THE KARTVELIAN SUFFIXAL INTRANSITIVE

Kevin Tuite, Université de Montréal (Bremen Festival of Languages, 30 Sept 2009)

0. Using an admittedly imperfect¹ classificatory scheme based primarily on Shanidze (1953), I divide Modern Georgian verbs into the following four classes (also called "conjugations"), according to their case-assignment properties and future-stem morphology:

Case-shifting and non-case-shifting conjugation classes (Modern Georgian)

	case-shifting	non-case-shifting
	[assigns ERG in Series 2]	[cannot assign ERG]
future stem = present	CLASS 1 [mostly transitive]	CLASS 2 [intransitive]
stem (+ preverb):	(ga)=a- xar - eb - s	(ga)=u- xar - d - eb - a
	"makes sb happy"	"becomes happy"
future stem \neq present	CLASS 3 [active intransitive]	CLASS 4 [mostly stative]
stem:	xar-ob-s "rejoices"	<i>u-xar-i-a</i> "is happy"

Class 2, sometimes labelled the "passive voice" (*vnebiti gvari* [Shanidze 1953: 297-299]), comprises three morphologically-distinct verb types.

	PREFIXAL	SUFFIXAL	ROOT ("UNMARKED")
Class 2 stem	-i-√-, -e-√-	-√-d- (OGeo -√-n-)	$\sqrt{\text{(+ ablaut)}}$
Source of root‡	[transitive] verbs;	nouns, adjectives; medial	{primary verbs}
$\{\}$ = ancient source,	$\{denominal + /-n-/\}$	& stative verbs;	
no longer productive		{transitive verbs}	
Example, with	<i>i-pšvn-eb-a</i> "is	<i>c'itl-d-eb-a (c'itel-</i> "red")	<i>sxlt'-eb-a</i> "slips, tears
transitive counterpart	pulverized"	"turns red, blushes"	loose"
	[trans. <i>pšvn-i-s</i>]	[trans. <i>a-c'itl-eb-s</i>]	[trans. sxlet'-s]
Semantics	passivization	inchoative, change of	spontaneous change,
		state	motion, applied force
Other Kartvelian	productive in Zan,	nonproductive in Zan;	nonproductive in Zan,
languages	Svan	absent in Svan	Svan

^{‡ (}Not including specialized uses of prefixal passive to form verbs of desiring/craving, etc. such as *m-e-myer-eb-a*, *m-e-šok'olad-eb-a*, etc.)

Prefixal passives are formed productively from primary verb roots, including several old, nonproductive types (vowelless roots, roots undergoing vowel alternation in the aorist stem). A small number of roots appear to have been derived from nominal stems, with the addition of a suffixal /n/ (e.g. gzav-n-i-s "sends", i-gzavn-eb-a "is sent"; cp. gza "road" [Shanidze 1953 §454; Melikischwili 1978]). With regard to their semantics, these verb roots are bivalent, their Class 2 forms being in most cases genuine passives. The second group, consisting in intransitives formed by addition of the suffix /d/, is highly productive in Georgian. It is the usual means for forming new verbs from noun and adjective stems, as well as from atelic (medial & stative) verbs. Derived verbs in /d/ characteristically denote a change of state (ga=q 'vitl-d-a "turned yellow");

-

¹ Among the imperfections of this scheme is the presumption of <u>paradigmaticity</u>: that for each verb a future-tense form of "the same verb" can be identified (Tuite 1996, 2000). For a critical review of this and other approaches to the categorization of Georgian verbs see Cherchi (1997)

The first and third groups of Class 2 verbs are well-attested in the other members of the Kartvelian language family. Both types of prefixal passives are productively formed in the Zan languages (Laz & Mingrelian) and in the outlier Svan. All Kartvelian languages have a small, closed set of root intransitives. The attestation of the suffixal intransitives, however, presents a puzzle: They are present, but in small numbers, in Zan; in fact, their comparitive rarity led some specialists to wonder if the morpheme had in fact been borrowed into Zan from Georgian (Marr 1910: 57; Chikobava 1936: 114). As for Svan, the /d/-intransitive or anything clearly cognate to it appears to be totally absent. Compounding the mystery of the suffixal intransitive is its allomorphic distribution in Old Georgian. The suffix added to form denominal or deadjectival change-of-state verbs varied according to the final consonant of the stem: as a rule, /-d-/ appeared only after the alveolar sonants (/n/, /r/, /l/); elsewhere the suffix was the ablauting /-(e)n-/ (e-grade in the 1st/2nd-person aorist).

-n-/-en	-d-
gan=did- n -a "became great, wealthy"	gamo=brc'q'in-d-a "shone forth"
gan=v-risx-en "I became angry"	gan=v-axl-d-i "I was renewed"

Whereas the other two types of Class 2 verb could be confidently reconstructed for the Kartvelian proto-language, the distribution of suffixal intransitives was sufficiently problematic to require explanation. Shanidze (1919 [1957]) hypothesized that the /-(e)n-/ allomorph, originally a denominal verbal formant, was older, and that the /-d/ suffix arose from dissimilation from the preceding sonant. Ertelishvili (1960) regarded both allomorphs as reanalysed past-tense stem formants. More recently, Jorbenadze compared the two suffixes to the adverbial case desinence of nouns, for which he reconstructed the allomorphs /-ad/ and /-an/ (1975: 138-142). In my view, the most promising line of inquiry into the prehistory of the Georgian suffixal intransitive was opened up by Marr (1925: 140-141), Topuria (1940) and Vogt (1947), who noted the high frequency of final dental stops in root-intransitive and ablauting-transitive verb roots. In Topuria's opinion, these root-final segments, which are also attested in Svan, were once separate morphemes cognate with the /-d/ suffix of interest to us here. In this paper I will take another look at these hypotheses from sixty or more years ago, and attempt to weave them into a plausible diachronic narrative.

1. Anomalous suffixal intransitives in Old Georgian and their Zan counterparts. The jumping-off point of my narrative is a small group of morphologically anomalous Old Georgian

suffixal intransitives (Topuria 1940, 1953; Baramidze 1976: 93; Shanidze 1919: 37; 1920: 180).² These verbs have vowelless stems, evidently the result of syncope of the root vowel manifested in the corresponding Class 1 transitives. Vowel alternations of this kind — most likely the consequence of an earlier mobile accent — occur in other ancient verb classes (Gamq'relidze & Mach'avariani 1965; Tuite 2003). Whereas most other Georgian suffixal intransitives are formed from noun or adjective or expressive stems, all of the anomalous d-intransitives are derived from verb stems, many of them from Class 1 transitives.

