 2014 for a different approach).

To sum up:
- I have proposed that thematic suffixes realize an Aspect head bearing the features [±bounded]. The exponent of [+bounded] Asp is a zero allomorph when Tense is [+past]. This context also permits ergative case.

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[1] I propose that the optative is formally [+past], like the English subjunctive, and [+bounded], and that the pluperfect is effectively an aorist perfect, so it is also [+past, +bounded], and lacks the thematic suffix. However, an agent in the pluperfect bears dative case, not ergative. In the perfect series, the agent is projected below Voice, as an applied argument bearing "quirky" dative case (McGinnis 2008). This can be taken to prevent ergative case assignment.

4.   Stacked thematic suffixes

- Aronson's (1990) analysis of the thematic suffix treats it as holding a single position in the verb template. However, there are instances where one thematic suffix is stacked above another in a single verb.

- Although thematic suffixes are dropped in the aorist, causatives do allow them:

(16)   redakTor-ma KiTa-s   es   Ceril-i   tav-is   žurnal-ši
       editor-ERG   KiTa-DAT this letter-NOM self-GEN   magazine-in

       gamo=a-kveqn-**eb**-in-a.
       PV=VCE-publish-TS-CAUS-AOR.3s

       'The editor had KiTa publish this letter in his magazine.'
       (Aronson 1990:307)

- Cikobava (1942) argues that verbs in the aorist were originally underspecified for voice, and that thematic suffixes functioned as 'causative' affixes in verbs without voice (cited by Nash 1995:379, fn.164).

- However, it is the *-in* suffix that contributes causative meaning—not the thematic suffix, which is also present in non-causative forms in other series (13a). In fact, causative *-in* is associated with the most common thematic suffix, *-eb* (13b), which disappears in the aorist (13c).

(17)   a.   gamo=a-kveqn-**eb**-s   '(s)he will publish X'
       b.   gamo=a-kveqn-**eb**-in-**eb**-s   '(s)he will have X publish Y'
       c.   gamo=a-kveqn-**eb**-in-a   '(s)he had X publish Y'

- Thus, the causative suffix is not *-in(-eb)* but *-in*, plus an additional thematic suffix (see also Lomashvili 2011). Unlike a Voice head, the causative *v -in* (and its thematic suffix) can be included in a nominalization.

(18)   redakTor-is mier Ceril-is   gamo=kveqn-eb-**in**-**eb**-a
       editor-GEN   by   letter-GEN PV=publish-TS-CAUS-TS-N
       'the causing (by the editor) of the letter to be published'

- I postulate that the causative suffix is the head of a higher vP, which takes AspP as its complement, and is dominated by a second AspP projection.

(19)

```
        TP
       /  \
      T   VoiceP
          /    \
     DP_subj   Voice'
              /     \
           Voice    AspP
                   /    \
                 Asp     vP
                -eb_TS  /  \
                       v   AspP
                      -in  /   \
                         Asp    vP
                         TS    /  \
                              v   √rootP
                                  /    \
                              √root   DP_Th/Pat
```

- A prominent current theory of locality in contextual allomorphy (Embick 2010) predicts that causative *-in* will block contextual allomorphy in either direction.

- As predicted, the lower Asp head is subject to contextual allomorphy conditioned by the lexical root, while the higher Asp projection is not, appearing as invariant *-eb*.

(20) a.   še=a-ḳer-**v**-in-**eb**-s   '(s)he will have X sew Y'
      b.   gamo=a-kveqn-**eb**-in-**eb**-s   '(s)he will have X publish Y'

- Also as predicted, a higher [+bounded] Asp projection appears as a zero allomorph in the context of [+past] Tense, but causative v blocks the lower Asp projection from undergoing Tense-conditioned allomorphy.

(21) a.   gamo=a-kveqn-**eb**-in-**eb**-s   '(s)he will have X publish Y'
      b.   gamo=a-kveqn-**eb**-in-**Ø**-a   '(s)he had X publish Y'

- This is why we see causatives containing thematic suffixes in the aorist.

- In some cases, Class II intransitives also allow two thematic suffixes:

(22) a.   da=a-rt-**av**   'you will spin X'
     b.   da=i-rt-**v**-**eb**-a   'X will be spun'

(23) a.   da=a-b-**am**   'you will bind X (to Y)'
     b.   da=i-b-**m**-**eb**-a   'X will be bound/bindable'

<div align="right">Hewitt (1996:132–133)</div>

- These may involve an anticausative *v* dominated by a second AspP, parallel to the causative *v*. I leave the matter for further research.

5.   Summary

- The term 'thematic suffix' and 'present/future stem formant' are handy descriptive labels, but the evidence suggests that this suffix realizes an aspectual head below Voice, which takes *v*P as its complement.

- Since *v*Ps can be stacked, so can AspPs. Effects of contextual allomorphy suggest that in the aorist (and the optative and pluperfect), the thematic suffix is a zero allomorph, conditioned by [+bounded] Asp and [+past] Tense.

- Ergative case on agents also arises in this context, unless blocked by quirky dative, as in the pluperfect. Note that [±bounded] is distinct from [±perfective], which is reflected in the presence or absence of an aspectual preverb.

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