

CHAPTER TWO

PHONOLOGY

This chapter consists of the phonological description of Tai-Ahom and Standard-Thai. It is followed by a comparison between these two languages. The terms, Tai-Ahom and Ahom, Standard-Thai and Thai are used interchangeably in this study.

2. The Phonological System of Tai-Ahom

2.1 Tai-Ahom script (ꯀꯪ ꯁꯤꯟ)

The present description of Tai-Ahom is based on the written records (chronicle) called, *Buranji*. It is imperative to start the discussion with Tai-Ahom script or alphabet and its phonological values. The Ahom alphabet is a type of an abugida alphabet, also called an alphasyllabary (a segmental writing system in which consonant–vowel sequences are written as a unit; each unit is based on a consonant letter, and a vowel notation is obligatory but secondary). The same system of writing is followed by Thai language as well.

The Ahom alphabet is derived from the Ancient Mon alphabet (Ranoo Wichasin, 1986, 1996), (Phukan, J.N., 2004).

The vowels are indicated by using the vowel symbols, which can appear above, below, to the left, or to the right of the consonant to write words. But while

pronouncing a particular word, consonant sound is articulated first and the vowel follows it. We also know that in Tai-Ahom and Thai no word can begin with a vowel.

There are 24 single consonant symbols and 12 conjunct consonants or consonant cluster symbols used in Buranji writing. These symbols represent the phonological system of Tai-Ahom language with only a few exceptions where the phonetic value is either lost or merged with some other sound. Each symbol is distinctly pronounced. The symbols are given in the chart below. Tai-Ahom symbols are given first row and just below, their phonetic value in IPA symbols.

2.1.1 Single consonant letters with IPA Symbols:



























1.					
	ka	k ^h a	(ga)	(g ^h a)	ŋa
2.					
	ca	(c ^h a)	-	-	ña
3.					
	ta	t ^h a	da	(d ^h a)	na
4.					
	pa	p ^h a	ba	(b ^h a)	ma
5.					
	ja	ra	la	sa	ha
					
					ʔa

Table 1: Ahom Single Consonant Letters

2.1.2 The Phonemic Chart of Tai-Ahom Consonants

Based on our transcribed data from the reading of texts we analyzed the consonant phonemes using the principle of contrast and complimentary distribution. We established the following consonant phonemes for Tai-Ahom.

Table 2: The Phonemic Chart of Tai-Ahom Consonants

	Bilabial		Labio-dental		Alveolar		Palatal		Velar		Glottal	
	vl.	vd.	vl.	vd.	vl.	vd.	vl.	vd.	vl.	vd.	vl.	vd.
Plosives:												
Un-aspirated	p	b			t	d			k	(g)	ʔ	
Aspirated	p ^h	(b ^h)			t ^h	(d ^h)			k ^h	(g ^h)		
Affricates:												
Un-aspirated							c					
Aspirated							(c ^h)					
Nasals												
		m				n		ɲ		ŋ		
Fricatives												
					s						h	
Lateral												
					l							
Trill												
					r							
Semi-vowel												
								j				

As we can see from the chart above, apart from the glottal plosive and fricative /ʔ, h/ Tai-Ahom uses five distinctions with regard to place of articulations, i.e. bilabial, alveolar, palatal and velar. With regard to manners of articulation we have plosives voiced vs. voiceless vs. voiceless aspirated, palatal affricate, voiceless, four nasals, two voiceless fricatives, a lateral /l/, a trill /r/ and a semi-vowel /j/. Phonemes

that appear in the brackets, / **b^h**, **d^h**, **g**, **g^h**, **c^h**/ are found only in borrowed words from Indo-Aryan sources like Assamese.

In the above chart the consonants shown in the brackets are found only in Indo-Aryan words that may have appeared in the text after 16th and 17th century texts. We can also see that semi-vowel /w/ is missing from the system but it is an allophone of /b/ that occurs only in word final position. It may also occur in consonant clusters in the form of a glide, e.g. /w/ /p^hwa/ ‘to leave suddenly’.

2.1.3 Phonetic Description of Tai-Ahom Consonants

All nasal consonants are voiced in Tai-Ahom.

1. /p/ Bilabial, voiceless, un-aspirated plosive
2. /b/ Bilabial, voiced, un-aspirated plosive
3. /t/ Alveolar, voiceless, un-aspirated plosive
4. /d/ Alveolar, voiced, un-aspirated plosive
5. /k/ Velar, voiceless, un-aspirated plosive
6. /g/ Velar, voiced, un-aspirated plosive
7. /ʔ/ Glottal, voiced, un-aspirated, plosive
8. /p^h/ Bilabial, voiceless, aspirated, plosive
9. /b^h/ Bilabial, voiced, aspirated, plosive
10. /t^h/ Alveolar, voiceless, aspirated, plosive
11. /d^h/ Alveolar, voiced, aspirated, plosive

12. /**k^h**/ Velar, voiceless, aspirated, plosive
13. /**g^h**/ Velar, voiced, aspirated, plosive
14. /**c**/ Palatal, voiceless, un-aspirated, affricate
15. /**c^h**/ Palatal, voiceless, aspirated, affricate
16. /**m**/ Bilabial, voiced, nasal
17. /**n**/ Alveolar, voiced, nasal
18. /**ñ**/ Palatal, voiced, nasal
19. /**ŋ**/ Velar, voiced, nasal
20. /**s**/ Alveolar, voiceless, fricative
21. /**h**/ Glottal, voiced, fricative
22. /**l**/ Alveolar, voiced, lateral
23. /**r**/ Alveolar, voiced, trill
24. /**j**/ Palatal, voiced, semi-vowel

2.1.4 Phonemic Contrasts of Tai-Ahom Consonants

Consonant phonemic contrasts in Tai-Ahom can be shown in syllable initial and final positions. As mentioned in our introduction that Tai-Ahom is monosyllabic language, therefore syllable is the unit of analysis in our description. Due to the limited data available some contrasts can be said to be minimal. At times we have shown the occurrences of consonants in the initial and final position in sub-minimal pairs. Voice aspirated plosives /**b^h**, **d^h**, **g^h**/, voiced velar plosive /**g**/ and palatal,

voiceless aspirated fricative /c^h/ are highly restricted to just the names of person in our texts. The word final consonants are limited to /p, t, k, m, n, ŋ, j, b [w]/ only.

2.1.4.1 Initial Consonant Contrasts and Occurrences

/p/ vs /p^h/ vs /b/

/pi:/	(v ⁹)	‘year’
/p ^h i:/	(w ⁹)	‘spirit or ghost’
/bi:/	(v ⁹)	‘comb, to comb’

/b/ has two allophones [b] occurs initially but [w] occurs finally as in following examples.