CLASS 2 SUFFIXAL INTRANSITIVE	MEANING	CLASS 1 TRANSITIVE
gan=stk-d-eb-i-s (Early Geo gan=xtk-d-eb-i-s)	bursts	gan=xetk-s
$a\gamma = /gan = /mi = s - t'q' - d - eb - i - s (< *t'x - d -)$	breaks	$a\gamma = t'ex-s$
da=h- q sn- d - e b- i - s	is undone; falls apart	da=h-qsn-i-s
gan= k'p-d -eb-i-s	wears out, wastes away	gan=k'ap-s
gamo= čn-d -eb-i-s	appears, becomes visible	gamo=a-čen-s

Confirming the impression that the above-listed suffixal intransitives are archaic as well as anomalous is comparative evidence from the two Zan languages (Laz and Mingrelian). Although /d/-intransitives are not common in Mingrelian and Zan, a convincing case has been made that they are indeed inherited from the Georgian-Zan ancestral language, rather than representing a borrowing from Georgian (Danelia 1976: 173-4). Both languages have suffixal intransitives with simple stems. These are derived from verbal roots, and denote spontaneous events or changes. Among the tiny number of Laz d-intransitives, the semantic field of nonvolitional mental phenomena is best represented.³

SIMPLE-STEM SUFFIXAL INTRANSITIVES IN ZAN (Danelia 1976; Kajaia 2001-2; Marr 1910)		
LAZ		
ga=b-c'q'en-d-u-r	I become bored, tired of sthg (cp. Geo mo=m-c'q'in-d-eb-a)	
mo=m-c 'on-d-u-n	I like sthg/sb (cp. Geo <i>mo=m-c 'on-s</i>)	
mo=b-yor-d-um	I err, am deceived/mistaken (cp. Geo mo=a-yor-eb-s "deceives sb")	
ke=čkin-d-u-n	appears, becomes visible (cp. Geo ga[mo]=čn-d-eb-i-s)	
MINGRELIAN		
tan-d-u-n	dawns (cp. Geo teneb-i-s; Laz tan-u-n)	
šin-d-u-n	swells (cp. Geo siv-d-eb-a)	
rčkin-d-u-n	appears, becomes visible (cp. Geo ga[mo]=čn-d-eb-i-s)	
čxon-d-u-n	becomes happy, blessed (cp. Geo cxon-d-eb-i-s)	
žin-d-u-n	dries in the sun, airs out	
rgi-d-u-n	cools off (cp. Geo gril-d-eb-a)	
c'k'ond-id-u-n	(turbid water, etc.) clarifies (cp. Geo c'k'nd-eb-a)	

² Some of the anomalous verbs have syllabic stems, but with the suffix /d/, rather than the expected /-(e)n/, after a non-sonant consonant. Most of these probably represent replacement of an earlier /-(e)n/ suffix by /d/, a shift noted as early as the 9^{th} -c. *Sinai Mravaltavi* (Sarjveladze 1984: 481-6). A handful of such verbs, however, seem never to have taken the /-(e)n/ suffix, for example da=a-vic'q'-d-eb-i-s "forgets".

³ In the variety of Laz described by Lacroix (2009), two of the d-intransitives listed here have been absorbed into the class of root intransitives, the /d/ suffix having been reinterpreted as part of the stem (\check{ckind} -). This might be a harbinger of the eventual disappearance of suffixal intransitives in Laz.

Some of the vowelless Georgian d-passives and many of the simple-stem Zan suffixal intransitives are derived from stative or atelic verbs. According to the diachronic scenario formulated by Mach'avariani (1973: 109), the Kartvelian suffix *-ed — the ancestor of the suffixal intransitive formant -d — was added only to atelic verb stems, for the purpose of deriving "dynamic" (change of state) intransitive verbs; for example Geo. čan-s "is visible" > gamo=čn-d-eb-i-s "becomes visible". Mach'avariani took note of the attestation of d-suffixal forms derived from transitive stems such as t'q'-d-eb-i-s and xtk-d-eb-i-s, but dismissed them as "sporadic" and atypical phenomena to be disregarded in the reconstruction of the original function of the d-suffix (1973: 109). I agree that they are atypical, but unlike Mach'avariani, I interpret this as symptomatic of their chronological depth. In any case, the inclusion of transitive stems as possible inputs to d-suffixation does not necessitate a significant revision of Mach'avariani's reconstruction of the suffix's semantic force: The primary effect of the ancestor of the Georgian and Zan d-suffix was aspectual — creating change-of-state verbs — but in the case of transitive stems, the agent argument was backgrounded (and possibly removed from the case frame), giving an intransitive, monoactantial output. The following examples from Old Georgian texts would support this interpretation:

```
da=qsn-d-es dzarywni misni (When Ieboste heard that Abener had died) "his sinews (hands) grew weak" [2 Samuel 4:1]
```

gamoabrc'q'invos ..., vidremdis gan=**k'p-d**-es mtovare (In his days he shall radiate justice and abundance of peace) "until the moon fades away" (Vulgate: donec non sit luna) [Psalm 71 (72): 7]

ara gan=xtk-d-a bad \bar{e} igi (Simon Peter hauled ashore the net full of fish) "and the net did not burst (ouk $esxis\theta\bar{e}$)" [Jn 21:11, Xanm.]

In contrast to the above-mentioned verbs, the majority of Mingrelian suffixal intransitives, which have compound stems formed by addition of the suffix *-on-*, are derived from adjectival, nominal and expressive stems. Their semantic range however is essentially the same as that of the simple-stem suffixal intransitives. Compound-stem suffixal intransitives are not attested in Laz.

COMPOUND-STEM SUFFIXAL INTRANSITIVES IN MINGRELIAN (Danelia 1976; Kajaia 2001-2)			
root + /on/	A. spontaneous natural change		
\check{c} 'it-on-d-u-n < \check{c} 'ita "red"	turns red (cp. Geo <i>c'itl-d-eb-a</i>)		
?vit-on-d-u-n < ?vit- "yellow"	turns yellow (cp. Geo <i>q'vitl-d-eb-a</i>)		
xik'-on-d-u-n	becomes bone-dry		
<i>pižv-on-d-u-n</i> < <i>pižvi</i> "lungs"	swells up		
bit'k'-on-d-u-n (cp. Geo p'ut'k'una "chubby")	gets fat (cp. Geo dial. <i>p'it'k'in-d-eb-a</i>)		
žiž-on-d-u-n	gets wet, soaked		
үiy-on-d-u-n	begins to rot		
c'ic'-on-d-u-n	ripens, fills out		
č'k'ir-on-d-u-n	wilts		
	B. change of mental state		
<i>škur-on-d-u-n</i> < <i>škurini</i> "fear"	becomes frightened		
<i>čič-on-d-u-n</i> ?< <i>čičie</i> "poor, stupid"	becomes dumbfounded, stunned; stiffens		
jirj-on-d-u-n < jirja "numb, stiff"	is stunned; [hair] stands on end		
go=yviz-on-d-u-n < yvizini/ yvirini "scowl"	becomes furious		
go=q'viq'-on-d-u-n	gets angry		

In terms of the greater range of lexical categories from which stems can be formed, as well as their meaning, the Mingrelian compound stem d-intransitives can be compared to regular Old Georgian suffixal intransitives, especially those attested in the earliest documents. The suffixal intransitives occurring in the so-called Xanmeti texts (5th-8th cc.) denote naturally-occurring events (get dark, become tender, appear, grow old); changes of state (become heavy, ill, poor; be healed); emotional reactions (become angry, worried, astonished; see the verb inventories in Sarjveladze 1971, Kajaia 1984). Notably absent from Mingrelian as well as the early Old Georgian corpus are suffixal intransitives denoting the undertaking of volitional actions such as Mod Geo *myer-d-eba* "begins to sing", *korc'in-d-eba* "gets married" and the like.

