

TSEZ MORPHONOLOGY

Introduction.

Tsez has quite rich nominal morphology. Any nominal item can have 71 different case forms in the singular as well as in the plural. With a few exceptions, nominal cases are formed by means of unique case suffixes. The main complication of Tsez nominal morphology is that only some 58 per cent of Tsez nominal vocabulary inflects all nominal cases from the same stem, while remaining nouns make a distinction between direct (absolutive) and oblique (non-absolutive) stems. Oblique stem is formed by means of numerous thematic suffixes. Synchronically, thematic suffixes (of which there are over a dozen) carries no meaning, and is not in general predictable from the form or meaning of the noun. How could such a system have arisen?

1. Tsez nominal case system.

Before moving to the thorough study of Tsez nominal morphonology it is essential to undertake a brief examination of Tsez case system. Tsez nominal morphology distinguishes overtly the categories of number and case. Number makes a binary distinction between singular and plural. For nearly all nouns, the singular is unmarked, the plural is suffixed. The regular plural suffixes are *-bi* (in absolutive case), *-za* (in oblique cases). A restricted number of words take an alternative plural suffix -a identical for all cases.

Tsez nominal case system distinguishes 11 grammatical and 60 locational cases. Grammatical cases of C'uri 'stool' and uži 'boy' are given in (1a-b). Note, in oblique cases, plural marker *-bi* goes into *-za*.

(1)		(a)		(b)	
		SG	PL	SG	PL
1.	Abs	^a uri	^a uri-bi	uži	uži-bi
2.	Erg	q'ur- <i>f</i>	^a uri-z- <i>f</i>	uži- <i>f</i>	uži-z- <i>f</i>
3.	Gen 1	q'uri-s	^a uri-za-s	uži-s	uži-za-s
4.	Gen 2	q'uri-z	^a uri-za-z	uži-z	uži-za-z
5.	Dat	q'uri-r	^a uri-za-r	uži-r	uži-za-r
6.	Instr	q'uri-d	^a uri-za-d -	-	-
7.	Equat	q'uri- ^a fj	q'uri-za- ^a fj	uži- ^a fj	uži-za- ^a fj
8.	Equat	q'uri-xor	q'uri-za-xor	uži-xor	uži-za-xor
9.	Poss 1	^a uri-šaj	^a uri-za-šaj	uži-šaj	uži-za-šaj
10.	Poss 2	^a uri-xu	^a uri-za-xu uži-xu	uži-za-xu	
11.	Abessive	^a uri-taj	^a uri-za-taj uži-taj	uži-za-taj	

In existent linguistic literature, the suffixes *-xor*, *-C'fj*, *-šaj*, *-xu*, and *-taj* are indicated as derivational morphemes. According to Abdullaev (1981), suffixes *-xor*, *-C'fj*, *-šaj*, *-xu*, and *-taj* are used to derive ajectives from nouns. It seems, however, that suffixes *-xor*, *-C'fj*, *-šaj*, *-xu*, and *-taj* have inflectional status rather than derivational. Inflectional status of these morphemes are confirmed by location of these morpheme relative to the nominal root. As was pointed out in typological literature (Bybee 1985), morphemes within the word are organized in a way so that if a noun includes a derivational and an inflectional affixes then the derivational affix occurs

closer to the nominal root than the inflectional one; if a noun includes two inflectional affixes then the affix more relevant to the meaning of the noun (number marker) occurs closer to the nominal root than the affix which is less relevant (case marker). This generalization has great predictive power. For instance, this generalization excludes languages where an inflectional affix occurs closer to the nominal root than a derivational one; or languages where a case marker occurs closer to the nominal root than a number marker. Crucially, Tsez suffixes *-xor*, *-Cfj*, *-šaj*, *-xu*, and *-taj* occur farther from the nominal root than the plural marker suggesting that these affixes, in fact, have an inflectional status.