/bak/	[bak]	(v ⁹ m)	‘to mark by small cutting’
/jib/	[jiw]	(w ⁹ o)	‘to be brave’
/b ^h /	/b ^h u:-laj/	(v ⁹ w ⁹)	‘name of person’

/t/ vs /t^h/ vs /d/

/ti:/	(a ⁹)	‘to hit’
/t ^h i:/	(w ⁹)	‘often’
/di:/	(ʕ ⁹)	‘good’
/d ^h /	/d ^h ɔ:ra:/ (ʎ ⁹ ʔl ⁹ ʔl)	‘name of person’

/k/ vs /k^h/

/kɔŋ/ (ᠭᠣᠨ) ‘gun’

/k^hɔŋ/ (ᠶᠣᠸᠠ) ‘stuff’

/b/ vs /ʔ/

/bɔk/ (ᠪᠣᠭ) ‘to tell, to inform’

/ʔɔk/ (ᠶᠣᠩ) ‘young, soft’

/p^h/ vs /t^h/

/p^huɪ/ (ᠸᠠᠩ) ‘classification of cloth’

/t^huɪ/ (ᠲᠠᠩ) ‘jungle’

/g^h/ /g^hat/ (ᠭᠠᠲ) ‘pier’

/g/ /gutɪːmaliː/ (ᠭᠤᠲᠢᠮᠠᠯᠢ) ‘name of person’

/c/ /ceː/ (ᠴᠡ) ‘capital city’

/c^h/ /c^hɔːpɔːra/ (ᠴᠠᠷᠠ) ‘name of person’

/m/ vs /n/ vs /ṁ/ vs /ŋ/

/maː/ (ᠮᠠ) ‘to come’

/naː/ (ᠨᠠ) ‘paddle field’

/ṁaː/ (ᠮᠠ) ‘to see, to meet’

/ŋa:/ (ᄎ) ‘sesame’

/s/ vs /h/

/suŋ/ (ᄎᄎ) ‘clear, clean’

/huŋ/ (ᄎᄎ) ‘being in peace, glory’

/l/ vs /r/

/loŋ / (ᄎᄎ) ‘to go (along the river)’

/roŋ / (ᄎᄎ) ‘to shout’

/j/ /joŋ/ (ᄎᄎ) ‘to return back’

2.1.4.2 Final Consonant Contrasts/ Occurrences

As stated above only a few consonants /p, t, k, m, n, ŋ, j, b [w]/ are found in the final position.

Examples:

/t/ vs /k/

/hok/ (ᄎᄎ) ‘spear’

/hot/ (ᄎᄎ) ‘be tied, be hungry’

/p/ /stup/ (ᄎᄎ) ‘to join, to meet’

/m/ vs /n/ vs /ŋ/

/him/ (ཁཿ) ‘to tie, to scratch’

/hin/ (ཁཿ) ‘rock’

/suŋ/ (ཁཿ) ‘high, tall’

/j/ /suj/ (ཁཿ) ‘levy’

2.1.4.3 More Examples of Consonant Occurrences: Initially

1. /k/ མ /kat/ /ma/ ‘market’
2. /k^h/ ས /k^hik/ /no/ ‘to worship’
3. /ŋ/ ར /ŋam/ /zi/ ‘to be good, beautiful’
4. /c/ ལ /ciŋ/ /no/ ‘corner’
5. /s/ ལ /sum/ /no/ ‘sour’
6. /ñ/ ལ /ñiŋ/ /no/ ‘female’
7. /j/ ལ /jɔn/ /no/ ‘to return’
8. /d/ ལ /dit/ /no/ ‘sunlight’
9. /t/ ལ /tɔŋ/ /no/ ‘belly’
10. /t^h/ ལ /t^hɔj/ /no/ ‘word’
11. /n/ ལ /naŋ/ /no/ ‘to sit’
12. /p/ ལ /pin/ /no/ ‘to be, to become’

13.	/p ^h / 𑜋	/p ^h it/ 𑜋𑜂𑜆𑜇	‘chili’
14.	/m/ 𑜇	/muŋ/ 𑜇𑜂𑜆𑜇	‘country’
15.	/r/ 𑜄	/ruŋ/ 𑜄𑜂𑜆𑜇	‘to shine’
16.	/l/ 𑜊	/luk/ 𑜊𑜂𑜆𑜇	‘child’
17.	/b/ 𑜁	/ban/ 𑜁𑜂𑜆𑜇	‘sweet, day’
18.	/h/ 𑜏	/hun/ 𑜏𑜂𑜆𑜇	‘shape, form’
19.	/ʔ/ 𑜓	/ʔaŋ/ 𑜓𑜂𑜆𑜇	‘basin’
* 20.	/g/ 𑜇	/gu:ʔahati:/ 𑜇𑜂𑜆𑜇𑜂𑜆𑜇𑜂𑜆𑜇	‘name of city’
21.	/g ^h / 𑜇𑜂	/g ^h arapatr/ 𑜇𑜂𑜆𑜇𑜂𑜆𑜇𑜂𑜆𑜇	‘name of person’
22.	/b ^h / 𑜁𑜂	/b ^h u:ru:ni:/ 𑜁𑜂𑜆𑜇𑜂𑜆𑜇𑜂𑜆𑜇 /	‘name of river’
23.	/d ^h / 𑜄𑜂	/d ^h e:kiʔal/ 𑜄𑜂𑜆𑜇𑜂𑜆𑜇𑜂𑜆𑜇	‘name of person’
24.	/c ^h / 𑜄𑜂	/c ^h ɔjsa:k ^h ɔra/ 𑜄𑜂𑜆𑜇𑜂𑜆𑜇𑜂𑜆𑜇 /	‘name of river’

* Consonants in examples 20-24 above are found in borrowed words, especially person and place name from Assamese or Hindi. However, it is mentioned that the symbol (𑜄𑜂) “c^h” in Tai-Ahom romanization is a “Sanskritic” rendering of the Assamese transcription of an Ahom symbol that probably represented an alveolar fricative [s] rather than a palatal affricate [c^h]. Thus, for example, Ahom /c^h/ has been quite routinely used at face value as evidence in discussing Tai linguistic history, for example, (Li, 1945), (Diller, 1992).

Within 24 consonants of Tai-Ahom, there are only 8 consonants namely; /p, t, k, m, n, ŋ, j, b [w]/ that can end a word to form closed syllable words in Ahom language. Examples are given below to show their occurrences.

2.1.4.4 Consonants Occurrence Word Finally in Tai-Ahom

- | | | | | | | |
|----|-----|-----|-------|-------|--------|---------------------|
| 1. | /p/ | ᵛ | as in | /ʔip/ | (ᵛᵛᵛᵛ) | ‘to be near’ |
| 2. | /t/ | ᵛ | as in | /pat/ | (ᵛᵛᵛ) | ‘to wipe’ |
| 3. | /k/ | ᵛ | as in | /tuk/ | (ᵛᵛᵛ) | ‘to fall’ |
| 4. | /m/ | ᵛ | as in | /rum/ | (ᵛᵛᵛ) | ‘to join, to unite’ |
| 5. | /n/ | ᵛ | as in | /han/ | (ᵛᵛᵛ) | ‘to see’ |
| 6. | /ŋ/ | ᵛ | as in | /taŋ/ | (ᵛᵛᵛ) | ‘all’ |
| 7. | /j/ | (ᵛ) | as in | /suj/ | (ᵛᵛᵛ) | ‘the levy’ |
| | /ñ/ | | as in | /ñiw/ | (ᵛᵛᵛ) | ‘the kite’ |
| 8. | /b/ | ᵛ | as in | /kab/ | (ᵛᵛᵛ) | ‘I’ |
| | /b/ | | as in | /ban/ | (ᵛᵛᵛ) | ‘day’ |

From the above words, it should be noted that the letter (ᵛ) /ñ/, when it occurs word initially it is pronounced as palatal /ñ/, and it is pronounced as /j/ when it occurs finally. Whereas the consonant (ᵛ) /j/ can occur only word initially.

