

Tones in Khezha Noun Constructions

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Khezha is one of the minor Naga languages of the Tibeto-Burman family, spoken by about 25,000 people in and outside Nagaland (about 20,000 in Nagaland and 5,000 in Manipur). The region in which its speakers live is also called Khezha. Scholars have classified Naga languages into three groups, viz. Western, Central and Eastern. According to this classification, Khezha, along with Angami, Chokri, Mao, Rengma, Sema and Pochuri, constitute the Eastern (or Southern) group. In recent years, some scholars have attempted to study some of the Naga languages. However, no one has done any significant work on Khezha; only small data samples have been collected for comparative analysis with other Naga languages. Within Khezha, each village has its own dialect identity (this is a common characteristic of all Naga languages). The present study was conducted on the Pfutsero dialect of Khezha, of which the author is a native speaker.

Khezha is a tone language. The three tone levels of Khezha are marked as:

High	(H)	é
Mid	(M)	e (unmarked)
Low	(L)	è

In this paper the author has attempted to describe only some of the processes of noun formation. Since Khezha is a tone language, tones always interact with word construction.

Syllable. Khezha has a minimum length of two syllables in the noun word-class. Thus, this language may be considered disyllabic. Single syllables cannot constitute a noun. Therefore, when the base form is monosyllabic, it requires a prefix in order to build a word. Without its prefix, it remains only a bound morpheme. The most common prefix of this type is *e-*. Whenever the prefix *e-* occurs, the following syllable is recognized as the base form of the word, because the second syllable conveys the basic meaning while the first syllable is devoid of independent meaning. The reason is that in Khezha, disyllabicity is an obligatory feature of the noun word-class. Thus, the prefix *e-* has no morphological function, and occurs simply to give greater phonological weight to the attached syllable. This is the reason why it occurs only with monosyllabic lexical roots and never with *di-* or

polysyllabic roots. When its lexical root is compounded with other morphemes, the prefix is automatically dropped or assimilated to its adjacent vowel.

Tones and syllabic base. Tone is an obligatory feature of the syllable; every syllable occurs with a tone. Pitch distinctions are intimately integrated with syllables. Hence, the noun class has the minimum canonical form *eTCVT* or *CVTCVT*, where *e* stands for the prefix *e-*, *T* for an obligatory tone, *C* for consonant, and *V* for vowel. In most cases, the prefix *e-* carries only a low tone. This phenomenon is also seen in many African languages which have vowel prefixes. Mid tone occurs only in rare cases, while high tone never occurs (cf. Elimelech 1976; Ayo 1966; Smith 1973; Romaine 1983).

Variation of tones. Tone variation in Khezha noun formation may be divided into three types: (1) morphologically conditioned variation, (2) phonologically conditioned variation, and (3) nouns derived by tonal alternation.

1. *Morphologically conditioned variation.* In this case, tone variation is the result of a morphologically conditioned alternation.

In Khezha, abstract nouns are mostly derived from verbs and adjectives by the derivational prefixes *ta-* and *ke-*. *Ke-* is used for abstract nouns, while *ta-* is used to convey the style or behavior of the actor. Both morphemes have the underlying tone level M.

EXAMPLE 1

<i>Underlying form</i>		<i>Derived form</i>
a. tè 'run'	ke + tè	keté 'race'
b. rhè 'draw'	ke + rhè	kerhé 'drawing'
c. wè 'shoot'	ke + wè	kewé 'shooting'
d. khà 'ask'	ke + khà	kekha 'prayer'
e. khwe 'wait'	ke + khwe	kekhwé 'waiter'
f. thu 'write'	ke + thu	kethu 'writer'
g. tshè 'do'	ke + tshè	ketshé 'doer'
h. wé 'good'	ke + wé	kewé 'goodness'
i. to 'eat'	ke + to	kèto 'food'
j. so 'drink'	ke + so	kèso 'drink (N)'
k. sè 'bad'	ke + sè	kèsè 'badness'
l. de 'beat'	ke + de	kède 'fight (by beating with hands)'

In examples a-d, the underlying tone of the verb is L, but changes to H in the derived form, giving the tone sequence MH. In examples e-l, all have underlying tone M, but differ in the derived form: examples e-h have the tone sequence MM; while i-l have LM, with the underlying tone M of *ke-* changing to L in the derived form. Here we may conclude that tone variation is due to morphologically conditioned variation, as there is no trace of phonological rule involvement.