SUFFIXAL	OLD GEORGIAN	ZAN (LAZ-MINGRELIAN)	
INTRANSITIVES			
Type 1 (archaic):	vowelless stems (xtk-d- "burst"); other	L: all d-stems	
deverbal only	anomalous d-stems (vic 'q '-d- "forget")	M: simple d-stems	
Type 2: denominal,	(e)n- (q'wav-n- "flourish"; suk-n- "fatten")	(L: absent)	
deadjectival, etc.	-d- (<i>cen-d</i> - "sprout"; <i>ksin-d</i> - "get angry") M: compound <i>-on-d</i> - stems		
SEMANTICS	(1) spontaneous natural event or change of state		
	(2) nonvolitional change of psychological state		

2. Root intransitives in Georgian and Zan. The semantic characteristics of Laz and Mingrelian suffixal intransitives, as well as those attributed to the oldest verbs of this type in Georgian, are encompassed by the range of meanings associated with the third type of Class 2 verb mentioned at this beginning of this paper, the unmarked (*unišno*) or root intransitives. A further indication of a close link between the oldest Georgian suffixal intransitives and root intransitives is the verbal-noun formant *-om-a*, which appears in the masdar forms of Group II and IV root intransitives (see the tables below), as well as a handful of ancient suffixal intransitives, such as *t'q'd-oma* "breaking", *stkd-oma* "bursting". I have divided root intransitives into eight semantic fields, of which four overlap with those of Old Georgian and Zan d- intransitives. The zone of non-overlap corresponds to meanings related to movement (or its lack, staying put).

Semantics of root intransitives compared to Old Georgian and Zan (Laz-Mingrelian) dintransitives (examples from Georgian)

	root intransitives	d- intransitives
1. natural, spontaneous change	dn- "melt"	bnel-d- "grow dark"
2. [incapacitating] change of emotional/psychological/physical state	tvr- "get drunk"	qsn-d- "grow feeble"
3. change of posture	dg- "stand up"	
4. "stay, remain"	<i>št</i> - "remain"	
5. volitional movement	dzvr- "move, creep"	
6. appearance, sudden manifestation	<i>t'q'vr</i> - "appear, be manifest	<i>čn-d-</i> "appear, become
	suddenly"	visible"
7. sudden movement	<i>k'rt</i> - "shudder"	
8. [destructive] effect of applied force	<i>c'q'vd</i> - "break"	xtk-d- "break, burst"

⁴ D-intransitive masdars in *-om-a* are particularly numerous in the northeast Georgian highland dialect Xevsur, where they appear in such forms as *ač'kavdoma* (cp. *a=č'kav-d-eb-is* "calls, cries out"), *gardaprindoma* (cp. *garda=prin-d-eb-is* "jumps across"; Ch'inch'arauli 2005)

New root intransitives are no longer formed in any Kartvelian language. Svan and Georgian have in the neighborhood of 80-90 each; the Zan languages have fewer, about two dozen (Lacroix 2009). An initial categorization of Georgian root intransitives can be made according to morphological properties, in particular the phonological contours of the root and the form of the corresponding transitive. This classification correlates in an interesting way with semantic features, rendering it potentially useful for grouping the root intransitives of the other Kartvelian languages. The first group is composed of root intransitives with simple 2- or 3-consonant stems. Some of these verbs undergo e-grade ablaut in the 1st/2nd-person aorist (e.g. OGeo *gan=v-t'ep* "I became warm"). The corresponding transitives contain the transitivizing preradical vowel /a/ and the series marker /ob/, e.g. *v-a-t'p-ob* "I warm sthg". Mingrelian cognates of Georgian Group I root transitives show similar morphology, albeit with some differences in the series markers added to the verb stems (cp. Geo. *dn-eb-i-s*; M. *din-u-n* < **dn-av-n*; Tuite 2003).

Georgian root intransitives

Group I. CS or CC stem, transitive in a-\(\sqrt{-}\)ob; (most) masdars in -\(\operatorname{b}\)-a			
Ia. root shape $\frac{\langle CS \rangle}{\langle S (S = /r, n, m \rangle)}$			
INTRANSITIVE	TRANSITIVE	MEANING	
qm-eb-i-s	a-qm-ob-s	"dries"	
dn-eb-i-s	a-dn-ob-s	"melts"	
č'k'n-eb-i-s	a-č'k'n-ob-s	"wilts, withers"	
kr-eb-i-s	a-kr-ob-s	"vanishes, is extinguished"	
zr-eb-i-s	a-zr-ob-s	"freezes"	
<i>šr-eb-i-s</i>	a-šr-ob-s	"dries"	
cxr-eb-i-s (S1/2 aorcxer)	a-cxr-ob-s	"wanes, calms"	
tvr-eb-a (-tver)	a-tr-ob-s	"becomes drunk"	
s-zvr-eb-i-s	a-zr-ob-s	"[skin, bark] peels off"	
švr-eb-a (-šver)		"becomes tired, weary"	
үr-eb-a		"[plant] wilts, fades"	
Ib. root shape /CG/ (co	nsonant + grave [labial/velar/u	vular]; S1/2 aorist /CeG/	
t'p-eb-i-s (-t'ep)	a-t'p-ob-s	"warms"	
t'k'b-eb-a	a-t'k'b-ob-s	"is sweetened"	
<i>з</i> γ-еb-а (-зеγ)	<i>a-zy-eb-s/ a-zy-ob-s</i>	"is sated"	
lb-eb-a	a-lb-ob-s	"softens"	
lp'-eb-i-s	a-lp'-ob-s	"rots"	
lqv-eb-i-s/lyv-eb-i-s	a-lqv-ob-s	"begins to melt, thaw"	
cxv-eb-i-s	a-cx-ob-s	"is baked"	
c'q'v-eb-a	a-c'q'-ob-s	"is destroyed"	
gb-eb-i-s	a-gb-ob-s	"is boiled"	
sxw-eb-i-s		"thickens, becomes stout"	
ččw-eb-i-s		"grows soft, tender"	

Georgian Group I root transitives with Mingrelian cognates

INTRANSITIVE	ACTIVE (*a-√-(a)w-ew-)	MEANING
qm-eb-i-s; M. xum-u-n	a-qm-ob-s; M. o-xum-u-an-s	"dries"
dn-eb-i-s; M. din-u-n	a-dn-ob-s; M. o-din-u-an-s	"melts"
kr-eb-i-s; M. nkir-u-(n)	a-kr-ob-s; M. o-nkir-u-an-s	"vanishes, is extinguished"
šr-eb-i-s; M. skir-u-(n)	a-šr-ob-s; M. o-skir-u-an-s	"dries"
yr-eb-a; M. yur-u-n "dies"		"[plant] wilts, fades"
t'p-eb-i-s (-t'ep); M. t'ib-u-n	a-t'p-ob-s; M. o-t'ib-u-an-s	"warms"

Group I root intransitives are associated with semantic fields 1 & 2 in the diagram on the preceding page: various types of naturally-occuring changes of state (melt, dry, wilt, freeze, rot), including some that affect human subjects (become tired, drunk, sated). The second group of Georgian root intransitives are distinguished by their root shape — most of them end in alveolar stops — as well as the causative suffix -en- which appears in their transitive forms. Most Group II root intransitives denote types of voluntary movement, although a small number of them signify manifestation or appearance (semantic fields 3-6). Some Georgian Group II verbs have Zan cognates, although these do not manifest a transitive-stem morphology distinct from Group I.