The letter (ᵛ) is pronounced as voiced bilabial /b/ when it occurs word initially and it is pronounced as labial semi-vowel /w/ word finally. It is important to note here that the Tai-Ahom script is very scientific as it has the sense of allophonic variations.

2.1.5 Consonant Clusters in Tai-Ahom

Some scholars have given interesting comments on the use of consonant clusters in Tai-Ahom language.

“Ahom orthography does not systematically represent clusters, although some manuscripts seem to indicate a few; but many clusters appear to be indicated in the 1795 bark-text Assamese transcriptions of the then-Ahom, which form one source for the Ahom Lexicons”. (B. Barua and N.N. Phukon: 1964) Further, Anthony Diller, (1992), stated that, “the clusters in the Romanization of that dictionary are based on such evidence, not on Ahom script directly. More seriously for historical-comparative studies, problems occur with the Romanized transcriptions of Ahom in the available published sources.

According to Terwiel, (1993:40), *“...the use of consonant clusters was of recent times possibly from the time of publication of Tai-Ahom Assamese English Dictionaries in 1920. It would therefore appear that the liberal scattering of consonant clusters in the transliterated lists forms part of the reconstruction of Tai-Ahom undertaken in the late nineteenth and early twentieth centuries.”*

He further commented that the use of consonant clusters in spelling without writing in the script is not traditional or had come from old hierarchy. In Tai-Ahom language, there are consonant clusters and it is of recent use only. The question is why there has been the presence of consonant cluster in Tai-Ahom and the answer might be due to the influence of Assamese or due to mistranscribing, misinterpretation, misunderstanding, misreading or misspelling, etc.

10. [ɰ] /t^hw/ as in ?
11. [ɲ] /k^hw/ as in ɲ /k^hwam/ ‘content’
12. [ɳ] /n^hw/ as in ɳ /nwɔ:-bwa:/ ‘the drum (Assamese)’

Consonant clusters appear in the initial position only in Tai-Ahom. It is also true for many Tai and Tibeto-Burman languages as well.

Consonant clusters in Tai-Ahom writing appear with only two consonants /r, w/ as second members in an initial consonant cluster. As stated above [w] is an allophone of /b/ which occurs in final position. But as a second member in a cluster [w] can also occur.








The first members of consonant cluster are /b, p^h, k, k^h, t, t^h, d, m, n, s / only.

Examples of clusters with Tai-Ahom scripts are as follow:

- | | | | | | |
|--------|------------------|------------------|------------------|------------------|-------|
| 1. ɲ/ᩈ | 2. ɲ | 3. ɲ | 4. ᩈ | 5. ɲ/ᩈ | 6. ɲ |
| kr | k ^h r | tr | dr | p ^h r | mr |
| 7. ɲ | 8. ɲ | 9. ɲ | 10. ɲ | 11. ɲ | 12. ɲ |
| sr | bw | p ^h w | t ^h w | k ^h w | nw |


















2.2 Tai-Ahom Vowels



In Tai-Ahom writing system fourteen vowel symbols are found in the documents consulted for the present study. The vowels are mere symbols that are added to any consonant and vowels alone cannot be used as words in the language.

To write the vowel letter, the vowel symbol must be fixed with the consonant letter to make a word e.g. // + // = // /ru:/ 'head', // + // + // + (◌◌) = // /kin/ 'to eat', etc. Each of them is added to the consonants to produce a word.

There are fourteen vowels symbols in Tai-Ahom that are used in the Buranji manuscripts that I have studied. These are as follows:

Vowel symbols in Tai-Ahom with Roman transliteration.

1.  /a/ 2.  /ai/ 3.  /i/ 4.  /ii/
5.  /u/ 6.  /ui/ 7.  ,  /uw/
8.  /au/ closed syllable,  opened syllable
9.  ,  /e/ 10.  /am/ 11.  /aj/
12.  /aj/ . 13.  /aw/ 14.  /aj/

The symbols from 1 to 9 above are single vowels and the symbols 10 to 14 are vowels symbols used in the script. The sequences 11 and 12 have different symbols in Tai-Ahom script but they are pronounced as /aj/. But in the manuscript we found that symbol 11  / is restricted to only a few words. Perhaps it had some different phonetic value that was lost in the history of Tai-Ahom and its pronunciation merged with the symbol 12 .

2.2.1 The phonemic chart of Tai-Ahom Vowels

Based on our analysis of vowel system of Tai-Ahom we arrived at the following chart which has nine vowels. According to the tongue height we have high, high mid, low mid and low vowels. According to the lip position we have front and central unrounded vowels and back rounded vowel. In addition, there is high back unrounded vowel /ɯ/. Vowel length is found in high front vowels /i, i:/, high back vowel /u, u:/ and low central vowels /a, a:/. High-mid, front, unrounded vowel /e:/ and low-mid, back, rounded vowel /ɔ:/ are inherently long.

Table 3: The Phonemic Chart of Tai-Ahom vowels

Tongue Position	Front		Central		Back		Back
Lip-Rounding	Unrounded		Unrounded		Rounded		Unrounded
Length	Short	Long	Short	Long	Short	Long	Short
Raise of the tongue							
High	i	i:			u	u:	ɯ
High-Mid		e:					
Low-Mid						ɔ:	
Low			a	a:			

There are 5 extra vowel sequences represented by the script symbols:

1. (_ ') /am/
2. (_ ') /aj/
3. (_ ʼ) /aj/
4. (- ʼ) /aw/
5. (- ʼ) /ɔj/

The vowel symbol (◌◌), pronounced /am/ is actually vowel /a/ plus bilabial nasal /m/ included in the script symbol in Buranji script. For example, the word /k^ham/ will be transcribed /ꠤ/ ‘gold’. When this vowel symbol (◌◌) occurs with other vowels i.e. /ɔ:/ (◌◌), /u/ (◌◌) it is realized as bilabial nasal /m/ plus the said vowels as in /rɔ:m/ [rɔm](ꠤ) ‘together’, /hum/ (ꠤ) ‘to cover’. But where the bilabial nasal /m/ is found with the vowels other than these i.e. /i/ (-◌), /u/ (-◌) the symbols for /m/ will be /ɐ/ as in /lim/ (ꠤꠤ) ‘sharp’, /kuum/ (ꠤꠤ) ‘sturdy’.

2.2.2 Phonetic Description of Tai-Ahom Vowels

Tai-Ahom vowels can occur in syllable medial and final positions only. Therefore, we will have medial and final vowels only. The vowels /i, u, a/ have short long contrasts finally, but medially the length contrast is neutralized. The vowels /e:/, /ɔ:/ are inherently long. Long vowels do not occur in medial position. However, low-mid, short vowel [ɔ] appears in closed syllable, that can be treated as allophone of the vowel phoneme /ɔ:/. Since, they are in complimentary distribution. In this script we have two types of symbols for the same sound /ɔ:/ i.e. (◌◌) is placed medially and the (ꠤ_ꠤ) is placed finally in a syllable. This means, the inventor of Tai-Ahom script had the knowledge of the distinction of these two sounds in the given environments.

