ICONICITY OF VOWEL QUALITIES IN NORTHEASTERN THAI REDUPLICATED WORDS

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1. Introduction

Several types of reduplication in languages spoken in Southeast Asia have been reported by Haas (1942 and 1946), Banker (1964), Smith (1973), Diffloth (1976 and also in this book) and Jacob (in this book). The use of reduplication is also common in the Isan dialects, i.e., the Thai dialects spoken in the northeastern region of Thailand. Reduplicated words are normally used as intensifiers and pluralisers. The iconic value of vowel qualities in reduplicated words are of particular interest.

Firth (1930) draws to our attention the relationship between vowel qualities and their suggestive meanings. He states:

> When the consonantal link is etymemic or phonaesthetic, vocalic heterophony will also have some sort of function. Vowel variation in otherwise similar phonetic sequences is a common verbal device in English and other Germanic languages--e.g. drink, drank, drunk, sink, sank, sunk. ... Vowel variation is widely used for other purposes in most Germanic languages. We sometimes vary the vowels to suit in some way the varied aspects of similar actions--e.g. the verbs drip, drop, droop. Why i should suit the first sort of action and oo the third, it is possible to guess--but we must beware of sound symbolism...

> The use of reduplication, of ee and oo sounds, and the liquid l r n m sounds as intensives, as diminutives associated with reiteration, or with affectionate, or pejorative feelings or regard for the picturesque, will account for much of what is loosely called onomatopoeia.[1]

The iconicity of vowel qualities in Isan reduplicated words may be used as evidence to support Firth's interesting comments on sound symbolism. The analysis in this article, which is based on the Muaong Sam Sip dialect (MSS) spoken in Ban Bua Yang, Tambon Dum Yai, Amphoe Muang Sam Sip in Ubon Rachathani Province, and the many examples of reduplication found in the Isan-Central Thai Dictionary by Somdet Phramaha Wirawong Titsamahathera, et al. (1972) and also Nimmanhaeminda

(1976) strongly suggest that the phenomenon described is quite wide-spread among Isan and other Tai dialects spoken in the northeastern part of Thailand.[2]

2. A brief phonological sketch of the Muang Sam Sip dialect

Consonant system

Initial consonants

p	t	c	k	ʔ
ph	th		kh	
b	d			
m	n	ɲ	ŋ	
f	s		h	
v	l	j		

Note: MSS has no consonant clusters.

Examples

pa:[2]	'fish'
ta:[2]	'eye'
ca:[4]	'noncommissioned officer (army, air force and police)'
ka:[2]	'crow'
ʔa:[6]	'to open one's mouth'
pha:[3]	'to bring along'
tha:[3]	'to paint, smear'
kha:[3]	'thatch grass'
ba:[2]	'to omit, skip'
da:[4]	'to scold'
ma:[3]	'to come'
na:[3]	'rice field'
ɲa:[1]	'to be coarse, rough (as of a floor having dirt or sand on it)'
ŋa:[3]	'sesame'
fa:[1]	'wall; lid'
sa:[1]	'swamp'
ha:[1]	'to seek'

va:^{3} 'arm spread (a measure)'

la:^{3} 'to say good-bye'

ja:^{2} 'medicine'

Final consonants

p	t	k	ʔ
m	n	ŋ	

Examples

sa:m^1 'three'

sa:n^1 'to weave, plait (bamboo)'

sa:ŋ^1 'to comb (thatch grass)'

sa:p^5 'an unpleasant smell (as of body odours)'

sa:t^5 'to splash'

sa:k^5 'pestle'

sap^1 'to chop, slash'

sat^1 'animal'

sak^1 'to tatto'

saʔ^4 'to tear up'

Vowel system

Monophthongs

i, i:		(ɯ)^3, ɯ:	u, u:	
e, e:		ɤ, ɤ:	o, o:	
ε, ε:			ɔ, ɔ:^{4}	
	a, a:			