Group II. monomorphemic stem, transitive in a-√-en; (most) masdars in -om-a			
Ha. root shape /CT/; S1/2 aorist /CeT/; (T = /d, t, r/)			
INTRANSITIVE	TRANSITIVE MEANING		
jd-eb-i-s (S1/2 aorjed)	a-j(d)-en-s / (stative) z-i-s	"[one] sits down"	
sxd-eb-i-s (-sxed)	(stative) sxed-s	"[many] sit down"	
s-c'vd-eb-a; Sv. li-hwd-i "give"	a-c'vd-en-s	"reaches for, attacks"	
h-xvd-eb-a; M. xvad-u(n)	a-xvd-en-s / a-xved-r-eb-s	"meets, encounters"	
dzvr-eb-i-s (-dzver)	a-dzvr-en-s "creeps, moves"		
št-/šd-eb-i-s (-šed); M. skid-u-n	a-št-en-s "remains"		
ct-eb-i-s (-cet)/ cd-eb-a	a-ct-un-eb-s / a-cd-en-s	"is mistaken, is wasted"	
qd-eb-a (-qed); Sv. qed-ni	a-qd-en-s; 3sg aor. qad-a	"go, happen"	
t'q'vr-eb-a (-t'q'ver)	a-t'q'vr-en-s	"appears unexpectedly;	
[thunder] bursts"			
IIb. non-alveolar-final roots			
c'v-eb-i-s (-c'ev)	a-c'v-en-s / (stative) c'ev-s "lies down"		
dg-eb-i-s (-deg)	a-dg-en-s / (stative) dg-a-s "stands up"		
rcxv-eb-i-s a-rcxv-en-s "causes shame (to sb)"			

The small set of Georgian root intransitives that I will tentatively designate as Group III are characterized principally by the existence of medial verbs in -i- (ancient permansives?) paralleling the intransitives in -eb-. Most of them have complex roots similar in form to those of Group IV, but without ablauting transitives. On the whole, Group III verbs denote sudden, involuntary movements, especially when associated with fright or surprise (semantic field 7).

Group III. root intrans. contrasts with medial verb in /-i-s/; (most) masdars in -ol-a			
IIIa. root shape C(R)C			
INTRANSITIVE	MEDIAL	TRANSITIVE	MEANING
k'rt-eb-i-s	k'rt-i-s	a-k'rt-ob-s	"shudders, trembles"
prtx-eb-i-s; M. i-ntx-eb-un	prtx-i-s	a-prtx-ob-s	"is startled"
zrc'-eb-i-s	zrc'-i-s	a-ʒrc'-un-eb-s	"shakes, trembles"
x(l)t'-eb-a	<i>x(l)t'-i-s</i>	a-xt'-un-eb-s	"jumps, leaps"
cb-eb-a	cb-i-s		"is mad, raves"

The final group is comprised of root intransitives which are paired with ablauting transitives (athematic e-grade present, i-grade aorist). Group IV roots are phonologically more complex than those of Group I or II verbs, comprising an initial consonant or harmonic cluster, followed by a sonant (/r, l, n/ and a final occlusive, which for the large majority of Group IV roots has apical (dental-alveolar) articulation. In addition to their distinctive morphology, these meanings of these verbs, especially the majority of them that have apical-final stems, cluster in semantic field 8: destruction, disruption or distortion due to the application of force.

Group IV. bimorphemic stems with ablauting transitives; masdars in -a//-om-a					
IVa. root shape /CS-T/ (apical-final: /t², d, t, j̆ /)					
INTRANSITIVE	TRANSITIVE (present /aorist)	MEANING			
šrt'-eb-i-s	šret'-s / šrit'-a	"is extinguished, dried up"			
sxlt'-eb-i-s	sxlet'-s/sxlit'-a	"slips, tears loose"			
c'rt'-eb-i-s	c'ret'-s/c'rit'-a	"is drained, squeezed dry"			
č'q'lt'-eb-is/č'q'd-eb-a	č'q'let'-s/č'q'lit'-a	"is crushed, mashed"			
da=ylt'-a > daq'ta [Gurian]	ylet'-s/ylit'-a	"is shredded"			
c'q'(v)d-eb-a	c'q'ved-s/c'q'vid-a	"perishes; snaps in two, breaks"			
c'q'(m)d- eb - a	c'q'me(n)d-s "destroys"	"perishes, is damned"			
c'(mn)d-eb-a	c'me(n)d-s/c'mi(n)d-a	"[liquid] clarifies"			
c'k'nd-eb-a		"[liquid] clarifies"			
cvd-/cvt-eb-i-s	cvet-s / cvit-a	"wears out"			
bnd-eb-i-s	bned-s / bnid-a "stuns"	"swoons, faints"			
g(l)j-eb-i-s	glej-s / glij-a	"tears, shreds"			
IVb. root shape /CS-C/ (labial or dorsal-final)					
INTRANSITIVE	TRANSITIVE	MEANING			
drk'-eb-i-s (S1/2 aorderk')	drek'-s / drik'-a	"bends, bows"			
zrk-eb-i-s		"gets fat, greasy, sluggish"			
<i>k'rb-eb-i-s</i> (S1/2 aor. <i>-k'erb</i>)	k'reb-s / k'rib-a	"gathers"			

Many Georgian Group IV root intransitives have Mingrelian and/or Laz cognates, the transitive correlates of which show evidence of ablaut.

Georgian Group IV root transitives with Mingrelian cognates				
INTRANSITIVE	TRANSITIVE	MEANING		
šrt'-eb-i-s; M. škirt'-u-n	šret'-s / šrit'-a; M. škirit'-un-s	"is extinguished, dried up"		
sxlt'-eb-i-s; M. u-cxirt'-u-n	sxlet'-s / sxlit'-a; M. cxilat'-	"slips, tears loose"		
c'rt'-eb-i-s; M. c'ird-u-n	c'ret'-s/c'rit'-a; M. c'irid-un-s	"is drained, squeezed dry"		
c'q'(v)d-eb-a; M. č'q'ord-u-n	c'q'ved-s/c'q'vid-a; M. č'q'vid-un-s	"perishes; breaks"		
drk'-eb-i-s (S1/2 aorderk')	drek'-s / drik'-a; M. dirik'-ən-s (<	"bends, bows"		
<i>M. dirk'-u-n (< *dṛk'-aw-n)</i>	*dṛik '-aw-s)			

Svan root intransitives have not been discussed up to now, since they represent a morphologically — if not semantically — homogenous verb class. All of them form their present stems by addition of the suffix -en-, and have athematic agrist stems marked by ablaut of the root vowel. Many, but not all of them, are associated with transitives which are likewise formed by ablaut (Topuria 1967; Tuite 1997).

Semantic subgroups of Svan root intransitives

	semantic subgroups of Syan 1000 mer	***************************************	
SEMANTICS	SVAN EXAMPLES	COGNATES	ABLAUTING
			TRANSITIVES
spontaneous change	leqw-n-i "thaws, melts"	G. <i>lqw-eb-i-s</i>	mostly absent
(= Group I), N= 3-4	<i>x-e-hwr-en-i</i> "[sun] goes down"	_	-
volitional movement	qed-n-i "comes"	G. qd-eb-i-s	mostly absent
(= Group IIa), N = 25+	<i>x-o-čd-en-i</i> "escapes (from)"		
appearance, revelation	gweb-n-i "is found"		almost always
(= Group IIb), N = 6-8	<i>x-o-k'wh-en-i</i> "appears, is revealed"		absent
effect of applied force	xwet'-n-i"is annihilated, dies out"	G. xwet'-s	almost always
(= Group IV), N = 30+	beč'k'w-n-i "breaks, splits"	"sweeps away"	present

In order to bring this discussion back to suffixal intransitives, I will present what I believe is evidence of a significant link between them as a class and the root intransitives just discussed. In addition to the evident overlap of semantic fields, there is a formal similarity which merits investigation. One notes the comparatively high proportion of root intransitive stems with final dental stops. In the case of several Zan root intransitives with root-final /d/, comparison with Georgian cognates implies that this final segment originated as a suffix subsequently incorporated into the verb root (Mach'avariani 1973).