1. /i/ Front, High, Unrounded, Short Vowel
2. /i:/ Front, High, Unrounded, Long Vowel
3. /u/ Back, High, Rounded, Short Vowel
4. /u:/ Back, High, Rounded, Long Vowel
5. /ʊ/ Back, High, Unrounded, Short Vowel
6. /e:/ Front, High-Mid, Unrounded, Long Vowel
7. /ɔ:/ Back, Low-Mid, Rounded, Long Vowel
8. /a/ Central, Low, Rounded, Short Vowel
9. /a:/ Central, Low, Rounded, Long Vowel

2.2.3 Phonemic Contrasts in Minimal and Sub-Minimal Pairs.

2.2.3.1 Vowel Contrasts in final position:

The phonemic distinctions between short long vowels are found only in the final position. In medial closed syllable only short vowels are found. But the vowels /e:/, /ɔ:/ are inherently long. The vowel /e:/ is not found medially at all and when we have the vowel /ɔ:/ medially, it has its short allophone. So we can say that /ɔ:/ has two allophones. The short occurs medially and long one occurs finally. Based on the final contrasts we have established the phonemic status of length in vowels in case of /i, u, a/. But surely in classical phonemics we accept the rule that, ‘once a phoneme is always a phoneme.’

Final Contrasts:

/i/ vs /iː/

/ti/ ‘will’

/tiː/ ‘to hit’

/iː/ vs. /uː/

/niː/ ‘war’

/nuː/ ‘arrow’

/aː/ vs. /uː/

/kaː/ ‘to go’

/kuː/ ‘bed’

/u/ vs /uː/

/lu/ ‘to be unformed, out of order’

/luː/ ‘to scratch’

/eː/ vs /ɔː/

/meː/ ‘to worship’

/mɔː/ ‘skilled person’

/leː/ ‘to travel along’

/pɔː/ ‘father’

/a/ vs /aː/

/p^ha/ ‘to leave immediately’

/p^haː/ ‘rocky cliff of mountain’

In Tai-Ahom script, the following vowels are treated as single units but in our analysis these are treated as vowel sequences.

/am/	/nam/	𑜀𑜢𑜤𑜰𑜫	‘water’
/aj/	/paj/	𑜀𑜢𑜤𑜰𑜫	‘to walk, to go’
/aj/	/jaj/	𑜀𑜢𑜤𑜰𑜫	‘already’
/aw/	/t ^h aw/	𑜀𑜢𑜤𑜰𑜫	‘old’
/ɔj/	/pɔj/	𑜀𑜢𑜤𑜰𑜫	‘festival’

* /u/ not found in opened syllable.

2.2.3.2 Vowel Contrasts in medial position:

/i/ vs. /a/

/i/	/kin/	(𑜀𑜢𑜤𑜰𑜫)	‘to eat’
/a/	/kan/	(𑜀𑜢𑜤𑜰𑜫)	‘together’

/u/ vs. /u/

/u/	/t ^h uk/	(𑜀𑜢𑜤𑜰𑜫)	‘correct, to be done (something)’
/u/	/t ^h uk/	(𑜀𑜢𑜤𑜰𑜫)	‘male’

/ɔ:/ vs. /u/

/ɔ:/ /nɔ:ŋ/ [nɔŋ] (နွဲ့) ‘younger sister/ brother’

/u/ /nuŋ/ (နွဲ့) ‘to put on’

The vowel phoneme /ɔ:/ has two allophones i.e. [ɔ] low-mid, short vowel occurs in closed syllables and [ɔ:] low-mid, long vowel occurs elsewhere.

Example: /ɔ:/

[ɔ] /k^hɔ:ŋ/ [k^hɔŋ] (နွဲ့) ‘stuff’

[ɔ:] /k^hɔ:/ [k^hɔ:] (ကွဲ) ‘to separate from’

2.3 **Tone**

Tone is used in PHONOLOGY to refer to the DISTINCTIVE PITCH level of a SYLLABLE. ..., the tone carried by a WORD is an essential feature of the MEANING of that word... Such languages, where word meanings or grammatical CATEGORIES are dependent on pitch level, are known as **tone languages**. (David Crystal, 1997)

Many languages in the world make use of distinctive pitch in order to indicate meaning distinctions. Segmental sounds are identical but a distinction is brought merely by changing the pitch level. Chinese, Thai and many Tibeto-Burman make use of tones.

Tone is an essential part of a word for the speaker of a tonal language. A change in tone or pitch in articulation of a word changes the word meaning, thus the meaning of a word depends on its tone.

2.3.1 Tone in Tai-Ahom

It is assumed that, Tai-Ahom language must have had tones when it was a spoken language, because many Tai languages like Thai have distinctive tones. But in Tai-Ahom manuscripts tones are not marked. Therefore, we have no way to study and know the tonal system. We found in our data a number of homophonous words some of them even cognates with Thai that have tones.

For example in Tai-Ahom, the word ‘**dog**’, ‘**horse**’ and ‘**come**’ are represented by the same symbols **ᩣ** /**ma:**/. The system of pronouncing the same letters with some tones must have been there to make such important distinctions. But now we have homophonous forms that have different meanings and perhaps can be understood only in a context of discourse. These words are cognates with Thai which have distinctive tones.

/**ma:**/ ‘to come’

/**má:**/ ‘horse’

/**mă:**/ ‘dog’

These words above have mid, high and rising tones respectively.

This proves that Tai-Ahom must have had some tones that are not marked.

In our present study we have not included any analysis of Tai-Ahom tones. However, we have provided a description of Standard-Thai tones.

We have a good idea of Thai tones from the phonological system of Thai from our study as below. But first we shall describe Thai consonants and vowels. The analysis of tones will be presented after the segmental phonemes.

2.4 Thai Consonant Phonemes

Table 4: The Phonemic Chart of Standard-Thai Consonants

	Bilabial		Labio-dental		Alveolar		Palatal		Velar		Glottal	
	vl.	vd.	vl.	vd.	vl.	vd.	vl.	vd.	vl.	vd.	vl.	vd.
<u>Stop</u>												
Unaspirate	p	b			t	d			k		ʔ	
Aspirate	p ^h				t ^h				k ^h			
<u>Affricate</u>												
Unaspirate							c					
Aspirate							c ^h					
Nasal		m				n				ŋ		
Fricatives			f		s						h	
Laterals						l						
Trill						r						
Semi-vowel		w								j		

2.4.1 Consonant Phonemes

It is clear from the above phonemic chart that Standard-Thai has twenty one consonant phonemes in its phonological system. There are three voiceless un-

aspirated plosives /p/, /t/, /k/, three voiced un-aspirated plosives /b/, /d/ and /ʔ/, three voiceless aspirated plosives /p^h/, /t^h/, /k^h/. There seems to be gap in the phonemic symmetry of voiced plosive as we do not have voiced velar plosive /g/. There are two palatal affricates /c/ and /c^h/, three voiced nasals, /m/, /n/, /ɲ/, three fricatives /f/, /s/, /h/, a lateral /l/, a trill /r/ and two semi-vowels /w/, /j/. The phonetic description of Thai phonemes is given below. Each phoneme has just one allophone each, but the final consonants /p, t, k/ are un-released finally.

