A PHONOLOGICAL COMPARISON BETWEEN KHLONGPHLU CHONG AND WANGKRAPHRAE CHONG

SIRIPEN UNGSITIPOONPORN

A THESIS SUBMITTED IN PARTIAL FULFILMENT
OF THE REQUIREMENTS FOR
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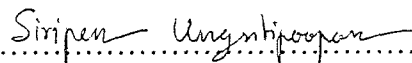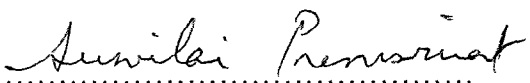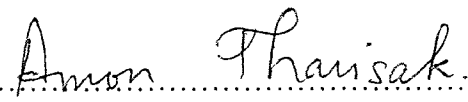FACULTY OF GRADUATE STUDIES
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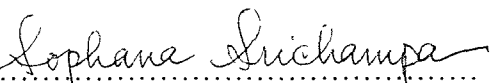
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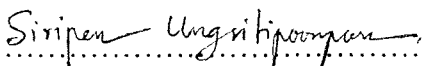
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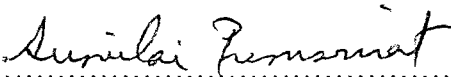
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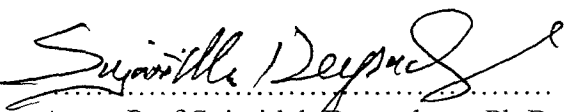# A PHONOLOGICAL COMPARISON BETWEEN KHLONGPHLU CHONG AND WANGKRAPHRAE CHONG

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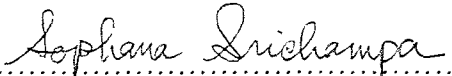
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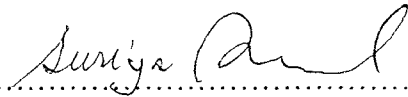
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The objective of this thesis is to study and compare the two major Chong dialects : the Chong spoken in Khlong Phlu village, Khao Khitchakut district and the Chong spoken in Wang Kraphrae village, Pong Nam Ron district, both in Chanthaburi province. A tagmemic framework is used for analyzing the phonological system of each dialect. Then the similarities and differences between the two chong dialects are presented.

The results of the study show that, at the phonemic level, the Khlong Phlu Chong (KP) and Wang Kraphrae Chong (WK) are similar. There are 21 consonant phonemes / p, pʰ, b, t, tʰ, d, c, cʰ, k, kʰ, ʔ, m, n, ɲ, ŋ, s, h, l, r, w, j /, 18 single vowel phonemes / i. iː, e, eː, ɛ, ɛː, ɨ, ɨː, ə, əː, a, aː, u, uː, o, oː, ɔ, ɔː / and one diphthong / uə /. There are four registers : clear voice / R1 /, clear voice followed by glottal constriction / R2 /, breathy voice / R3 / and breathy voice followed by glottal constriction / R4 /. There are two types of syllables : the open syllable and the closed syllable. In addition, three types of phonological words were found, namely monosyllabic words, disyllabic words and trisyllabic words and two types of intonation groups were found : falling and rising contours.

The KP Chong is different from WK Chong in the vocabulary usage. The phonetic realization of consonants in the major syllable are different in the initial and final position. Most vowels in the major syllable in WK Chong are higher than in KP Chong. The registers are phonetically different, especially the breathy voice, and the glottal constriction is not prominent in WK Chong. In addition, it is predictable that the registers in WK Chong may disappear in the future and WK Chong may become a tonal language.

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ศิริเพ็ญ อึ้งสิทธิพูนพร : การศึกษาเปรียบเทียบระบบเสียงภาษาชอง ระหว่างชองคลองพลู และชองวังกระแพร(A PHONOLOGICAL COMPARISON BETWEEN KHLONGPHLU CHONG AND WANGKRAPHRAE CHONG) คณะกรรมการควบคุมวิทยานิพนธ์ : สุวิไล เปรมศรีรัตน์, Ph.D. , อมร ทวีศักดิ์, Ph.D. , โสภนา ศรีจำปา, Ph.D. 260 หน้า

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วิทยานิพนธ์ฉบับนี้ มีจุดประสงค์เพื่อศึกษาและเปรียบเทียบภาษาชองสองถิ่นหลัก ได้แก่ ภาษาชองที่พูดที่หมู่บ้านคลองพลู กิ่งอำเภอเขาคิชฌกูฏ และภาษาชองที่พูดที่หมู่บ้านวังกระแพร อำเภอโป่งน้ำร้อน จังหวัดจันทบุรี โดยใช้ทฤษฎีแทกมีมิค (Tagmemic) ในการวิเคราะห์ระบบเสียง ภาษาชองแต่ละถิ่นแล้วเปรียบเทียบความเหมือนและความแตกต่างระหว่างภาษาชองทั้งสองถิ่น

ผลการศึกษาพบว่า ภาษาชองถิ่นคลองพลูมีความเหมือนกับภาษาชองถิ่นวังกระแพรใน ระดับสรวิทยา (Phonemics) คือมีหน่วยเสียงพยัญชนะ 21 หน่วยเสียง ได้แก่ / p, pʰ, b, t, tʰ, d, c, cʰ, k, kʰ, ʔ, m, n, ɲ, ŋ, s, h, l, r, w, j /, หน่วยเสียงสระเดี่ยว 18 หน่วยเสียง ได้แก่ / i, iː, e, eː, ɛ, ɛː, ɨ, ɨː, ə, əː, a, aː, u, uː, o, oː, ɔ, ɔː /, หน่วยเสียงสระประสม 1 หน่วยเสียง ได้แก่ / uə /, และลักษณะน้ำเสียง 4 ลักษณะคือ ลักษณะน้ำเสียงปกติ / R1 /, ลักษณะน้ำเสียงปกติตามด้วยการกักของเส้นเสียง / R2 /, ลักษณะ น้ำเสียงก้องมีลม / R3 / และลักษณะน้ำเสียงก้องมีลมตามด้วยการกักของเส้นเสียง / R4 /, พยางค์ แบ่งออกเป็น 2 ชนิดคือ พยางค์ปิดและพยางค์เปิด คำมี 3 ประเภทคือ คำพยางค์เดียว, คำสอง พยางค์ และคำสามพยางค์ และทำนองเสียงมี 2 ลักษณะคือ ทำนองเสียงตกและทำนองเสียงขึ้น

ภาษาชองถิ่นคลองพลู มีความแตกต่างจากถิ่นวังกระแพร ในด้านการใช้คำศัพท์ต่างชุดกัน, รูปปรากฏของเสียงพยัญชนะในพยางค์หลักต่างกันที่ตำแหน่งพยัญชนะต้นและท้าย, เสียงสระของ พยางค์หลักที่ถิ่นวังกระแพรส่วนใหญ่เป็นสระสูงกว่าที่ถิ่นคลองพลู, สัทลักษณะของลักษณะน้ำเสียง ทั้ง 2 ถิ่นมีความแตกต่าง กล่าวคือน้ำเสียงก้องมีลม และการกักของเส้นเสียงยังคงเด่นชัดในถิ่น คลองพลู แต่ไม่เด่นชัดในถิ่นวังกระแพร ซึ่งสามารถคาดเดาได้ว่าภาษาชองถิ่นวังกระแพรอาจจะ กลายเป็นภาษาที่มีวรรณยุกต์ในอนาคตได้

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LIST OF ABBREVIATIONS AND SYMBOLS

Asp	Aspirated
AE	Analogous Environment
IE	Identical Environment
C	Consonant
C_1	Initial consonant
C_2	Consonant cluster
C_3	Final consonant
cl.	Classifier
e.g.	exempli gratia
FP	Final Particle
n	noun
KP	Khlong Phlu Chong
WK	Wang Kraphrae Chong
qw.	Question Word
$/^{R1}/$	Clear voice
$/^{R2}/$	Clear voice followed by glottal constriction
$/^{R3}/$	Breathy voice
$/^{R4}/$	Breathy voice followed by glottal constriction
[ ]	Level pitch
[´]	High rising pitch
[˜ʔ]	High rising-falling pitch followed by glottal constriction
[ˋ]	Low falling pitch
[ˋʔ]	High falling pitch followed by glottal constriction
[..]	Breathy voice
Unasp	Unaspirated
Vl.	Voiceless
Vd.	Voiced

LIST OF ABBREVIATIONS AND SYMBOLS (cont.)

U	Unstress
W	Weak stress
S	Strong stress
V	Vowel
v	Verb
[']	Strong stress
[ˌ]	Weak stress
[ˈ]	Unreleased
( )	Optional occurrence
+	Occurrence
	Non-occurrence (blank)
~	Free Variation
≠	not equal
[⟋]	Rising Contour
[⟍]	Falling Contour
[ ]	Phonetic Transcription
/ /	Phonemic Transcription
.	Length of the vowel
[e̬]	The vowel with tongue height between [e] and [ɛ]
[u̬]	The vowel with tongue height between [u] and [o]
[o̬]	The vowel with tongue height between [o] and [ɔ]

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CHAPTER I

INTRODUCTION

1.1 Background of the study

Chong is a language in the Pearic branch of Mon-Khmer language subfamily in Austroasiatic language family (Diffloth, 1974). The Chong language is a spoken language without written form. Chong spoken in different areas are not exactly the same. The difference was found by Marie A. Martin (1975), between Chong spoken in Makham (which is now called Khao Khitchakut) and Pong Nam Ron districts. She called Chong spoken in Pong Nam Ron as "Chong həəp" and called the Chong spoken in Khao Khitchakut as "Chong lɔɔ". She did not give details of this grouping but from my knowledge these Chong names may come from the final particles they use when speaking.

Speaker A :   ceew^{R1} nih^{R1} "where are you going ?"

(Question)

Speaker B :   ceew^{R1} tih^{R1} həəp^{R1} "I am going there."

(Answered by Chong speakers in Pong Nam Ron district)

Speaker C :   ceew^{R1} tih^{R1} lɔɔ^{R1} "I am going there."

(Answered by Chong speakers in Khao Khitchakut district)

However, I also noticed the difference in pronunciation between these two dialects of Chong. The difference of Chong spoken in Khao Khitchakut and Pong Nam Ron districts is obvious. Examples are given below.

Khao Khitchakut	Pong Nam Ron	Gloss
[ˈtɕʰo̤ˀkˀ]	[ˈkrɔ̤ˏkˀ]	'pig'
[ˈʔɨ́tˀ]	[ˈʔɨ̤h]	'give'
[ˈtootˀ]	[ˈtóh]	'head'

[ˈreȩˌt˞]   [ˈrȋh]   'root'

[ˈcaâˀt˞]   [ˈcaâˀ]   'knife'

So far there has been no detailed study of the differences between the Chong dialects. Although there are research on the Chong dialects in various places in Khao Khitchakut area, those works mainly focus on one particular Chong dialect. The Chong variety of Pong Nam Ron district, Chanthaburi province has not yet been studied. So, I want to study the phonological system of two major Chong dialects in Chanthaburi province. First dialect is Chong spoken in Khlong Phlu village, Khao Khitchakut district because there are many Chong speakers in this area and has not been studied. Another dialect is Chong spoken in Wang Kraphrae village, Pong Nam Ron district because the different pronunciation of consonants and vowels can be heard clearly between these two dialects.

1.2 Objective of the study

The objective of the thesis is to study and compare the two major Chong dialects : Khlong Phlu Chong, Khao Khitchakut district and Wang Kraphrae Chong, Pong Nam Ron district, both in Chanthaburi province, Thailand.

1.3 Benefit of the study

1. The benefit of this thesis is to know the phonological differences of the two major Chong dialects spoken in Khao Khitchakut and Pong Nam Ron districts, Chanthaburi province.

2. This study will be useful for comparative historical study on Mon-Khmer languages especially that of the Pearic branch.

3. This study is useful for the developing of Chong orthography.

1.4 Scope of the study

This study presents the phonology of KP Chong as the representative of Chong spoken in Khao Khitchakut district and WK Chong as the representative of Chong spoken in Pong Nam Ron district, Chanthaburi province.

1.5 Descriptive approach

This study follows the tagmemic model. The phonological hierarchy usually cover four ranks : intonation group, phonological word, syllable and phoneme.

1.6 General information about Chong

Chong is considered a minority language of Thailand. Chong speakers are indigenous people of the eastern part of Thailand especially in Rayong and Chanthaburi province. However, nowadays Chong speakers are found only in Chanthaburi. There are also Chong speakers in Cambodia. (Edmondson, 1996:107)

There is no written evidence about Chong history. I interviewed Chong people (my informants) in the village about their history such as "Who are they?" or "Where did they emigrate from?". They answered that they have lived in this area for generations and never emigrated from anywhere. The Chong of Thailand have a tale about a Chong mini-kingdom in Kuan Kraburi (one city of Chanthaburi now), between the ninth and the eighteenth century of the Buddhist Era (B.E). In the year 2310 B.E., King Taksin fought with the Burmese army and ordered the people in Chanthaburi to join the army. Most of the Chong did not want to join the Siamese army, so they moved to Khao Khitchakut area in the western part of Makham district, Chanthaburi province. (Joachim Schliesinger, 2000 : 71).

The Chong people call themselves [tɕʰɔ̀ːˀŋ] which means "people". The Chong people have rather dark skin and smaller body than average Thai people. They have curly hair, squarish face, wide forehead and jaws, square-chin, flat nostril, heavy mouth, big pop-eyes and thick brows. The Chong have their own traditional culture besides their language. The well known tradition is the wedding ceremony which has been performed nowadays. The Chong people

want to preserve and pass on their own traditions and characteristics to the younger generations. The government sector especially Local Chanthaburi Cultural Council is now promoting Chong traditions and cultures. For example, the Chong people are invited for demonstrated performance and singing at the local festivals every year.

There are about 2,000 Chong speakers in Thailand. The Chong population are found mainly in Khao Khitchakut, Makham and Pong Nam Ron districts. The majority are found in Khao Khitchakut district. The fluent Chong speakers may not be over 200 people (Suwilai, 2000 : 29). Most of the Chong speakers in Khao Khitchakut district are found mainly in Phluang, Takhian Thong and Khlong Phlu subdistricts. In KP village which is the site of my research there are 690 people : 331 males, 359 females and 211 families. About 92% of the population in this village are Chong people. In Pong Nam Ron district, Chong speakers are found in Thap Sai subdistrict. In WK village, where the data was collected, there are 1221 people : 636 males, 585 females and 255 families. About 30% of the population are Chong people.

At the present time Chong people are considered Thai citizen. Although, some Chong people still believe in animism and some of them are also Buddhists. They go to the temple to make merit and offer food to the monks on every special Buddhist day. Phrabhat Phluang (Buddhist footprint) is the holy place which Chong people respect. There is a festival at Phrabhat Phluang every year in February and March.