Proto-Georgian-Zan	Mingrelian	Georgian
*q 'r-/q 'ar-	<i>?ord-u-n</i> "rots" (masdar <i>?orada</i>) < * <i>q 'ar-d-</i>	q'ar-s "stinks"
*xun-	xin(-)d-u-n "rots; dries up" (alternate masdars: xind-u-a, xin-apa); cp. Laz v-i-xin-er "I turn yellow (from fever)"	xun-d-eba "fades, becomes discolored"
*wic''q'-	o-č'q'ord-u-n (masdar č'q'olada); cp. Laz o-č'k'ond-u-n [Klimov 1998: 53]	a-vic'q'-d-eb-a, i-vic'q'-eb-s "forgets"

The existence of Zan cognates of Georgian root intransitives with fused root-final /d/ leads one to wonder (1) if any Georgian verb roots also contain the ancestor of the d-suffix, and if so, (2) whether the d-suffix in fact originated as a formant of what are now root-intransitive verbs.

bimorphemic verb root		basic root [Vogt 1947; Klimov 1998]
*bn-ed-	Geo. bnd-eb-i-s "swoons"; bned-s	*bn-/bin-	Geo. $da=i-bn-ev-a$ "be confused,
	"stuns"	/ben-	scattered"; bn-el-a "dark"
*c'r-ed-	Geo. c'rt'-eb-i-s; Mingr. c'ird-u-	*c'ur-	Geo. c'ur-av-s; Mingr. c'ir-ən-s
	<i>n</i> "is squeezed dry"		"wrings, presses"
*s'x-ed-	Geo. <i>sxd-eb-i-s</i> "[many] sit	*s 'x-	Geo. da=sx-am-s "seats/places
	down"		[many]"
*šr-et'-	Geo. šrt'-eb-i-s; Mingr. škirt'-u-n	*šwr-	Geo. <i>šr-eb-a;</i> Mingr. <i>skirt'-u-n</i>
	"is extinguished, dried up"		"dries up"
*č'q'l-et'-	Geo. č'q'lt'-eb-is; Mingr.	*č'q'l-	Geo. <i>da=č 'q 'l-em-a</i> "crush,
	č'q'ilit'- "is crushed, mashed"		squash"

Here, then, is the hypothesis to be investigated: The ancestor of the intransitive suffix /-d/ was once employed to form what were for all intents and purposes new members of the root-intransitive verb class. In order to assess the well-foundedness of this proposal, it will be necessary to look into the evidence that a suffix related to /d/ can be segmented from root intransitives and perhaps other verb types, and then evaluate the semantic plausability of such a scenario.

3. The d-suffix and ancient verb-stem formants. The possibility that the final VC segments in verb roots such as /bned/ and /šret'/ originated as a distinct morpheme has been proposed on several occasions by Kartvelologists. In his eccentric grammar of Old Georgian, Marr (1925: 140-1) deemed verb roots in final /(e)t'/ sufficiently numerous and semantically analyzable to

merit designation as a distinctive stem class (*poroda*). Alongside the above-mentioned /šret'/ and /c'red(t')/, Marr analyzed the transitive roots /k'vnet'/ "gnaw" < /k'ben/ "bite" + /et'/; and /sxlet'/ "tear off" < /sxl/ "prune [vine, branch]" + /et'/. In his view, the dental suffix was a sort of pluralizer — a

function he also assigned to the suffixal intransitive formants /d/ and /en/ — associated with "frequency" or "persistence" (*nastojčivost'*). Even if one questions Marr's inclusion of /t'/-final verbs as a stem type comparable to passive, subjective-version and causative stems, he deserves credit for having pointed out the possibility of segmenting out the /(e)t'/ element, attempting to associate it with semantic content, as well as linking it to the /d/-intransitive formant. Root-final VC segments were inventoried and analyzed in an insightful and important 1947 article by Hans Vogt. Following up on suggestions made by Topuria and Chikobava, Vogt hypothesized that a significant number of Georgian ablauting verbs of the form /Cⁿ-VC/, of which root intransitives represent a subset, were originally composed of a root followed by a -VC "primary suffix" (by which he designated verbal suffixes that appeared in all tense/aspect series). The /-et'/ segment isolated by Marr was one such primary suffix, but Vogt identified many others, representing almost every place and mode of articulation in the Georgian consonant inventory. It should be pointed out that not all transitive verbs with i/e ablaut are associated with root intransitives; indeed only a minority of them are.⁵ Nonetheless i/e ablauting verbs can be treated as a class, not

⁵ The relationship between root intransitives and i/e ablauting verbs remains to be worked out in detail. Some Georgian ablauting transitives with prefixal passives have Zan or Svan root-intransitive cognates,

only on morphological grounds but also with regard to their meaning. On the whole, these verbs denote various manifestations of violent, distorting, or disintegrating force applied to an object: slapping and beating (*txleš-*, *t'q'ep'-*), tearing and shredding (*dylez-*, *pxrec'-*), twisting (*grex-*, *znek-*), poking (*čvret'-*, *čxvlek'-*), squashing (*žyvlem-*, *sres-*), pinching (*p'rc'k'en-*, *čkmet'-*) and noisy eating (*tkvlep-*, *xvrep'-*, *k'vrex-*). Rather like the English monosyllabic expressives analyzed by Rhodes & Lawler (1981), one can detect groups of Georgian i/e-ablauting transitives with phonetically similar initial or final segments which also share more or less precise elements of meaning. Some segments of this kind were included by Klimov in his Kartvelian etymological dictionary (1998: 44-48). In the following table I have assembled sets of Georgian ablauting verbs which appear to have been formed by the addition of -VC primary suffixes to ancient roots.

"root"	labial stop	labial nasal	dental stop	sibilant	alveolar affricate	velar stop
kl-	klep plane		klet, klet' tear	kles plane off		
abrade			[skin] off	kleš rub		
čxvl-/čxr-			<i>čxvlet</i> ' pierce,			<i>čxrek'</i> stir,
/čvr-			čvret'/ č'vret			rummage,
poke			perforate			<i>čxvlek</i> ' poke
xvr-	xvrep' slurp	xvrem crunch,	xvret' perforate			
gnaw		nibble	[gnaw through?]			
č'q'(v)l-	č'q'vlep'	č'q'lem crush,	č'q'let' crush			
crush	crush, mash	squash				
t'(v)l-	t'vlep' lick,					t'lek' lick
lick	pick clean					clean
yr- twist?		yvrem hostile			γrec twist,	yrek' bend
growl?		expression			make face;	
					yrej/yreč'	
					grimace	

Similar phono-semantic clusters can be discerned among the 80 or so Svan ablauting verbs:

ONSET	CODA	INTRANSITIVE VERB	MEANING
b-	č'k'w	beč'k'w-(e)n-i	splits, bursts
	qw	beqw-(e)n-i	splits in two
	tk	betk-(e)n-i	explodes
		<i>x-a-bl-e</i> (trans.)	hurls, smacks down
tx- (cp. Geo. tx-	k'	x-e-txk'-en-i	drips (on sb/sthg)
"pour")	r	txer-(e)n-i	burst & leak
	р	x-e-txp-en-i	is covered (by sthg)
k'w- (? Geo. k'val-	Š	k'weš-en-i	confesses, reveals (secret)
"trace, footprint")	h	x-o-k'wh-en-i	is revealed, made known
c'- (? Geo. c'vet-	рх	x-e-c'px-en-i	drips (on sb/sthg)
"drip")	kw	x-e-c'kw-en-i	drips (on sb/sthg)

e.g. Geo *qleč-s, i-qlič-eba* "tear off"; Ming. *xorck-u-n* "bursts", Laz *xrock-un* "[animal] dies" [Klimov 1998: 339]. This could betoken the earlier existence of cognate root-intransitives in Georgian.

