

Chapter III

The Phonological Systems of Kui, Bruu and So

The phonological descriptions of Kui, Bruu and So are presented mainly for the purpose of comparison on a phonological level; thus, a minimum of phonetic detail is given.

3.1 The Phonological System of Kui

For the sake of convenience in comparing Kui to Bruu and So, in several matters of transcription and interpretation the phonological description to follow differs somewhat from that presented in the Kui-Thai-English Dictionary. The changes that have been made do not conceal or distort the phonological facts of Kui; they simply reflect another valid interpretation and representation of these facts. They include changes in some consonant symbols, reinterpretation of some diphthongs and the triphthongs with corresponding changes in transcription, and reinterpretation of the initial elements of many consonant clusters as presyllables also with corresponding changes in transcription. Otherwise, this description more or less follows that found in the dictionary (Prasert Sriwises 1978:vi-xv).

3.1.1 Syllables

Kui words consist of one or two syllables, and syllables are of two types: (a) presyllables (or minor syllables), and (b) main syllables (or major syllables). The structures of these two types are

Presyllables:

a. cv(c)- or N- in which

c- = p t c k ʔ , ph th ch kh , b , m , s,
r l j

-v- = a

-c = m

N- = m̄ n̄ ɲ̄ ŋ̄

a occurring as -v- is usually [ə]. For -c, m occurs only in sam-.

Main Syllables:

b. C(C)V(C) or C(C)V̄(C)

For the distribution of consonants and vowels in main syllables see 3.1.3 and 3.1.4.3, respectively.

The majority of words in Kui are monosyllabic. In disyllabic words it is usually the second, or main syllable, which is stressed, resulting in the shortening of the unstressed first, or pre-syllable. Examples:

Monosyllabic:

keh	'to break'
phooj	'fertilizer'
bliaj	'white'
tr̄v̄p	'to seep'
r̄uʔ	'to charge into'

Disyllabic:

ka'saaj	'ginger'
ta'p̄aŋ	'pond'
n'tr̄uuj	'chicken'
ɲ̄'chaaʔ	'rice straw'

Presyllables of the shape cv(c)- are quite unstable, with a strong tendency to be dropped, resulting in monosyllabic forms.

This is especially true of ?a- and ka- Examples:

?atee ~ tee	'hand'
kanìa ~ nìa	'friend'

Also, many words with sa-, and all of those with sam-, show this tendency, with a concomitant change in the nature of the initial consonant(s) of the main syllable. Examples:

samAA ~ [mhAA]	'level'
samlaap ~ [mlhaap]	'rice seedling'
saloj ~ [lhoj]	'(stink) badly'
sawiil ~ [fiil]	'dizzy'

3.1.2 Registers

Kui has a system of two registers or kinds of voice quality. Simply stated, Kui has (1) syllables with normally voiced vowels (1st Register), and (2) syllables with breathy-voiced vowels (2nd Register). In other words, the feature of voice quality is contrastive. Breathly vowels, or syllables, are represented by a grave accent (`) mark over the vowel(s).*

* The original analysis of the initial consonants of breathly (2nd Register) syllables presented some problems, in particular the voiceless stop series, because the writer of the Kui-Thai-English Dictionary felt that the initial stops in the breathly syllables of Kui were truly aspirated, rather than just slightly so. However, since there are no contrasts between the unaspirated and aspirated stops in 2nd Register syllables, these initials could be analyzed as either p t c k or ph th ch kh. In this thesis it was decided to use the unaspirated series (see Prasert Sriwises 1978:viii, Note 3).

Examples:

<u>Normal Voice</u>	<u>Breathy Voice</u>
(1st Register)	(2nd Register)
mɨŋ 'pointed'	mìŋ 'pimple'
cuu 'Buddhist novice'	cùu 'weak'

In terms of pitch, normal, or non-breathy (1st Register), syllables in isolation usually have an inherent mid level pitch. Breathy (2nd Register) syllables in isolation have an inherent low rising pitch.