Similarly, some nouns are derived from verbs by prefixing *ta-*:

EXAMPLE 2

Underlying form

Derived form

a. zè 'sleep'	ta + zè	tazə 'way of sleeping'
b. nè 'laugh'	ta + nè	tanə 'way of laughing'
c. tē 'walk'	ta + tē	tate 'way of walking'
d. to 'eat'	ta + to	tato 'way of eating'
e. thelé 'roam'	ta + thelé	tàle 'way of roaming'
f. kedze 'play'	ta + kedze	tàdze 'way of playing'
g. menyé 'shame'	ta + menyé	tànye 'way of becoming shy'
h. keku 'look after'	ta + keku	tàku 'person who looks after someone; way of looking after'

In examples a-d, the tones of both syllables are at the same level, i.e. MM in the derived form, regardless of their tone differences in the underlying form of the verb. In examples e-h, the tones of initial syllables change to L in the derived form, while the tones of the second syllables become M, regardless of their underlying tone, yielding LM sequences. The focal difference between the two groups is that the former is composed of monosyllabic underlying forms, while the latter is composed of disyllabic forms. The morphemes *the-*, *me-*, and *ke-* are replaced by *ta-* in the derived form, yielding the canonical disyllabic structure.

2. *Phonologically conditioned variation.*

(i) **Attributive Constructions:** In this case, the tone variation is the result of phonological conditioning, producing a surface contrast between High and Low in the second syllables. When the base form of a noun is compounded with another morpheme (bound or free), the vowel prefix *e-* is dropped. In most cases, tone is also lost along with the prefix:

EXAMPLE 3

<i>Underlying form</i>		<i>Derived form</i>
a. èthe 'deer'	+ ètrè 'mother animal'	thetré 'mother deer'
b. èthe "	+ ècè 'baby animal'	thecé 'baby deer'
c. èvo 'pig'	+ ècè "	vocé 'piglet'
d. èwè 'crab' ¹	+ ècè "	wocé 'baby crab'
e. èkè 'house'	+ ècè "	kécé 'small house'
f. ezó 'mat'	+ ècè "	zócè 'small mat'
g. elí 'buffalo'	+ ècè "	lícé 'baby buffalo'
h. èžú 'rat'	+ ècè "	žúcé 'baby/small rat'
i. èfá 'fowl'	+ ècè "	fécè 'chicken'

In the above examples, the tone sequence in surface form are as follows: (i) a-c, MH; (ii) d-e, LH; (iii) f-i, HL. The tone differences in the prefix *e-* of head nouns do not affect the tones in the derived form. The tone of the prefix is simply dropped along with its vowel in this form of compounding. When two base forms are compounded, the last syllable always remains as attributive. The attributive whose tone level is L in the underlying form is always either L or H in the surface form. The L of the following syllable (i.e. attributive) changes to H in the compounding, if and when the preceding tone is either L or M, whereas it retains L, if and when the preceding tone is H. The most striking point is that there is a selectional relationship between L and H. They occur together freely, but H can occur without L, while L cannot occur without H.

Tone variation of this kind occurs in all disyllabic attributive constructions in the cases where the underlying tone of the attributive is L. Consider the following:

EXAMPLE 4

<i>Underlying form</i>		<i>Derived form</i>
ètshè 'cattle'	+ èkè 'house'	tsèké 'cow shed'
ètshè 'wood'	+ èjè 'water'	tshèjé 'tree sap'
ètshè 'wood'	+ èbò 'trunk'	tshèbó 'tree'
èfá 'fowl'	+ èkè 'house'	fáké 'chicken shed'
ètshé 'meat'	+ èjè 'water'	tshéjè 'meat soup'

¹ We have substituted the symbol /ø/ for the author's /ō/ throughout. [Ed.]