Most of the Chong people work on the orchard and some are laborers. They grow durian, rambutan, mangosteen, pomelo, jackfruit etc. Some also grow rubber plants and some have rice fields. They also grow vegetables such as chilies, peppers, string beans, convolvulus and cucumbers. In WK village, apart from growing fruit some of them grow corn or cardamon.

In the past, Chong houses were made of bamboo. The bamboo stem is cut into two halves to make the floor and the wall. Roof was made of salacca wallichiana leaf. At present, Chong houses are similar to Thai houses. The wall and floor are made of wood. The roof is made of corrugated iron sheet.

Figure 1 : The Local Chanthaburi Cultural Council promotes the native
performance at Phluang temple.

Figure 2 : The local performance and 'songs by Chong people.

Figure 3 : Chong people go to the temple to make merit.

Figure 4 : Khlong Phlu temple

Figure 5 : My informant's rambutan garden

Figure 6 : My informant's durian garden.

1.7 Sociolinguistic setting

Nowadays, there are a lot of Thai speakers settled in the Chong villages. There are also some Khmer and north-eastern Thai speakers. The elderly Chong people can speak Chong well and they use it in daily life. The middle-aged Chong can understand but can not speak Chong fluently. Chong descendants of less than twenty years old can speak Chong only a little or not speak it at all. The children speak standard Thai with the teacher because there is no Chong teacher and they are shy to speak Chong. Furthermore, the Chong language is influenced by modern mass media such as radio, television and newspaper. The Chong people must accept new culture and language into their daily life so they speak Chong less than before. The younger generation can speak Thai better. It is likely that Chong may disappear in the next few generations.

There are many Chong speakers live in KP village. Mr. Chern (เชิน), the former Kamnan recognizes the value of Chong language. He has been trying to preserve and record Chong language. He took the leadership in Chong language revitalization project with the cooperation of Chong people and Mahidol University staff. Moreover, Pho Khian (พ่อเขียน), an abbot of Krathing temple, can speak Chong well and like to write Chong words with Thai characters. The Chong speakers speak Chong with him when they visit his temple.

Outside KP village there are Chong communities in many villages such as Nam Khun, Lang Noen and Thung Kabin villages. The elderly Chong speakers still use Chong to communicate with Chong people in other villages. In Pong Nam Ron district, there are fewer Chong speakers than in Khao Khitchakut district. This area is bordered by Cambodia so there are many Khmer speakers. In Wang Kraphrae village, the village head is Chong but he can not speak Chong well. The elderly Chong still speak Chong in the village. The middle-aged can understand Chong language more than 50% but can not speak the language fluently. The younger people who are less than twenty years old can understand Chong less than 30% and can speak the language very little.

1.8 Information about Chanthaburi Province, Khao Khitchakut District and Pong Nam Ron District.

Chanthaburi Province is located in the eastern part of Thailand. It is about 250 kilometers from Bangkok. It is bordered by Cha Choeng Saw and Sa Kaew provinces in the north and by Trat Province and the Gulf of Thailand in the south. In the east it is bordered by Cambodia and in the west it is bordered by Rayong Province and the Gulf of Thailand.

The administration of Chanthaburi province is divided into 10 Districts.

1. Mueang District   (อ. เมือง)
2. Khlung District   (อ. ขลุง)
3. Laem Sing District   (อ. แหลมสิงห์)
4. Tha Mai District   (อ. ท่าใหม่)
5. Makham District   (อ. มะขาม)
6. Pong Nam Ron District   (อ. โป่งน้ำร้อน)
7. Soi Dao District   (อ. สอยดาว)
8. Kaeng Hang Maeo District   (อ. แก่งหางแมว)
9. Na Yai Am District   (อ. นายายอาม)
10. Khao Khitchakut District   (กิ่ง อ. เขาคิชฌกูฏ)

Khao Khitchakut district was separated from Makham district and established as a subdistrict in 1993. Khao Khitchakut district office is located in Tambon Phluang in the north of Chanthaburi province. It is about 24 kilometers from Chanthaburi city. In the north it is bordered by Soi Dao and Kaeng Hang Maeo districts, in the south by Mueang and Makham districts, in the east by Pong Nam Ron and Makham districts and in the west by Tha Mai and Kaeng Hang Maeo districts.

Khao Khitchakut district consists of five subdistricts and 41 villages:

1. Phluang subdistrict (9 villages)   (ต พลวง)
2. Takhian Thong subdistrict (9 villages)   (ต ตะเคียนทอง)
3. Khlong Phlu subdistrict (10 villages)   (ต. คลองพลู)

4. Chak Thai subdistrict (8 villages)   (ต. ซากไทย)

5. Can Khlem subdistrict (6 villages)   (ต. จันเขลม)

The Chong are found in all subdistricts.

Khlong Phlu subdistrict consists of 10 villages:

1. Khlong Kwian Loi village   (บ้านคลองเกวียนลอย)

2. Nam Khun (1) village   (บ้านน้ำขุ่น 1)

3. Namkhun (2) village   (บ้านน้ำขุ่น 2)

4. Khlong Phlu (1) village   (บ้านคลองพลู 1)

5. Khlong Phlu (2) village   (บ้านคลองพลู 2)

6. Thung Kabin village   (บ้านทุ่งกบินทร์)

7. Cham Ta Rueang village   (บ้านชำตาเรือง)

8. Lang Noen village   (บ้านหลังเนิน)

9. Khlong Ta In village   (บ้านคลองตาอิน)

10. Wang Yai Muk village   (บ้านวังยายมุก)

The Chong are found in Nam Khun (1), Nam Khun (2), Khlong Phlu (1), Khlong Phlu (2), Lang Noen, Thung Kabin and Cham Ta Rueang villages.

Pong Nam Ron district office is located in Thap Sai subdistrict in the north east of Chanthaburi province. It is about 42 kilometers from Chanthaburi city.

The original name of Pong Nam Ron district was Kam Phut (กัมพุช). It was established as a District in 1951. It was called Pong Nam Ron because there was hot springs in this area in the past. It is called Pong because it was near a canal.

Pong Nam Ron district is bordered by Soi Dao district in the north, by Khlung and Bo Rai district in the south, by Cambodia in the east and by Tha Mai and Makham districts in the west. It consists of five subdistricts and 42 villages:

1. Thap Sai subdistrict (9 villages).   (ต.ทับไทร)

2. Pong Nam Ron subdistrict (12 villages).   (ต.โป่งน้ำร้อน)

3. Nong Ta Khong subdistrict (8 villages).   (ต.หนองตาคง)

4. Thep Nimit subdistrict (7 villages).   (ต.เทพนิมิต)

5. Khlong Yai subdistrict (6 villages).   (ต.คลองใหญ่)

The Chong are found in Thap Sai and Pong Nam Ron subdistricts.

Thap Sai subdistrict consists of 9 villages :

1. Thap Sai village   (บ้านทับไทร)

2. Wang Kraphrae village   (บ้านวังกระแพร)

3. Phang Ngon village   (บ้านพังงอน)

4. Thung Krang village   (บ้านทุ่งกร่าง)

5. Dong Chik village   (บ้านดงจิก)

6. Map Khla village   (บ้านมาบคล้า)

7. Thung Muang village   (บ้านทุ่งม่วง)

8. Soi Sipsi village   (บ้านซอย 14)

9. Khao Tham Sarika village   (บ้านเขาถ้ำสาริกา)

The Chong people are in Thap Sai and Wang Kraphrae villages.

Cha Choeng Sao Province

Sa Kaeo Province

Chonburi

⊙ **Soi Dao**

Cambodia

⊙ **Kaeng Hang Maeo**

⊙

Khaokhitchakut

⊙ **Pong Nam Ron**

Rayong Province

⊙

Na Yai Am

⊙ **Makham**

⊙

Tha Mai

⊙ **Mueang**

Trat Province

⊙ **Khlung**

⊙

Laem Sing

N

Gulf of Thailand

Map 1 : Chanthaburi Province

Soi Dao District

Khao Khitchakut District

$\triangle$ 10%

$\odot$ **Chan Khlem**

Pong Nam Ron District

$\odot$ **Khlong Phlu**

$\triangle$ 60%

$\triangle$ 80%

$\odot$ **Takhian Thong**

$\odot$ **Phluang**

$\triangle$ 30%

Tha Mai District

Makham District

$\triangle$ 20%

$\odot$ **Chak Thai**

N

Mueang District

$\triangle$ **Chong area**

Map 2 : Khao Khitchakut District

Cambodia

Soi Dao District

⊙ **Nong Ta Khong**

⊙ **Thepnimit**

△ 30%

⊙ **Thap Sai**

△ 10%

⊙ **Pong Nam Ron**

Khao Khitchakut

District

⊙ **Khlong Yai**

Makham District

Khlung District

N

△ **Chong area**

Map 3 : Pong Nam Ron District

Map 4 : Khlong Phlu subdistrict

Ban Tham-sarika

Ban Thung Krang

Ban Dong Chik

△ 10%

△ 10%

△ 30%

△ 5-10%

Ban Wang Kraphrae

Ban Phang Ngon

Ban Soi Sipsi

△ 5-10%

△ 20%

△ 10%

Ban Thap Sai

Ban
Map Khla

Ban △ 10%
Thung Muang

N

△ Chong area
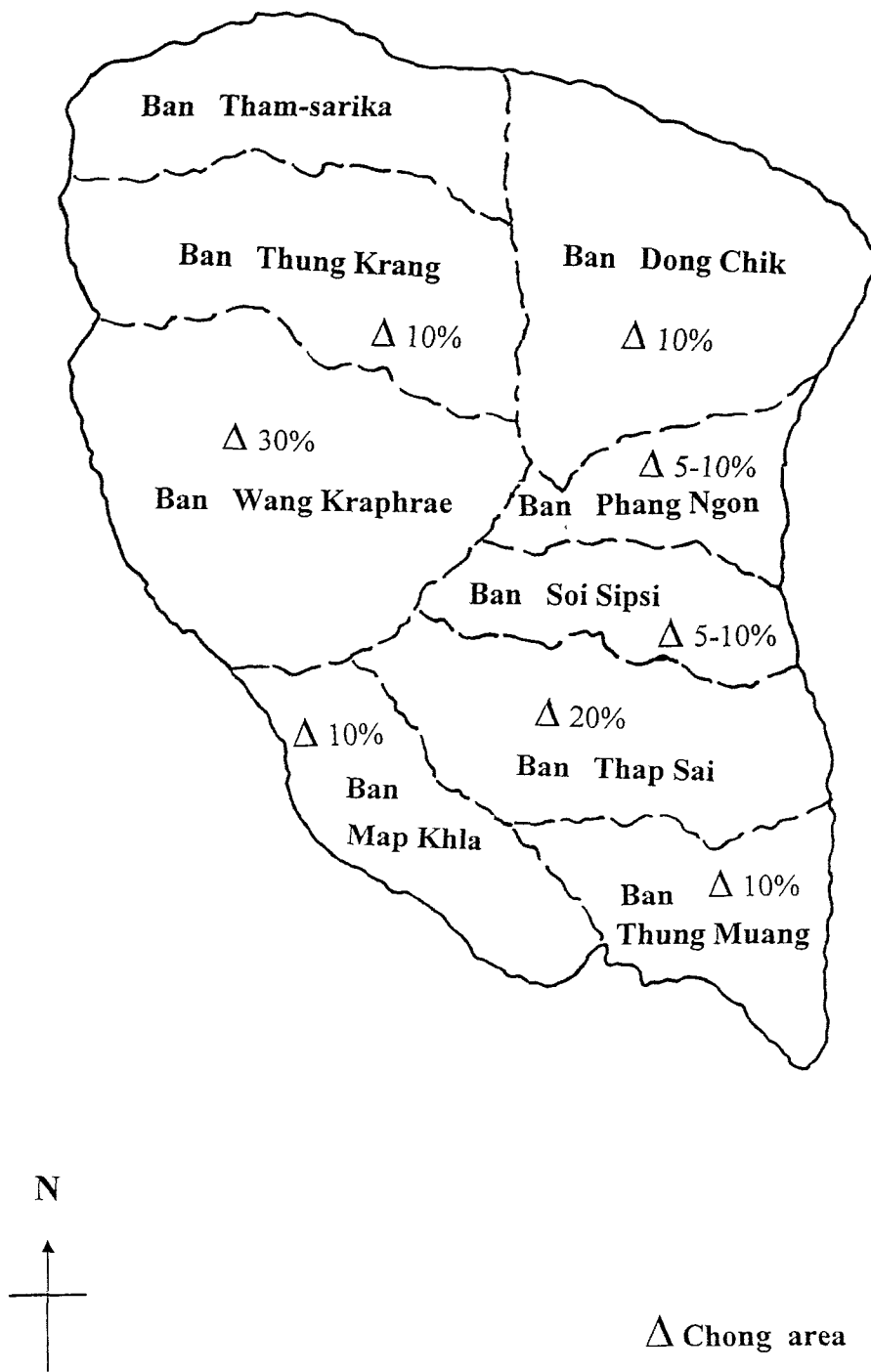
Map 5 : Thap Sai subdistrict

1.9 Language Classification

The Chong language belongs to the Pearic branch, Mon-Khmer subfamily, Austroasiatic language family.

The following diagram has been modified from Gerard Diffloth's language classification.

Austroasiatic

├── Munda subfamily
├── Nicobarese subfamily
└── Mon-Khmer subfamily
    ├── Khmer
    ├── Khmuic
    ├── Pearic
    │   ├── Pear
    │   ├── **Chong**
    │   ├── Samre
    │   ├── Angrak
    │   └── Sa'och
    ├── Monic
    ├── Katuic
    └── etc.
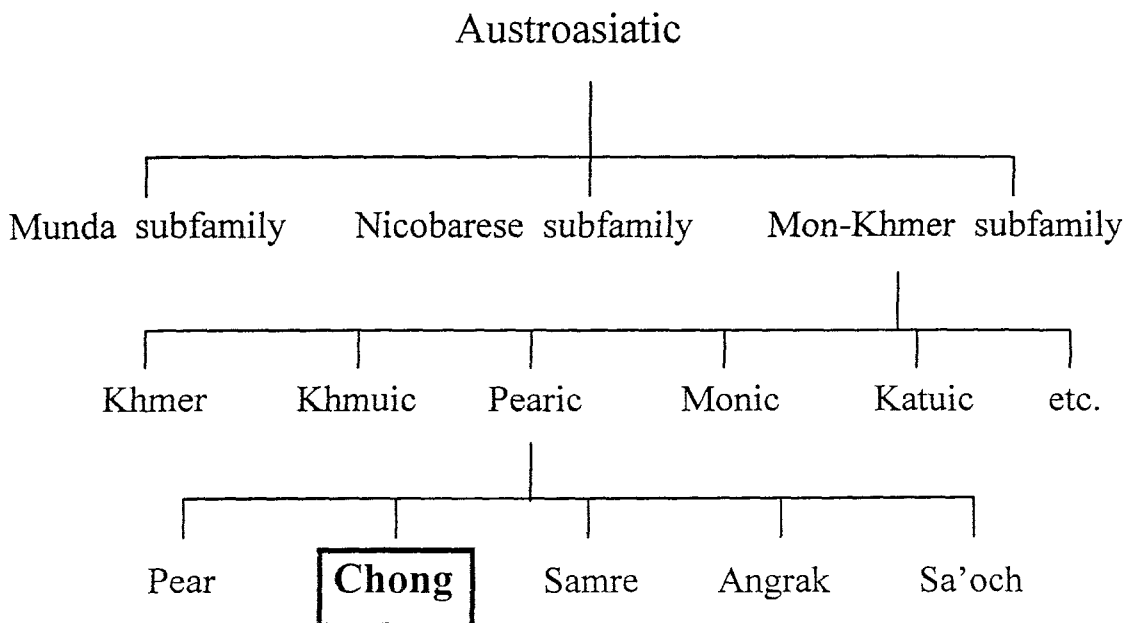
Figure 7 : Austroasiatic Language Family. (Adapted from Gerard Diffloth 1974)

CHAPTER II
LITERATURE REVIEWS

There are eight pieces of work done on Chong. They comprise of five articles and three M.A. theses. Most of them describe the sound system and some syntactic structure of Chong in a particular village of Khao Khitchakut district. There are two articles on instrumental study of Chong registers and two articles on Proto- Pearic and Pearic vocabulary.

