THE PHONOLOGIES OF
A LAMPANG LAMET AND WIANG PAPAO LUA

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0. INTRODUCTION

Lamet and Lua are both Palaungic languages.

Data on the Lamet of this study were collected in Lampang from speakers originally from Takluh village, north of Nam Tha, but who moved to Lampang more than thirty years ago. Their dialect is close to but different from Lindell et al.'s (1978) dialects A and B. It clearly belongs in Ferlus's (1980) Lower Lamet.[1] Lindell et al. suspected voice register in Lampang Lamet but failed to find it. This study confirms their suspicion: there is indeed contrastive register. It is often difficult for the nonnative ear to hear, but the two registers were discriminated unhesitatingly and consistently by several speakers. My main informant described them as "soft tongue" *vs* "hard tongue". Tense ("hard") register is here transcribed with the acute, ´, while lax ("soft") register is left unmarked.

The Lua of this study has been called Khamet, by Kraisri (1963) and others, or Lawa; but the people with whom I was in contact preferred the name *Lua'*. These villagers have lived in Ban Pang Chok (Ban Lua) in Wiang Papao district of southern Chiangrai province all their lives, and I could find no tradition of their ancestors' having ever lived anywhere else. Ferlus (1980) and others consider Lua to be a dialect of Lamet. On the contrary, I find them to be only about 50% cognate, and regard Lua as clearly not a Lamet dialect, though perhaps belonging to the same subgroup within Palaungic.

This study presents the phonologies of the two languages by hierarchical ranks: the intonation group, the stress group, the syllable, and the phoneme. Voice register is treated at the phoneme rank because it distinguishes morphemes, even though phonetically it is probably a syllable prosody.

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1. LAMPANG LAMET

1.1. *Intonation group.*

There are two contrasting types of intonation contour: the statement contour and the question contour. These contrast in the final stress group. The precontour stretch, though drawn as a straight line, is neutral and may vary in pitch.

The statement contour is used for ordinary declaratives and imperatives. An imperative adds loudness to the statement contour.

The statement contour has three subtypes according to *the structure of the final stressed syllable:*

> *a.* If the syllable ends in a stop or fricative after a short vowel, the intonation will glide upwards slightly:

taa? chanlooŋ   ?ɛ́h khəpən   má?   ———————————⌐

village leader   get   wife   new

səŋəh   ?aa?   khəmʋh   ———————————⌐

today   I   catch-a-cold

> *b.* If the syllable ends in a stop or fricative after a long vowel, the intonation will fall after gliding upward:

?úujɲ   kóoj   ŋɒɒt   ——————⌒\

father   not   stay

?aa?   thám   ɣíih   ———————⌒\

I   see   bear

> *c.* If the syllable is open or ends in a voiced continuant, the intonation will glide downward very slightly:

?aa?   su?   saam   plʋ?   mpii   ————————————⌐

I   like   eat   pumpkin

saam saam   ——————————⌐

eat   eat

The question contour is used for interrogatives. The stressed syllable of the final word has a strongly rising pitch:

mɛ́h   jám   ————————⌐   num   ?əh   palsʋm mɛ́h   ————————⌐

who   die?   year this   grow   what?

1.2. *Stress group.*

The Lamet stress group may have one or two syllables. Each stress group has as its nucleus one strongly stressed syllable, which is always the last syllable in the group. As its periphery it may have an unstressed open syllable or a weakly stressed closed syllable. Thus, if S = stressed syllable and s = nonstressed syllable, we may say that the two permissible patterns are S and sS, in other words:

$$\pm \left\{ \begin{array}{l} \text{unstressed syllable} \\ \text{weakly stressed syllable} \end{array} \right\} + \text{strongly stressed syllable}$$

Examples: ['púk]   'hot'

[m'pə́k]   'broken'

[pə̆l'kuul]   'finger'

Both of these types of stress group may function in the intonation group.

1.3. *Syllable.*

The structure of the Lamet syllable can be described in terms of a nucleus consisting of a vowel and a periphery formed by one, two, or more consonants. Both open and closed syllables may occur in either the stress-group nucleus or the stress-group periphery.

Open syllables have the structure C(C)V. The permissible clusters in a strongly stressed (nuclear) open syllable are *(a)* nasal plus stop or [l] or *(b)* stop plus [h l w γ]. An unstressed (peripheral) open syllable allows only stop plus [h]. Examples:

['γée]   'root'   [pə̆'huum]   'nest'

['phəə]   'soft'   [sə̆'ʔaak]   'sweep'

['mpəə]   'to fly'

Stressed closed syllables have the structure C(C)(C)VC. The permissible two-consonant clusters are *(a)* nasal plus stop or [l y γ h] or *(b)* stop plus [h l w γ]. Three-consonant clusters *(c)* nasal plus stop plus [h], *(d)* nasal plus stop plus [l], or *(e)* stop plus [h] plus [l]; these cannot take a preceding peripheral syllable. Examples:

[puul]   'seven'   [púk]   'hot'

[pɣíim]   'ancient'   [ŋklá̰?] 'apple snail'