Diphthongs

iu	iə	(ɯə)^5	ui	uə
eu		ɤi	oi	
εu			ɔi	
	ai, a:i			
	au, a:u			

Triphthongs

iəu   uəi⁶ uəi

Examples

ʔin²	'Indra (name of a Hindu god)'
ʔi:²	'title used with first names'
ʔen²	'tendon, sinew, gut'
ʔe:n²	'to lean'
kɛʔ¹	'to pick out, remove (tiny objects with the tip of the finger)'
ʔɛ:⁶	'the air bladder (of a fish)'
ʔan²	'clf. for small, long objects'
ʔa:²	'father's younger sister'
tɯk¹	'building'
ʔɯ:n⁴	'other, other ones'
ŋɤn³	'silver'
ʔɤ:n⁶	'to call'
khuk⁴	'jail'
ʔu:⁴	'cradle'
ʔon⁶	khi:⁵ ʔon⁶ 'a kind of plant'
ʔo:²	'a bowl-shaped vessel (usually used for drinking water)'
khɔʔ⁴	'to knock'
khɔ:³	'neck'
ʔiən²	'eel'
hiu¹	'hungry'
heu¹	'chasm'
ʔɛu²	'waist'
ʔau²	'to take'
ʔa:u²	'father's younger brother'
ʔai²	'to cough'
ʔa:i²	'shy'
ʔɯən⁶	'to diminish in force (rain)'
ʔɤi⁴	'to utter'

|	
khui[3]	'to chat'
ʔuə[4]	'sour sausage (Isan style)'
hoi[3]	'to scatter about on top of something'
ʔɔi[6]	'sugar cane'
hiəu[4]	'to be wilted, withered'
ʔɯəi[6]	'first daughter'
ʔuəi[4]	'to head (a boat) in a different direction'

Tone system

An MSS syllable may have one of the following six tones:[7]
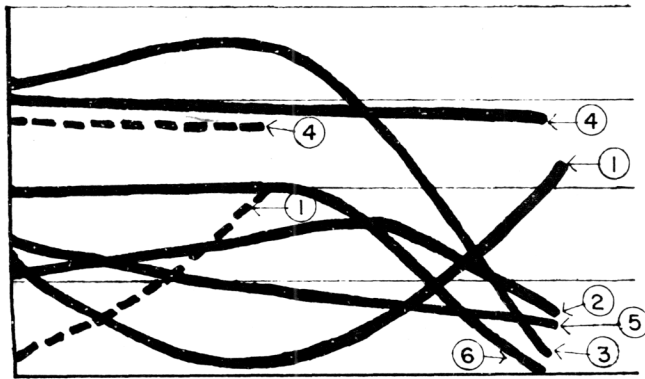
Tone 1:   low-rising, e.g.

kha:[1]	'leg'
kha:n[1]	'(Year of the) tiger'
khat[1]	'to polish'
kat[1]	'to bite'
bat[1]	'card'

Tone 2:   low-rising (slightly)-falling, e.g.

ka:[2]	'crow'
ba:[2]	'to skip'

Tone 3:   high-rising-falling, e.g.

kha:[3]	'thatch grass'
kha:ŋ[3]	'chin, jaw'

<u>Tone 4</u>:   high-level (or gradually falling), e.g.

kha:^{4} 'galangal'

ka:n^4 'white ring around dog's tail'

ba:^{4} 'shoulder'

kha:^{4} 'price, value'

khat^4 'to steer or guide a boat'

<u>Tone 5</u>:   low-falling with glottal constriction, expecially in open syllables, e.g.

kha:^{5} 'to kill'

kha:t^5 'to be torn'

ka:t^5 'a kind of vegetable'

ba:t^5 'to cut (e.g. one's finger)'

<u>Tone 6</u>:   mid-falling, e.g.

ka:^{6} 'rice seedlings'

ba:^{6} 'crazy'

kha:^{6} 'to trade'

kha:t^6 'to tie something around'

3. Patterns of reduplication

There are two types of reduplication in MSS: single reduplication and double reduplication. The former suggests singularity and the latter suggests plurality. The two types of reduplication may be represented in generalized formulas as follows:

<u>Single reduplication</u> : $C\overset{T}{V}(C) \rightarrow C\overset{T}{V}(C).C\overset{T}{V}(C)$

<u>Double reduplication</u> : $C\overset{T}{V}(C).C\overset{T}{V}(C) \rightarrow C\overset{T}{V}(C).C\overset{T}{V}(C).C\overset{T}{V}(C).C\overset{T}{V}(C)$

In single reduplication, each reduplicated word consists of two syllables, and each syllable can be divided into two major components: the changed component(C-) and the constant one (-VC) as illustrated in the diagram below:

C	$\overset{T}{V}$(C)	C	$\overset{T}{V}$(C)
k	i:k^5	s	i:k^5

Both C and V elements can be any consonant and vowel in the phonological system of MSS. However, there are some restrictions on the occurrence of T or tones: only tones 4, 5 and 6 occur in reduplicated words. For example:

na:^{5} ba:n^2 <u>bɤn^4-vɤn^4</u>   'a very happy big face'

dɛ:ŋ^2 <u>ki:k^5-si:k^5</u>   'to be dark red (as of eyes)'

dam^2 <u>khi:^{5}-li:^{5}</u>   'to be black (as of round objects)'

khɯn^5 <u>ci:t^6-phi:t^6</u>   'to sprout poorly (as of plants)'

In double reduplication, the C and the T elements of box B are constant, i.e. they are exactly the same as those of box A. The V element is the changed component. V_1 and V_2 are back vowels whereas V_3 and V_4 are front vowels. The vowels of box B are always in harmony with the ones of box A in terms of tongue height.

	A			B	
C V_1(C)		C V_2(C)		C V_3(C)	C V_4(C)
kh ɔm^5		l ɔm^5		kh ɛm^5	l ɛm^5

4. Iconic value of vowel qualities

Generally speaking, reduplicated words in Isan dialects are used as modifiers (adjectives and adverbs) or as intensifiers following descriptive verbs referring to the principal colours, shapes, i.e. 'fat, round thin, long' and a few others. Based on the iconic value of vowel qualities, the V elements may be divided into three major classes:

Class 1: u o ɯ ɤ

u represents u u: ui uə uəi

o " o o: oi

ɯ " ɯ ɯ:

ɤ " ɤ ɤ:

Class 2: i ɛ ɔ

i represents i i:

ɛ " ɛ ɛ: ɛu

ɔ : ɔ ɔ: ɔi

Class 3: e ə

      e represents e e:

      ə   "   a a: ai a:i au a:u

    Rounded and unrounded back vowels (u o ɯ ɤ) always suggest a larger size or a higher degree of intensity[8] whereas vowels belonging to the second class (i ɛ ɔ) always suggest a smaller size or a lower degree of intensity. The vowels of the third class may convey either the idea of largeness or that of smallness; for example, ə would suggest the greater magnitude when paired with ɛ, yet when paired with o, it suggests the smaller magnitude. From the data collected, six patterns of two-way semantic contrasts suggested by different vowel qualities have been found. They are as follows:

Pattern 1: u-u vs. i-i a-a ɔ-ɔ

Ex.1   mɯ:^{3} kin^6 kut^4-dut^4 'a big disfigured hand'

        mɯ:^{3} kin^6 kit^4-dit^4 'a small disfigured hand'

Ex.2   khiəu^1 cum^4-kum^4 'to be green (as of a large object in the distance)

        khiəu^1 cim^4-kim^4 'to be green (as of a small object in the distance)'

Ex.3   liəŋ^1 ʔui^4-hui^4 'to be yellow (as of a large object)'

        liəŋ^1 ʔai^4-hai^4 'to be yellow (as of a small object)'

Ex.4   khiəu^1 ʔum^4-thum^4 'to be green and fresh (as of a big vegetable)'

        khiəu^1 ʔam^4-tham^4 'to be green and fresh (as of a small vegetable)'

Ex.5   kɔ:ŋ^2 cum^6-kum^6 'a big pile (as of sand)'

        kɔ:ŋ^2 cɔm^6-kɔm^6 'a small pile (as of sand)'