2.1 The phonology of Chong (Huffman, 1983). Huffman concludes that there are 18 initial consonants / p-, t-, c-, k-, ʔ-, b-, d-, m-, n-, ɲ-, ŋ-, f-, s-, h-, w-, l-, r-, y- / and 12 final consonants / -p, -t, -c, -k, -ʔ, -m, -n, -ɲ, -ŋ, -h, -w, -y /. There are 16 initial clusters / ph-, th-, ch-, kh-, pr-, tr-, kr-, mr-, pl-, kl-, ml-, phr-, khr-, phl-, kw-, khw- /. There are 12 vowel phonemes : / i, e, ɛ, æ, ɨ, ə, a, u, o, ɔ, ɤ, ɑ / and every vowel has two registers. He called the two registers as 'tense' and 'lax'. Therefore the Chong has 46 nuclei. They consist of short vowels, long vowels and diphthongs. There are two registers. They are a 'tense' or 'clear' or 'head' manner (called 1st register) and a 'lax' or 'breathy' or 'chest' manner (called 2nd register). He analyzed a glottal feature occur before a final consonant as a prefinal glottal / ʔ /. By his analysis / ʔ / clusters as a prefinal element with finals / p, t, c, k, m, n, ɲ, ŋ, w, y /.

2.2 An instrumental study of Chong register (L-Thongkum T., 1991). Theraphan L-Thongkum researched with Gerard Diffloth on the Chong register in Makham district, Chanthaburi province and Bo Rai district, Trat province. They chose two female Chong informants from Krathing village, Phluang subdistrict, Makham district. She concludes that there are four sets of register

complex : R_1, R_2, R_3 and R_4. R_1 consists of clear voice, higher pitch, more open or on-gliding vowel. R_2 consists of clear-creaky voice, high-falling pitch and more open vowel. R_3 consists of breathy voice, lower pitch and raised vowel. R_4 consists of breath-creaky voice, low-falling pitch and raised vowel. In her opinion, the Chong language is in the process of becoming a tonal language.

2.3 Voice qualities and inverse filtering in Chong (Edmondson, 1993). Jerold A. Edmondson collected data from eight male Chong speakers in Khlong Phlu subdistrict Khao Khitchakut district of Chanthaburi province. He used the Rothenberg Mask as an instrument. He agrees with Theraphan that there are four registers in Chong.

2.4 A Pearic vocabulary (Headley, 1977). Robert K. Headley cited Baradat (1941) who divided Pearic groups into six groups : Eastern Pear, Western Pear, Pear of Kom Pong Thom province, Chong of Thailand, Samre of Siem Reap province and Saoch of Kam Pot province. Headley noticed that Pearic group perhaps has four distinct languages : Pear, Chong, Samre and Saoch. He collected about 900 Pear vocabulary and classified by lexical words into two groupings. Pear language is close to Chong language, while Samre is close to Saoch. He concluded that the Pearic languages appear to have an inventory of phonemes which is close to that of Khmer and typical for Mon-Khmer languages.

Consonants

	labial	dental	palatal	velar	glottal
stops	p	t	c	k	ʔ
	b	d		g	
fricatives		s			h
nasals	m	n	ɲ	ŋ	
flap		r			
lateral		l			
semi-vowels	w		y		

vowels

	front		central		back	
high	i	iː	ɨ	ɨː	u	uː
mid	e	eː	ə	əː	o	oː
		ɛː				
low	a	aː			ɔ	ɔː

Diphthongs

ie,   iə,   ea,   ew,   ae ([aɛ]),   aə,   aw,   ao
ɨə,   əw
uə,   oa

2.5 Proto-Pearic and the classification of Pearic (Headley, 1985). Robert K. Headley studied Proto-Pearic and criterion for classifying the Pearic dialects. He collected the data from Baradat's work (1941) for the main source of his study. Other sources of data are from Huffman's work (1976), and also the published works of Martin (1974a and b) and Headley (1977 and 1978). He reconstructed the phonetic system of Proto-Pearic as follows :

consonants

	labial	dental	palatal	velar	glottal
stops - vcl.	p	t	c	k	ʔ
(?)	P	T	C	K	
vcd.	b	d	j	g	
Fricatives-vcl.		s	hy		h
vcd.	v		y		
Nasals-vcl.	hm	hn		hŋ	
vcd.	m	n	(ñ)	ŋ	
Trill-vcl.		hr			
vcd.		r			
Lateral- vcl.		hl			
vcd.		l			

vowels

	front	mid	back
high	i	ɨ	u
mid-high	e	(ə)	o
mid-low	ɛ		ɔ
low		a	

All of the vowels cluster with / ː /

For the classification of the Pearic dialects, he suggested the classification of Pearic dialects as follows :

    1. Northeastern - Pearic of Kom Pong Thom (PK)

    2. Southeastern

        2.1 Suoi of Kom Pong Speu (SU)

        2.2 Saoch of Veal Renh (PC, PS)

    3. Western

        3.1 Chong of Chanthaburi (H)

        3.2 Chong hǝǝp (CH)

        3.3 Chong lɔɔ (CL)

    4. South Central

        4.1 Samre of Pursat (EP, SE, PM)

        4.2 Chong of Baradat (northeastern Trat province) (TC)

        4.3 Chong of Trat (CI)

    5. North central - Somray of Battambang (SY, WP)

2.6 A Phonology of Chong at Muban Takhian Thong Tambon Takhian Thong Makham District Chanthaburi Province (Surekha, 1982). Surekha concludes that there are 21 consonant phonemes   / p, t, c, k, ʔ, pʰ, tʰ, cʰ, kʰ, b, d s, h, m, n, ɲ, ŋ, l, r, w, y / that can occur in the initial position and 12 phonemes : / p, t, c, k, ʔ, h, m, n, ɲ, ŋ, w, y / that can occur as final consonants. The clusters are / pr, pl, pʰr, pʰl, kw, kr, kl, kʰr, kʰl, kʰw, ml /. There are 18 single vowels : / i, ii, e, ee, ɛ, ɛɛ, ɨ, ɨɨ, ǝ, ǝǝ, ɔ, ɔɔ, a, aa, u, uu, o, oo / and 6 diphthongs / ia, ɨa, ua, iia, ɨɨa, uua /. She also presented four registers : clear voice / R1 /, clear voice followed by glottal constriction / R2 /, breathy voice / R3 / and breathy voice followed by glottal constriction / R4 /. There are 10 types of syllable structure in Chong language.

2.7   A Description of The Chong Language of Thung Ta In Chanthaburi, An Austroasiatic Language in Thailand (Sirikan,1987). . According to Sirikan, there are 21 consonant phonemes / p, t, c, k, ʔ, pʰ, tʰ, cʰ, kʰ, b, d s, h, m, n, ɲ, ŋ, l, r, w, y /, 11 clusters / pl, pʰr, pʰl, kr, kl, kʰr, kʰl, kw, kʰw, ml / and 12 final consonants / p, t, c, k, ʔ, h, m, n, ɲ, ŋ, w, y /. There are 18 single vowels : / i, ii, e, ee, ɛ, ɛɛ, ɨ, ɨɨ, ə, əə, ɔ, ɔɔ, a, aa, u, uu, o, oo / and three diphthongs / ia, ɨa, ua /. The four registers are clear voice / R1 /, clear voice followed by glottal constriction / R2 /, breathy voice / R3 / and breathy voice followed by glottal constriction / R4 /. There are nine types of syllable structures. Most of Chong words are monosyllabic and disyllabic. The word order in Chong language is SVO.

2.8   A Description of the Chong Language at Muban Nam Khun 1, Tambon Khlong Phlu, Amphoe Makham, Chanthaburi Province (Saiphon, 1991). Saiphon found that there are 21 consonant phonemes / p, t, c, k, ʔ, pʰ, tʰ, cʰ, kʰ, b, d s, h, m, n, ɲ, ŋ, l, r, w, y /, 11 clusters / pl, pʰr, pʰl, kr, kl, kʰr, kʰl, kw, kʰw, ml / and 12 final consonants / p, t, c, k, ʔ, h, m, n, ɲ, ŋ, w, y /. There are 18 single vowels : / i, ii, e, ee, ɛ, ɛɛ, ɨ, ɨɨ, ə, əə, ɔ, ɔɔ, a, aa, u, uu, o, oo / and three diphthongs / ia, ɨa, ua /. The researcher mentioned three registers in Chong. They are clear voice / R1 /, clear voice followed by glottal constriction / R2 /, breathy voice / R3 /. Most of the words are monosyllabic or disyllabic. There are free and bound morphemes. The word type is complex, compound and reduplication. There are four types of phrase : noun phrases, verb phrases, place phrases and time phrases and three kinds of sentences: statement, imperative and interrogative.

CHAPTER III

METHODOLOGY

This research project is a field research carried out in Chong villages in Chanthaburi province, Thailand.

3.1 Survey of the research area

The first time I went to a Chong village was in March 1999 during the linguistic students' field trip where I went as a research assistant to recheck the number of Chong people for the Mahidol linguistic mapping project. I found that there are two interesting groups of Chong people in Chanthaburi province. One is a large group at Khao Khitchakut district and another is a small group at Pong Nam Ron district. These two groups have some different features. I decided to study Chong for my thesis. I started to study the work done on Chong language and chose the area for investigation. I have selected the Chong spoken in Khlong Phlu village (Khao Khitchakut district) and the Chong spoken in Wang Kraphrae village (Pong Nam Ron district) for my study. There still are many Chong people who can speak Chong well in this area. The basic information was collected in July, September and December 1999. In April 2000 and June 2000, the collected data were rechecked. The data were also rechecked with the Chong speakers during the Thai-based Chong orthography meeting at Mahidol University.

3.2 Data collection

3.2.1 Wordlist

I have prepared a wordlist of about 2,000 words used in daily life. This wordlist is adapted from the Swadesh - Southeast Asian wordlist (revised 1960), Surekha's thesis (1982), and Sirikan's thesis (1987). The wordlist comprises words belong to different semantic fields, such as nature, geography, plants, animals

body parts, food and cooking, kinship terms and pronouns including some basic sentences. I also used illustrations and real objects or plants found in the village in eliciting data. The wordlist used in this thesis for both dialects are provided in the appendix.

3.2.2 Eliciting data

Two main informants were selected : one from Khlong Phlu village, Khao Khitchakut and one from Wang Kraphrae village, Pong Nam Ron district.

The informants were chose under the following criteria.

1) The informants must be born in Khlong Phlu village Khao Khitchakut district or Wang Kraphrae village Pong Nam Ron district, Chanthaburi province and have never moved or lived in other places for a long time.

2) The informants are more than fifty years old because those less than 50 cannot speak Chong very well. Those over fifty chosen for the study speak Chong language in their daily life.

3) The informants should be male and female because there is no difference of gender in using the language.

4) The informants need to have a complete set of articulation, so that they can pronounce the sounds clearly.

5) The informants must have enough time to help me.

3.2.3 Transcribing and recording the data

The data are collected, transcribed into IPA phonetic symbols and recorded on cassettes. Then, the data were arranged into rhyming lists for the sound checking process. After that the transcribed words from the wordlist are rechecked with the informant again.

3.3 Sources of data : The informants

3.3.1 Khlong Phlu village

1) Mrs. Chin Phanphay (นางจิ๋น ผันผาย) is the main informant. She is fifty-five years old. Her husband is also a Chong speaker. She was born in

Khlong Phlu village. She speaks Chong and Thai well. She has four sons and one daughter. She is a house-wife. She had never been in school.

2) Mrs. Phrom Homwan (นางพร้อม หอมหวาน) is seventy-two years old. She was born in Khlong Phlu village and never moved to other places. She has one son and five daughters. She is a house-wife. She had never been in school.

3) Mr. Chian Phanphay (นายเฉียน ผันผาย) is sixty-one years olds. He is Mrs. Chin's husband. He is an orchardman. He finished Prathom 4.

3.3.2 Wang Kraphrae village

1) Mrs. Lim Phut-thewan (นางลิ้ม พุทเทวรรณ์) is the main informant. She is sixty-eight years old. Her husband is Cambodian. She was born in Wang Kraphrae village. She has four sons and one daughter. She is a house-wife. She finished Prathom 4 and so she can read and write a little Thai.

2) Mrs. Sae Sangsahat (นางแส่ สังขหัส) is sixty-eight years old. Her parents are Chong. She has two sons and three daughters. She is a laborer. She had never been in school but she can speak Thai. She can speak Chong fluently and uses the language in daily life with her neighbors.

Figure 8 : Main informants (Mr. Chian and Mrs. Chin)
They were taken picture with their grandson and granddaughter

Figure 9 : An elderly Chong woman, Mrs. Phrom (and her granddaughter)
These two figure are the informants at Khlong Phlu village

Figure 10 : Main informant (Mrs. Lim)

Figure 11 : Mrs. Sae

These two figures are the informants at Wang Kraphrae village.

3.4 Data analysis

The Chong phonological structure is analyzed by using the Tagmemic framework. Tagmemics explains the phonological structure of a language in terms of a hierarchy of ranks. The analysis starts with the highest rank (the intonation group) and proceeds to the lowest rank (the phoneme) as shown in the following diagram.
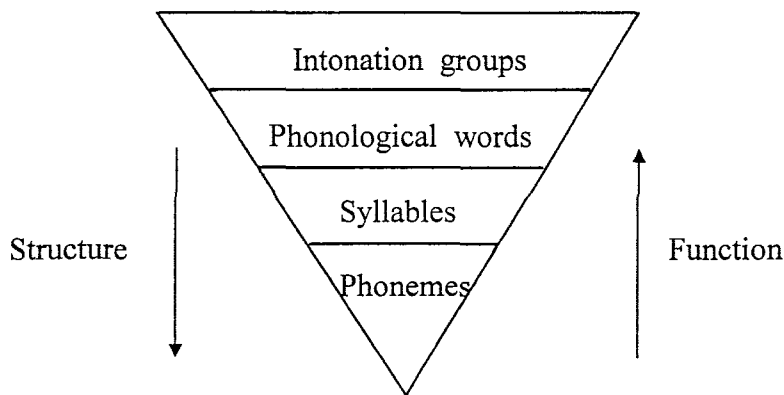
Figure 12 : The phonological hierarchy

The intonation group is the unit of the highest level of the hierarchy as here presented and has no statable function. Its structure is stated in terms of the phonological word.