In disyllabic words, if the main syllable has breathy voice, the presyllable (cv-) tends to have breathy voice also.

3.1.3 Consonants

Kui has 23 consonants that may occur initially in main syllables (see note on f) and 14 that may occur finally.

3.1.3.1 Initial Consonants

p	t	c	k	ʔ
ph	th	ch	kh	
b	d	J*		
m	n	ɲ	ŋ	
(f)**	s			h
w	r,l	j		

* J = [dʒ]

** There seem to be only 13 words with initial f. One, /faj faa/, 'electricity', is a loan word from Thai, and in the others f is in free variation with sw-, except for /fraŋ/, 'Westerner', which has the variant form /paraŋ/.

3.1.3.2 Final Consonants

p t c k ?
 m n ɲ ŋ h
 w r,l j

3.1.3.3 Consonant Clusters

Only p ph f b t k and kh can be the first element in consonant clusters, whereas the second element must be r or l.*

pr tr kr pl kl
 (phr) khr phl khl
 (fr)
 br bl

3.1.3.4 Distribution of Initial Consonants and Initial Consonant Clusters with Registers

Main syllables with normal voice (1st Register) can have any initial consonant or initial consonant cluster.

Main syllables with breathy voice (2nd Register) can have any initial consonant except ph th ch kh, b d J, (f) s, ? (h)** and only the pr tr kr, pl kl initial consonant clusters.

* phr occurs in only one word, a definite loan from Thai; on the single occurrence of fr see previous footnote; khr and khl are rare.

** There are 7 words with initial h in 2nd Register main syllables, e.g.

h ^h v?	'to hold up and release a kite'
h ^h vŋ	'merry, gay'
h ^h uc	'to walk'

3.1.4 Vowels

Kui has a total inventory of 22 monophthongs and 2 diphthongs.

3.1.4.1 Monophthongs

	front		back
close	i,ii	ɯ,ɯɯ	u,uu
half-close	e,ee	ɤ,ɤɤ	o,oo
half-open	ɛ,ɛɛ	ʌ,ʌʌ	ɔ,ɔɔ
open		a,aa	ɑ,ɑɑ

3.1.4.2 Diphthongs

ia ua (ɯa)*

3.1.4.3 Distribution of Vowels with Registers and Final Consonants

In Kui all short vowels, long vowels and diphthongs can occur in main syllables with either 1st Register or 2nd Register. In general, 2nd Register short and long vowels are less common than 1st Register short and long vowels. The opposite is true for the diphthongs ua and ia.

All final consonants can be preceded by either 1st or 2nd Register vowels. Short vowels are most common before ʔ, h and ŋ; long vowels and diphthongs before ø, i.e. in open syllables, and ʔ.

Vowel occurrence is very restricted before c, ɲ (especially all short back vowels and the long back unrounded ones) and w (occurring with only one back vowel), and front vowels do not occur with j.

* There are 3 words with ɯa, all Thai loans.

3.2 The Phonological System of Bruu

The phonological description to follow is adapted almost entirely from the Bruu-Thai-English Dictionary (Theraphan L. Thongkum and See Puengpa 1980:ii-vii) and Theraphan L. Thongkum (1980:221-233), with a few minor changes and additions.

3.2.1 Syllables

Bruu syllables may be divided into two types, namely (a) the presyllable or minor syllable, and (b) the main syllable or major syllable. The structures of presyllables and main syllables are

Presyllables:

a. cv(c)- or N- in which

c- = p t c k ^ʔ, ph kh, b, m ɲ, s, r l

-v- = a u i

-c = m n ŋ r

N- = _| m _| n _| ɲ _| ŋ

For -v-, i is rare; a occurs the most frequently, thus the order a u i.