Ex.6   san^5 ʔu:^{6}-pu:^{6} 'to be very short (as of a big hand)'

        san^5 ʔɔ:^{6}-pɔ:^{6} 'to be very short (as of a small hand)'

Pattern 2: o-o vs. i-i e-e a-a ɔ-ɔ

Ex.1   kɔ:ŋ^2 coʔ^4-koʔ^4 'a big pile (as of dirt)'

        kɔ:ŋ^2 ciʔ^4-kiʔ^4 'a small pile (as of dirt)'

Ex.2   na:^{5} so:^{4}-vo:^{4} 'a big ugly face'

          na:^{5} se:^{4}-ve:^{4} 'a small ugly face'

Ex.3   fa:^{6} cɛ:ŋ^6 co:ŋ^4-po:ŋ^4 'extremely clear sky'

          fa:^{6} cɛ:ŋ^6 ca:ŋ^4-pa:ŋ^4 'clear sky'

Ex.4   na:^{5} lɛ:m^1 co:t^6-lo:t^6 'long pointed face of a large creature'

          na:^{5} lɛ:m^1 cɔ:t^6-lɔ:t^6 'long pointed face of a small creature'

Ex.5   ɲa:ŋ^4 mok^4-cok^4 'walking stiffly (as of a large creature)'

          ɲa:ŋ^4 mɔk^4-cɔk^4 'walking stiffly (as of a large creature)'

Pattern 3: ɯ-ɯ vs. i-i

Ex.1   hu:^{3} cɯ:^{4}-vɯ:^{4} 'a big hole'

          hu:^{3} ci:^{4}-vi:^{4} 'a small hole'

Ex.2.   jiət^5 khɯŋ^6-nɯŋ^6 'stretching out full length (as of a big thing)'

          jiət^5 khiŋ^6-niŋ^6 'stretching out full length (as of a small thing)'

Ex.3   hu:^{1} san^3 phɯŋ^6-vɯŋ^6 'sticking out (as of big ears)'

          hu:^{1} san^3 phiŋ^6-viŋ^6 'sticking out (as of small ears)'

Pattern 4: ɤ-ɤ vs. ɛ-ɛ

Ex.1   kha:ŋ^6 kɤ:ŋ^4-dɤ:ŋ^4 'to be stuck on (as of something big)'

          kha:ŋ^6 kɛ:ŋ^4-dɛ:ŋ^4 'to be stuck on (as of something small)'

Ex.2   na:^{5} ba:n^2 bɤn^4-vɤn^4 'a big happy face'

          na:^{5} ba:n^2 bɛn^4-vɛn^4 'a small happy face'

Ex.3   liəŋ^1 ʔɤ:^{6}-hɤ:^{6} 'to be extremely yellow (as of a big thing)'

          liəŋ^1 ʔɛ:^{6}-hɛ:^{6} 'to be extremely yellow (as of a small thing)'

Pattern 5: a-a vs. ɛ-ɛ

Ex.1   lom^6 pa:ŋ^4-ja:ŋ^4 'to topple (of a big thing)'

          lom^6 pɛ:ŋ^4-jɛ:ŋ^4 'to topple (of a small thing)'

Ex.2　bum^6 ?a:ŋ^6-ma:ŋ^6　　'a large indentation (as in a pot)'

　　　　bum^6 ?ɛ:ŋ^6-mɛ:ŋ^6　　'a small indentation (as in a pot)'

Ex.3　ba:n^2 kha:n^5-la:n^5　　'to spread fully (as of a mushroom cap)'

　　　　ba:n^2 khɛ:n^5-lɛ:n^5　　'to spread a little (as of a mushroom cap)'

Pattern 6:　e-e　vs.　ɛ-ɛ

Ex.1　nɔ:n^3 me:p^5 ?e:^{6}-pe:^{6}　　'to lie in a prone position (of a big fat thing)'

　　　　nɔ:n^3 me:p^5 ?ɛ:^{6}-pɛ:^{6}　　'to lie in a prone position (of a small fat thing)