The locative cases form a rich array distinguishing seven locational series: 'in' (in hollow space), 'in' (in mass), 'under', 'on', 'near', 'near/behind', and 'at/on' (vertical space) multiplied by three directional series: 'to', 'from', 'toward/through'. Each locative case, in turn, have neutral (2a) versus oppositional (2b) opposition.

(2a)

SER	ESS	LAT (to)	ABL (from)	DIR (toward)
SER1 (in)	-f	-f-r	-f-j	-f-Ror
SER2 (in)	-š	-š-er	-š-fj	-š-xor
SER3 (on)	-□(o)	-□o-r/-□f-r	-□-fj	-□-fRor
SER4 (under)	->	->-er	->-fj	->-xor
SER5 (near)	-de	-de-r/-df-r	-d-fj	-d-fRor
SER6 (near)	-x(o)	-xo-r/-xf-r	-x-fj	-x-fRor
SER7 (at)	-q(o)	-qo-r/-qf-r	-q-fj	-q-fRor

(2b)

SER	ESS	LAT (to)	ABL (from)	TRSL(through)
SER1 (in)	-f-z	-f-z-fr	-f-z-fzaj	-f-z-a
SER2 (in)	-š-fz	-š-fz-ar	-š-fz-aj	-š-fz-a
SER3 (on)	-□-fz	-□-fz-ar	-□-fz-aj	-□-fz-a
SER4 (under)	->-fz	->-fz-ar	->-fz-aj	->-fz-a
SER5 (near)	-d-fz	-d-fz-ar	-d-fz-aj	-d-fz-a
SER6 (behind)	-x-fz	-x-fz-ar	-x-fz-aj	-x-fz-a
SER7 (at)	-q-fz	-q-fz-ar	-q-fz-aj	-q-fz-a

2. Absolutive vs. oblique stems.

As we can see, case and number inflections in Tsez are quite straightforward and regular for all declinable nouns. Knowing the stem of the noun one can easily derive any case form in the singular as well as in the

Plural. The main complication of Tsez nominal morphology is that only some 58 per cent of nominal lexicon use absolutive stem to form all case forms. Remaining nouns make a distinction between direct (absolutive) versus oblique (non-absolutive) stems. The oblique stem is formed by means of numerous thematic suffixes attached to the basic absolutive stem. Several nouns such as *moči* 'place', *buq* 'sun', *buci* 'moon', *muR* ' ', *muži* 'bed', *ši* 'water', *ǰ'u* 'roof' form an oblique stem by apophony. Two nouns such as *R'anabi* 'woman/women' and *xexbi* 'child/children' use what is etymologically a plural form as both singular and plural.

From the above, Tsez nominal vocabulary can be divided into two major groups: **athematic**, **thematic**. Athematic and thematic nouns will be investigated in the sections (2.1) and (2.2) below. But before proceeding, it is essential to make a distinction between thematic and epenthetic suffixes. Thematic and epenthetic suffixes are distinguished here based on the following characteristics.

1) Function. Epenthetic suffixes perform a clear function. They are used to break phonologically prohibited consonantal or vocalic sequences. See the example (3a) where epenthetic suffix *-e-* is used to break final consonantal cluster. In contrast, thematic suffixes are functionless, at least synchronically. They appear irrespective of the phonological rule of the language (3b), often creating sequences prohibited by the language (3c).

(3)	(a)	(b)	(c)
	‘Mountain’	‘Pole’	‘Grapes’
ABS	Hon	giri	TM udi
GEN	Hon-e-s	giri-mo-s	TM ud-o-s
LOC	Hon-ko	giri-mo- ^k	TM ud-o- ^k

2) Consistency. Thematic suffix is used consistently throughout the paradigm (4a), while epenthetic suffix is used only in the forms of the paradigm where its use is required (4b).