The phonological word is the unit above the syllable in the phonological hierarchy. Its structure is described in terms of syllables and functions in the intonation group.

The syllable is defined as the rank whose unit functions in the phonological word, and has a structure described in terms of phonemes.

The phoneme is the unit of the lowest level of the hierarchy and has no statable function. It functions in the syllable and the phonetic forms of the phoneme may be described.
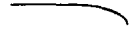
CHAPTER IV
KHLONG PHLU CHONG PHONOLOGY

4.1 The Intonation Group

In Khlong Phlu Chong, there are two types of intonation contour : the falling contour and the rising contour.

4.1.1 The falling contour

The falling contour in Chong normally occurs in declarative sentence, content question and request. It is indicated by [⌐‾‾‾‾‾‾⌐].
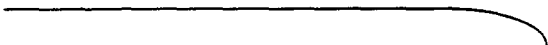
1) Declarative sentence

The declarative is a type of sentence or clause which is typically used in the expression of a statement. It can be affirmative or negative.

/ wən^{R4} dak^{R1} ca^{R1} ceːw^{R1} can^{R1}nəbuːj^{R1} /
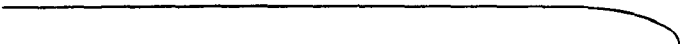
tomorrow he/ she will to go Chanthaburi

'He /She will go to Chanthaburi tomorrow.'

/ cʰan^{R1} coːk^{R1} riw^{R3} jaŋ^{R3} maː^{R3} /

I   run fast the same as horse

'I run as fast as a horse.'

/ ʔuːɲ^{R1} klic^{R1} ʔuːt^{R1} mɔŋ^{R3} kʰwan^{R1} nətʰaw^{R3} /

father to cut wood with   ax

'Father used ax to cut wood.'

Negation in Chong

The negation in Chong is indicated by the negative word ʔiᴿ¹ before the verb and ʔihᴿ¹ or ʔihɔhᴿ¹ 'not' at the end of the utterance. The word ʔihɔhᴿ¹ make the sound softer. ʔiᴿ¹ before the verb can be dropped in rapid speech.

/ cʰanᴿ¹ (ʔiᴿ¹)kʰahᴿ¹ dakᴿ¹ ʔihᴿ¹ /   'I don't know he/ she.'

  I   (not)know   he/ she   not

/ cʰanᴿ¹ cʰoːpᴿ³ cʰaːᴿ¹ lacʰiwᴿ¹ ʔihᴿ¹   'I don't like to eat vegetable.'

  I   like   to eat   vegetable   not

/ (ʔiᴿ¹)ʔiːnᴿ¹ cʰɨmᴿ³ kɨjᴿ¹ tɔŋᴿ¹ ʔanᴿ¹ ʔihᴿ¹ /

(not)have   people stay/ live house this   not

'There is no people in this house.'

/ cʰanᴿ¹ tʰɨmᴿ¹ plɔŋᴿ¹ (ʔiᴿ¹) pɛnᴿ¹ ʔihᴿ¹ /   'I can not cook rice.'

  I   cook   rice   (not) can   not

/ cʰanᴿ¹ pʰuːtᴿ³ sɛːmᴿ² (ʔiᴿ¹) kʰlɔːŋᴿ³ ʔihᴿ¹ /

  I   speak   Thai   (not) fluently   not

'I can not speak Thai fluently.'

/ ʔiːnᴿ¹ kəpiʔᴿ¹ ʔɨtᴿ¹ cʰaːᴿ¹ ʔihɔhᴿ¹ /   'There is nothing to eat.'

  have   what   give   eat   not + FP

/ kʰrɛːŋᴿ² ʔoːᴿ¹ cʰanᴿ¹ pʰicᴿ³ (ʔi)lakᴿ³ ʔihᴿ¹ /   'I can not sleep last night.'

Night yesterday   I   lie down (not)sleep not

2) The content question

The falling contour occurs in content question. The content question words in Chong are mɔj^{R3} ʔih^{R1} 'how much, how many' kəpiʔ^{R1} 'what', ʔemih^{R1} 'who', pənih^{R1} 'where', tʰɔː^{R3} ʔih^{R1} 'why', jaŋ^{R3}ʔih^{R1} 'how', nəʔih^{R1} 'when'.

/ dak^{R1} tʰɔː^{R3} kəpiʔ^{R1} /   'What does he/ she do?'

he/ she   do   what

/ dak^{R1} cɛːn^{R2} nəʔih^{R1} /   'When did he/ she come?'

he/ she   come   when

/ dak^{R1} pruːk^{R3} saː^{R1} nəʔih^{R1} /   'When did he/ she marry?'

he/ she marry   together when

/ toʔ^{R1}tuə^{R1}ʔan^{R1} raː^{R3}kʰaː^{R3} mɔj^{R3}ʔih^{R1} /   'How many price of this table?'

table cl.   this   price   how many

/ kɛː^{R1} cʰɨː^{R3} jaŋ^{R3}ʔih^{R1} /   'What is your name?'

you   name   how

/ mih^{R1} waːŋ^{R2} ceːw^{R1} mɔŋ^{R3} cʰan^{R1} nec^{R2} /   'Who want to go with me?'

who   want   go   with   I   some

/ wən^{R3}ʔan^{R1} tʰɔː^{R3}ʔih^{R1} (ʔi^{R1})ceːw^{R1} rɔŋ^{R3}riən^{R1} /

today   why   (not) go   school

'Why you don't go to school today?'

/ kəpiʔ^{R1} kɨj^{R1} reʔ^{R1} kəpaw^{R1} /   'What is in a bag?'

what   stay   in   bag

/ tɔŋ^{R1} kɨj^{R1} pənih^{R1} /   'Where is your house?'

house   stay   where

3) Request

The request has the falling contour. In making a request, the word ʔuːc^{R1} 'little' is used to make the statement sounds polite.

/ cʰuəj^{R1} wɔk^{R1} plɔŋ^{R1} ʔɨt^{R1} cʰan^{R1} ʔuːc^{R1} /

help   to scoop rice(cooked) give   I   little

'Please scoop some rice to me.'

/ cʰuəj^{R1} pəːk^{R3} pak^{R1}kətuː^{R1} ʔit^{R1} ʔuːc^{R1} /

help   to open   door   give   little

'Help me to open the door, please.'

/ cʰuəj^{R1} tʰiw^{R3} kʰɔːŋ^{R1} ʔit^{R1} ʔuːc^{R1} /

help   buy   something give   little

'Help me to buy something, please.'

4.1.2 The rising contour

The rising contour occurs in polar question. The question words in Chong are hiːt^{R1}, ʔidoː^{R1}, ʔitɛː^{R1}, ʔitaj^{R1}. They occur at the end of the sentence. It is indicated by [   ].
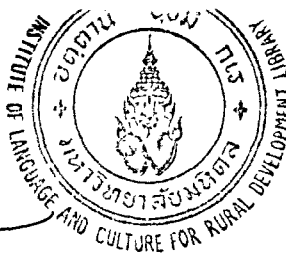
/ ʔan^{R1} ʔaw^{R1} kʰɔːŋ^{R1} kɛː^{R1} ʔitɛː^{R1} /

this　shirt　belong　you　qw.

'Does this shirt belong to you?'

/ tʰɔm^{R1} cʰoːj^{R1} haːj^{R1} həːj^{R1} ʔidoː^{R1} /

uncle to grow rice　already　qw.

'Has the uncle grown rice already?'

/ tʰɔm^{R1} cʰoːj^{R1} haːj^{R1} ʔitaj^{R1} /　　　'Does the uncle grow rice?'

uncle　grow　rice　qw.

/ kɛː^{R1} səbaːj^{R1} diː^{R1} ʔitɛː^{R1} /　　　'Are you well?'

you　well　qw.

/ kɛː^{R1} waːŋ^{R2} klap^{R1} tɔŋ^{R1} ʔitɛː^{R1} /　　　'Do you want to go home?'

you　want　return　house　qw.

/ ʔan^{R1} ʔaw^{R1} kʰɔːŋ^{R1} kɛː^{R1} hiːt^{R1} /　　　'Does this cloth belong to you?'

this　cloth　belong　you　qw.

/ kɛː^{R1} kəːj^{R3} ceːw^{R1} kuŋ^{R1}tʰeːp^{R3} hiːt^{R1} /　　　'Do you ever go to Bangkok?'

you　ever　go　Bangkok　qw.

/ təlaːt^{R1} kɨj^{R1} ŋaːj^{R4} tɔŋ^{R1} hiːt^{R1} /　　　'Is the market far from home?'

market　stay　far　home　qw.

/ kɛː^{R1} cʰoːp^{R3} cʰaː^{R1} cʰiw^{R3} haj^{R1} hiːt^{R1} /　　　'Do you like hot curry?'

you　like　eat　curry　hot　qw.

4.2 Phonological word

The phonological word in Chong may also be called the stress-groups. The stress is a term used in phonetics to refer to the degree of force used in producing a syllable. The usual distinction is between stressed and unstressed syllables, the former being more prominent than the latter. The prominence is usually due to an increase in loudness of the stressed syllable, but increase in length and often pitch may contribute to the overall impression of prominence. (Crystal 1991 : 328) There are three types of phonetic stress in Chong language : strong, weak and unstress.

The strongly stressed syllable is defined as a syllable which is loudest and longest in duration. It always occurs on the major syllable. It is marked by ['] in phonetic transcription. The weakly stressed syllable is defined as a syllable which has less volume than the strongly stressed syllable but has more volume than the unstressed syllable. It always occurs on the presyllable which has a final consonant. It is marked by [ֽ] in phonetic transcription. The unstressed syllable is defined as a syllable which has less volume than the weakly syllable. It occurs in an open presyllable with a neutral vowel. It is not marked in phonetic transcription. Since stresses are predictable in word, they are not phonemic and they are not marked in the phonemic transcription.

Symbols used in word

[']	strong stress
[ֽ]	weak stress
[ ]	unstress
s	refer to major syllable which is strong stress
w	refer to presyllable which is weak stress
u	refer to presyllable which is unstress

4.2.1 Word structure

The word in Chong is described in terms of syllable which are marked by stress occurring on the syllable. The last syllable is always the nucleus

which has strong stress. The peripheral syllables are weak stress or unstress. In KP Chong, there are three types of word : monosyllabic, disyllabic and trisyllabic words. The word structure can be u ˌwˈs   or ˌw uˈs

1) Monosyllabic word

A monosyllabic word is a word with only one major syllable. The strong stress is therefore on that only syllable. It can be both open and closed syllable. The structure of monosyllabic word is ˈs.

Examples :

/ maː^{R3} /	[ˈma̤ːˏ]	'horse'
/ cʰiː^{R1} /	[ˈtɕʰiː]	'louse'
/ pʰluː^{R3} /	[ˈpʰlṳːˏ]	'leg'
/ ʔɔːŋ^{R1} /	[ˈʔɔːŋ]	'wasp'
/ kuːp^{R2} /	[ˈkûːˀpˀ]	'frog'
/ pʰleːw^{R3} /	[ˈpʰle̤ːˏw]	'fire'
/ kʰluːm^{R2} /	[ˈkʰlûːˀm]	'urinate'
/ moːj^{R4} /	[ˈmṳ̀ːˇˀj]	'one'

2) Disyllabic word

The disyllabic word in Chong consists of a presyllable and a major syllable. The strong stress always occurs on the last syllable. The first syllable has normally an unstress or a weak stress. It can be classified according to the structure of the stress pattern into two sub-types as follows.

Sub-type I

This sub-type is composed of an open presyllable which is unstressed followed by a major syllable which is strongly stressed. Its structure is uˈs.

e.g.   / kənaːj^{R1} /   [kə ˈnaːj]   'elephant'

| / kətiː^{R1} / | [kə ˈtiː] | 'eight' |

/ kəkʰrətR3 /	[kə ˈkʰrə̰ t˺]	'termite'
/ səbuːnRI /	[sə ˈbuːn]	'womb'
/ kəcʰuːjR2 /	[kə ˈtɕʰûː˞ʔj]	'buttocks'
/ kənaːkR2 /	[kə ˈnâː˞ʔk˺]	'crow'
/ kəlɔːŋR4 /	[kə ˈlɔ̰̌ː˞ʔŋ]	'broad-walk'

The following table show the co-occurrence of presyllable which can occur with the next major syllable.

Table 1 : The co-occurrence of the open presyllable and the initial consonant of the next major syllable.

+ : occurrence

(blank) non-occurrence

	p	pʰ	b	t	tʰ	d	c	cʰ	k	kʰ	ʔ	m	n	ɲ	ŋ	s	h	l	r	w	j
pə			+		+				+			+			+	+			+		
tə				+					+											+	
tʰə															+						
kə	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+
kʰə												+	+	+	+				+	+	+
mə									+						+		+		+		
sə		+				+											+			+	
lə		+	+	+							+				+						
prə											+										

The co-occurrence of the open presyllable and the initial consonant of the next major syllable as shown in the table 1 can be summarized as follows.