2.4.2 Phonetic Description of Standard-Thai Consonants

1. /p/ Bilabial, voiceless, un-aspirated plosive
2. /b/ Bilabial, voiced, un-aspirated plosive
3. /t/ Alveolar, voiceless, un-aspirated plosive
4. /d/ Alveolar, voiced, un-aspirated plosive
5. /k/ Velar, voiceless, un-aspirated plosive
6. /ʔ/ Glottal, voiced, un-aspirated plosive
7. /p^h/ Bilabial, voiceless, aspirated plosive
8. /t^h/ Alveolar, voiceless, aspirated plosive
9. /k^h/ Velar, voiceless, aspirated plosive
10. /c/ Palatal, voiceless, un-aspirated, affricate
11. /c^h/ Palatal, voiceless, aspirated, affricate
12. /m/ Bilabial, voiced, nasal

13. /n/ Alveolar, voiced, nasal
14. /ɲ/ Velar, voiced, nasal
15. /f/ Labial-dental, voiceless, fricative
16. /s/ Alveolar, voiceless, fricative
17. /h/ Glottal, voiced, fricative
18. /l/ Alveolar, voiced, lateral
19. /r/ Alveolar, voiced, trill
20. /w/ Bilabial, voiced, semi-vowel
21. /j/ Palatal, voiced, semi-vowel

2.4.3 Distribution of Standard-Thai consonant phonemes

All the twenty one consonant phonemes can occur syllable onset position but syllable coda position is occupied only by eight phonemes viz., /p/, /t/, /k/, /m/, /n/, /ɲ/, /j/, /w/. Similar distribution is found in Tai-Ahom discussed earlier.

2.4.4 Initial Consonant Contrasts

/p/ vs /p^h/ vs /b/

/pâ:/	‘aunt’
/p ^h â:/	‘cloth’
/bâ:/	‘to be mad’

/t/ vs /t^h/ vs /d/

/tɛ:n/ ‘small bee’

/t^hɛ:n/ ‘to replace’

/dɛ:n/ ‘boundary’

/k/ vs /k^h/ vs /ʔ/

/kàt/ ‘to bite’

/k^hàt/ ‘to scrub’

/ʔàt/ ‘to press’

/c/ vs /c^h/

/ca:m/ ‘to sneeze’

/c^ha:m/ ‘bowl’

/m/ vs /n/ vs /ŋ/

/ma:/ ‘to come’

/na:/ ‘paddy field’

/ŋa:/ ‘sesame’

/f/ vs /s/ vs /h /

/fǎ:n/ ‘to slide’

/sǎ:n/ ‘to braid (from bamboo strands)’

/hǎ:n/ ‘to divide’

/l/ vs /r/

/lɔ:ŋ/ ‘to try’

/rɔ:ŋ/ ‘runner up’

/w/ vs /j/

/wâ:t/ ‘to draw’

/jâ:t/ ‘relative’

2.4.5 Final Consonant Contrasts

There are eight consonants that can occur syllable finally.

/p/ vs /t/ vs /k/

/ráp/ ‘to receive’

/rát/ ‘to tie’

/rák/ ‘to love’

/m/ vs /n/ vs /ŋ/

/kâ:m/ ‘paw (of a crab)’

/kâ:n/ ‘stem’

/kâ:ŋ/ ‘fish bone’

/j/ vs /w/

/ja:j/ ‘grandmother’

/ja:w/ ‘long’

2.4.6 Consonant clusters in Standard-Thai

There are only certain combinations of consonants that can occur in Standard-Thai. The term “consonant cluster” refers only to combinations of consonants which are pronounced without an intervening vowel. For instance, มลาย /**mǎ-la:j**/ ‘to disappear’ is not a consonant cluster because it is pronounced /**mǎ-la:j**/. In Thai language, consonant clusters are composed of two consonants that may occur syllable initial position only.

Lateral /**l**/, trill /**r**/ and semi-vowel /**w**/ can occur as second member in an initial consonant cluster. As first members of a consonant cluster only six consonants can occupy initial position. These are voiceless plosives /**p, t, k**/ and voiceless aspirated plosives /**p^h, t^h, k^h**/. Therefore, we can have only /**pr, p^hr, tr, t^hr, kr, k^hr, pl, p^hl, kl, k^hl, kw, k^hw**/. We do not find initial cluster with alveolar plosives /**t, t^h**/ with lateral /**l**/. But when some words are borrowed from English and are almost assimilated into Thai some new clusters have been added. These are voiced plosives /**b, d**/ and voiceless, labio-dental /**f**/ as first members of a consonant cluster. Examples from Thai can be illustrated as below for all types of consonant clusters.

The Standard-Thai clusters are as follow;

- | | | | |
|----|---------------|------------------|-----------------|
| 1. | / pr / | / prà:p / | ‘to get rid of’ |
| 2. | / pl / | / plà:p / | ‘to comfort’ |
| 3. | / tr / | / tron / | ‘straight’ |

- | | | | |
|-----|--------------------|---|---------------------|
| 4. | /kr/ | /kr̀ɨŋ/ | ‘bell’ |
| 5. | /kl/ | /klɯ:n/ | ‘to swallow’ |
| 6. | /kw/ | /kwa:ŋ/ | ‘deer’ |
| 7. | /p ^h r/ | /p ^h rɔ:m / | ‘to be ready, with’ |
| 8. | /p ^h l/ | /p ^h lɔ:j/ | ‘ruby’ |
| 9. | /t ^h r/ | /can-t ^h ra:/ | ‘moon’ |
| 10. | /k ^h r/ | /k ^h r̀ù-k ^h r̀à/ | ‘not smooth’ |
| 11. | /k ^h l/ | /k ^h l̀à:t/ | ‘being coward’ |
| 12. | /k ^h w/ | /k ^h wǎ:/ | ‘right hand side’ |

The consonant clusters in English loan words used in Thai are as follows:

- | | | | |
|----|------|-------------|--------------|
| 1. | /br/ | /bra:/ | ‘brassière’ |
| 2. | /bl/ | /blu:-ji:n/ | ‘blue jeans’ |
| 3. | /dr/ | /drá:p / | ‘draft’ |
| 4. | /fr/ | /fri:/ | ‘free’ |
| 5. | /fl/ | /flúk/ | ‘fluke’ |

2.5 Standard-Thai Vowels

Table 5: The Phonemic Chart of Standard-Thai Vowels

Tongue Position	Front		Central		Back			
Lip-Rounding	Unrounded		Unrounded		Rounded		Unrounded	
Length	Short	Long	Short	Long	Short	Long	Short	Long
Raise of the tongue								
High	i	i:			u	u:	ʊ	ʊ:
High-Mid	e	e:			o	o:	ɤ	ɤ:
Low-Mid	ɛ	ɛ:			ɔ	ɔ:		
Low			a	a:				
Diphthong	ia	ia:			ua	ua:	ʉa	ʉa:

Thai has unusually a large number of vowel phonemes. There are twenty-four vowels in all, eighteen single vowel phonemes (nine short and nine long vowels) and six diphthongs. First of all we shall provide the phonetic description of vowels and their distribution and phonemic contrasts.