(4)	(a)	(b)
	‘Hand’	‘Mountain’
ABS	reka	Hon
GEN	rek-i-s	Hon-e-s
SER4:ESS	rek-i- ^o	Hon-e- ^o
SER4:LAT	rek-i- ^o -er	Hon- ^o -e-r
SER5:ESS	rek-i-de	Hon-de

3) Predictability. Use of epenthetic suffix is predictable by the rule of the language. Use of the thematic suffix is not predictable.

From the above, suffixes **-j(V)**, **-m(V)**, **-r(V)**, **-no**, **-d(V)**, **-djo**, **-b(V)**, **-o**, and **-a** have clear thematic status, while the suffixes **-e** have epenthetic status. Vocalic element **-i** can be used either as a thematic suffix, or as an epenthetic suffix.

2.1 Athematic nouns.

Athematic nouns are the ones which do not use consonantal or vocalic complexes to form an oblique stem. Case endings are added directly to the basic absolutive form. This group includes more than 58 per cent of Tsez nominal vocabulary. Athematic nouns can be subdivided into two groups: those with final vowel and those with final consonant. First group includes around 76 per cent of athematic nouns or around 45 per cent of the Tsez total nominal vocabulary. In these nouns, case endings are attached directly to the absolutive stem. If the case ending has vocalic onset (ergative, SER1-DIR), then final vowel of the nominal stem is omitted (4a-b). Second group includes around 23 per cent of athematic nouns or 14 per cent of the Tsez total nominal vocabulary. In these nouns, case endings are added directly to the absolutive stem. If a case is formed by the monoconsonantal ending (genitive, dative, SER3:ESS), then epenthetic vowel **-e** (elsewhere) or its variant **-i** (if the stem has final consonant **-j**) is inserted to resolve phonologically prohibited word final consonantal clusters (4c-d).

(a)	(b)	(c)	
(d)			
(5)	‘fish’	‘boy’	‘friend’
ABS	besuro	uži	halmaR
ERG	besur- ^r	halmaR-e-s	mej-i-s
DAT	besuro-r	halmaR-e-r	mej-i-r

SER3:ESS	besuro->	uži->	halmaR-e->	mej-i->
SER3-LAT	besuro->-er	uži->-er	halmaR->-er	mej->-er
SER4:ESS	besuro-ċ	uži-ċ	halmaR-ċo	mej-ċo

2.2. Thematic nouns.

(6) Thematic nouns are the ones which use thematic suffixes to form an oblique stem. Thematic suffixes are **-jo**, **-ja**, **mo**, **-m**, **-ro**, **-r**, **-no**, **-na**, **-do**, **-da**, **-djo**, **-ba**, **-be**, **-oli**, **-ola**, **-dara**, **-o**, **-i**, and **-a**. Some of them are frequent (**-j(V)** occur with 281 nouns; **-m(V)** – with 340 nouns; **-r(V)** – with 46 nouns; **-o** – with 49 nouns; **-a** – with 66 nouns; and **-i** – with 15 nouns). Remaining suffixes are found only with a few native nouns (**-d(V)** is found with 5 nouns: *ma* ‘gate’, *ša* ‘alcohol’, *ix* ‘spring’, *i* ‘fire’, *mo* ‘fat’; **-n(V)** is found with 4 nouns: *kwa*, *žo* ‘ax’, *Ho*, *esij* ‘brother’; **-ol(V)** is found with 4 nouns: *roc* ‘buttock’, *kiki* ‘breast’, *be@i* ‘bodypart’, *xexoj* ‘puppy’; **-djo** is found with 2 nouns: *baha* ‘price’, *bišwa* ‘food’; **-b(V)** is found with 2 nouns: *zar* ‘pebble’, *kid* ‘girl’; **-dara** is found only with one noun: *ca* ‘star’). Of 13 thematic suffixes, only two (**-j(V)** and **-m(V)**) are productive. Of 200 loan words randomly selected from Tsez-English dictionary, 68 nouns (34 per cent) choose the thematic suffix **-j(V)**, 22 nouns (11 per cent) choose the thematic suffix **-m(V)**, remaining 110 nouns (55 per cent) do not make a distinction between an absolutive and oblique stems. See the examples which illustrate the declension of the thematic nouns (5).