1. The open presyllable / pə / can occur with single initial consonant / t, d, k, m, ŋ, s, r / of the next major syllable as in :

/ pətaː RI /	'below'
/ pədɨŋ RI /	'up, above'
/ pəkaːj R2 /	'out side'

/ pəmoːn^{R3} /   'behide'

/ pəŋaːj^{R3} /   'front'

/ pəsaː^{R1} /   'son / daughter-in-law'

/ pəreʔ^{R1} /   'inside'

2. The open presyllable / tə / can occur with single initial consonant / t^h, k, w / of the next major syllable as in :

/ tət^{h}eʔ^{R1} /   'ground'

/ təkɨp^{R1} /   'under the floor'

/ təwɛc^{R1} /   'the whorl of hair on top of
                                      the head'

3. The open presyllable / t^{h}ə / is only followed by / ŋ / as in :

/ t^{h}əŋiʔ^{R1} /   'daytime'

4. The open presyllable / kə / can occur with all initial consonants except / ʔ / of the next major syllables as in :

/ kəpaːt^{R2} /   'cotton'

/ kəp^{h}aŋ^{R3} /   'swamp'

/ kəbuːj^{R1} /   'roof '

/ kətaː^{R1} /   'duck'

/ kət^{h}ən^{R3} /   'calf of leg'

/ kədaːj^{R1} /   'centre'

/ kəcəːm^{R1} /   'eyebrow'

/ kəc^{h}uːj^{R2} /   'buttocks'

/ kəkeːp^{R1} /   'hut'

/ kək^{h}uj^{R3} /   'shade, shadow'

/ kəmeː^{R1} /   'guest'

/ kəneːw^{R1} /   'sickle'

/ kəɲaːj ^{R3} /	'to tell'
/ kəŋoː ^{R3} /	'sesame'
/ kəsuk ^{R1} /	'hair'
/ kəhiː ^{R1} /	'pastle'
/ kəloːn ^{R2} /	'navel'
/ kərɨt ^{R1} /	'walking stick'
/ kəwaːɲ ^{R1} /	'cardamon'
/ kəjaː ^{R1} /	'scorpion'

5. The open presyllable / kʰə / can occur with single initial consonant / m, n, ɲ, ŋ, l, w, j / of the next major syllable as in :

/ kʰəmoʔ ^{R1} /	'stone, rock'
/ kʰəneːt ^{R2} /	'comb(n.)'
/ kʰəɲah ^{R1} /	'charcoal'
/ kʰəŋaːm ^{R2} /	'husked rice'
/ kʰəlɛh ^{R1} /	'to remove stitches'
/ kʰəwaːk ^{R1} /	'hoe'
/ kʰəjaʔ ^{R1} /	'ginger'

6. The open presyllable / mə / can occur with single initial consonant / kʰ, ŋ, h, r / of the next major syllable as in :

/ məkʰɔːŋ ^{R1} /	'shin'
/ məŋɛː ^{R1} /	'small bee'
/ məhaːm ^{R1} /	'blood'
/ məruj ^{R2} /	'fruit fly'

7. The open presyllable / sə / can occur with single initial consonant / b, d, h, w / of the next major syllable as in :

/ səbuːn ^{R1} /	'womb'

/ sədaŋ[R1] /	'post in the central area of a house'
/ səha:j[R1] /	'adultery'
/ səwiŋ[R1] /	'to spin (yarn)'

8. The open presyllable / lə / can only occur with single initial consonant / ŋ, p[h], b, t, ʔ / of the next major syllable as in :

/ ləŋum[R1] /	'to murmur'
/ ləp[h]a:ŋ[R3] /	'dawn'
/ ləbɨŋ[R1] /	'lagoon'
/ lətɔŋ[R1] /	'room'
/ ləʔa:w[R1] /	'gulf'

10. The open presyllable / prə / is only followed by / ʔ / as in :

| / prəʔo:[R1] / | 'yesterday' |

There are two open presyllable / kə, k[h]ə / which can preceed the consonant cluster of the next major syllable.

The presyllable / kə / is followed by / p[h]l, kl, kr, k[h]l, k[h]r / as in :

/ kəp[h]lə:ŋ[R1] /	'gun'
/ kəklɛʔ[R1] /	'fish scale'
/ kəkru:k[R1] /	'basket'
/ kək[h]le:t[R2] /	'slide'
/ kək[h]rup[R3] /	'to pounce on'

The presyllable / k[h]ə / is only followed by / pr / as in :

| / k[h]əpraŋ[R1] / | 'guava' |

Sub-type II

The word in this type is rather rare. This sub-type consists of a closed presyllable and a major syllable. The strong stress is on the major syllable and the weak stress is on the presyllable. Its structure is ˌwˈs.

Examples :

/ cam^{R1} kʰɨn^{R1} /	[ˌtɕam ˈkʰɨn]	'woman'
/ cam^{R1} lɔːŋ^{R3} /	[ˌtɕam ˈlo̯ˇːŋ]	'man (vs. woman)'
/ biŋ^{R1} baːŋ^{R1} /	[ˌbiŋ ˈbaːŋ]	'spider'
/ caŋ^{R3} kʰriw^{R1} /	[ˌtɕa̯ˎ ŋ ˈkʰriw]	'butterfly'
/ caŋ^{R1} kriːt^{R2} /	[ˌtɕaŋ ˈkriːʔt˺]	'cricket'
/ mən^{R3} kaːk^{R1} /	[ˌme̯ˎ n ˈkaːk˺]	'armpit'

3) Trisyllabic word

The trisyllabic word is rare in Chong language. Some are borrowed from Thai. This type is formed by two presyllables and one major syllable. The strong stress is on the major syllable. The weak stress is on the closed presyllable and the unstress is on the open presyllable. Its structure is ˌw uˈs or u ˌwˈs.

Examples of [ˌw uˈs] :

/ luk^{R1} kəmoːj^{R1} /	[ˌluk˺ kə ˈmoːj]	'salt'
/ cut^{R1} kəpʰoːt^{R3} /	[ˌtɕut˺ kə ˈpʰu̯ˇːt˺]	'soul, spirit'
/ sip^{R1} kəsiəw^{R1} /	[ˌsip˺ kə ˈsiəw]	'whisper'
/ tɨk^{R1} məhɔːk^{R1} /	[ˌtɨk˺ mə ˈhɔːk˺]	'snore'
/ kʰwan^{R1} nətʰaw^{R3} /	[ˌkʰwan nəˈtʰa̯ˎ w]	'axe'

As for the structure u ˌwˈs , I found only one example and the weak stress is on the second open presyllable.

| / pʰəjaː^{R1}maːn^{R1} / | [pʰə ˌjaːˈmaːn] | 'enemy' |

4.2.2 Variation of word structure

Most of the disyllabic words in Chong occur in variation with monosyllabic word. This occurs even in one speaker. The presyllable in a disyllabic word can sometimes be dropped in rapid speech[1].

e.g. / kəpaːw^{R1} /   ~   / paːw^{R1} /   'buffalo'

   / kəsuk^{R1} /   / suk^{R1} /   'hair'

   / kəkɔʔ^{R1} /   / kɔʔ^{R1} /   'worm'

   / kək^{h}ɨn^{R1} /   ~   / k^{h}ɨn^{R1} /   'wife'

   / kəc^{h}ɨm^{R3} /   / c^{h}ɨm^{R3} /   'person'

   / kəneːw^{R2} /   ~   / neːw^{R2} /   'child'

   / k^{h}ənam^{R1} /   ~   / nam^{R1} /   'medicine'

   / k^{h}əloʔ^{R1} /   ~   / loʔ^{R1} /   'skin'

   / k^{h}əjaːj^{R2} /   / jaːj^{R2} /   'wind'

   / kəmaʔ^{R3} /   / maʔ^{R3} /   'rain'

   / məŋaːm^{R3} /   / ŋaːm^{R3} /   'bee'

When these disyllabic words occur in a sentence, the presyllable is normally deleted.

Examples :

/ k^{h}ruː^{R1} jaːj^{R3} neːn^{R1} neːw^{R2} /

'The teacher tells the scores to the children.'

   / kəjaːj^{R3} /   ~   / jaːj^{R3} /   'to tell'

   / kəneːw^{R2} /   / neːw^{R2} /   'child'

/ c^{h}ɔː^{R1} tuə^{R1} k^{h}ïʔ^{R3} c^{h}aː^{R1} lɛːk^{R1} /

'A skinny dog eats chicken.'

   / kək^{h}ïʔ^{R3} /   ~   / k^{h}ïʔ^{R3} /   'skinny'

---

[1] This is also mention by Headley, 1985. He said that the presyllable is reduced to zero in some of the Chong dialects of Thailand.

/ boːt^{R1} lɛːŋ^{R3} kɨj^{R1} kɨp^{R1} ʔuːt^{R1} /

'The younger sister is under the tree.'

/ kəlɛːŋ^{R3} /	~	/ lɛːŋ^{R3} /	'young woman'
/ təkɨp^{R1} /	~	/ kɨp^{R1} /	'under'

When the presyllable of some disyllabic words is deleted, the word become similar to other monosyllabic words. The native speakers can understand by the context.

Examples :

/ maː^{R3} /			'horse'
/ kəmaː^{R3} /	~	/ maː^{R3} /	'needle'
/ waːj^{R3} /			'field'
/ kəwaːj^{R3} /		/ waːj^{R3} /	'tiger'
/ duːŋ^{R1} /			'coconut'
/ kəduːŋ^{R1}/		/ duːŋ^{R1} /	'pond, pool'

4.3 The syllable

4.3.1 Syllable function

The syllable functions in the phonological word. There are two main classes of syllable in terms of their functions : nuclear syllable and peripheral syllable.

1) The nuclear syllable

The strongly stressed syllable functions as nucleus of the phonological word and therefore takes a strong stress. It always occurs as the final syllable of the phonological word.

e.g.	/ tiː^{R1} /	[ˈtiː]	'hand'
	/ ʔic^{R1} /	[ˈʔíc˺]	'defecate'
	/ kəpʰəː^{R1} /	[kə ˈpʰəː]	'grope'

/ kəpʰoːn^{R3} /	[kə ˈpʰṵ̌ːⁱn]	'drum'
/ mən^{R3} k̲a̲ː̲k̲^{R1} /	[ˌmə̰ˑn ˈk̲a̲ː̲k̲˺]	'armpit'
/ luk^{R1} kə̲m̲o̲ː̲j̲^{R1} /	[ˌlúk˺ kə ˈm̲o̲ː̲j̲]	'salt'

2) Peripheral syllable

The peripheral syllable can be divided into two sub-classes : a weakly stressed peripheral syllable and an unstressed peripheral syllable.

The weakly stressed peripheral syllable functions as a periphery of the phonological word and has a weak stress. It occur in the first syllable or the second syllable of the trisyllabic word and the first syllable of the disyllabic word.

e.g.	/ c̲a̲ŋ̲^{R1} kriːt^{R2} /	[ˌt̲ɕ̲a̲ŋ̲ ˈkrîːˀt˺]	'criket'
	/ c̲a̲m̲^{R1} kʰɨn^{R1} /	[ˌt̲ɕ̲a̲m̲ ˈkʰɨn]	'woman'
	/ c̲a̲ŋ̲^{R3} kʰriw^{R1} /	[ˌt̲ɕ̲a̲̰ˑŋ̲ ˈkʰriw]	'butterfly'
	/ l̲u̲k̲^{R1} kəmoːj^{R1} /	[ˌl̲ú̲k̲˺ kə ˈmoːj]	'salt'
	/ pʰəj̲a̲ː̲^{R1}maːn^{R1} /	[pʰə ˌj̲a̲ː̲ˈmaːn]	'enemy'

The unstressed peripheral syllable functions as a periphery of the phonological word and has no stress. It occurs in the first syllable of a disyllabic word and the first syllable or the second syllable of a trisyllabic word.

e.g.	/ k̲ə̲pʰoːt^{R3} /	[k̲ə̲ ˈpʰṵ̌ːⁱt˺]	'corn'
	/ k̲ə̲kup^{R1} /	[k̲ə̲ ˈkúp˺]	'turn over'
	/ k̲ə̲mrec^{R3} /	[k̲ə̲ ˈmrḛˑc˺]	'pepper'
	/ cut^{R1} k̲ə̲pʰoːt^{R3} /	[ˌt̲ɕút k̲ə̲ ˈpʰṵ̌ːⁱt˺]	'soul, spirit'
	/ p̲ʰ̲ə̲jaː^{R1}maːn^{R1} /	[p̲ʰ̲ə̲ ˌjaːˈmaːn]	'enemy'

4.3.2 Syllable structure

The syllable is made up of phonemes. Its structure is normally described in terms of consonants, vowels and registers. The syllable pattern can be classified into two types, they are an open syllable and a closed syllable.

1) Open syllables

These syllables is composed of a vowel as a nucleus preceded by a single consonant or consonant cluster and any register functioning as a periphery. It can be divided into two sub-types : open presyllable and open major syllable.

Sub-type I : Open presyllable

The open presyllable is definded as a syllable whose nucleus is a neutral vowel [ə] which occurs in free variation with the central vowel [a]. In this study it is analyzed as / ə / in phonemic transcription. Consequently, [ə] is selected as a phonetic form because it occurs more frequently. It is unstressed and precedes the major syllable in disyllabic or trisyllabic words. This sub-type of the presyllable can be deleted in connected speech. Its structure is : Cə- or CCə- .

Cə-	e.g.	/ pəkaːj R2 /	[pə ˈkâːʔj]	'outside'
		/ kʰəneːw R2 /	[kʰə ˈnêːʔw]	'child'
		/ kʰəmuːc R2 /	[kə ˈmûːʔcˤ]	'spirit'
		/ kʰənɛɲ R1 /	[kʰə ˈnɛɲ]	'fish net'
		/ tətʰeʔ R1 /	[tə ˈtʰéʔ]	'ground'
		/ səbuːn R1 /	[sə ˈbuːn]	'womb'
		/ pəsaː R1 /	[pə ˈsaː]	'son /daughter-in-law'
		/ pəmoːn R3 /	[pə ˈmu̯ˇːn]	'behide'
		/ kəkih R1 /	[kə ˈkíh]	'waist'

I found the only one example of the structure CCə- .

| | | / prəʔoː R1 / | [prə ˈʔoː] | 'yesterday' |

Sub-type II : Open major syllable

The open major syllable is defined as a syllable whose nucleus is a vowel and preceded by an obligatory consonant or an optional cluster functioning as a periphery of the syllable and a register. It has the structure $C_1(C_2)V^{R1,R3}$

Examples of $CV^{R1, R3}$:

/ pɔː^{R1} /	[ˈpɔː]	'to carry in one's arm'
/ tiː^{R1} /	[ˈtiː]	'hand'
/ cʰiː^{R1} /	[ˈtɕʰiː]	'louse'
/ sɛː^{R1} /	[ˈsɛː]	'farm'
/ luː^{R1} /	[ˈluː]	'howl'
/ waː^{R1} /	[ˈwaː]	'monkey'
/ juː^{R1} /	[ˈjuː]	'to send'
/ meː^{R3} /	[ˈme̞ː]	'mother'

Examples of $CCV^{R1, R3}$:

/ prəː^{R1} /	[ˈprəː]	'employ (v.)'
/ kʰlaː^{R1} /	[ˈkʰlaː]	'road'
/ pʰlaː^{R3} /	[ˈpʰla̞ː]	'new'
/ pʰriː^{R3} /	[ˈpʰri̞ː]	'forest'

2) Closed syllables

The closed syllable is composed of a vowel as a nucluse preceded by a single consonant or consonant cluster, a final consonant and a register functioning as a periphery. It an be divided into two sub-types : closed presyllable and closed major syllable.

Sub-type I : Closed presyllable

The closed presyllable consists of initial consonant, vowel, a final consonant and R1 or R3. It is weak stress and precedes the major syllable in

disyllabic and trisyllabic words. Its structure is $_{\mathsf{l}}CVC^{R1,\,R3}$. This sub-type is rather rare in Chong. Only seven words of my data are found in KP Chong.