Ex.2　pe:^{2} le:t^6-pe:t^6　　'to be flat (as of a big thing)'

　　　　pe:^{2} lɛ:t^6-pɛ:t^6　　'to be flat (as of a small thing)'

Ex.3　lin^6 ɲa:u^3 khe:t^6-le:t^6　　'a broad long tongue'

　　　　lin^6 ɲa:u^3 khɛ:t^6-lɛ:t^6　　'a narrow long tongue'

The semantic relationship of different vowel qualities described above may be presented diagramatically as follows:

◯ = larger size or higher degree of intensity

△ = smaller size or lower degree of intensity

A three-way semantic contrast (large vs. medium vs. small) suggested by different vowel qualities also occurs in MSS. So far, only two patterns have been found:

Pattern 1: o-o vs. ɔ-ɔ vs. i-i

Ex.1   hu:^{3} con^4-poŋ^4 'a really big hole'

        hu:^{3} cɔŋ^4-pɔŋ^4 'a fairly big hole'

        hu:^{3} ciŋ^4-piŋ^4 'a small hole'

Ex.2   mɯ:n^3 ta:^{2} moŋ^6-koŋ^6 'to open one's eyes very widely'

        mɯ:n^2 ta:^{2} mɔŋ^6-kɔŋ^6 'to open one's eyes widely'

        mɯ:n^3 ta:^{2} miŋ^6-kiŋ^6 'to open one's eyes a little bit'

Pattern 2: u-u vs. ɔ-ɔ vs. ε-ε

Ex.1   man^3 hot^1 tun^4-jun^4 'It shrunk a lot.'

        man^3 hot^1 tɔn^4-jɔn^4 'It shrunk quite a lot.'

        man^3 hot^1 tεn^4-jεn^4 'It shrunk a little bit'

Ex.2   tum^4 ʔuʔ^4-puʔ^4 'a very big bump (as from a mosquito bite)'

        tum^4 ʔɔʔ^4-pɔʔ^4 'a fairly big bump (as from a mosquito bite)'

        tum^4 ʔεʔ^4-pεʔ^4 'a small bump (as from a mosquito bite)'

Double reduplication is used to indicate plurality. The normal rhythmic pattern is ⏑ ╱ ⏑ ╱. Three patterns have been found:

Pattern 1: u-u-i-i vs. ɔ-ɔ-ε-ε

Ex.1   lɔi^3 ʔu:ŋ^4-lu:ŋ^4-ʔi:ŋ^4-li:ŋ^4 'floating (in the water) of several big objects'

        lɔi^3 ʔɔ:ŋ^4-lɔ:ŋ^4-ʔε:ŋ^4-lε:ŋ^4 'floating (in the water) of several small objects'

Ex.2   kiŋ^6 khum^5-lum^5-khim^5-lim^5 'rolling of several big objects'

        kiŋ^6 khɔm^5-lɔm^5-khεm^5-lεm^5 'rolling of several small objects'

Pattern 2: ɤ-ɤ-e-e vs. ɔ-ɔ-ε-ε

Ex.1   duəŋ^2 mɤ:^{6}-cɤ:^{6}-me:^{6}-ce:^{6} 'several big round shapes'

        duəŋ^2 mɔ:^{6}-cɔ:^{6}-mε:^{6}-cε:^{6} 'several small round shapes'

Pattern 3: o-o-e-e vs. ɔ-ɔ-ε-ε

Ex.1   ten^6 kho?^{4}-jo?^{4}-khe?^{4}-je?^{4} 'jumping back and forth, (as of several big frogs)'

ten^6 khɔ?^{4}-jɔ?^{4}-khɛ?^{4}-jɛ?^{4} 'jumping back and forth (as of several small frogs)'

Ex.2   kha:u^1 co:k^6-pho:k^6-ce:k^6-phe:k^6 'to be extremely white (as of several big white objects)'

kha:u^1 cɔ:k^6-phɔ:k^6-cɛ:k^6-phɛ:k^6 'to be extremely white (as of several small white objects)

