Grammatically Conditioned Vowel Alternation of Lacid (Lashi) in Kachin State

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1 Introduction

1.1 The phenomenon

Lacid (‘Lashi’ in Jingpho/Burmese, Lèqì’ in Chinese) is a Burmish language spoken in Kachin State and Shan State of Burma (Myanmar) and Yunnan Province of China.

In Lacid spoken in Kachin State, some verbs show the alternation in vowel quality. The most striking illustration of the alternation is served by (Realis-) Negative/Positive pairs of verbs, which suggests that the alternation is grammatically conditioned:

(1) ʔa-נְיַיF ’(He) does not stay.’ / ŋe(ː)tF(-taL) ’(He) stays.’
ʔa-tסL ’(He) did not eat.’ / tsO(ː)L(-taL) ’(He) ate.’

As (ː) in the above examples show, vowel lengthening is observed in the (Realis-)Positive verbs in data via elicitation. Vowel lengthening is also observed in the cases where the alternation in vowel quality seems absent.

(2) ʔa-נְיַיF ’(He) did not do.’ / ཆ(ː)tF(-taL) ’(He) did.’
ʔa-מְיָאF ’(He) did not see.’ / mya(ː)F(-taL) ’(He) saw.’

So we might have to treat the alternation in vowel quality as a sub-case of vowel lengthening.

I am still uncertain whether ‘lengthened rhymes’ are surely distinguish from the corresponding ‘un-lengthened rhymes’ in rapid speech. So in this presentation I treat only the alternation in vowel quality (henceforth AiVQ), and consider its phonological and grammatical environments.

1.2 Previous description of vowel alternation in the language

Dai & Li (2007) mentions that Leqi verbs show the alternation between ‘short’ and ‘long’ vowels. The ‘short’-‘long’ pairs they listed (p.17) are as follows:

<table>
<thead>
<tr>
<th>Vowel</th>
<th>Short</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>ʔ̣a</td>
<td>i-ː</td>
<td>i-ː</td>
</tr>
<tr>
<td>ʔ̣a</td>
<td>e-i-ː</td>
<td>e-i-ː</td>
</tr>
<tr>
<td>ʔ̣a</td>
<td>e-ː</td>
<td>e-ː</td>
</tr>
<tr>
<td>ʔ̣a</td>
<td>a-ː</td>
<td>a-ː</td>
</tr>
<tr>
<td>ʔ̣a</td>
<td>ʔ̣a-ː</td>
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<td>ʔ̣a-ː</td>
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<td>ʔ̣a</td>
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<td>ʔ̣a-ː</td>
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</tr>
<tr>
<td>ʔ̣a</td>
<td>ʔ̣a-ː</td>
<td>ʔ̣a-ː</td>
</tr>
</tbody>
</table>

The alternation is grammatically conditioned. Environments of ‘short’/‘long’ rhymes they enumerate (pp.19–27) are summarized as below. (boldface and roman numbering by SH.)

**Predicates:**
- When a verb/adjective becomes the predicate of a sentence by itself, it is pronounced as ‘long’ (i).
- When a verbal predicate takes a cognate object, the predicate is pronounced as ‘long’ (ii), and the object is pronounced as ‘short’.
When an auxiliary verb and a verb form a complex predicate, both the auxiliary verb (iii) and the verb (iv) are pronounced as ‘long’.

A verb followed by either $pj^{33}$ ‘perfect’ or $a^{31}$ ‘imperative’ is pronounced as ‘short’, though the ‘short-long’ distinction seems to be gradually lost before $pj^{33}$.

A (simple) predicate with a negative adverb $a^{33}$ is pronounced as ‘short’.

In a auxiliary-verb complex accompanied by negative $a^{33}$, the auxiliary is pronounced as ‘long’ (v).

Adverbials: a reduplicated adjective used adverbially is pronounced as ‘short’.

Attributives: when a reduplicated adjective is used as an attribute to a noun, only the final element of reduplication is pronounced as ‘long’ (vi).

Complements: a verb/adjective used as a complement of a predicate is pronounced as ‘long’ (vii), except that it is followed by $pj^{33}$ ‘perfect’.

In compounding: a verb/adjective morpheme in compound (noun) is pronounced as ‘short’.

In affixation: when an adjective is prefixed by $a^{33}$ or suffixed by $-tse^{33}$ to derive a noun, the adjective is pronounced as ‘short’.