(7)	‘rope’	‘medicine’	‘pray’	‘shepherd’	‘name’
ABS	roč	daru	kak	aHo	ci
ERG	roč-j-o	daru-j-f	kak-m-o	aHo-m-f	ci-r-f
GEN	roč-jo-s	daru-ja-s	kak-mo-s	aHo-m-e-s	ci-ro-s
LOC	roč-jo-□	daru-ja-□	kak-mo-□	aHo-m-□o	ci-ro-□
PL.ABS	roč-ja-bi	daru-ja-bi	kak-ma-bi	aHo-m-bi	ci-ra-bi
PL.OBL	roč-jo-za-s	daru-ja-za-s	kak-mo-za-s	aHo-m-za-s	ci-ro-za-s

It is obvious from the above that in order to inflect Tsez noun one should know the type to which a given noun belongs. If a certain noun belongs to the athematic type then one can derive any case form without difficulties. If a noun belongs to the thematic type then one should have an additional information about the thematic suffix to be used with a particular noun. This factor makes it difficult to form the correct case form even for the Tsez native speakers. Variations in using one or another thematic suffixes are quite often from one speaker to another and even within the speech of the same speaker. This factor is responsible for existence of many nouns which possess double forms (7).

bo ^ˆ i ‘wolf’	-	bo ^ˆ -a/bo ^ˆ -bi/bo ^ˆ i-bi ‘wolves’
R’utku ‘house’	-	R’utku-bi/R’utka-bi ‘houses’

3. Where thematic suffixes come from.

As we have seen, some 42 per cent of Tsez nominal vocabulary have an oblique stem distinct from the absolutive one. Oblique stem is formed by means of thematic suffixes which do not have a clear function. The question arises what is the etymology of the thematic suffixes? How could such a system have arisen?

Comparison of Tsez with other Tsezic languages suggests a single origin for the thematic suffixes of contemporary Tsez: They are reinterpretation of older plural suffixes. Contemporary Tsez has only one productive plural suffix, absolutive **-bi**, oblique **-za-**, and in nouns taking a thematic suffix this follows the thematic suffix. Only a handful of nouns form their plural form by means of **-a**. By contrast, some

other Tsezic languages have a variety of plural suffixes. For instance, Hunzib has six relatively frequent (absolute) plural suffixes and about seven occurring only with a few nouns each (van den Berg 1995: 39-41); Tsez thematic suffixes are regularly related to Hunzib and Bezhta plural suffixes (9).

	Tsez	Gunsib
(8)	-a	-a
	-i	-a
	-u	-u
	-b(V)	-b(V)
	-d(V)	-da
	-r(V)	-ro
	-ol(V)	-la
	-m(V)	-m(V)
	-j(V)	-ja
	-n(V)	-na

With some lexical items, one can observe intervening stages in the desemanticizing of the etymologically plural suffixes in Tsez. For instance, comparison of Tsez with Ginux and Hunzib reveals a number of examples in which the same segment has morphemic status (plural marker) in one language and thematic status in another. Compare Tsez word *esij* 'brother' with the corresponding words in Ginux, Hunzib and Bezhta. In Ginux the word *esu* 'brother' has two plural forms of which the first plural form is derived by means of the plural marker **-ni**, (suffix **-na** is used also to derive plural form in Hunzib and Bezhta) while the second plural form is derived by means of the second plural marker **-be** attached to the first plural form. In Tsez, Proto-Tsezic plural affix ***-na** lost its grammatical function giving rise a thematic suffix. This thematic suffix is used to form an oblique stem. In modern Tsez, plural form of this word is derived by means of plural suffix **-bi**. It is obvious from the comparison that Proto-Tsezic plural marker ***-n(V)** is preserved in Ginux, Hunzib and Bezhta, while in Tsez it lost its original grammatical function and is reanalysed as a thematic suffix. Examples in (13) are illustrative.