/ cam^{R1} kʰɨn^{R1} /	[ˌt͡ɕam ˈkʰɨn]	'woman'
/ cam^{R1} lɔːŋ^{R3} /	[ˌt͡ɕam ˈlo̝ːˇŋ]	'man (vs. woman)'
/ mən^{R3} kaːk^{R1} /	[ˌmə̝n ˈkaːk]	'armpit'
/ caŋ^{R1} kriːt^{R2} /	[ˌt͡ɕaŋ ˈkriːʔt]	'cricket'
/ caŋ^{R3} kʰriw^{R1} /	[ˌt͡ɕaŋ ˈkʰriw]	'butterfly'
/ biŋ^{R1} baːŋ^{R1} /	[ˌbiŋ ˈbaːŋ]	'spider'
/ cut^{R1} ʔɔːŋ^{R1} /	[ˌt͡ɕut ˈʔɔːŋ]	'to sit on one's heel'

Sub-type II : Closed major syllable.

The closed major syllable is defined as a syllable whose nucleus is a vowel and preceded by an obligatory consonant or an optional cluster, a final consonant and a register functioning as periphery of the syllable. It has the structure $C_1(C_2)VC_3^{R1-4}$

Examples of CVC^{R1-4} :

/ piːŋ^{R1} /	[ˈpiːŋ]	'ripe'
/ boːt^{R1} /	[ˈboːt]	'young brother/ sister'
/ tak^{R1} /	[ˈták]	'large'
/ soːc^{R1} /	[ˈsoːc]	'horn'
/ huːj^{R1} /	[ˈhuːj]	'blow'
/ laʔ^{R1} /	[ˈláʔ]	'leaf'
/ kic^{R1} /	[ˈkíc]	'small'
/ ʔuːt^{R1} /	[ˈʔuːt]	'wood'
/ wic^{R1} /	[ˈwíc]	'again'
/ cɛːn^{R2} /	[ˈt͡ɕɛ̂ːʔn]	'come'
/ cʰiːm^{R2} /	[ˈt͡ɕʰîːʔm]	'bird'

/ ŋət^{R2} /	['ŋə̃ʔt˥]	'bitter'
/ pʰɔh^{R3} /	['pʰŏ̦h]	'ashes'
/ ja:m^{R3} /	['ja̰ːˏm]	'cry'
/ tʰa:k^{R3} /	['tʰa̰ːˏk˥]	'water'
/ kʰət^{R3} /	['kʰə̰ˏt˥]	'pain'
/ ɲu:c^{R3} /	['ɲṵːˏc˥]	'wrinkle'
/ rɔ:j^{R4} /	['rɔ̰̀ːʔj˥]	'cucumber'

Examples of CCVC^{R1-4} :

/ kwa:t^{R1} /	['kwa:t˥]	'crawl'
/ klo:m^{R1} /	['klo:m]	'Cambodian'
/ prak^{R1} /	['prák˥]	'silver'
/ pʰram^{R1} /	['pʰram]	'five'
/ plɔ:k^{R2} /	['plɔ̃ːʔk˥]	'mud'
/ kʰra:ɲ^{R3} /	['kʰra̰ːˏɲ]	'drink (fermented)'
/ kʰlɔŋ^{R4} /	['kʰlò̰˘ʔŋ]	'log'

The two following tables (table 1 and table 2) show single initial consonants occurring with different vowel (in the open and closed syllables).

Table 2 : The co-occurrence of initial consonant and vowel in the open major syllable.

+	occurrence
(blank)	non-occurrence

	p	pʰ	b	t	tʰ	d	c	cʰ	k	kʰ	ʔ	m	n	ɲ	ŋ	s	h	l	r	w	j
i																					
iː				+	+			+		+						+	+				
e																					
eː			+							+		+				+	+	+			
ɛ																					
ɛː								+				+				+	+				
a																					
aː		+		+		+	+			+					+	+	+			+	+
ə																					
əː		+																			
u																					
uː		+		+	+	+		+		+						+		+			+
o																					
oː			+		+	+				+					+			+			+
ɔ																					
ɔː	+			+	+			+		+								+			
ɨ																					
ɨː		+																			

The co-occurrence of initial consonant and vowel in the open major syllable as shown in the table 2 can be summarized as follows.

1. The long vowel phonemes can occur after all initial consonant phonemes in the open major syllable.

2. All consonant phonemes never occur before short vowel phonemes in the open major syllable.

3. The consonant phoneme / p / can only occur with vowel phoneme / ɔː / as in :

/ pɔː[Rl] /   'to carry in one's arm'

4. The consonant phoneme / p^h / can occur with vowel phonemes / aː, əː, uː, ɨː / of the open major syllable as in :

/ p^haː^{R1} /	'full (from eating)'
/ p^huː^{R3} /	'you (singular)'
/ kəp^{h}əː^{R1} /	'grope'
/ kəp^{h}ɨː^{R1} /	'star apple'

5. The consonant phoneme / b / can only occur with vowel phoneme / eː / of the open major syllable as in :

/ beː^{R1} /	'distort'

6. The consonant phoneme / t / can occur with vowel phonemes / iː, aː, uː, oː, ɔː / of the open major syllable as in :

/ tiː^{R1} /	'hand'
/ taː^{R1} /	'grandfather'
/ kətuː^{R1} /	'grass'
/ kətoː^{R1} /	'teach'
/ tɔː^{R1} /	'unit'

7. The consonant phoneme / t^h / can occur with vowel phonemes / iː, uː, ɔː / of the open major syllable as in :

/ nɨm^{R3} t^{h}iː^{R1} /	'next year'
/ t^{h}uː^{R3} /	'flee'
/ t^{h}ɔː^{R3} /	'make, do'

8. The consonant phoneme / d / can occur with vowel phonemes / uː, oː / of the open major syllable as in :

/ duː^{R1} /	'season'
/ doː^{R1} /	'a particle used in a yes or no question'

9. The consonant phoneme / c / can only occur with vowel phoneme /o:/ of the open major syllable as in :

/ co:^{R1} /   'nephew/ niece'

10. The consonant phoneme / c^h / can occur with vowel phonemes / i:, a:, u:, ɔ: / of the open major syllable as in :

/ c^{h}i:^{R1} /   'louse'

/ c^{h}a:^{R1} /   'to eat'

/ c^{h}u:^{R1} /   'grandchild'

/ c^{h}ɔ:^{R1} /   'dog'

11. The consonant phoneme / k / can only occur with vowel phonemes /ɛ:, a: / of the open major syllable as in :

/ kɛ:^{R1} /   'you (polite)'

/ ka:^{R1} /   'mouth'

12. The consonant phoneme / k^h / can occur with vowel phonemes / i:, e:, o:, ɔ: / of the open major syllable as in :

/ pe:w^{R2} k̲^{h}i̲:^{R3} /   'this evening'

/ kək^{h}e:^{R1} /   'fowl louse'

/ kək^{h}o:^{R1} /   'mortar'

/ kək^{h}ɔ:^{R3} /   'crocodile'

13. The consonant phoneme / m / can occur with vowel phonemes /e:, a:, u: / of the open major syllable as in :

/ me:^{R3} /   'mother'

/ ma:^{R3} /   'horse'

/ mu:^{R1} /   'multitude'

14. The consonant phoneme / ɲ / can only occur with vowel phoneme /ɛ: / of the open major syllable as in :

/ ti:^{R1} n$\underline{ɛ:^{R1}}$ /   'first finger'

15. The consonant phoneme / ɲ / can only occur with vowel phoneme /a: / of the open major syllable as in :

/ kəɲa:^{R1} /   'yam'

16. The consonant phoneme / ŋ / can occur with vowel phonemes /e:, ɛ:, o: / of the open major syllable as in :

/ kəŋe:^{R3} /   'small bee'

/ kəŋɛ:^{R1} /   'listen'

/ kəŋo:^{R3} /   'sesame'

17. The consonant phoneme / s / can occur with vowel phonemes / i:, e:, ɛ:, a:, u: / of the open major syllable as in :

/ si:^{R1} /   'snake'

/ se:^{R1} /   'line, rope'

/ sɛ:^{R1} /   'farm'

/ jaŋ^{R3} $\underline{sa:^{R1}}$ /   'similar'

/ su:c^{R2} $\underline{su:^{R1}}$ /   'red ant'

18. The consonant phoneme / h / can occur with vowel phonemes / i:, a: / of the open major syllable as in :

/ kəhi:^{R1} /   'pestle'

/ ha:^{R1} /   'to open (mouth)'

19. The consonant phoneme / l / can occur with vowel phonemes / e:, u:, o:, ɔ: / of the open major syllable as in :

/ kəle:^{R1} /   'maggot in the fermented fish'

/ lu:^{R1} /   'howl'

/ kəlo:^{R3} /   'sieve'

/ lɔ:^{R1} /   'much, many'

20. The consonant phoneme / w / can only occur with vowel phoneme / aː / as in :

/ waːᴿ¹ /   'monkey'

21. The consonant phoneme / j / can occur with vowel phonemes / aː, uː, oː / as in :

/ jaːᴿ¹ /   'tobacco'

/ juːᴿ³ /   'to send'

/ joːᴿ¹ /   'have sexual intercourse'

Table 3 : The co-occurrence of initial consonant and vowel in closed major syllable.

+   occurrence

(blank)   non-occurrence

	p	pʰ	b	t	tʰ	d	c	cʰ	k	kʰ	ʔ	m	n	ɲ	ŋ	s	h	l	r	w	j
i	+	+			+			+	+	+	+	+	+		+			+	+	+	
iː	+	+		+	+	+		+		+	+	+	+	+	+	+	+			+	
e					+							+						+	+		
eː	+	+		+	+	+	+	+	+	+		+	+		+	+		+	+	+	+
ɛ	+				+			+				+	+			+	+	+			
ɛː	+	+		+	+		+		+	+		+	+			+	+	+			
a	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
aː	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
ə		+		+	+		+	+	+	+		+	+	+	+				+		
əː	+				+			+	+			+	+		+			+			
u	+	+	+	+	+		+	+	+	+		+	+		+	+	+	+	+		+
uː	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
o		+			+			+	+	+		+	+		+					+	+
oː	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+		+
ɔ	+	+	+	+	+	+	+	+	+	+		+	+		+		+	+		+	+
ɔː	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+		+
ɨ	+	+	+	+	+	+		+	+	+		+	+			+	+	+	+		
ɨː				+			+	+													+
uə					+							+					+				

The co-occurrence of initial consonant and vowel in the closed major syllable as shown in the table 3 can be summarized as follows.

1. The consonant phoneme / p / can occur with vowel phonemes / i, iː, eː, ɛ, ɛː, a, aː, əː, u, uː, oː, ɔ, ɔː, ɨ / such as :

/ pɛːk ^{R2} /	'wet'
/ paɲ ^{R1} /	'to twist (rope)'
/ puk ^{R1} /	'spoiled'
/ pɔːt ^{R1} /	'burn (v.)'
/ pɨt ^{R1} /	'fat'

2. The consonant phoneme / pʰ / can occur with vowel phonemes / i, iː eː, ɛː, a, aː, ə, u, uː, o, oː, ɔ, ɔː, ɨ / such as :

/ pʰiʔ ^{R3} /	'tasty'
/ pʰuh ^{R1} /	'to boil'
/ pʰɔh ^{R3} /	'ashes'
/ pʰoːn ^{R2} /	'four'
/ pʰɨk ^{R1} /	'pick (flower)'

3. The consonant phoneme / b / can occur with vowel phonemes / aː, u, uː, oː, ɔ, ɔː, ɨ / such as :

/ baːj ^{R1} /	'farm'
/ buk ^{R1} /	'nest'
/ bɔːj ^{R1} /	'sail'
/ buːɲ ^{R1} /	'pressed new rice'
/ boːt ^{R1} /	'young brother/ sister'

4. The consonant phoneme / t / can occur with vowel phonemes / iː, eː, ɛː, a, aː, ə, u, uː, oː, ɔ, ɔː, ɨ / such as :

/ teːw ^{R1} /	'right'
/ tak ^{R1} /	'large'

/ tuŋ^{R1} /   'egg'

/ tɔːj^{R2} /   'before'

/ tɨk^{R1} /   'to lead'

5. The consonant phoneme / tʰ / can occur with all single vowel phonemes such as :

/ tʰiw^{R3} /   'buy'

/ tʰaŋ^{R3} /   'see'

/ tʰuh^{R1} /   'breast'

/ tʰɔːj^{R1} /   'pursue'

/ tʰɨːt^{R3} /   'ride'

6. The consonant phoneme / d / can occur with vowel phonemes / iː, eː, a, aː, uː, ɔ, ɔː, ɨ, uə / such as :

/ diːw^{R1} /   'mat'

/ daːŋ^{R1} /   'old (not new)'

/ dɔŋ^{R1} /   'gourd'

/ dɔːŋ^{R1} /   'times'

/ duəj^{R1} /   'plow'

7. The consonant phoneme / c / can occur with vowel phonemes / eː, ɛː, a, aː, ə, u, uː, oː, ɔ, ɔː / such as :

/ cɛːŋ^{R1} /   'ring (for finger)'

/ cak^{R1} /   'to shoot'

/ caːp^{R1} /   'wash (face)'

/ cuh^{R1} /   'go down descend'

/ cuːc^{R3} /   'harvest'

8. The consonant phoneme / cʰ / can occur with vowel phonemes / i, iː, eː, a, aː, ə, u, uː, o, oː, ɔ, ɔː, ɨ, ɨː / such as :

/ c^{h}eːm^{R1} /	'to feed'
/ c^{h}iːp^{R2} /	'mucus'
/ c^{h}aŋ^{R3} /	'roast'
/ c^{h}ət^{R2} /	'to leak'
/ c^{h}oːj^{R2} /	'extremety'

9. The consonant phoneme / k / can occur with all single vowel phonemes except / iː, e / such as :

/ kic^{R1} /	'small'
/ keːw^{R2} /	'bend'
/ kaːŋ^{R1} /	'moon, month'
/ kɔŋ^{R1} /	'wheel'
/ kɨːt^{R2} /	'tame'

10. The consonant phoneme / k^h / can occur with vowel phonemes / i, iː, eː, ɛː, a, aː, ə, əː, u, uː, o, oː, ɔː, ɨ / such as :

/ k^{h}eːn^{R1} /	'son/ daugther'
/ k^{h}eːw^{R1} /	'to call'
/ k^{h}ah^{R1} /	'to know'
/ k^{h}uːj^{R2} /	'mongoose'
/ k^{h}oːt^{R2} /	'mosquito'

11. The consonant phoneme / ʔ / can occur with vowel phonemes / i, iː, a, aː, uː, oː, ɔ, ɔː, ɨ / such as :

/ ʔaw^{R1} /	'clothes'
/ ʔic^{R1} /	'defecate'
/ ʔiːn^{R1} /	'have'
/ ʔuːt^{R1} /	'wood'
/ ʔoːc^{R1} /	'take'

12. The consonant phoneme / m / can occur with all single vowel phonemes except / e, ɨː / such as :

/ mɛʔ^{R1} /   'mother'

/ mɛːm^{R3} /   'cheek'

/ mət^{R3} /   'eyes'

/ moːj^{R4} /   'one'