1.3 Phonology and transcription

- **Syllable Structure**
  
  C(y)(w)V(C)/QT

  C=Consonant, V=Vowel, Q=Voice Quality Feature of Vowel, T=Tone

- **Initial=C(y), Rhyme= (w)V(C)**

- **Consonants**
  
<table>
<thead>
<tr>
<th>LABIAL</th>
<th>DENTAL</th>
<th>ALVEOLAR</th>
<th>PALATAL</th>
<th>VELAR</th>
<th>GLOTTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASAL</td>
<td>m</td>
<td>n</td>
<td>ñ</td>
<td>ŋ</td>
<td>ñ̆</td>
</tr>
<tr>
<td>Stops/</td>
<td>unaspir.</td>
<td>p</td>
<td>ts</td>
<td>t</td>
<td>c k</td>
</tr>
<tr>
<td>Affricate</td>
<td>aspirated</td>
<td>ph</td>
<td>tsh</td>
<td>th</td>
<td>ch kh</td>
</tr>
<tr>
<td>Fricative</td>
<td>i</td>
<td>s</td>
<td>ś</td>
<td>x</td>
<td>fi</td>
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<tr>
<td>Lateral</td>
<td>l</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flap</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approximant</td>
<td>v</td>
<td>y</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- V- [y] (before -ē) [v] (before other rhymes)
- Initial clusters with glide -y-  my-, py-, phy-, ky-, khy-

- **Vowels**
  
<table>
<thead>
<tr>
<th>CLOSE</th>
<th>FRONT</th>
<th>CENTRAL</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>u</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MID-CLOSE</td>
<td>e</td>
<td>ē</td>
<td>o</td>
</tr>
<tr>
<td>MID-OPEN</td>
<td>Ė</td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>OPEN</td>
<td>a</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Glide -w- (realized as [-u-]) cooccurs only with i, e, a

- **Voice Quality Feature**
  
  [-creaky] (V) vs. [+creaky] (V)

  [+creaky] vowels do not cooccur with initials /ph-, tsh-, th-, ch-, kh-, f-, s-, ś-, x-, fi-/

- **Tone**
  
  Falling(F)21, Low(L)22–33, High(H)44.
2 Phonological environment of AiVQ

2.1 AiVQ rhymes

(3)
-\(i_1\) [i] -\(i_{t2}\) [it]
-\(e_1^*\) [e] -\(et_2\) [et]
-a [a] -\(ap\) [Ap] -\(at\) [At]

(4)
-\(i\) [i]
-\(e\) [e]

(5)
-\(\tilde{s}\) [\(\tilde{s}\)]

Below are the examples of each alternation pattern. Lhv., Zwa., WB. and OWB. indicate the corresponding Lhaovo, Zaiwa, Written Burmese and Old Written Burmese forms respectively. Zaiwa forms are from Yabu (1982), except those with (ZYYC), which are from Huáng Bù Fán (1992). WB and OWB forms put in braces are transliterated by the system shown in the end of the handout.

1. \(i / e\)

(4) ʔ\(\ddot{a}\)-\(\ddot{y}\)iF / \(\ddot{y}\)eF ‘to be small’ Lhv. ʔ\(\ddot{a}\)ayF; Zwa. \(\ddot{y}\)eF; WB. \(\ddot{c}\)O\(\ddot{S}\) {ngay’}

(5) ʔ\(\ddot{a}\)-\(\ddot{y}\)iL / \(\ddot{i}\)L ‘to laugh’ Lhv. \(\ddot{y}\)iF; Zwa. \(\ddot{y}\)iL; WB. \(\ddot{c}\)O\(\ddot{S}\) {ray’} /\(\ddot{y}\)iL/

When the initial is either palatal or with glide -\(\ddot{y}\)-, AiVQ usually does not occur (with a few exceptions). Let us label them as ‘Y class’.

2. \(i t / e t\)

(6) ʔ\(\ddot{a}\)-\(\ddot{y}\)itF / \(\ddot{y}\)etF ‘to stay’ Lhv. \(\ddot{a}\)n\(\ddot{a}\)F; Zwa. \(\ddot{a}\)j\(\ddot{F}\); WB. \(\ddot{c}\)\(\ddot{S}\) {ne} < OWB. {niy’}

When the initial is either palatal or with glide -\(\ddot{y}\)-, AiVQ usually does not occur (with a few exceptions). Let us label them as ‘Y class’.
2.2 Question: do AiVQ rhymes constitute natural class?

From the viewpoint of modern Lacid:
Hypothesis 1: 'Closed AiVQ rhymes are i/¨e/u/o + -k/ŋ/t.'

From the viewpoint of PLB
(PLB forms are based on Matisoﬀ(2003), related to Lacid forms via WB forms.)

Hypothesis 2: 'Closed AiVQ rhymes are those corresponding to PLB *i/a/u + *k/ŋ/y/w.'