[phlúŋ]   'spout'   [kɑɑn phlʋʋw]   'young man,
                                                 bride'

Weakly stressed (minor) syllables, always closed, have
the structure C(C)VC. The closing consonant need not be homor-
ganic with the following nuclear consonant. Examples:

[pũt'pɯnɯŋ]   'long drum'   [thʋʋŋ'khúm] 'to kick'

[phĩŋ'nóoŋ]   'log'   [klɯnɯŋ'khám] 'to tilt'

[thǎn'wun] 'in confusion'

Unstressed syllabic (presyllable) nasals have the structure N,
and are usually but not always homorganic with the following nuc-
lear consonant. Examples:

             [n̩'laŋ]   'bald'

             [ŋ̩'ɣɯn]   'to shake'

             [m̩'puŋ]   'door'

1.4. *Phonemes.*

The major elements at the phoneme rank are consonants,
vowels, tone, and register.

1.4.1. *Consonants.*

The consonant phonemes and clusters may be charted
as follows:

(a) Simple initials:

p	t	c	k	?
m	n	ɲ	ŋ	
w	l, r	j	ɣ	
f	s			h

(b) Initial clusters — two:

ph	th	ch	kh			
pl			kl			
pɣ						
			kw			
mp	mt	mc		mj	mɣ	ml
	nt	nc		nj		nl	nh
			ŋk		ŋɣ	ŋl

(c)   Initial clusters — three:

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nch          phl          khl
             mpl          ŋkl
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(d)   Finals:

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        p       t       c       k       ʔ
        m       n       ɲ       ŋ
        w       l       j
        s                       h
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The stop consonants /p t c k/ in final position have simultaneous glottal closure. In initial position they become voiced following the syllabic nasals /m̩ n̩ ŋ̩/.

/f/ is found mostly in loanwords. Before /a/ it has the bilabial allophone [ɸ], as in /fan/ [ɸan] 'to teach'.

/s/ has three allophones: [s], [ɕ], [ç]. In initial position [s] can vary freely with [ɕ]. In final position only [ç] occurs.

/h/ between two voiced phonemes is voiced, as in /nhooŋ/ [nɦooŋ] 'rice-steaming kettle'.

The nasals /m n ŋ/ have syllabic allophones [m̩ n̩ ŋ̩] before an initial consonant.

/l/ is phonetically devoiced [l̥] after an initial voiceless consonant, as in /pluʔ?/ [pl̥uʔ?] 'fruit'. It also has the allophone [ɾ] in final position, varying freely with [l].

In many cases Lamet /ɣ/ corresponds to /r/ in other languages. There is, however, an extrasystematic /r/ in a few words for names of days and years (/rawaaj/, /ruuŋ/, /rap/), presumably borrowed or archaic.

1.4.2.   *Vowels.*

The vowels of Lampang Lamet may be charted as follows. All may occur long or short. There are no high offglides.

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        i           ɯ           u
        ɪ           ə           ɤ
        e           ʌ           o
        ɛ           a           ɑ
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Long vowels may occur in open or closed syllables, but short vowels occur only in closed syllables.

There is an [i] transition between a vowel and a final palatal consonant, as in /paɲ/ [paⁱɲ].

While [ia] appears in a loan from Northern Thai, the only high offglides that have been found in apparently native words are [ɯa] and [ua], and these in only three words. This rarity of occurrence would seem to indicate that they are not part of the regular phonemic system.

In my data I have found only three words with nasalization, but these yield a minimal pair and a near-minimal pair with nonnasalized words. Although nasalization is contrastive, its rarity shows that it is not part of the regular system. All three instances precede a final glottal stop:

má̃?	'yesterday'	má̃?	'new, again'
khəmá̃?	'to sneeze'	khəma?	'shy'

1.4.3. *Register and tone.*

As has been mentioned, Lampang Lamet has contrastive voice register. My main informant's comments would seem to indicate that tongue tension is at least part of the physical difference. Examples:

kəŋ	'half'	kə́ŋ	'tight'
laac	'lost'	láac	'to untie'
ɣuh	'gauzy, flimsy'	ɣúh	'to pull'
phəjɯ	'visitor'	phəjɯ́	'to cock a gun'

Tone is not phonemically distinctive. There seem to be three pitches, varying according to the structure of the syllable. Short vowels with final stop or fricative are pronounced with low rising pitch: ʔap ∨ 'dark'. Long vowels with final stop or fricative are pronounced with mid-level pitch, gliding downward at the end: múus ⊢ 'nose'. Short and long vowels with other final consonants or in open syllables tend to be pronounced with mid-level pitch: ʔím ⊢ 'raw', maa ⊢ 'field'.

2. WIANG PAPAO LUA

2.1. *Intonation group.*

As in Lamet, there are two contrasting types of intonation contour in Lua: the statement contour and the question

contour. The contrastive contour starts at the beginning of the final stress group.

The statement contour is used for ordinary declaratives and imperatives. An imperative adds loudness to the statement contour. The statement contour normally glides slightly upward:

ʔɔɔ kɤʔ maŋ sɔŋ.