5. Conclusion

Reduplication in Northeastern Thai dialects is a living process well-established in the speech community. Its basic forms and functions can be said to be the same for different speakers although there are some minor differences. The iconic value of vowel qualities in reduplicated words can be illustrated systematically. Two phonetic features of vowel, namely, BACK and HIGH seem to play the most important rôle. The dichotomies BACK vs. NON-BACK and HIGH vs. NON-HIGH may be presented diagramatically as follows:
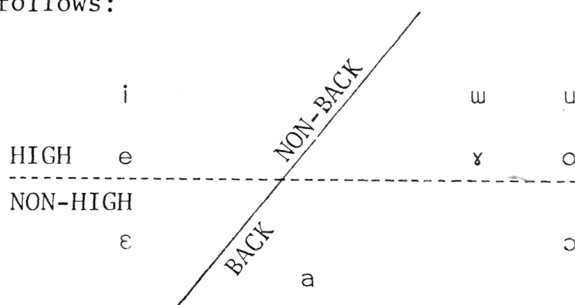
Normally, vowels are classified in articulatory terms on the basis of three dimensions of classification: a.) tongue height, b.) tongue advancement and c.) lip posture. It is interesting to note that the posture of the lips appears irrelevant in the reduplicative system of Northeastern Thai dialects.

NOTES

[1] Firth, J.R., Speech, Chapter VI, (reprinted in the Tongues of Men & Speech, ed., P. Strevens, pp. 180-187).

Miss Dhanan Chantrupanth, who is professor Henderson's student, told me that Professor Henderson mentioned in class that when Firth was

alive, he was very interested in this aspect of phonetics. I should
have asked Professor Henderson for more information; however, I was
reluctant to do so because this article was supposed to be a surprise
for her. I expect to hear her comments later.

2 My Saek and Yo informants from Nakhon Phanom province have told me
that similar types of reduplication could also be found in their
languages.

3 The short unrounded high back vowel ɯ occurs only rarely in MSS except
in loanwords from the Central Thai dialects such as tɯk[1] 'brick build-
ing' and in reduplicated words. Where Standard Thai words have the
vowel was in lɯ̌k 'deep', maʔɯ̌k 'a kind of eggplant', saʔɯ̌k 'to hiccup',
plaa-mɯ̀k 'squid', ʔɯ̀t 'tough (as of a person)', khwaaj-thɯ̀k 'a young
male buffalo', MSS cognates have ɤ.

4 MSS has a kind of ɔ: which is realized as [ɔ.] in closed syllables and
as [ɔ:] in open syllables.

5 [ɯ:ə] and [i:ə] are in free variation in careless speech, especially
that of uneducated speakers. It is considered more prestigious to
use only [ɯ:ə]. Words spelled in Standard Thai orthography with the
letters <ɪ̜ʉ> are always pronounced [i:ə], whereas words spelled with
the letters <ɪ̜ə> may be pronounced [ɯ:ə] or [i:ə] in MSS.

6 [ɯəi] alternates freely with [iəi]; however, it is more prestigious
to use [ɯəi].

7 Narrowband spectrograms were made to confirm the analysis of the pho-
netic shapes of tones in MSS. The words used are: kha:[1] 'leg',
ka:[2] 'crow', ba:[2] 'to skip', kha:[3] 'thatch grass', kha:[4] 'galangal',
ka:n[4] 'white ring around dog's tail', ba:[4] 'shoulder', kha:[4] 'price,
value', kha:[5] 'to kill', ka:[6] 'rice seedlings', ba:[6] 'crazy', kha:[6]
'to trade', kha:t[5] 'to be torn', ka:t[5] 'a kind of vegetable', ba:t[5]
'to cut (e.g. one's finger)', kha:t[6] 'to tie round', khat[1] 'to polish',
kat[1] 'to bite', bat[1] 'card', and khat[4] 'to steer or guide a boat'.

8 An emphatic stress and an intonation contour indicating excitement
always accompany the vowel set suggesting large size or high degree
of intensity.

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