As for open rhymes, there still remain the following puzzles.

- u?(<PLB *-wak), -o?(<PLB *-ak), -uŋ(<PLB *-ŋ/w) are non-AiVQ rhymes,
  but -o(<PLB *-a/*-wa) is an AiVQ rhyme.
- uk(<PLB *-uk), -uŋ(<PLB *-uŋ) are AiVQ rhymes,
  but -u(<PLB *-u) is a non-AiVQ rhyme.

And we still must refer the modern Lacid context, that is, whether the initial belongs to Y class or not.

3 Grammatical environment of AiVQ

3.1 Comparison to Lhaovo tonal alternation

Lhaovo tonal alternation (Sawada(2005) etc.)

(16) Patterns: F→L; L→H; H→H(vacuous)

Environments:
1. in the final syllable of verb(+auxiliary) which stands as the predicate of positive Realis (Informative) sentences (Realis environment: (i),(ii),(iv),(vii) in p.2.)
2. in the final syllable of verb(+auxiliary) which stands as the predicate of attributive clauses, or
   in the nominal head of attributive phrases (Attributive environment: (vi) in p.2.)
3. in each final syllable of all but the last verb constituting a verb concatenation (Conjunctive
   environment: (iii),(v) in p.2.)
4. before instrumental case-marker (Instrumental environment).

Lacid AiVQ occurs in the environments 1.-3. above.

- Realis environment

(17) Lhaovo Lacid
ReaLiS(-positive) naL (raH) ňetF (taL) ‘(He) stays.’
(Realis-)NEGative mā-naF ?ā-ńitF ‘(He) does not stay.’
IrReaLiS <mā->naF-neqH <?ā->ńitF-śia?H ‘(he) will <not> stay.’
IMPerative naF (fia?F) ňitF ‘Stay!’
Negative-IMPerative tā-naF ?ā-ńitF-caH ‘Don’t stay!’
HORTative naF-śaqL ňitF-śaqH ‘Let’s stay!’
OPTative <mā->naF-śoqL ňitF-pācH ‘May <not> (he) stay!’

- Realis environment is indicated by (R) in glosses of the examples below.

- Attributive environment ((A) in glosses.)

(18) Lhv. yañFguqF-meqF naL ?aul-reF mauH kyayF laukL. • naF ‘stay’ > ‘naL
Lcd. yañLguqF-moL ňetF yo?F-rlH moH kyeF myOL . • ňetF ‘stay’ > ňetF
Yangon-loc stay(A) time-acc job very many(R)
‘When (I) lived in Yangon, I have a lot of jobs.’

(19) Lhv. yoF-(fiaF) yonL chē-kyhöH mā-loL ruF paL. • loF ‘come’ > loL
Lcd. yoF ňaqL xitL-kyhoL ?ā-IOF tsiF seF . • loF ‘come’ > loF
I-(top) he here-ALL not-come(A) nmzr know(R)
‘I know that he did not come here.’

(20) Lhv. ?ānHne?H cH*-IOF-rlaH kyaunL-suL-pyuF tā-yaukF
Lcd. ?ānHnaqF cuH*-IOF-rlaH kyaqL-soH-suL tā-yaukF
yesterday arrive(&)-come(A)-LINKER road-walk-person one-cl:human
‘A traveler who arrived yesterday.’

- In Lhv., * indicates that TA applied vacuously.
- In Lcd., * indicates that it is a non-AiVQ rhymes put in the grammatical environment of AiVQ.

- Conjunctive environment ((& in glosses.)

house collapse(&)-fall(&)-go-nilga
‘The house has collapsed.’

(22) Lhv. yonL chē-kyhof mā-yoH*-liH-kaL kyoH-ke?H. • kyoL ‘hear’ > kyoH
Lcd. ňaqL xitL-kyhoL ?ā-IOH*-riH-kaL kyoL-kaF. • kyoL ‘hear’ > kyoOL
he here-ALL not-get(&)-come-quor hear(&)-put.in(R)
‘(I) heard that he could not come here.’

(23) Lhv. tuŋHpauH ḵe?H-yēreL mā-paL-kyoL. • paL ‘know’ > paL
Lcd. sokHpauF ḵapL-lokFr-H ?ā-seF-kyoL . • seF ‘know’ > seF
book read-though not-know(&)-hear
‘Though (I) read the book, (I) did not understand.’
3.2 Positing abstract elements triggering alternation

In the analysis of Lhaovo tonal alternation in Sawada (2005), I posited the abstract element TA which triggers tonal alternation and functions as grammatical markers (as well as zero-sentence markers for realis-negative and imperative sentences). I analyze AiVQ in Lacid in the same fashion, positing the abstract element VA.