2.5.1 Phonetic Description of Standard-Thai Vowels

1. /i/ Front Unrounded High Short Vowel
2. /i:/ Front Unrounded High Long Vowel
3. /u/ Back Rounded High Short Vowel

4. /ʊ:/ Back Rounded High Long Vowel
5. /ʊ/ Back Unrounded High Short Vowel
6. /ʊ:/ Back Unrounded High Long Vowel
7. /e/ Front Unrounded High-Mid Short Vowel
8. /e:/ Front Unrounded High-Mid Long Vowel
9. /o/ Back Rounded High-Mid Short Vowel
10. /o:/ Back Rounded High-Mid Long Vowel
11. /ɤ/ Back Unrounded High-Mid Short Vowel
12. /ɤ:/ Back Unrounded High-Mid Long Vowel
13. /ɛ/ Front Unrounded Low-Mid Short Vowel
14. /ɛ:/ Front Unrounded Low-Mid Long Vowel
15. /ɔ/ Back Rounded Low-Mid Short Vowel
16. /ɔ:/ Back Rounded Low-Mid Long Vowel
17. /a/ Central Rounded Low Short Vowel
18. /a:/ Central Rounded Low Long Vowel
19. /ia/ Front Unrounded Short Diphthong
20. /ia:/ Front Unrounded Long Diphthong
21. /ua/ Back Rounded Short Diphthong
22. /ua:/ Back Rounded Long Diphthong

- | | | | | | |
|-----|-------|------|-----------|-------|-----------|
| 23. | /ua/ | Back | Unrounded | Short | Diphthong |
| 24. | /ua:/ | Back | Unrounded | Long | Diphthong |

2.5.2 Standard-Thai Vowel Contrasts

Just like Tai-Ahom, initial vowels are completely absent in Thai. We find the medial and final contrasts only. We shall show the phonemic contrasts in these positions only.

2.5.2.1 Medial Vowel Contrasts

/i/ vs /i:/	/sɯ́n/	‘teaser’
	/sɯ́:n/	‘prohibition in Buddhism’
/u/ vs /u:/		
	/kʰuṇ/	‘you (polite)’
	/kʰu:n/	‘to multiply’
/i/ vs. /u/		
	/sɯ̀t/	‘a right’
	/sùt/	‘end, supreme’
/e/ vs. /o/		
	/pɛn/	‘to be’
	/pɒn/	‘to mix’

/u/ vs /uː/

/juːt/ 'to take'

/juːt/ 'to extend'

/e/ vs /eː/

/dèt/ 'to pull'

/dèt/ 'power'

/o/ vs /oː/

/pon/ 'to mix'

/poːn/ 'adj. bulge'

/ɣː/

/kɣːt/ 'to be born, to happen'

/ɛː/

/dɛːt/ 'sunlight'

/ɔː/

/kɔːt/ 'to hug'

/a/ vs /aː/

/nam/ 'to guide'

/naːm/ 'name'

/iaː/

/kɪaːt/ 'honor'

/uaː/

/nuɑːt/ 'to massage'

/uaː/

/ruɑːn/ 'house'

The contrasts for the pairs like /ɯ/ vs /ɯᵛ/, /ɛ/ vs /ɛᵛ/, /ɔ/ vs /ɔᵛ/, /ia/ vs /iaᵛ/, /ua/ vs /uaᵛ/, /uaᵛ/ vs /uaᵛ/ are not found medially. However, final contrasts are there to establish their phonemic status.

In Standard-Thai the short vowels /ɛ/, /ɔ/ may occur medially in borrowed words especially from English.

Examples:

/nót/	‘the knot’
/móp/	‘the mob’
/cʰók/	‘to shock’
/cʰók-koᵛ-lét/	‘the chocolate’
/lók/	‘to lock’
/dòt/	‘the small round mark’

2.5.2.2 Final Vowel Contrasts

Some final vowel contrasts may not be in exactly in minimal pairs but they are found in sub-minimal pairs.

/i/ vs. /iᵛ/

/pɿ/	‘start to break’
/pɿᵛ/	‘to move fast’

/u/ vs. /uː/

/kù/ ‘to lie’

/kùː/ ‘to shout’

/uː/ vs. /uːː/

/rúː/ ‘to know’

/ruːː/ ‘to take out untidy’

/i/ vs. /u/

/tì/ ‘to blame’

/tù/ ‘smell bad’

/e/ vs. /o/

/lé/ ‘to be uniform’

/ló/ ‘to dump, to throw’

/u/

/hu/ ‘sound of laughing’

/uː/

/muː/ ‘hand’

/e/

/tè/ ‘to kick’

/eː/

/t^heː/ ‘to pour’

/eː/ vs. /oː/

/kěː/ ‘chick’

/kǒː/ ‘a kind of sweet’

/o/ vs /oː/

/pó/ ‘small pier’

/póː/ ‘nude’

/ɣ/ vs /ɣː/

/cɣ/ ‘to meet’

/cɣː/ ‘to get swell’

/ɛ/ vs /ɛː/

/tɛ/ ‘to touch’

/tɛː/ ‘but’

/ɔ/ vs /ɔː/

/kɔ/ ‘island’

/kɔː/ ‘to build’

/a/ vs /aː/

/pà/ ‘to patch’

/pàː/ ‘forest, jungle’

/ia/

/kiá/ ‘a kind of pine’

/iaː/

/siǎː/ ‘to lose’

/ua/	/ʔuá/	‘I’ (informal)
/ua:/	/kluá:/	‘to be afraid’
/uá/	/cuá/	‘bright’
/uá:/	/ruá:/	‘to leak’

2.6 Phonological System and Thai script

There are **forty four** consonants symbols in Standard-Thai which represent **twenty one** consonant phonemes. But for **eighteen** single vowel phonemes we have only eighteen symbols and **six** symbols for diphthongs and **eight** special vowel symbols.

The Thai phonological system is best described in terms of syllable, the tone-bearing unit. A Thai syllable has the maximum shape of **C(C) V (V)(C) + Tone**. There are five tones, which will be delineated later.

It appears that the symbol /ɯ / stands for vocalic /ɯ / and the symbol /ə / stands for vocalic /ə / borrowed from Sanskrit when Buddhism reached Thailand and texts were used. These were vowel sounds in Sanskrit and Thai script accommodated in its system of writing. Even the words given below are loans from Sanskrit that are written in modified forms in Thai. The symbol no. 6 /ɯ-/ transcribed as /aj / appears in twenty words that are used in Thai and these special words are taught while teaching the Thai script.

But symbol / ฦ-/ transcribed /**aj**/ occurs elsewhere in Thai language and words written with this letter are different that are not the ones used to distinguish the twenty words explained above. The symbols for /**am**/ and /**aw**/ appear everywhere in the language but are distinct from the phonemic system of Thai described above. Examples are provided below.

2.7 Special Vowel Symbols

The following symbols stand for combinations of vowels and consonants, vowels and semi-vowel and consonants and vowels. When these combinations occur the symbols which are given in our Thai chart above are not used. These are treated as a traditional symbols.

1. ฦ /**ruu**/ as in ฦดึ /**ruí-di**/ ‘heart’
2. ฦ /**ruu**/ as in ฦผี /**ruu-sǐ**/ ‘ascetic’
3. ฦ /**luu**/ as in ฦ /**luú**/ ‘Interrogative particle’ (old usage)
4. ฦ /**luu**/ as in ฦ /**luu**/ ‘Interrogative particle’ (old usage)
5. อ /**am**/ as in อ /**t^ham**/ ‘to do’
6. ใ /**aj**/ as in ใ /**baj**/ ‘leaf’
7. ใ /**aj**/ as in ใ /**paj**/ ‘to go’
8. เ /**aw**/ as in เ /**raw**/ ‘we’

2.8 Use of the vowel symbols with consonants

To construct a word in Standard-Thai and its representation in the script there are some rules to be followed. There are a number of ways to join the vowels with the consonant or consonant clusters. The vowels both single and compound occur in various positions. They occur everywhere around the consonant or clusters, before or after the consonant symbols, above or below, or both before and after the consonant or consonant clusters and before after and above the consonant symbols.