Phono-semantic clusters of Georgian e/i ablauting verbs 1. rub/abrade/scrub/strip

ONSET	CODA	MEANING	
kl	р	plane off (cp. <i>kl-ib-</i> "file")	core cluster:
kl	t	tear skin off	ONSET = kl
kl	ť	chafe, take skin off	CODA 1: -t'/t [+change of state: take skin off]
kl	S	plane, round off	OTHER CODAS: -p/-s/-š
kl	Š	rub down (sharp edge)	

2. perforate/poke/stick

ONSET	CODA	MEANING	
ČX	r	stick in sthg	base
čxvl	k'	poke	derived stem cluster:
čxvl	ť	puncture	$ONSET = base (\check{c}x[v]r/l)$
čxr	k'	poke, rummage	CODA 1: -t' [change, completion: puncture]
čvr	ť	make holes in sthg	CODA 2: -k' [poke]
č'(v)r	t	perforate	(partial inversion: glottalization)
qvr	ť	perforate	peripheral? onset w/o initial affricate

3. rip/tear/shred

ONSET	CODA	MEANING	
čkl	t	tear to shreds	core cluster:
p'(x)r	C'	rip	ONSET: stop+velar/uvular+liquid
p(x)r	C'	rip	CODAS: dental-alveolar-palatal
dyl	Z	rip, shred	
γl	ť	rip, swindle	periphery (onset w/o initial stop)
gl	ď	tear	
pl	t	rip, shred	also peripheral to above?

4. twist/bend

ONSET	CODA	MEANING	
gr	Х	twist, twirl	core?
γr	k'	bend, crook	ONSET: g/γ+r
γr	С	twist, contort	CODAS: -x/-k'/-c (semantic contrast?)
dr	k'	bend, twist	periphery
br	С	warp, twist	
p'r	Х	twist, curl	

5. distorted facial expression

ONSET	CODA	MEANING	
γr	n	growl	base: yr- "growl"?
γr	С	contort (saxes yrecs makes a face)	core cluster
γr	č'	grimace, bare teeth	ONSET = base
γr	j	grimace	CODAS: alveolar affricate
k'r	č'	(i) cut; (ii) bare teeth	(variant of above)
γrč'	n	gnash teeth (<\vr-e\ceccirc\)	secondary cluster:
xrč'	n	gnash, grind teeth	ONSET = core cluster (yrč')
XČ'	n	bare teeth	periphery of above
pč	n	open (mouth) wide, gawp	
bγv	r	frown angrily	peripheral cluster (related by partial
γvr	m	be sullen	inversion?)

6. loud eating

ONSET	CODA	MEANING	
sl	k	lick, lap	cluster I (lick, lap)
ťl	k'	lick up	ONSET = apical: $s/t' + (v) + 1/r$ -
svl	p'	lap up, slurp	CODA 1: -k/k'
svr	p'	lap up	CODA 2: -p'
ťvl	p'	lick clean	
tkvl	р	gobble, slurp	cluster II (gobble, slurp)
xvl	р	gobble up	ONSET = dorsal: $(t)k/x + (v) + 1/r$
xvr	p'	slurp, sip	CODA: -p'/p
xvr	m	nibble	periphery of above clusters
ťk'v	r	chew, gnaw	

The clusters of ablauting verbs with initial /kl-/ and /čxvl-/čxr-/čvr-/ (clusters 1 & 2) provide contrasts indicative of what the earlier semantic force of /-et'/ and /-et/ might have been. Juxtaposing *čxvlet*' "pierce" vs. *čxvlek*' "poke"; *klet*, *klet*' "tear [skin] off' vs. *kleš* "rub", gives the impression that /-et'/ signalled change of physical integrity through the act of poking (in the sense of perforating the object), and a similarly dramatic change in the case of the second contrast. Dental codas are also frequent in the "rip, shred" cluster (#3). By contrast, /eT/ segments do not occur in verb clusters 4-6, denoting twisting/ bending, loud eating and distorted facial expressions. I hypothesize therefore that one of the functions of ancient Georgian /et'/ was the connotation of a change of state or physical integrity.

Can the stem-formant /et'/ be plausibly linked to the intransitive suffix /d/ on phonetic grounds? Klimov (1998: 45-46) made such a proposal, albeit with the time line going in the opposite direction. He accepted Marr's argument that /et'/ could be segmented from ablauting verbs, adding that "originally it might have been a marker of Aktionsart". In his opinion, however, the initial phonological form was *-ed/-id, with -et'/-it' as a variant that arose for the most part within Georgian as an "expressive substitution" (1998: 319), although some of his etymologies presuppose that the glottalized variant arose much earlier, in the common ancestor of Georgian and Zan (1998: 230, 253).

verbs with stem formant *-ed/-id (Klimov 1998)

	Georgian	Zan	Svan
CK *c ' 'q 'w-ed/-id/-d	OG c'q'wed-a; G.	M. č'q'ord-u-n	<i>šq'ed-n-i</i> "falls;
"perishes; breaks"	c'q'vet'-s; c'q'd-eb-a		[gun] goes off"
CK *xw-ed/-d "meet, be	OG xwd-eb-i-s, xwed-a	M. v-xvad-i	<i>x-e-xw-a</i> "meets",
found"			<i>x-a-xwīd</i> "met"
GZ (CK?) * <i>sxl-et</i> '/- <i>t</i> "'slip,	sxlt'-eb-i-s	M. cxirt'-u-n	? cxwed-n-i
tear loose"			"breaks off, is
			interrupted"
GZ * <i>šr-et'/it'/-t'</i> "extinguish"	šrt'-eb-i-s	M. škirt'-u-n	
GZ *yl-et'/it'/-t' "tear up"	ylet'-s/ylit'-a	M. yilit'-un-s	
GZ *qwr-et'/it'/-t' "make	qwret'-s/qwrit'-a	M. xvirit'un-s	
holes, pierce"			
GZ *čxw(l)-et'/it'/-t' "prick,	čxvlet'-s / čxvlit'-a	M. čxvirt'-un-s	
stick into"			
GZ *č'q'l-et'/it'/-t' "crush,	č'q'lt'-eb-is	M. č'q'ilit'-	
crumple"			
GZ *c'r-ed/-id/-d"strain,	OG c'red-a; G. c'rt'-	Mingr. c'ird-u-n	
squeeze"	eb-a		
? GZ *zyw-ed/-d "limit,	zyud-av-s "encloses"	M. o-zyod-uan-s	
enclose"		"exterminates",	
		zyvind-un-s	
		"beats, whips"	