(17') Lhaovo Lacid
RLS naF-TA (raH) ˜nitF-VA (taL) ‘(He) stays.’
NEG mā-naF-φ ?ā-˜nitF-φ ‘(He) does not stay.’
IRL naF-negH ˜nitF-fia?H ‘(he) will stay.’
IMP naF-φ (fia?F) ˜nitF-φ (fia?H) ‘Stay!’
NIMP tā-naF-φ ?ā-˜nitF-caH ‘Don’t stay!’
OPT naF-šoŋL ˜nitF-pâcaH ‘May <not> (he) stay!’

Lacid auxiliaries such as -koH ‘plural subject’, -pyeL ‘realization’, -shiH ‘still’ come between the verb and Realis marker (=VA) as the corresponding Lhaovo auxiliaries do. Therefore, AiVQ never occurs before auxiliaries.

(19') Lhv. Lcd.
N oF(-H aF) N oF I(-top) yo ˜na he ch˘e-khyoH xitL-khyoL m˘a-loF- TA P ˘a-loF- VA ‘I know that he did not come here.’
(18') Lhv. Lcd.
yanGguŋL-meŋF naF-TA-TA ˜auL-reF mauH kyayF laukF-TA .
Lcd. yanGguŋL-mol ˜nitF-VA-VA yo?F-ril moH kyeF myoL-VA .
PN-LOC he here-ALL not-come-NEG-ATTR NMRZ know-RLS
‘When (I) lived in Yangon, I have a lot of jobs.’

- The effects of Lhaovo TAs cannot be accumulated. (Sawada(2006)) The same thing also applies to Lacid VAs.

(22') Lhv. Lcd.
he here-ALL not-get-&-come-NEG-QUOTE hear-&-put.in-RLS
‘(I) heard that he could not come here.’

3.3 Question: What is the sources of abstract elements TA/VA?

Dai&Li (2007) argues that Leqi ‘long’ vowels were introduced as means of compensating the loss of verbal affixes (pp.27–28).

I also think that the common source(s) of TA/VA is/are the lost grammatical form(s), which existed in the stage of their proto language (i.e. proto-Lhaovo-Lacid).

- Shown in 3.1, the environments of the alternations can be reduced to three, (except for idiosyncratic one of instrumental case-marker in Lhaovo), which suggests that the number of lost grammatical form (e.g., affixes) as possibles sources of TA/VA could also be reduced to three at most. There might be homophonous sources (or merely a single source).

  cf. WB. ?iC/ < OWB. S S [e@] ‘(positive-)realis’, ‘genitive’

- Patterns of Lhaovo tonal alternation suggest that the form(s) might have had the tone of highest pitch. (Roughly speaking, TA ‘raises’ the pitch of preceding syllable.)

- Patterns of Lacid AiVQ suggest that form(s) might have had a relatively wide aperture. (VA at least increases the aperture of vowel of preceding AiVQ rhyme.)

7
The problem of this approach might be that we must allow VA to affect the vowel of closed rhymes across their final consonants.

Abbreviations

& ... Coordinator of verbs  LOC ... Case marker: Locative  QUOT ... Quotation marker
ACC ... Case marker: Accusative  NEG ... Sentence marker: Negative  RLS ... Sentence marker: Positive
ALL ... Case marker: Allative  Realis Informat ive
ATTR ... Marker of Attributive element  NMZR ... Nominalizer  RLZN ... Auxiliary: Realization
CL ... Classifier noun  PN ... Proper noun  TOP ... Topic Indicator

Reference


Appendix: Sawada’s Burmese transliteration system

Consonant letters and symbols

{T} Ꝗ  [Th] Ꝙ  [D] Ꝙ  [Dh] Ꝛ  [N] Ꝙ
{-y} ꝝ  {-r} ꝝ  {-w} ꝝ
[s] ꝙ  [h] ꝝ  [L] Ꝙ  [@] ꝝ  [-h] ꝝ

Vowel letters and symbols

{-ii} ꝝ  (-u) ꝝ  (-e) ꝝ  (-o) ꝝ
{-aa} ꝝ  {-ii} ꝝ  {-uu} ꝝ  (-e) ꝝ  (-o) ꝝ  (-o’) ꝝ

Symbols participating in rhyme notation

<table>
<thead>
<tr>
<th>rhyme symbols</th>
<th>tone marks</th>
<th>vowel killer</th>
</tr>
</thead>
<tbody>
<tr>
<td>creaky heavy</td>
<td>Realis Informative</td>
<td></td>
</tr>
</tbody>
</table>

Quotation marker

Topic Indicator

Superscript letter

[ng’]$