(9)	Singular	Plural 1	Plural 2
Genux	esu 'brother'	—	es-ni es-ni-be
Tsez	esij 'brother'	—	*es-na es-na-bi
Hunzib	is 'brother'	—	is-na -
Bezhta	is 'brother'	—	is-na -

Similar process can be illustrated by Genux noun *ked* 'girl'. This noun also has two plural forms of which the first form is derived by means of suffix **-bi** and second plural form is derived by means of suffix **-be**. Note, in this case, both forms are derived attaching plural markers to the basic absolute stem. Corresponding word in Tsez has only one plural form which is derived by means of plural suffix **-bi**. Crucially, plural marker is attached to the oblique stem which is formed by the thematic suffix **-be**. It is obvious, the first plural markers **-bi** in Ginux corresponds to the thematic suffix **-be** in Tsez and second plural marker **-be** in Genux corresponds to the plural suffix **-bi** in Tsez (14).

(10)		Plural 1	Plural 2
Ginux	ked 'girl'	—	ked-bi ked-be
Tsez	kid	—	*kid-be kid-ba-bi

As we mentioned earlier, contemporary Tsez has only one productive plural suffix **-bi**. A number of nouns take an alternative plural suffix **-a**. Crucially, some of the words which normally use a plural suffix **-a** can have an alternative plural form derived by means of more productive suffix **-bi**. Interestingly, a plural suffix **-bi** is attached not to the nominal stem but to the original plural form. In that case, the original plural suffix **-a** is reanalyzed as a thematic suffix and the original plural form is reanalysed as an oblique stem. In contemporary Tsez, both plural forms are being used, however, more productive plural suffix **-bi** gradually takes over the suffix **-a**. This suggests that a thematic suffix **-a** and a plural suffix **-a** etymologically go back to the same grammatical element – plural marker. Later, this element was developed into the thematic suffix, in some cases (15b), but retained its original grammatical function, in other cases (15c).

	Sg		Pl		Pl2
(11)	šud 'grave'	–	šud-a	–	šud-a-bi
	Run 'tree'	–	Run-a	–	Run-a-bi
	a TM 'stone'	–	a TM -a	–	a TM -a-bi
	R'ul 'stone'	–	R'ul-a	–	R'ul-a-bi
	is 'bull'	–	isw-a	–	isw-a-bi
	a TM 'stone'	–	a TM -a	–	a TM -a-bi
	R'ul 'stone'	–	R'ul-a	–	R'ul-a-bi
(b)	R'utku	–	*R'utk-a	–	R'utk-a-bi
	šilu 'horn'	–	*šil-a	–	šil-a-bi
	m'olja 'nail'	–	*m'olja-a	–	m'olja-a-bi
(c)	®u® 'fly'	–		®u®-a	– ?®u®-a-bi
	ku® 'sheaf'	–	ku®-a	–	?*ku®-a-bi
	bo ^ˆ i 'wolf'	–	bo ^ˆ -a	–	*bo ^ˆ -a-bi

Tsez includes a number of examples which reflect the desemanticization of two plural suffixes in sequence to become a thematic suffix. See the example in (12) where the same word includes three different plural markers of which only one marker performs its original function in contemporary Tsez, while two others have lost their original function giving rise to a thematic suffix.