The following are examples of the occurrences of Standard-Thai vowels and the transliteration in IPA in order to indicate their positions. It should be noted that when we transliterate in IPA written form, the vowels can occur only in word medially and finally, none of the vowels occur word initially.

The instances below indicate the position of the vowels in Standard-Thai written form together with IPA symbol word finally.

Within 32 vowel symbols including 8 extra vowels in Standard-Thai, there are 5 vowels which occur in front of the main consonant or consonant clusters. They are /-ɛː/ (เ-), /-eː/ (เ-), /-oː/ (โ-), /-aj/ (ใ-), /-aj/ (ใ-) as in the following examples.

1. Before C/CC

Thai Script	IPA /Roman	
แก่	/kɛː/	‘old’
เกร	/keː-reː/	‘bad child’
โมโห	/moː-hɔː/	‘angry’

There are 3 vowels that occur after the consonant symbols, i.e., follow the consonant or consonant clusters. They are /-a/ (ะ), /-a:/ (า), /-ɔ:/ (อ) as in the following examples.

2. After the C/CC

Thai Script	IPA/ Roman	
กผะ	/k ^h lǎ/	‘to mix’
มา	/ma:/	‘to come’
รอ	/rɔ:/	‘to wait’

There are 3 vowels that may occur above the consonant letter or consonant clusters. They are /-i/ (ิ), /-i:/ (ี), /-u/ (ู) as in the following examples.

3. Above the C/CC

Thai Script	IPA/ Roman	
ติ	/t̪i/	‘to blame’
สี	/s̪i:/	‘color’
หึ	/hu̪i/	‘sound of laughing’

There are 2 vowels that may occur below the consonant or consonant clusters.

They are /-u/ (๑), /-u:/ (๑) as found in the following examples.

4. Below the C/CC

Thai Script

IPA/ Roman

ประจุ

/prà-cù/ ‘(electric) charge’

รู

/ru:/ ‘hole’

There are 7 vowels which occur in both before and after the consonant or consonant cluster symbols. They are /-e/ (๑), /-ɛ/ (๑), /-o/ (๑), /-ɔ/ (๑), /-ɤ/ (๑), /-ɔ:/ (๑), and /-aw/ (๑) as in the following examples.

5. Before & after the C/CC letter

Thai Script

IPA/ Roman

เตะ

/tè/ ‘to kick’

และ

/lɛ/ ‘and’

เยอะ

/jɔ/ ‘much, many’

There are 4 vowels which occur both above and after the consonant or consonant cluster symbols. They are /-u:/ (๑), /-ua/ (๑), /-ua:/ (๑), and /-am/ (๑) as in the following examples.

6. Above-After the C/CC

Thai Script	IPA/ Roman	
มือ	/m <u>uɔ̌</u> /	‘hand’
ลัวะ	/l <u>uá</u> /	‘name of a race’

There are 4 vowels which occur before, above, and after consonant or consonant cluster symbols. They are /-**ia**/ (เียะ), /-**ia**/ (เีย), /-**ua**/ (เือะ), and /-**ua**/ (เือ)

as in the following examples.

7. Before-Above-After the C/CC

Thai Script	IPA/ Roman	
เปี้ยะ	/pi <u>á</u> /	‘name of dessert’
เลีย	/li <u>a</u> /	‘to lick’
เกลือ	/kl <u>ua</u> /	‘salt’

It is also possible to find the same situation in case of the medial vowels. Similar restrictions of occurrence are also found in case of diphthongs in Thai. These restrictions are useful while learning and teaching Thai script.

2.9 Supra-segmental phonemes in Standard-Thai

2.9.1 Tones

It is well known fact that the languages within Tai family, like Thai, Laos, Khamti and others use tones extensively. Since our data on Tai-Ahom is taken from the written records and the Tai-Ahom writing system had no system of making tones in writing. We cannot really compare the tonal system in these two languages under study. Therefore, we shall not describe Thai tones in detail. However, we shall provide a short description of Thai tones.

Standard-Thai is a tonal language and it has five different tones. Each syllable has one of the five tones. The tones are designated with regard to the pitch levels. Four tone markers, and designations are low, falling, high, and rising, the mid tone is unmarked in Thai script. These five tones are phonemic and just with the change of tone the meaning of the word will change. Segmental phonemes do not change. The following table shows the tone markers used both in Thai script and IPA.

2.9.2 Tone markers and pitch levels

Tone Markers in Thai script			pitch levels
(-)	Mid tone	The pitch level remains the same	(-)
(')	Low tone	The pitch level drops down	(˘)
(ˊ)	Falling tone	The pitch level rises and falls	(ˆ)
(ˋ)	High tone	The pitch level goes up high	(ˊ)
(ˆ)	Rising tone	The pitch level falls and then rises	(ˇ)

2.9.3 Phonemic contrasts of Tones

Mid tone	/pā:/	‘throw away’
Low tone	/pā:/	‘forest’
Falling tone	/pâ:/	‘aunt’
High tone	/pá:/	‘father (loan word)’
Rising tone	/pǎ:/	‘the old rich man (loan word)’

2.10 Comparison between Tai-Ahom & Standard-Thai phonology

Both Tai-Ahom and standard Thai belong to Tai group of languages and share a number of similarities. However, some differences have been noted in our study.

The analysis of Tai-Ahom phonological system was based on the written records and Thai phonological system was based on both spoken and written material. But we can compare both phonological systems.

2.10.1 Consonants

Tai-Ahom has twenty-four consonant phonemes and standard Thai has twenty-one phonemes. Tai-Ahom has voiced aspirated plosives /b^h, d^h, g^h/ and a voiced velar plosive /g/ which were actually borrowed from Indo-Aryan sources in the history of this language. It appears that palatal nasal /ñ/ is found in Tai-Ahom. It is also recorded in the earliest text that we have studied. But all these phonemes are absent in Standard-Thai. However Standard-Thai has labio-dental fricative /f/ which is absent in

Tai-Ahom. Rest of the consonant system is very similar in both the languages. Both Tai-Ahom and Standard-Thai have similar consonant cluster system. But they differ in selecting the second members. Thai uses /r, l, w/ as one of the second member but Tai-Ahom uses only /r, w/.

2.10.2 Vowels

Tai-Ahom has fourteen vowel system out of which nine are represented by single letter symbols. Each one is pronounced clearly and represents a single sound. Five vowel symbols are sequences of vowels used in the script.

But Thai has eighteen vowel system plus six diphthongs and eight extra vowel symbols. Five extra vowels of Ahom and eight extra vowels of Thai form a very similar system. Tai-Ahom lacks the following vowels which are presented in Standard-Thai, /**ui**, **e**, **o**, **oi**, **ɛ**, **ɛi**, **ɔ**, **ɤ**, **ɤi**/. Standard-Thai has /**ia**, **iaɪ**, **ua**, **uaɪ**, **ua**, **uaɪ**/ as diphthongs but Tai-Ahom has simply a few vowel sequences represented by extra symbols. In addition standard Thai has borrowed two vocalic sounds /**ɾ**/ and /**ɿ**/ from Sanskrit sources that are not found in Tai-Ahom. This may be because Thais followed Buddhism from both Sanskrit and Pali texts translated into Thai and must have influenced Thai language system. But Tai-Ahom people did not have access to such contacts.