Main Syllables:

b. C(C)V(C)(C) or C(C)^ˀV(C)(C)

For the distribution of consonants and vowels in main syllables see 3.2.3 and 3.2.4.3, respectively.

Main syllables always receive stress and seem to be longer than unstressed presyllables.

The majority of words in Bruu are either monosyllabic (main syllable) or disyllabic (presyllable + main syllable).

Examples:

Monosyllabic:

ra^ʔ '(of a roof) leaky'

ʔuujh	'fire'
sil	'to thrust under or into'
kiap	'corpse'
nàw	'who'

Disyllabic:

ra'pàŋ	'swamp'
ʔa'kaa	'fish'
sa'wiir	'dizzy'
kan'tɔɔjʔ	'kind of termite'
n'trèe	'pestle'

3.2.2 Registers

The register contrast in Bruu is between normal voice quality (sometimes slightly tense) and breathy voice quality. Register difference in Bruu is sometimes accompanied by vowel-quality differences. For example, both short and long low vowels tend to have onglides in breathy syllables. Breathiness is indicated by a grave accent (`).

When the main syllables have breathy phonation, the presyllables tend to have the same phonation type.

It is interesting to note that Ban Woen Buek Bruu has developed a contrast between non-nasalized (or slightly nasalized) and nasalized (or heavily nasalized) voice quality instead of non-breathy vs. breathy voice quality in syllables beginning with glottal consonants, i.e. ʔ- and h-. The informant seems to equate nasalization with breathiness or non-normality.*

On the basis of voice-quality contrast there are hence three types of syllables in Bruu: normal, breathy, and nasalized.

* See also Theraphan L. Thongkum 1980:233.

Examples:

Normal:

naʔ	'clf. for people'
pək	'to perch'
cɛɛm	'bird'
ʔuh	'very heavy'
(ku)ʔɛɛl	'to spit out (food)'
haaŋ	'high-frequency sound'
huat	'steamer made of bamboo'

Breathy:

naʔ	'like, alike'
pək	'kind of disease'
cɛɛm	'to be loaded almost to the point of sinking'

Nasalized:

ʔũh	'Here it is!'
ʔɛɛl	'to be interested in the opposite sex'
hãŋ	'wasp'
hũat	'to pour on top'

3.2.3 Consonants

The Bruu consonant system consists of 20 consonants that can occur syllable-initially and 12 that can occur finally in main syllables.

3.2.3.1 Initial Consonants

p	t	c	k	ʔ
ph	th		kh	
b	d			
m	n	ɲ	ŋ	

	s		h
w	r,l	j	

3.2.3.2 Final Consonants

p	t	k	ʔ
m	n	ŋ	h
w	r,l	j	

3.2.3.3 Consonant Clusters

Not more than two consonants are permitted in the initial position. Only p , b , t , th , and k can be the first element in consonant clusters, while the second element must be r or l. In final position only four clusters are allowed: -wʔ, -wh, -jʔ, and -jh.

a. Initial

pr	tr	kr	pl	kl
	thr			
br			bl	

b. Final

wʔ	jʔ
wh	jh

3.2.3.4 Distribution of Initial Consonants and Initial Consonant Clusters with Registers

Normal main syllables (1st Register) can have any initial consonant or initial consonant cluster.

Breathy main syllables (2nd Register) can have

any initial consonant except ph th kh, b d, s, ? (h)* and only the pr tr kr, pl kl initial consonant clusters.

3.2.4 Vowels

Bruu has a total inventory of 22 monophthongs and 5 diphthongs.

3.2.4.1 Monophthongs

	front	back	
close	i,ii	u,uu	u,uu
half-close	e,ee	ɤ,ɤɤ	o,oo
half-open	ɛ,ɛɛ	ʌ,ʌʌ	ɔ,ɔɔ
open		a,aa	ɑ,ɑɑ

3.2.4.2 Diphthongs

iə	uə	uə
ia		ua

3.2.4.3 Distribution of Vowels with Registers and Final Consonants and Final Consonant Clusters

All short vowels, most long vowels and all diphthongs in Bruu can occur in main syllables with either 1st or 2nd Register. Generally speaking, 2nd Register short vowels, long vowels and diphthongs are less common than their 1st Register counterparts, although there are two notable exceptions: ìa and ùa are more common than that ia and ua, respectively.