- (12) a) ca 'star' – *ca-da (PL) – *ca-da-ra (PL) – cadara-bi (PL)

Finally, few Tsez nouns show a more far-reaching desemanticization of the productive plural suffix, which serves also as a petrified marker in the singular. Two nouns such as *xexbi* 'child' and *R'anabi* 'woman' use what is etymologically a plural form as both singular and plural. The noun *xexbi* did not retain its historical singular form **xex*, while a historical singular form of the noun *R'ana* has been found in several verbal expressions. It is obvious, that these words include former plural marker as a part of the nominal stem. The words *xexbi* and *R'anabi* do not take additional plural marker, since Tsez does not have other productive plural markers. An alternative plural marker **-a** does not extend to these nouns being unproductive.

A number of Tsez nouns have two distinct singular forms of which the second form includes the components identical to the thematic suffixes. Comparison of Tsez with other Tsezic languages reveals that the first singular form of Tsez noun corresponds to the only singular form of the corresponding noun in Gunzib, while the second singular form of Tsez noun corresponds to the plural form of the correspond-

ing noun in Gunzib. This suggests that the second singular form in Tsez is reinterpretation of older plural form as singular one. Examples (17) are illustrative.

(13)	SG1	SG2	PL	Meaning
Tsez	čan	čan-ja	čan-ja-bi	'she-goat'
Gunzib	čan	čani-ja	'she-goat'	
Tsez	^{TMa} TMi	^{TMa} TMi-li	^{TMa} TMi-li-bi	'baby'
Gunzib	^{TMa} TMa	^{TMa} TMa-li	'drop, baby'	

The process of desemanticizing or petrification of the functional elements of the language is not unusual. Similar phenomenon is found in many Daghestanian languages as well. Lak, for instance, uses thematic suffixes **-r(V)**, **-d(V)**, **-tt(V)**, **-l(V)**, **-n(V)**, **-danu**, **-ttirda**, **-ttara**, **-dara**, **-ttira**; Lezgi uses thematic suffixes **-di**, **-ci**, **-i**, **-či**, **-ɟi**, **-adu**, **-uni**, **-ini**, **-r(V)**; Tabasaran uses thematic suffixes **-di**, **-ri**, **-li**, **-ni**, **-nu**, **-ru**, **-lu**; Agul uses thematic suffixes **-di**, **-ala**, **-ela**, **-ura**, **-ani**, **una**, **-uni**, etc. It seems that thematic suffixes in these languages also go back to older plural markers. This assumption is based on the fact that some of the thematic suffixes in Tsez are regularly related to the thematic suffixes in other Nakh-Daghestanian languages. Compare Tsez noun *ci* 'name' – *ci-ro-s* (GEN) with Lak *ʔa* 'name' – *ʔa-r-du* (GEN); Chech *ʔe* 'name' – *ʔe-ra-n* (GEN); Ingush *ʔi* 'name' – *ʔe-ra-š* (PL). In some languages etymological plural marker ***-r(V)** have been petrified with the absolutive stem. For instance, a suffix **-r** is represented as a part of the absolutive stem in Avar (*ʔar* 'name'), Axxax (*ʔeri* 'name'), Archi (*ʔor* 'name'), Lezgi (*@war* 'name'), Budux (*tur* 'name'), etc.

Similar phenomenon is found also in other languages. For instance, in contemporary Dach, the word *eier* 'egg' uses what is etymologically plural suffix ***-er** as a part of the nominal stem. In modern Dach, plural form of this noun is derived by means of suffix **-en** attached to the historical plural form. Another example comes from English where the word *child-r-en* reflects the process of petrification of two plural suffixes **-r** and **-en** in sequence to become a part of the nominal stem.

Conclusion.

In this article, we made an attempt to show the evolution of the former meaningful grammatical elements (function morphemes) such as plural markers into thematic suffixes. This process happened in three stages. First, plural markers that eventually become thematic suffixes perform their basic morphological function. Next, one or another less productive plural marks gradually lose their grammatical meaning and morphemic status. When former grammatical element loses its basic function they petrify with the nominal stem or they are reanalyzed as thematic suffixes which occur in oblique cases. Finally, more productive plural marker extends to the nouns with desemanticized or petrified plural markers.