/ mɨt^{R2} /   'to take pity on'

13. The consonant phoneme / n / can occur with all single vowel phonemes except / ɔ, ɨː / such as :

/ neːm^{R2} /   'trunk of tree'

/ nak^{R1} /   'cl. of person'

/ nɨm^{R3} /   'year'

/ kʰənɛɲ^{R1} /   'fish net'

/ kʰənaːp^{R1} /   'rice seedings'

14. The consonant phoneme / ɲ / can occur with vowel phonemes / iː, a, aː, ə, uː, oː, ɔ / such as :

/ ɲuːc^{R3} /   'wrinkle'

/ ɲət^{R3} /   'dried (red pepper)'

/ ɲoːj^{R1} /   'sit down and sleep'

15. The consonant phoneme / ŋ / can occur with vowel phonemes / i, iː, eː, a, aː, ə, əː, u, uː, o, oː, ɔː / such as :

/ ŋic^{R3} /   'to fall (down)'

/ ŋaːj^{R4} /   'far'

/ ŋət^{R2} /   'bitter'

/ ŋőːn^{R1} /   'to stoop'

/ ŋɔːn^{R1} /   'Ionperata cylindrica'

16. The consonant phoneme / s / can occur with vowel phonemes / iː, eː, ɛ, ɛː, a, aː, u, uː, oː, ɔ, ɔː, ɨ / such as :

/ saŋ^{R1} /	'hear'
/ sɛːm^{R2} /	'Thai people'
/ saːp^{R1} /	'tasteless'
/ sum^{R1} /	'star'
/ sɔːŋ^{R1} /	'dance'

17. The consonant phoneme / h / can occur with vowel phonemes / iː, ɛ, ɛː, a, aː, u, uː, oː, ɔ, ɔː, ɨ, uə / such as :

/ haːj^{R1} /	'rice'
/ huːm^{R1} /	'bathe'
/ hoːc^{R1} /	'dead, die'
/ hɔːp^{R3} /	'to eat (rice)'
/ huəc^{R1} /	'to whistle'

18. The consonant phoneme / l / can occur with all single vowel phonemes except / iː, o, ɔ, ɨː / such as :

/ laːk^{R3} /	'untie'
/ lɔːŋ^{R1} /	'banana'
/ luj^{R1} /	'pointed'
/ lɨŋ^{R4} /	'deep'
/ lɔːm^{R3} /	'liver'

19. The consonant phoneme / r / can occur with vowel phonemes / i, e, eː, a, aː, u, uː, oː, ɔ, ɔː, ɨ / such as :

/ reːt^{R3} /	'root'
/ raːj^{R3} /	'ten'
/ rɔk^{R1} /	'toad'

/ rɔːŋ^{R3} /   'centipede'

/ rɨʔ^{R1} /   'or'

20. The consonant phoneme / w / can occur with vowel phonemes / i, iː, eː, a, aː, ə, o, ɔ / such as :

/ wic^{R1} /   'again'

/ kəweːk^{R3} /   'shake (v.)'

/ waːj^{R3} /   'field'

/ wok^{R3} /   'clothes'

/ wɔk^{R1} /   'to scoop'

21. The consonant phoneme / j / can occur with vowel phonemes / eː, a, aː, u, o, oː, ɔ, ɔː, ɨː / such as :

/ jok^{R3} /   'build'

/ jaːm^{R3} /   'cry'

/ jɨːŋ^{R3} /   'tall'

/ kəjoːj^{R1} /   'hang up'

/ kəjɔŋ^{R2} /   'pincers'

There are 5 initial clusters which can preceed long vowels / iː, aː, əː, uː, oː / in the open major syllables.

1. The consonant cluster / pr / can occur with vowel phonemes / iː, əː / in the open major syllable as in :

/ priː^{R1} /   'monitor'

/ prəː^{R1} /   'employ (v.)'

2. The consonant cluster / pʰr / can only occur with vowel phoneme / iː / in the open major syllable as in : .

/ pʰriː^{R1} /   'forest'

3. The consonant cluster / $p^h l$ / can occur with vowel phonemes / iː, aː, uː / in the open major syllable as in :

/ $p^h li \colon$ [R1] /   'fruit'

/ $p^h la \colon$ [R3] /   'new'

/ $p^h lu \colon$ [R3] /   'leg'

4. The consonant cluster / kl / can only occur with vowel phoneme / uː / in the open major syllable as in :

/ kəklu ː [R1] /   'to rinse'

5. The consonant cluster / $k^h l$ / can occur with vowel phonemes / aː, oː / in the open major syllable as in :

/ $k^h la \colon$ [R3] /   'screech'

/ mət [R3] $k^h lo \colon$ [R1] /   'blind'

Table 4 : The co-occurrence of consonant cluster and vowel in the closed major syllable.

	+	occurrence
	(blank)	non-occurrence

	pr	pl	pʰr	pʰl	kr	kl	kʰr	kʰl	kw
i	+		+			+	+	+	
iː	+		+	+	+				
e								+	
eː			+	+			+	+	
ɛ					+	+			
ɛː				+		+	+		
a	+	+	+	+	+	+	+	+	
aː			+	+	+	+	+	+	+
ə							+		
əː				+			+		
u			+		+		+	+	
uː	+		+		+	+		+	
o				+				+	
oː			+	+		+			
ɔ		+	+		+	+		+	
ɔː	+	+	+	+	+	+	+		
ɨ			+	+	+			+	
ɨː									

The co-occurrence of consonant cluster and vowel in the closed major syllable as shown in the table 4 can be summarized as follows.

1. All consonant clusters can occur in the closed major syllable except / kʰw /.

2. The consonant cluster / pr / can occur with vowel phonemes / i, iː, a, uː, ɔː /.

e.g.   / laʔ^{R1} pric^{R1} /   'a kind of vegetable'

         / priːŋ^{R1} /   ˙oil'

         / prak^{R1} /   'silver'

/ pruːk^R3 /   'to marry'

/ prɔːŋ^R2 /   'coffin'

   3. The consonant cluster / pl / can occur with vowel phonemes /a, ɔ, ɔː/.

e.g.   / plak^R1 /   'to break'

/ plɔŋ^R1 /   'rice (cooked)'

/ plɔːk^R2 /   'mud'

   4. The consonant cluster / pʰr / can occur with vowel phonemes / i, iː,

eː, a, aː, u, uː, oː, ɔ, ɔː, ɨ /.

e.g.   / pʰric^R3 /   'blink'

/ pʰriːŋ^R1 /   'black plum'

/ pʰreːm^R2 /   'land leech'

/ pʰram^R1 /   'five'

/ pʰraːn^R3 /   'hunter'

/ suk^R1 p̲ʰ̲r̲u̲h̲^R1 /   'gray hair'

/ pʰruːŋ^R3 /   'white'

/ pʰroːm^R3 /   'ready'

/ pʰrɔʔ^R3 /   'because'

/ pʰrɔːk^R3 /   'squirrel'

/ pʰrɨh^R1 /   'to sow'

   5. The consonant cluster / pʰl / can occur with vowel phonemes / iː,

eː, ɛː, a, aː, əː, o, oː, ɔː, ɨ /.

e.g.   / pʰleːw^R3 /   'fire'

/ pʰlɛːk^R3 /   'to open (something)'

/ pʰlaːk^R3 /   'to chop '

/ pʰloh^R1 /   'twins'

/ pʰloːm^R2 /   'wax (bee)'

/ pʰlɔːk^{R3} /   'tusk'

/ pʰlɨŋ^{R1} /   'sky'

6. The consonant cluster / kr / can occur with vowel phonemes / iː, ɛ, a, aː, u, uː, ɔ, ɔː, ɨ /.

e.g.   / krat^{R1} /   'thick'

/ kraːk^{R1} /   'to carry (water)'

/ kruk^{R1} /   'to pour (water)'

/ kəkruːk^{R1} /   'basket'

/ krɔŋ^{R1} /   'straight'

/ krɨp^{R1} /   'eggplant'

7. The consonant cluster / kl / can occur with vowel phonemes / i, ɛ, ɛː, a, aː, uː, oː, ɔ, ɔː /.

e.g.   / klic^{R1} /   'to cut'

/ klɛːp^{R1} /   'lick''

/ klaw^{R2} /   'newt'

/ klaːŋ^{R1} /   'bunch'

/ kloːm^{R1} /   'Cambodian'

/ klɔːŋ^{R1} /   'bone'

8. The consonant cluster / kʰr / can occur with vowel phonemes / i, eː ɛː, a, aː, ə, əː, u, ɔː /.

e.g.   / caŋ^{R3} k̲ʰ̲r̲i̲w̲^{R1} /   'butterfly'

/ kʰreːm^{R1} /   'creel'

/ kʰrɛːŋ^{R2} /   'night'

/ kʰraːɲ^{R3} /   'drink (fermented)'

/ kəkʰrət^{R3} /   'termite'

/ kʰrəːp^{R2} /   'to berp'

/ kʰruŋ^{R1} /   'pigsty'

/ kʰrɔːc^{R1} /   'lemon'

9. The consonant cluster / kʰl / can occur with vowel phonemes / i, e, eː, a, aː, u, uː, o, ɔ, ɨ /.

e.g.   / kʰlic^{R3} /   'sprain'

            / kʰleʔ^{R1} /   'shame'

            / kʰlaʔ^{R1} /   'to spit (something from mouth)'

            / kʰlaːc^{R3} /   'to scratch'

            / kʰluk^{R1} /   'cover'

            / kʰluːm^{R2} /   'urinate'

            / kʰloŋ^{R4} /   'log'

            / kʰlɔʔ^{R1} /   'shellfish'

            / kʰlɨŋ^{R1} /   'confine(v.)'

10. The consonant cluster phoneme / kw / can only occur with vowel phoneme / aː /.

e.g.   / kwaːt^{R1} /   'crawl'

Table 5 : The co-occurrence of vowel and final consonant in the closed major syllable.

	+	occurrence
(blank)		non-occurrence

	-p	-t	-c	-k	-h	-ʔ	-m	-n	-ɲ	-ŋ	-w	-j
i		+	+	+	+	+			+	+	+	
iː	+	+		+			+	+		+	+	
e			+			+			+			
eː	+	+		+			+	+		+	+	
ɛ		+	+		+	+			+			
ɛː	+	+		+			+	+		+	+	
a	+	+		+	+	+	+	+	+	+	+	+
aː	+	+	+	+			+	+	+	+	+	+
ə		+				+		+				+
əː	+	+		+			+	+		+		+
u	+	+	+	+	+	+	+	+		+		+
uː	+	+	+	+			+	+	+	+		+
o				+	+	+	+	+		+		+
oː	+	+	+	+			+	+		+		+
ɔ	+	+		+	+	+	+	+		+		+
ɔː	+	+	+	+			+	+	+	+		+
ɨ	+	+		+	+	+	+	+		+		+
ɨː		+								+		+
uə			+									+

The co-occurrence of vowel and final consonant in the closed major syllable as shown in the table 5 can be summarized as follows.

1. / p / is a final consonant phoneme that occurs with vowel phonemes / iː, eː, ɛː, a, aː, əː, u, uː, oː, ɔ, ɔː, ɨ /.

e.g.	/ cʰɨp^{R1} /	'dark'
	/ kəkeːp^{R1} /	'hut'
	/ kəkʰaːp^{R3} /	'bamboo'
	/ kuːp^{R2} /	'frog'

/ kəmiːp^{R3} /   'glutinous rice'

2. / t / is a final consonant phoneme that occurs with all single vowel phonemes except / e, o /.

e.g.   / weːt^{R3} /   'unripe (fruit)'

            / kwaːt^{R1} /   'crawl'

            / kʰət^{R3} /   'pain'

            / pʰiːt^{R3} /   'sweep'

            / pʰuːt^{R2} /   'young (toptree)'

3. / c / is a final consonant phoneme that occurs with vowel phonemes / i, e, ɛ, aː, u, uː, oː, ɔː, uə /.

e.g.   / pʰic^{R3} /   'to sleep'

            / tʰuːc^{R3} /   'to sting'

            / coːc^{R2} /   'vomit'

            / kɔːc^{R2} /   'gruel'

            / sɛc^{R2} /   'cold'

            / huəc^{R1}/   'to whistle'

4. / k / is a final consonant phoneme that occurs with all vowel phonemes except / e, ɛ, ə, ɨː, uə /.

e.g.   / kɔːk^{R1} /   'neck'

            / kʰəmɨk^{R2} /   'sweat'

            / kʰəwaːk^{R1} /   'hoe'

            / lɛːk^{R1} /   'chicken'

            / loːk^{R3} /   'flay, skin'

5. / h / is a final consonant phoneme that occurs with vowel phonemes / i, ɛ, a, u, o, ɔ, ɨ /.

e.g.   / kʰah^{R1} /   'to know'

/ kəpɔh^{R1} /   'thread'

/ kʰəlɛh^{R1} /   'to remove stiches'

/ pʰruh^{R1} /   'gray (hair)'

/ pʰoh^{R3} /   'ashes'

6. / ʔ / is a final consonant phoneme that occurs with vowel phonemes
/ i, e, ɛ, a, ə, u, o, ɔ, ɨ /.

e.g.   / kəkʰɨʔ^{R3} /   'skinny'

/ laʔ^{R1} /   'leaf'

/ ʔɔʔ^{R1} /   'father'

/ tʰeʔ^{R1} /   'soil'

/ tʰuʔ^{R1} /   'hot'

7. / m / is a final consonant phoneme that occurs with all vowel
phonemes except / i, e, ɛ, ə, əː, ɨː, uə /.

e.g.   / məhaːm^{R1} /   'blood'

/ huːm^{R1} /   'bathe'

/ pʰeːm^{R2} /   'angry'

/ tʰɔm^{R1} /   'aunt'

/ tʰɨm^{R1} /   'to cook'

8. / n / is a final consonant phoneme that occurs with all vowel
phonemes except / i, e, ɛ, ɨː, uə /.

e.g.   / kətaːn^{R1} /   'battle-axe'

/ kəpʰoːn^{R1} /   'drum'

/ kəkʰɨn^{R1} /   'wife'

/ kʰeːn^{R1} /   'son/ daughter'

/ cɛːn^{R2} /   'come'

9. / ɲ / is a final consonant phoneme that occurs with vowel phonemes

/ i, e, ɛ, a, aː, uː, ɔː /.

e.g.   / kʰraːɲ^R3 /   'drink (fermented)'

        / kʰənɛɲ^R1 /   'fish net'

        / buːɲ^R1 /   'pressed new rice'

        / ʔiɲ^R1 /   'I'

        / paɲ^R1 /   'to twist (rope)'

10. / ŋ / is a final consonant phoneme that occurs with all vowel phonemes except / e, ɛ, ə, uə /.

e.g.   / kəmɛːŋ^R2 /   'jaw'

        / kətɨŋ^R2 /   'thin'

        / tuŋ^R1 /   'egg'

        / paːŋ^R1 /   'flower'

        / bɔŋ^R1 /   'damage'

11. / w / is a final consonant phoneme that occurs with vowel phonemes / i, iː, eː, ɛː, a, aː /.

e.g.   / deːw^R1 /   'true'

        / cʰiw^R3 /   'soup'

        / kəpaːw^R1 /   'buffalo'

        / ʔaw^R1 /   'shirt'

12. / j / is a final consonant phoneme that occurs with vowel phonemes / a, aː, ə, əː, u, uː, o, oː, ɔ, ɔː, ɨ, ɨː, uə /.

e.g.   / kʰəj^R4 /   'sharp'

        / muːj^R1 /   'day after tomorrow'

        / ŋaːj^R3 /   'face'

        / rɔːj^R4 /   'cucumber'

        / cʰɨːj^R1 /   'kiss'

4.3.3 Syllable Boundary

In phonetic transcription, the syllable boundaries are marked by the stress. The strong stressed sign ['] shows the beginning of the major syllable, the weakly stressed sign [ˌ] shows the beginning of the closed presyllable and no sign for unstressed syllable. Since stress in the Chong is predictable, therefore stress need not to be marked in the phonemic transcription. This study used a register / ^{R} / at the end of the syllable except in the open presyllable which has no register because the vowel in presyllable is a neutral vowel.