I   also not know

ʔeen ɣɤɤʔ ŋɔ̀ɔʔ lon.

it   makes rice fall

But if the final word has the breathy falling tone, ˋ , the contour glides downward after rising:

pɔ̀ɔ ʔeen maŋ ŋòot.

father his not stay

pɤ̀ɤʔ salnùm hɛk səwàaj.

eat medicine already be-better

The question contour is used only for interrogatives. The stressed syllable of the final word has a strongly rising pitch:

pɤ̀ɤʔ salnùm hɛk ka?

eat medicine already (interrog.)

lùuŋ ŋòot nàŋ ʔeen

uncle stay where (interrog.)

If the final word has the breathy falling tone, the contour levels off after the rise:

ɣɤɤʔ sanmɔ̀?

do   what?

ɲaam ʔeen mìi sət̀uu?

when? you will-come

2.2. *Stress group.*

The function and structure of stress groups in Wiang Papao Lua are the same as in Lampang Lamet. All types of stress

groups can function in all types of intonation groups.

The structure of the stress group is:

$$\pm \left\{ \begin{array}{l} \text{unstressed syllable} \\ \\ \text{weakly stressed syllable} \end{array} \right\} \quad + \quad \text{strongly stressed syllable}$$

2.3. *Syllable.*

The Lua syllable types are the same as in Lampang Lamet (see 1.3).

Open syllables have the structure C(C)V. They function both in the strongly stressed and the unstressed positions in the stress group. Unstressed open syllables may have [ə], [i], as [ɔ] their vowel (Lampang Lamet allows only [ə] in this position). Examples:

[ˈsàa]   'basket'   [bɔˈtɔɔm]   'button'

[təˈham]   'right'   [siˈnàat]   'gun'

Closed syllables have the structure C(C)(C)VC. They function in the strongly stressed and weakly stressed positions in the stress group. Weakly stressed closed syllables may have any short vowel. Examples:

[ˈkhwaaj]   'late'   [pŏkˈpòm]   'moon'

Thus the following patterns may be found in stress groups:

ˈC (C) (C) V (C)

N ˈC (C) V (C)

C (h) V̆ ˈC (C) V (C)

C (h) V̆ V ˈC (C) (C) V (C)

These Lua syllable patterns are similar to those of Lampang Lamet (see 1.3) except that in the fourth row Lua allows three main syllable consonants while in the third and fourth rows Lua contrasts three short presyllable vowels.

2.4. *Phonemes.*

The major elements at the phoneme rank are consonants, vowels, and tones.

2.4.1. *Consonants.*

The consonant phonemes and clusters may be charted as follows:

(a) Simple initials:

p	t	c	k	?
b	˙ d			
f	s			h
m	n	ɲ	ŋ	
w	l	j	ɣ	

(b) Initial clusters — two:

```
ph    th         kh
pl               kl
pɣ    tɣ    cɣ   kɣ
pj
                 kw
mp                      mɣ
      nt               nl
            ŋk    ŋl    ŋɣ    ŋj
```

(c) Initial clusters — three:

```
        mpl              ŋkl
              nth        ŋkh
              ntɣ        ŋtɣ
                         khw
```

(d) Finals:

p	t	c	k	?
m	n	ɲ	ŋ	
w	l	j		
s				h

The stop consonants /p t c k/ in final position have simultaneous glottal closure.

/s h m n l/ have the same allophones as in Lampang La-met, and these occur in the same positions (see 1.4.1).

2.4.2. *Vowels.*

The vowels of Wiang Papao Lua may be charted as follows. All except the high offglides may be either long or short. Most words with offglides appear to be loans from Thai.

ia	ɯa	ua
i	ɯ	u
e	ɤ	o
ɛ	a	ɔ

[ə] is found in open unstressed syllables, and probably could be considered an allophone of /ɤ/.

As in Lamet and most other Mon-Khmer languages, there is an [i] glide onto final palatals: /pɯɲ/ [pɯⁱɲ] 'to shoot'.

Nasalization was found with some ten words contrasting with nonnasalized forms in similar environments:

ʔɤ̃ɔm	'small pot'	ʔɔɔŋ	'crab shell'
hẽew	'abyss'	heeŋ	'cover'[2]

2.4.3. *Tone and register.*

There are two contrastive tones: the falling breathy tone, and the normal tone. The former falls from mid-level, and sometimes has perceptible breathiness. The pitch, not the voice quality, seems to be most distinctive at present. Mitani (1965: 28) called it a "quasi-tonal register". The normal tone varies freely between low-rising and mid-level pitch. Examples:

pùk	'rotten'	puk	'hot'
tùm	'ripe'	tum	'fishing implement'
ɣɔ̀ɔc	'intestine'	ɣɔɔc	'to sharpen'

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[2] Of a fishing implement.

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NOTE

This paper is a condensation of the author's Mahidol University thesis, which provides detailed discussion and fuller examples together with vocabularies of both languages of some 1,500 items each. Copies may be obtained from the author: 242 Wisutkasat Road, Bangkok 10200.