èžo 'bee'	+	èjè 'water'	žojé 'honey'
ètso 'stone'	+	èkè 'house'	tsoké 'stone house'

In the above examples, the attributive tone L changes in the following patterns:

L + L	-> LH
H + L	-> Same
M + L	-> MH

The above examples illustrate a dissimilation rule. However, in the cases where the underlying tone of the attributive is M, it changes in different ways:

EXAMPLE 5

Underlying form		Derived form
a. èvo 'pig'	+ èkhø 'plate'	vokhø 'pig's plate'
b. ètshø 'dog'	+ èphe 'leg'	tshøphè 'dog's leg'
c. èyi 'banana tree'	+ ènè 'leaf'	yinè 'banana leaf'
d. èvo 'pig'	+ ènye 'unmated horn-less female animal'	vonyè 'unmated sow'
e. èfé 'fowl'	+ èbo 'enclosed space'	fébò 'cage for fowl'
f. èžú 'rat'	+ ètshø 'nest of animal'	žútshø 'rat nest'
g. elí 'buffalo'	+ èphe 'leg'	líphè 'buffalo's leg'
h. èjè 'water'	+ èbu 'pocket'	jèbu 'space for water'
i. èjè 'fire'	+ èbu "	mèbu 'fire place'

In the examples above, the attributive tone M changes in the following ways:

M + M	-> ML, MM
H + M	-> HL, HM
L + M	-> Same

In the cases where the underlying tone of the attributive is H, it does not change in any environment. This shows that H is more resistant to change than L and M:

EXAMPLE 6

Underlying form

elí 'buffalo'	+ e jí 'testicle'
èf é 'fowl'	+ èd á 'way of doing'
èthe 'deer'	+ el é 'unmated female animal with horn'
èž o 'bee'	+ èb ó 'hive'
èts è 'cattle'	+ èc í 'horn'
ètsh è 'wood'	+ èkw é 'shell'

Derived form

lí jí 'buffalo's testicle'
féd á 'fowl's way of doing'
thel é 'unmated female deer'
žob ó 'bee hive'
tsèc í 'cattle horn'
tshèkw é 'tree bark'

H + H -> Same

M + H -> Same

L + H -> Same

If, however, the construction contains more than two syllables, i.e. if the head noun has more than one syllable, the above rule is not strictly maintained:

EXAMPLE 7

Underlying form

- a. mežì 'naughty' + ètr è 'mother
animal'
b. kòčì 'fish' + èc è 'baby animal'
c. mekú 'lie' + ètr è
d. tòží 'eagle' + ètr è
e. lepú 'jar' + èc è
f. menyí 'boar' + ètr è
g. kòdò 'kind of bird' + èc è
h. lèsò 'fishing mat' + èc è
i. ròc é 'bird' + èc è
j. lèbó 'kind of edible water snail'
+ ètr è
k. f é jí 'cock' + èc è
l. íwø 'kind of bird' + èc è
m. sólo 'person's name' + èj è
n. k él è 'squirrel' + èc è

Derived form

- mežìtr è 'big naughty/
master of naughtiness'
kòčìc è 'small/baby fish'
mekútr è 'big/master liar'
tòžítr è 'big/mother eagle'
lepuc è 'small jar'
menyitr è 'mother boar'
kòdòc è 'baby of kòdo'
lèsòc è 'small fishing net'
ròc éc è 'baby bird'
lèbótr è 'big/mother snail'
f é jíc è 'young cock'
íwøc è 'baby íwø'
sóloj è 'Solo's water'
k él èc è 'baby squirrel'

It is observed that the tones of head nouns are not affected by this alternation, only attributive tones, i.e. those of the final syllable. Interestingly, the initial tone affects the changing of the final syllable tone.

If the mid syllable tone is M preceded by L, then there is free variation between H and L in the final syllable in the surface form:

EXAMPLE 8

<i>Underlying form</i>	<i>Derived form</i>
lènə 'snake' + ècè 'baby animal'	lènəcés ~ lènəcè 'baby/ small snake'
kèwu 'thief' + ètrè 'mother animal'	kèwutrés ~ kèwutrè 'big/ professional thief'
tèci 'wicked' + ètrè	tècitrés ~ təcitrè 'big, wicked'
kèkhwe 'watch house' + ètrè	kèkhwetrés ~ kèkhwetrè (lit. big house watcher) 'queen bee'

In the above examples 7 and 8, the attributive tone changes in the following ways:

a) HM + L -> Same	b) HH + L -> Same	c) HL + L -> Same
LM + L -> LML ~ LMH	LH + L -> Same	LL + L -> LLH
MM + L -> MMH	MH + L -> Same	ML + L -> Same