All final consonants can be preceded by either 1st or 2nd Register vowels. Short vowels are least restricted before

* Except hii 'kind of bamboo container', pharpha?-pharhii 'preserved fish (elaborate expression)', hòoh 'exclamation of surprise', and ?ahàa 'kind of bamboo'.

? h and ŋ. Long vowels and diphthongs are least restricted before Ø and ŋ. In general, vowels occur least commonly before w, which most back vowels can not precede; front vowels can not precede j.

No front vowels can precede any of the final consonant clusters. Only ʌ occurs before wh; only a ʌ and aa before w?. 1st and 2nd Register vowels (short, long and diphthongs) can precede both jh and j? but the 2nd Register ones are few in number.

3.3 The Phonological System of So

The phonological description that follows is the result of my study and analysis of So first in 1975 and 1976, assisted by Mr. Jimmy G. Harris and with data obtained from Mr. Song Chomduangkaew, under the auspices of the Indigenous Languages of Thailand Research Project (ILTRP), the Central Institute of English Language, Office of State Universities, and from 1978-1981 with Mr. Klang Chao-nam, who was personally engaged by me to compile a So dictionary. A first draft of this description was a paper submitted in a lexicography course taught by Dr. Therphan L. Thongkum, Department of Linguistics, Chulalongkorn University in 1981. It represents only one possible phonological analysis, particularly in regard to the vowel system.

3.3.1 Syllables

Words in So may consist of one or two syllables and syllables comprise two types: (a) presyllable (first or minor syllable), and (b) main syllable (or major syllable), the structure of which are Presyllables:

a. cv(c)- or N- in which

c- = p t c k ?, ph th kh, m, s h,
r l

-v- = a u i

-c = m n ŋ

N- = $\begin{matrix} m & n & \eta & \eta \\ | & | & | & | \end{matrix}$

For -v-, a occurs the most frequently, thus the order a u i. a is usually [ə]. Almost all occurrences of i are in si- and ci-; almost all occurrences of u are in ku-. In many words si- and ci- alternate, and ku- and ci- alternate to ka- and ca-, respectively.

Main Syllables:

b. C(C)V(C)(C) or C(C) $\overset{\vee}{V}$ (C)(C)

For the distribution of consonants and vowels in main syllables see 3.3.3 and 3.3.4.3, respectively.

Stress almost always falls on the main syllable. As a result of such stress placement, minor syllables are quite short compared to main ones.

Most words in So are either monosyllabic (main syllable) or disyllabic (presyllable + main syllable).

Examples:

Monosyllabic:

ʔuujh	'fire'
ràh	'dry'
blaaaj	'white'
tùək	'boat'

Disyllabic:

ta'mùr	'monkey'
ka'najʔ	'a hook'
n'trèe	'pestle'
m'paj	'flea'

3.3.2 Registers

So has a system of two registers in which contrasts are maintained by differences in phonation or voice quality, namely, normal (or clear) voice: Register 1, and breathy voice: Register 2. Herein Register 2 is marked by a grave accent (`) over the (first) vowel; Register 1 is unmarked.

The differences in phonation are most readily perceived by their effect on the vowel portion of a syllable, though there are some noticeable effects on initial consonants, e.g. slightly aspiration of voiceless 'unaspirated' stops of Register 2 syllables. Both short and long high vowels in Register 1 syllables are lowered, for example.

The register of a minor syllable is independent of that of the major syllable. In fact, almost all minor syllables have Register 1.