It appears that the proto-Tai language has had very similar vowel systems in both the languages. But in the history of Standard-Thai it developed more vowel distinctions.

As discussed earlier Standard-Thai makes use of five distinctive tones marked even in Thai script. Being the member of Tai group of languages, Tai-Ahom must have had some tonal system similar to that of Thai. But our data on Tai-Ahom is drawn from Buranji documents where the tone symbols are not marked. The fact that Tai-Ahom has a large number of homophonous words with very different meanings shows that some words had tonal distinction that was not marked in the script. Therefore, as of today we have no way to reconstruct Tai-Ahom tones until we have more comparative data.

As stated earlier the Buranji text that I consulted and was read to me by Tai-Ahom priests was highly restricted and I could not find any distinctive tones in the text. But it is possible to predict from some cognates in these languages that Tai-Ahom had some type of tones which the text writers did not mark in the text that we consulted. Thai corresponding words have the tones as we know and surely the corresponding Tai-Ahom must have had the tones as discussed earlier.

2.11 Tai-Ahom and Standard-Thai consonant correspondences

Since Tai-Ahom and Thai are genetically related languages, it will be worth while to show this fact by comparative cognates.

We find the following initial correspondences where systematic changes can be easily explained.

Tai-Ahom		Standard -Thai
/p ^h /	corresponds to	/p ^h / or /f/
/t/	corresponds to	/t/ or /t ^h /

/r/	corresponds to	/r/ or /h/
/k/	corresponds to	/k/ or /k ^h /
/n/	corresponds to	/n/ or /d/

The above correspondences are exemplified as below:

/p ^h aj/	corresponds to	/fǎj/	‘the fire’
/ti:/	corresponds to	/t ^h î:/	‘to, at’
/ru:/	corresponds to	/huǎ:/	‘the head’
/ku:/	corresponds to	/k ^h û:/	‘pair’
/nin/	corresponds to	/din/	‘the earth’

2.12 Syllable Structure in Tai-Ahom and Standard-Thai

Both languages under study have very similar syllabic structure. Basic syllabic structure is C(C) V and C(C) V C only. Both the languages are basically monosyllabic but Thai has acquired some poly-syllabic words as well in its history due the contact with other languages, especially Pali, Sanskrit and English.

Some linguists observed that the use of consonant clusters in Tai-Ahom language is not traditional or from the old hierarchy but it is of recent use only. Regarding the use of consonant clusters in the languages of the Tai family and compare the Tai-Ahom language with other Tai languages such as Tai-Khamti, Tai-Phake, etc. the use of consonant cluster has not found in these languages (except Tai-Aiton, the use of consonant cluster is found in this language but I haven’t studied whether it is due to borrowing or not).

Syllable structures in Tai-Ahom and Standard-Thai are as follows:

1. **CV** (Consonant + Vowel) A vowel or vowels (diphthong) preceded by one consonant as in the open syllable in **Tai-Ahom**:

/ta/	‘eye’
/ba/	‘to say’
/daj/	‘thread’
/daw/	‘star’

Standard-Thai

/ka:/	‘crow’
/la:/	‘donkey’
/ma:/	‘to come’
/má:/	‘horse’

2. **CCV** (Consonants + Vowel) the consonant clusters combines with a single vowel in the form of open syllable.

Tai-Ahom

/p ^h wa/	‘to leave suddenly’
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Standard-Thai

/pla:/	‘fish’
/klâ:/	‘to dare’
/p ^h ró/	‘because, sweet sound’

3. **CVC** (Consonant + Vowel + Consonant) a consonant followed by a vowel and consonant (to form the closed syllable).

Tai-Ahom

/min/ 'to smell'

/biw/ 'to be bent'

Standard-Thai

/ca:m/ 'to sneeze'

/bin/ 'to fly'

/pɔ̌:t/ 'to open'

/pìt/ 'to close'

4. **CCVC** (Consonants + Vowel + Consonant) the consonant cluster occurs initially followed by the vowel and the consonant at the end in the form of closed syllable.

Tai-Ahom

/p^hraŋ/ 'the Muslim'

/kraŋ/ 'middle'

Standard-Thai

/klom/ 'rounded'

/klɯ̌ŋ/ 'to roll'

/klaŋ/ 'middle'

5. CV-CV

Standard-Thai

/waɪ-caɪ/ ‘speaking word’

/pʰaɪ-sǎɪ/ ‘language’

/pʰaɪ-sǎɪ/ ‘tax’

6. CV-CVC

Standard-Thai

/cʰə-là:k/ ‘label’

/saɪ-ba:n/ ‘to swear’

/kə-ba:n/ ‘head’

7. CVC-CVC

The first and second syllables are the closed syllables and they consist of consonant + vowel + consonant and the second syllable also consists of consonant + vowel + consonant.

Standard-Thai

/pàt-cʰɨm/ ‘final’

/lam-pʰaŋ/ ‘alone’

/sǎn-tʰǎ:n/ ‘structure’

8. **CVC-CCV**

*This kind of word structure is very less in Tai-Ahom language but very rich in Standard-Thai.

The first syllable is closed syllable and consists of consonant + vowel + consonant and the second syllable is open syllable consists of consonants + vowel.

Standard-Thai

/kam-p^hrá:/ ‘orphan’

/can-t^hra:/ ‘moon’

/don-tri:/ ‘music’

9. **CCV-CV**

These disyllabic words consist of two open syllables e.g. the first syllable combined with consonant (clusters) + vowel and second syllable combined with consonant + vowel.

Standard-Thai

/krà-sǎ:/ ‘heron (a kind of bird)’

/prà-mà:/ ‘diffident’

/prà-tu:/ ‘door’

10. **CCV-CVC**

The first syllable consists of consonant clusters + vowel as an open syllable and the second syllable is the closed syllable combined with a consonant + vowel and ends by a consonant.

Standard-Thai

/krà-caj/ ‘to spread, to diffuse’

/krà-c^haj/ ‘one kind of ginger (Thai ginger)’

/prà-moŋ/ ‘fishery’

11. **CCVC-CCV**

The first syllable combined with consonants + vowel + consonant, the second syllable combined with consonants + vowel.

Standard-Thai

/p^hláp-p^hla:/ ‘royal pavilion’

/p^hrâŋ-p^hru:/ ‘adv. effusively’

12. **CCV-CCVC**

The first syllable consists of consonants (consonant clusters) + vowel and the second syllable is the closed syllable which consists of consonants (consonant clusters) + vowel + consonant.

Standard-Thai

/prà:p-ra:j/ ‘not much’

/k^hla:-k^hlâm/ ‘crowded’

/p^hlî:-p^hlă:m/ ‘hasty’

13. **CCVC-CCVC**

The first syllable consists of consonant clusters + vowel + consonant and the second syllable consists of consonant clusters + vowel + consonant.

Standard-Thai

/prà:k-pram/ ‘to set somebody up’

/trà:k-tram/ ‘to work hard’

/p^hláp-p^hluŋ/ ‘lily (name of a flower)’

14. **CCVC-CV**

The first syllable is closed syllable which consists of consonant clusters + vowel + consonant and the second is open syllable which consists of consonant + vowel.

Standard-Thai

/pràt-ja:/ ‘knowledge’

/p^hruók-să:/ ‘plants’