If, however, the underlying tone of the attributive is M, it changes in the following ways:

EXAMPLE 9

- a) HM + M -> HML
 sótshə 'person's name' + èhə 'cup' -> sótshəhà 'Sotsha's cup'
- LM + M -> LML
 mèshi 'match' + èbu 'box' -> mèshibù 'matchbox'
- MM + M -> MML
 menyi 'boar' + èphe 'leg' -> menyiphè 'boar's leg'
 menyi 'boar' + èru 'bone' -> menyirù 'boar's bone'

b) HH + M -> HHL

fájé 'cock' + èphe 'leg' -> fájéphè 'cock's leg'

MH + M -> Same

melí 'chest' + èbu 'box' -> melíbu 'chest box'

MH + M -> MHL

mesé 'person's name' + èha 'cup' -> meséhà 'Mese's cup'

LH + M -> Same

thèní 'sun' + èphe 'leg' -> thèníphe 'sun ray'

LH + M -> LHL

ròcá 'bird' + èphe 'leg' -> ròcáphe ~ ròcéphè 'bird's leg'

c) HL + M -> Same (~ HLL)

kélè 'squirrel' + èphe 'leg' -> kélèphe ~ kélèphè 'squirrel's leg'

LL + M -> Same

kòdò 'a kind of bird' + èkho 'nest' -> kòdòkho 'kòdò's nest'

ML + M -> MLL (~ MLM)

kécù 'person's name' + èphe 'leg' -> kecùphe ~ kecùphè
'Kecu's leg'

Observing the above examples, Khezha allows tone sequences of both (M)ML and (M)MH, but their occurrence is restricted on the basis of the underlying tones. For instance, if the underlying tone of the final syllable is M, then it cannot become H after MM in the derived form, e.g. MM + M -> MML, and not MM + M -> MMH.

(ii) **Invariant M tone nouns from L tone verbs:** Some mid tone M nouns with the è- prefix are derived from verbs in the low tone L. These derived nouns always retain their M tone in compounds, so they must be listed separately as exceptions to the tone alternation rules above. These invariant M-tone nouns include:

èbe 'seat' < bè 'to sit'
 èbø 'excrement' < bø 'to clean excrement'
 èzə 'bed' < zə 'to sleep'

Consider the compounds in Example 10:

EXAMPLE 10

- èžú 'rat' : žúbø 'rat dung' (not *žúbó)
 ètsè 'cattle' : tsèbø 'cow dung' (not *tsèbbø, *tsèbbó)
 èvo 'pig' : vobø 'pig dung' (not *vobbø, *vobbó)
 sòtshe 'person's name' : sòtshebø 'Sotsha's stool' (not
 *sòtshebø, *sòtshebó)
 ròcé 'bird' : ròcébø 'bird excrement' (not *ròcébbø, *ròcébbó)
 dítsò 'person's name' : dítsòbbø 'Ditso's stool' (not *dítsòbbø,
 *dítsòbbó)
 kàvø 'bamboo' : kàvøbø 'wasted part of bamboo' (not *kàvøbbø,
 *kàvøbbó)
 menyí 'boar' : menyíbø 'boar dung' (not *menyibø, *menyibó)

(iii) **Coordinate Constructions:** In a coordinate construction, as in the other types of constructions above, the initial low tone is lost along with the prefix è- of the preceding constituent. However, this tone is retained in the following constituent. In this case, the prefix è- is not completely lost; rather, it is assimilated to its adjacent vowel, with its low tone intact.

EXAMPLE 11

<i>Underlying form</i>		<i>Derived form</i>
a. èkhø 'plate'	+ èlè 'pot'	khøølè 'utensils'
b. èkhø	+ èha 'cup'	khøøha 'cups and plates'
c. ètshø 'dog'	+ èvo 'pig'	tshøèvo 'pigs and dogs'
d. eso 'jungle rat'	+ èžú 'rat'	sòðžú 'rats that destroy crops'
e. ètshé 'meat'	+ èrò 'birds'	tshéèrò 'animals and birds'
f. ètshè 'wood'	+ ètso 'stone'	tshèètso 'wood and stone'
g. èpu 'maternal uncle'	+ ènyi 'paternal aunt'	puùnyi 'elderly relatives'
h. khùnyu 'animal'	+ èžú 'rat'	khùnyuùžú 'animals that destroy crops'
i. èvo 'pig'	+ èlè 'male'	voòlè 'male pig'
j. ètshø 'dog'	+ èlè "	tshèèlè 'male dog'
k. kèthø 'cat'	+ èlè "	kèthøèlè 'male cat'