The three-way distinction among plain (voiced), aspirated and glottalized occlusives is of course phonemic in the Kartvelian languages, but the distribution is less than arbitrary in certain domains of the lexicon. As has been noted by Neisser (1953: 7-10) and Holisky (1981: 123-4), numerous Georgian expressive verbs have doublets or near-doublets in which glottalic parameters are correlated with differences in intensity, pitch or other features of the soundmotion complex denoted by the verb stem (for example, tuxtux-eb-s "thick boiling liquid (jam, sauce) bubbles" (cp. duy-s "boils"); t'q'ap'-uni "clatter of horse's hooves; patter of feet", tkapatkupi "loud splatter of rain, clatter of hooves"; dyveb-s "churns [butter]", tkvep-s "whips [eggs]". Alongside phonosemantically-motivated deployments of voicing and glottalization are seemingly sporadic variants, such as the synonyms čvret'-s and č'vret-s "perforates", in which the glottalization feature appears to have migrated from the root coda to the onset. The other domain characterized by a non-arbitrary distribution of glottalic features is the inflectional morphology. As is the case in many other languages (Jakobson 1958; Hopper & Traugott 2003: 155), 'marked' phonemes are dispreferred in Kartvelian bound morphemes. Notably absent are the glottalized occlusives, whereas all of the high-resonance phonemes (vowels, liquids and nasals) appear in the declensional and conjugational morphology.

Inventory of phonemes in inflectional morphemes:

	Georgian	Mingrelian	Svan
vowels:	a/e/i/o/u	a/e/i/o/u	a/ā/e/ē/i/o/u/ə
sonants:	m/n/l/r	m/n/l/r	m/n/l/r/w
fricatives:	v/s/(h)	v/s/š	v/s/š/x
occlusives			
plain (voiced):	b/d/g	b/g	d/g/j-
aspirate:	p/t	p/t/k	
ejective:			

In view of the above, at least two scenarios can be considered: (1) Klimov's hypothesis that *ed was the older form of the stem-formant, from which the expressive variant /et'/ arose (independently?) in Georgian and Proto-Georgian-Zan; (2) the alternative proposal that the expressive, change-of-state (or Aktionsart) formant *et' is older, and that the variant with final plain (voiced) stop evolved as a consequence of grammaticalization.⁶

stage	function	examples
I. Common	*-et'/-ed as ablauting verb-stem formant(s);	CK *c 'lq 'w-ed/-id/-d "perishes;
Kartvelian	present in transitive and intransitive verbs;	breaks"
	connote change of state, termination	
II. Georgian-	-d as stem formant for deriving spontaneous	OGeo <i>t'q'-d-eb-is</i> "breaks"
Zan	change-of-state intransitives from transitive	(masdar <i>t'q'doma</i>)
	and stative verb stems	Ming ?ord-u-n "rots" (?orada)
III. Old Geo,	-d as suffix for deriving spontaneous	Geo c'itl-d-eba, Ming č'it-on-d-
Mingrelian	change-of-state intransitives from verb,	<i>u-n</i> "reddens, blushes"
	adjective, noun stems; (OGeo) allomorphic	
	distribution with <i>-(e)n-</i>	
IV. Georgian	-d as productive inchoative / change-of-state	MGeo ga=demok'rat'-d-a
	intransitive formant	"became democratic" [193 hits];
		ga=zvezd-d-a "became a star"

4. The allomorph *-(e)n*. My principal focus in this paper has been the intransitive formant -d-, but I do not want to end without indulging in a bit of speculation about the origins of its Old Georgian allomorph *-(e)n*-. Shanidze's hypothesis that they might have a common origin (with -d- a product of phonetic dissimilation) has not won widespread acceptance. In their etymological dictionary, Fähnrich & Sarjveladze accord the two suffixes separate entries. With regard to establishing an etymology for a suffix of the form *-en/-n*, it would appear that the primary difficulty would not be a lack of phonologically plausible candidates so much as an overabundance: /e/s and /n/s abound in the Kartvelian morphemic inventory, and several phonologically-identical morphemes (/en/ in Georgian and Svan, /an/ in Zan) have been inventoried. Limiting the search to intransitive or passive formants certainly reduces the pool of candidates, but leaves a pair of Svan morphemes in contention. The first candidate is the aorist-

⁶ As pointed out by Alice Harris at the oral presentation of this paper in Bremen, the most likely scenario is that the *-ed/et*' suffix became incorporated into some verb roots, even as it remained a productive morpheme with punctilear/change-of-state meaning.

stem suffix $-\alpha n/-\bar{\alpha} n/-\bar{e} n$, which is only employed by prefixal passives (e.g. Sv $\alpha d-k$ ' $\bar{a}p-\bar{\alpha} n$ "it was overturned"). Mach'avariani (2002: 104) rejected any link between this morpheme and the Old Georgian intransitive formant -(e)n- on distributional grounds, a proposal with which I am inclined to concur. A more likely cognate for the Svan passive-aorist suffix, in my view, would be the Old Georgian plural-absolutive suffix -(e)n-. This formant only appears in the aorist and pluperfect stems of transitive and prefixal-intransitive verbs, as a mark of agreement with a plural absolutive argument. According to the hypothesis I offer for consideration here, Svan once had a plural-absolutive suffix with the same form and distribution as in Old Georgian. It disappeared in the aorist of transitive verbs (as in Georgian), but remained as an aorist-stem formant in the passive. Rendering a reinterpretation scenario more plausible is the redundancy of the plural-absolutive suffix in the passive aorist, since plurality of the grammatical subject is already indicated by the person suffixes, e.g. $a\gamma=x-e-srul-n-es$ (PV=O3-ObjV-complete-AbsPL-S3pl) $d\gamma=0$ "his days (of service) were completed" [Lk 1: 23 Xann.].

- (i) **ččw-(n)-** "grow tender, soften" rt'oni misni da=**čwčw-n**-ian "its branches grow tender "
 [Mt 24: 32, Xanm]; later versions have the root intransitive da=**ččw**-ian
- (ii) **zrk-(n)-** "get fat, sluggish"; (iii) **sxw-(n)-** "become thick, stout" gan=suk-n-a da gan=sxw-a, gan=zrk-n-a "he became fat and gross and gorged" (another version has gan=sxw-n-a) [Deut 32: 15]
 - cp. maxwili uplisay ... gan=zrk-a cmeltagan vactaysa "The Lord's sword ... became greasy with the fat of rams" [Isaiah 34:6]

The hypothesis to be investigated is whether these verbs preserve the last traces of the distribution of this formant in prehistoric Georgian.