Examples:

mpii	'chilli'	klaŋ	'handle of a dip net'
mpii	'Mother ...'	klàŋ	'(of the hair) to fall out in spots'
palih	'to pluck'	mat	'next to'
palih	'to turn over' (tr.)	màt	'the eye'

So has several examples of contrasts between nasalized and non-nasalized vowels, occurring however only after glottal initials - and in most cases before them too - i.e. ? and h. The phonological status of nasalization in these environments has not been determined because this feature occurs in such restricted environments that its occurrence is considered marginal.

Examples:

ʔoh	'to ladle'
ʔōh	'Take it!'
ʔehʔeh	'sound of coughing'
ʔēhʔēh	'sound of calling a dog'
haʔ	'to tear; final particle'
hãʔ	'to frighten'
haj	'we'
hãj	'center of mouth cavity'

3.3.3 Consonants

So has 21 consonants that may occur initially in main syllables and 14 that may occur finally.

3.3.3.1 Initial Consonants

p	t	c	k	ʔ
ph	th	(ch)*	kh	
b	d			
m	n	ɲ	ŋ	
	s			h
w	r,l	j		

3.3.3.2 Final Consonants

p	t	c	k	ʔ
m	n	ɲ	ŋ	h
w	r,l	j		

* ch occurs only in pch, which in some cases alternates to ns.

3.3.3.3 Consonant Clusters

In initial consonant clusters of main syllables, only p ph b t th d k kh may occur as the first element; the second element may be only r or l. In final consonant clusters, only w or j may occur as the first element and only ʔ or h as the second. Charted as follows:

a. Initial

pr	tr	kr	pl	kl
phr	thr	chr		khl
br	dr		bl	

b. Final

wʔ	jʔ
	jh

3.3.3.4 Distribution of Initial Consonants and Initial Clusters with Registers

In main syllables with normal voice, i.e. Register 1, any initial consonant or initial consonant cluster may occur.

In main syllables with breathy voice, i.e. Register 2, any initial consonant may occur except ph th ch kh, b d, s (ʔ h)* but only pr tr kr, pl kl initial consonant clus-

* There are only 10 items with initial ʔ and 6 with initial h, e.g.

ʔùʌ	'patterned blanket'
ʔùmʌŋ	'kind of frog'
ʔahàʔ	'to frighten'
hùm	'to crowd around to look'

ters may occur.

3.3.4 Vowels

So has a total inventory of 22 monophthongs and 5 diphthongs.

3.3.4.1 Monophthongs

	front	back	
close	i,ii	u,uu	u,uu
half-close	e,ee	ɤ,ɤɤ	o,oo
half-open	ɛ,ɛɛ	ʌ,ʌʌ	ɔ,ɔɔ
open	a,aa	ɑ,ɑɑ	

3.3.4.2 Diphthongs

iə	uə	uə
ia	ua	

3.3.4.3 Distribution of Vowels with Registers and Final Consonants and Final Consonant Clusters

Most short and long vowels and all diphthongs in So occur in either 1st or 2nd Register main syllables. 2nd Register short vowels, long vowels and diphthongs generally occur less frequently than their 1st Register counterparts, with two significant exceptions: *ua* and *ia* are more frequent than *ua* and *ia*, respectively.

All final consonants can occur with both 1st and 2nd Register vowels. A notable exception is the non-occurrence of *ʔ* and *h* with any long vowels (diphthongs excluded). Short vowels occur most frequently before *ʔ* *h* and *ŋ*; long vowels and diphthongs before *∅* and *ŋ*. Neither *a* *à* nor any short back vowels occur before *c* *ɲ*; also the restrictions on long vowels occurring with *c* *ɲ* are many. No back vowels at all and only a few front ones occur with *w*; nor do any front vowels occur with *j*.

As for final consonant clusters, only e ε a and iə occur with w?. jh does not occur with any long vowels at all, jʔ only with `uə. These latter two final consonant clusters can occur with both 1st and 2nd Register short non-front vowels.