It appears that the gender morpheme $\text{è}1\text{ə}$ 'hornless male animal' (in examples i-k) behaves differently from other gender-marking suffixes. Like head nouns, it retains the prefix tone L, making its prefix *e-* assimilate to the adjacent vowel. Thus, it behaves more in coordination with the preceding head noun than as an attributive to it.

Compare the following:

$\text{è} \text{v} \text{o}$ 'pig'	+ $\text{è} \text{n} \text{y} \text{e}$ 'unmated hornless female animal'	$\text{v} \text{o} \text{n} \text{y} \text{e}$ 'unmated sow' (not * $\text{v} \text{o} \text{ò} \text{n} \text{y} \text{e}$)
$\text{è} \text{t} \text{s} \text{h} \text{ə}$ 'dog'	+ $\text{è} \text{n} \text{y} \text{e}$	$\text{t} \text{s} \text{h} \text{ə} \text{n} \text{y} \text{e}$ 'unmated female dog' (not * $\text{t} \text{s} \text{h} \text{ə} \text{è} \text{n} \text{y} \text{e}$)

3. *Nouns derived from tonal alternation.* An interesting feature of Khezha is that many nouns can be derived from verbs or adjectives by simply changing their tones. Khezha, as discussed earlier, has a disyllabic noun-formation system. This may explain why verbs and adjectives having two syllables do not undergo further syllable expansion, but simply alter their tones. There are three patterns of tonal alternation:

- (i) Underlying MH -> derived LM.
- (ii) Underlying MH -> derived MM.
- (iii) Underlying MM -> derived LM.

EXAMPLE 12

Underlying form

- a. $\text{m} \text{e} \text{z} \acute{\text{e}}$ 'be correct'
- b. $\text{m} \text{e} \text{n} \text{y} \acute{\text{e}}$ 'be shy'
- c. $\text{t} \text{h} \text{e} \text{r} \acute{\text{e}}$ 'to stitch'
- d. $\text{m} \text{e} \text{j} \acute{\text{e}}$ 'to lay eggs'
- e. $\text{m} \text{e} \text{z} \acute{\text{e}}$ 'to urinate'
- f. $\text{m} \text{e} \text{n} \text{y} \text{h} \acute{\text{i}}$ 'be powdery'
- g. $\text{p} \text{f} \acute{\text{e}} \text{w} \text{e}$ 'to fart'
- h. $\text{m} \text{e} \text{r} \text{ə}$ 'to vomit'
- i. $\text{m} \text{e} \text{l} \text{o}$ 'to foam'
- j. $\text{m} \text{e} \text{k} \text{e}$ 'to bite'

Derived form

- $\text{m} \text{è} \text{z} \text{ə}$ 'right' (N)
- $\text{m} \text{è} \text{n} \text{y} \text{e}$ 'shame' (N)
- $\text{t} \text{h} \text{è} \text{r} \text{ə}$ 'stitching' (N)
- $\text{m} \text{e} \text{j} \text{ə}$ 'egg'
- $\text{m} \text{e} \text{z} \text{ə}$ 'urine'
- $\text{m} \text{e} \text{n} \text{y} \text{h} \text{i}$ 'powdery object'
- $\text{p} \text{f} \text{è} \text{w} \text{e}$ 'gas'
- $\text{m} \text{è} \text{r} \text{ə}$ 'vomit' (N)
- $\text{m} \text{è} \text{l} \text{o}$ 'foam'
- $\text{m} \text{è} \text{k} \text{e}$ 'biting fight (e.g. dog)' (N)

A complication arises here. In the underlying form column of examples a-f, final syllables carry the tone H, but in the derived form they divide into two groups. The phonological and morphological representations do not give any clue to a generalization. Therefore it may be tentatively concluded that their variation is due to their semantic content. For instance, examples a-c are abstract nouns, while examples d-f refer to concrete objects. Examples g-j appear to refer to relatively abstract nouns.

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