References

- Baramidze, Leli. 1976. vnebiti gvaris zmnata ac'mq'os daboloebisatvis dzvel kartulši (On the present endings of passive verbs in Old Georgian). *Dzveli kartuli enis k'atedris šromebi* 19: 79-95.
- Cherchi, Marcello. 1997. *Modern Georgian morphosyntax*. A grammatico-categorial hierarchy-based analysis with special reference to <u>indirect verbs</u> and <u>passives of state</u>. Wiesbaden: Harrassowitz Verlag.
- Chikobava, Arnold. 1936. *č'anuris gramat'ik'uli analizi t'ekst'ebiturt* (A grammatical analysis of Laz, with texts). Tbilisi: Mecniereba
- Č'inč'arauli, Aleksi. 2005. Xevsuruli leksik'oni. Tbilisi: Kartuli ena.
- Danelia, K'orneli. 1976. vnebiti gvaris c'armoebisatvis k'olxurši. (On the formation of the passive voice in Colchian [Zan]). *Dzveli kartuli enis k'atedris šromebi* 19: 163-174.
- Deeters, Gerhard. 1930. Das kharthwelische Verbum: vergleichende Darstellung des Verbalbaus der südkaukasischen Sprachen. Leipzig: Markert und Petters.
- Ertelishvili, P. 1960. -d/-n (-en) vnebitobis supiksta genezisis sak'itxisatvis (On the origin of the passive suffixes -d/-n (-en)). *Tbilisis saxelmc'ipo universit'et'is šromebi* (Proceedings of Tbilisi State University), 93: 77-91.
- Gagua, K'lara 1990: k'vlav supiksiani vnebitis sak'itxisatvis svanurši. *Iberiul-k'avk'asiuri* enatmecniereba 29: 67-71
- Gamq'relidze, T. and G. Mač'avariani. 1965. sonant'ta sist'ema da ablaut'i kartvelur enebši: saerto-kartveluri st'rukt'uris t'ip'ologia. (The system of sonants and ablaut in the Kartvelian languages: a typology of Common Kartvelian). Tbilisi: Mecniereba.
- Fähnrich, Heinz & Zurab Sarjveladze. 2000. *kartvelur enata et'imologiuri leksik'oni. (meore, ševsebuli da gadamušavebuli gamocema)*. (Etymological dictionary of the Kartvelian languages. 2nd, expanded and revised edition.) Tbilisi: Sulxan-Saba Orbelianis sax. Tbilisis p'edagogiuri universit'et'is gamomcemloba.
- Holisky, Dee Ann. 1981. Aspect and Georgian medial verbs. Delmar, NY: Caravan Press. Hopper, Paul & Traugott, Elizabeth Closs Traugott. Grammaticalization. Cambridge: Cambridge

University Press.

- Imnaishvili, İvane. 1968. vnebiti gvaris zmnata taviseburebani dzvel kartulši. (Characteristics of passive-voice verbs in Old Georgian). *dzveli kartuli enis k'atedris šromebi* 11: 27-54.
- Jakobson, Roman. 1958 (1971). Morfologičeskie nabljudenija nad slavjanskim skloneniem. *Selected works, vol. II,* pp. 154-183. The Hague: Mouton
- Jorbenadze, Bessarion. 1975. zmnis gvaris pormata c'armoebisa da punckiis sak'itxebi kartulši (On the derivation and functions of verbal voice in Georgian). Tbilisi University Press.
- Kajaia, Lamara (ed.). 1984. *xanmet'i t'ekst'ebi, 1: xanmet'i otxtavi*. (Khanmeti texts, 1: the Khanmeti gospels.) Tbilisi: Mecniereba.
- Kajaia, Otar. 2001-2002. *megrul-kartuli leksik'oni*. [Megrelian-Georgian dictionary.] Tbilisi: Nek'eri.
- Klimov, G. A. 1964. Etimologičeskij slovar' kartvel'skix jazykov. Moscow: Nauka
- Klimov, Georgij A. 1998. *Etymological Dictionary of the Kartvelian Languages*. Berlin: Mouton de Gruyter.
- Lacroix, René. 2009. *Description du dialecte laze d'Arhavi: Grammaire et textes*. Thèse de doctorat, Université Lumière Lyon II.
- Mach'avariani, Givi. 1973. vnebitis supiksuri t'ip'is genezisis sak'itxi kartvelur enebši (On the origin of the suffixal passive in the Kartvelian languages). *Macne, enisa da lit'erat'uris seria* 1: 107-121.
- Mach'avariani, Givi. 2002. *kartvelur enata šedarebiti gramat'ik'a* (Comparative grammar of the Kartvelian languages). Tbilisi: Tbilisis universitetis gamomcemloba.
- Marr, N. Ja. 1910. *Grammatika čanskago (lazskago) jazyka*. Materialy po jafetičeskomy jazykoznaniju II. St. Petersburg: Tipografija Imperatorskoj Akademija Nauk.
- Marr, N. Ja. 1925. *Grammatika drevneliteraturnogo gruzinskogo jazyka*. Leningrad: Materialy po jafetičeskomy jazykoznaniju, XII.

- Melikischwili, Damana. 1978. Das System der Konjugation des transitiven Verbs im modernen Georgisch. *Georgica* 1: 17-23.
- Neisser, Friedrich. 1953. Studien zur georgischen Wortbildung. Abhandlung für die Kunde des Morgenlandes XXXI #2. Wiesbaden: Franz Steiner.
- Rhodes, Richard & John Lawler. 1981. Athematic metaphors. *Chicago Linguistics Society* 17: 318-342.
- Sarjveladze, Zurab. 1984. *kartuli salit'erat'uro enis ist'oriis šesavali* (An introduction to the history of the Georgian literary language). Tbilisi: Ganatleba.
- Shanidze, Ak'ak'i. 1919 [1957]. nasaxelari zmnebi kartulši (Denominal verbs in Georgian). *Txulebani I: Kartuli enis st'rukt'urisa da ist'oriis sak'itxebi*, 35-44. Tbilisi: Tbilisi State University Press.
- Shanidze, Ak'ak'i. 1920 [1957]. subiekt'uri p'repiksi meore p'irisa da obiekt'uri p'repiksi mesame p'irisa kartul zmnebši (The 2nd person subject prefix and the 3rd person object prefix in Georgian verbs), reprinted in *Txulebani I: Kartuli enis st'rukt'urisa da ist'oriis sak'itxebi* (Issues in the structure and history of the Georgian language, I), pp. 111-263. Tbilisi: Tbilisi State University Press.
- Shanidze, Ak'ak'i. 1953. *kartuli gramat'ik'is sapudzvlebi, I: morpologia* (The fundamentals of Georgian grammar I: morphology). Tbilisi: Tbilisi State University Press.
- Topuria, Varlam. 1940. kartvelur enata sit'q'vac'armoebidan, II: -ed, -ur, r- apiksebisatvis (Word formation in the Kartvelian languages: the affixes -ed, -ur, r-). Ak'ad. N. Maris saxelobis enis, ist'oriisa da mat'erialuri k'ult'uris inst'it'ut'is moambe V-VI: 535-540.
- Topuria, Varlam. 1953. enis ganvitarebis šinagan k'anonta erti nimuši kartulši (One example of the internal laws of language evolution in Georgian). *Iberiul-k'avk'asiuri enatmecniereba* 5: 519-528.
- Topuria, Varlam. 1967. svanuri ena, I: zmna (The Svan language, I: Verb). Tbilisi: Mecniereba Tuite, Kevin. 1996. Paradigm recruitment in Georgian. NSL 8: Linguistic Studies In The Non-Slavic Languages of the Commonwealth of Independent States and the Baltic Republics, H. Aronson, ed, pp 375-387. Chicago Linguistics Society.
- Tuite, Kevin. 1997. Svan. München: Lincom Europa.
- Tuite, Kevin. 2000. review of Cherchi 1997. Anthropological Linguistics, 42 #2: 297-300
- Tuite, Kevin. 2003. Kartvelian series markers. Current trends in Caucasian, East European and Inner Asian linguistics. Papers in honor of Howard I. Aronson. Dee Ann Holisky & Kevin Tuite (editors), 363-392. Amsterdam & Philadelphia: John Benjamins.
- Vogt, Hans. 1947. Les suffixes verbaux du géorgien ancien: *Norsk Tidsskrift for Sprogvidenskap* XIV: 38-82.