	Peripheral syllable (presyllable)	Nuclear syllable (major syllable)
open syllable	C(C)ə	'C(C)V^{R1,R3}
closed syllable	ˌCVC^{R1,R3}	'C(C)VC^{R1-4}

4.4 Phonemes

4.4.1 Function

In Chong, there are both segmental and suprasegmental phonemes. A segmental phoneme is stated in terms of consonant and vowel, and a suprasegmental phoneme is stated in terms of register (voice quality). In this study three classes of phonemes will be presented according to their function in the syllable : consonants, vowels and registers.

4.4.2 Consonant

1) General Definition

The consonant sound is made by a closure or narrowing in the vocal tract so that the airflow is either completely blocked, or so restricted that

audible friction is produced. Consonant articulations are relatively easy to feel, and as a result are most conveniently described in term of place and manner of articulation. In addition, a routine phonetic description of consonants would involve information about the mode of vibration of the vocal cords, and it is often necessary to specify the duration of the sound, the airstream mechanism involved and the direction of airflow. Form a phonological point of view, consonant are those units, which function at the margin of syllables, either single or in clusters (Crystal 1991 : 74)

In Chong, there are 21 consonant phonemes / p, pʰ, b, t, tʰ, d, c, cʰ, k, kʰ, ʔ, m, n, ɲ, ŋ, s, h, l, r, w, j /.

The following chart is the consonant that will be grouped according to their manners and points of articulation.

Table 6 : The consonant phonemes of Khlong Phlu Chong.

Point of art. Manner of art.		Bilabial	Alveolar	Palatal	Velar	Glottal
Stops	vl. unasp.	p	t	c	k	ʔ
	vl. asp.	pʰ	tʰ	cʰ	kʰ	
	vd.	b	d			
Nasals		m	n	ɲ	ŋ	
Fricatives			s			h
Lateral			l			
Trill			r			
Semi-vowels		w		j		

2) Formational statements of consonants (Khlong Phlu Chong).

/ p / It has two allophones.

[p] is a voiceless unaspirated bilabial stop. It occurs in the initial position of the syllable.

[p˺] is a voiceless unaspirated bilabial stop. It occurs syllable finally and is unreleased.

Examples :	/ plɔːk^{R2} /	[ˈplɔ̂ːʔk˺]	'mud'
	/ pruːk^{R3} /	[ˈpru̯ːk˺]	'to marry'
	/ pɨt^{R1} /	[ˈpɨ́t˺]	'fat, grease'
	/ kʰaːp^{R2} /	[ˈkʰâːʔp˺]	'itch'
	/ kʰaːp^{R3} /	[ˈkʰa̯ːp˺]	'gape, yawn'

/ pʰ /, [pʰ] is a voiceless aspirated bilabial stop. It occurs only in the initial position of the syllable.

Examples :	/ pʰleːw^{R3} /	[ˈpʰle̯ːw]	'fire'
	/ pʰlɨŋ^{R1} /	[ˈpʰlɨŋ]	'sky'
	/ pʰloh^{R1} /	[ˈpʰlóh]	'twins'
	/ pʰuŋ^{R3} /	[ˈpʰu̯ŋ]	'belly'
	/ pʰluː^{R3} /	[ˈpʰlu̯ː]	'leg'

/ b /, [b] is a voiced bilabial stop. It occurs only in the initial position of the syllable.

Examples :	/ bɔːj^{R1} /	[ˈbɔːj]	'sail'
	/ bɔːp^{R1} /	[ˈbɔːp˺]	'tired, weary'
	/ buk^{R1} /	[ˈbúk˺]	'nest'
	/ buːɲ^{R1} /	[ˈbuːɲ]	'pressed new rice'
	/ bɔŋ^{R1} /	[ˈbɔŋ]	'damage, harm'

/ t / It has two allophones.

[t] is a voiceless unaspirated alveolar stop. It occurs in the initial position of the syllable.

[t˺] is a voiceless unaspirated alveolar stop. It occurs only syllable finally and is unreleased.

Examples :	/ tuŋ^{R1} /	['tuŋ]	'egg'
	/ tiːw^{R1} /	['tiːw]	'sew'
	/ tɔŋ^{R1}/	['tɔŋ]	'house'
	/ hiːt^{R1} /	['hi᷄ːt˺]	'to disappear'
	/ reːt^{R3} /	['re̠ːˏt˺]	'root'
	/ kʰeːt^{R1} /	['kʰeːt˺]	'comb (v.)'

/ tʰ /, [tʰ] is a voiceless aspirated alveolar stop. It occurs only in the initial position of the syllable.

Examples :	/ tʰok^{R3} /	['tʰy̠ˇk˺]	'boat'
	/ tʰeʔ^{R1} /	['tʰe᷄ʔ]	'earth, soil'
	/ tʰaːk^{R3} /	['tʰa̠ːˏk˺]	'water'
	/ tʰɔm^{R1} /	['tʰɔm]	'aunt'
	/ tʰⁱiːŋ^{R3} /	['tʰⁱi̠ːˏŋ]	'enter'

/ d /, [d] is a voiced alveolar stop. It occurs only in the initial position of the syllable.

Examples :	/ duəj^{R1} /	['duəj]	'plow'
	/ diːw^{R1} /	['diːw]	'mat'
	/ dak^{R1}/	['da᷄k˺]	'he or she'
	/ daːŋ^{R1} /	['daːŋ]	'old (not new)'
	/ doːn^{R1} /	['doːn]	'correct, right'

/ c / It has two allophones.

[tɕ] is a voiceless unaspirated alveolo-palatal affricate. It occurs only in the initial position of the syllable.

[cˀ] is a voiceless unaspirated palatal stop. It occurs only syllable finally and is unreleased.

Examples :   / ceːwᴿ¹ /   [ˈtɕeːw]   'walk'

             / cuhᴿ¹ /   [ˈtɕúh]   'go down descend'

             / kicᴿ¹ /   [ˈkícˀ]   'little, small (of size)'

             / pʰicᴿ³ /   [ˈpʰi̥cˀ]   'lie down'

             / ʔuːcᴿ¹ /   [ˈʔuːcˀ]   'few, little (quantity)'

/ cʰ /, [tɕʰ] is a voiceless aspirated alveolo-palatal affricate. It occurs only in the initial position of the syllable.

Examples :   / cʰoʔᴿ³ /   [ˈtɕʰo̤ʔ]   'sour, acid'

             / cʰənᴿ³/   [ˈtɕʰə̤n]   'step on'

             / cʰɨtᴿ¹ /   [ˈtɕʰɨ́tˀ]   'old (not young)'

             / cʰɔːŋᴿ⁴ /   [ˈtɕʰo̤ːˀŋ]   'Chong people'

             / cʰiːmᴿ² /   [ˈtɕʰîːˀm]   'bird'

/ k / It has two allophones.

[k] is a voiceless unaspirated velar stop. It occurs in the initial position of the syllable.

[kˀ] is a voiceless unaspirated velar stop. It occurs only syllable finally and is unreleased.

Examples :   / klɔːŋᴿ¹ /   [ˈklɔːŋ]   'bone'

             / kuːpᴿ² /   [ˈkûːˀpˀ]   'frog'

             / kɔːkᴿ¹ /   [ˈkɔːkˀ]   'neck'

             / cʰɔːkᴿ¹ /   [ˈtɕʰɔːkˀ]   'pound (v.)'

             / pɔkᴿ¹ /   [ˈpɔ́kˀ]   'wind, wrap'

             / paːkᴿ¹ /   [ˈpaːkˀ]   'climb'

/ kʰ /, [kʰ] is a voiceless aspirated velar stop. It occurs only in the initial position of the syllable.

Examples :   / kʰaŋ^R3 /   [ˈkʰa̤ŋ]   'hard'

/ kʰət^R3 /   [ˈkʰə̤t˺]   'pain'

/ kʰiːn^R2 /   [ˈkʰî̤ːʔn]   'squash'

/ kʰɔːn^R2 /   [ˈkʰɔ̂ːʔn]   'mouse, rat'

/ kʰoːt^R2 /   [ˈkʰô̤ːʔt˺]   'mosquito'

/ ʔ /, [ʔ] is a glottal stop. It occurs in both initial and final position of the syllable.

Examples :   / ʔuːt^R1 /   [ˈʔuːt˺]   'wood'

/ ʔuːɲ^R1 /   [ˈʔuːɲ]   'father'

/ ʔic^R1 /   [ˈʔíc˺]   'defecate'

/ kʰəloʔ^R1 /   [kʰə ˈloʔ]   'hide, skin'

/ kʰlɔʔ^R1 /   [ˈkʰlɔ́ʔ]   'shell'

/ kəkɔʔ^R1 /   [kə ˈkɔ́ʔ]   'worm'

/ m /, [m] is a voiced bilabial nasal. It occurs in both initial and final position of the syllable.

Examples :   / maː^R3 /   [ˈma̤ː]   'horse'

/ meː^R3 /   [ˈme̤ː]   'mother'

/ meːw^R4 /   [ˈmè̤ːʔw]   'fish'

/ pʰreːm^R2 /   [ˈpʰrê̤ːʔm]   'land leech'

/ tʰaːm^R2 /.   [ˈtʰâ̤ːʔm]   'crab'

/ məŋaːm^R3 /   [mə ˈŋa̤ːm]   'bee'

/ n /, [n] is a voiced alveolar nasal. It occurs in both initial and final position of the syllable.

Examples :   / nɔːŋ^R3 /   [ˈnɔ̤̌ːŋ]   'hill, mountain'

/ neːm^R2 /   [ˈnê̤ːʔm]   'trunk of tree'

/ naːk^R3 /   [ˈna̤ːk˺]   'otter'

/ kʰɛːnᴿ¹ /   [ˈkʰɛːn]   'arm'

/ loːnᴿ¹ /   [ˈloːn]   'louse'

/ kʰiːnᴿ² /   [ˈkʰîːˀn]   'squash'

/ ɲ /, [ɲ] is a voiced palatal nasal. It occurs in both initial and final position of the syllable.

Examples :   / ɲuːcᴿ³ /   [ˈɲu̠ːˌcˤ]   'wrinkled'

/ ɲaːmᴿ²/   [ˈɲâːˀm]   'finger'

/ tʰaːɲᴿ¹ /   [ˈtʰaːɲ]   'weave'

/ ʔiɲᴿ¹ /   [ˈʔiɲ]   'I'

/ kʰraːɲᴿ³ /   [ˈkʰra̠ːˌɲ]   'drink (fermented)'

/ ŋ /, [ŋ] is a voiced velar nasal. It occurs in both initial and final position of the syllable.

Examples :   / ŋaːjᴿ³ /   [ˈŋa̠ːˌj]   'face'

/ ŋaːjᴿ⁴/   [ˈŋâ̠ːˀj]   'far (adv.)'

/ ŋaːmᴿ⁴ /   [ˈŋâ̠ːˀm]   'sweet'

/ hɛːŋᴿ¹ /   [ˈhɛːŋ]   'we'

/ ʔɔːŋᴿ¹ /   [ˈʔɔːŋ]   'wasp'

/ kaːŋᴿ¹/   [ˈkaːŋ]   'month'

/ s /, [s] is a voiceless alveolar fricative. It occurs only in the initial position of the syllable.

Examples :   / sɔːŋᴿ¹ /   [ˈsɔːŋ]   'dance'

/ saːpᴿ² /   [ˈsâːˀpˤ]   'bright'

/ saŋᴿ¹ /   [ˈsaŋ]   'hear'

/ saːpᴿ¹ /   [ˈsaːpˤ]   'bland, tasteless'

/ siːᴿ¹ /   [ˈsiː]   'snake'

/ h /, [h] is a voiceless glottal fricative. It occurs in both initial and final position of the syllable.

Examples :   / hoːcᴿ¹ /   [ˈhoːc˥]   'dead, die'

/ hɨjᴿ¹ /   [ˈhɨj]   'to fly'

/ huːjᴿ¹ /   [ˈhuːj]   'blow'

/ tʰuhᴿ¹ /   [ˈtʰúh]   'breast (of woman)'

/ kʰəjuhᴿ¹ /   [kʰə ˈjúh]   'storm'

/ kʰəmahᴿ¹ /   [kʰə ˈmáh]   'smoke (n.)'

/ l /, [l] is a voiced alveolar lateral. It occurs in both initial position of the syllable and as the second element in the consonant cluster.

Examples :   / luːᴿ¹ /   [ˈluː]   'howl'

/ luːcᴿ³ /   [ˈlṳːˬc˥]   'steal'

/ pʰleːwᴿ² /   [ˈpʰlê̤ːʔw˥]   'silent'

/ kʰleʔᴿ¹ /   [ˈkʰléʔ]   'shame'

/ klawᴿ² /   [ˈklâ̰ʔw]   'newt'

/ r /, [r] is a voiced alveolar trill. It occurs in both initial position of the syllable and as the second element in the consonant cluster.

Examples :   / rɔːŋᴿ³ /   [ˈrɔ̤ˬːˬŋ]   'centipede'

/ raːpᴿ³ /   [ˈra̤ːˬp˥]   'wash'

/ rɔːpᴿ¹ /   [ˈrɔːp˥]   'embrace'

/ prakᴿ¹ /   [ˈprák˥]   'silver'

/ pʰrɔːkᴿ³ /   [ˈpʰrɔ̤ˬːˬk˥]   'squirrel'

/ w /, [w] is a voiced labio-velar semi-vowel. It occurs in syllable initially, finally and as the second element in the consonant cluster.

Examples: / weːŋᴿ¹ /   [ˈweːŋ]   'raw'

/ weːtᴿ³ /   [ˈwe̤ːˬt˥]   'green, unripe'

/ wiːŋᴿ¹ /   [ˈwiːŋ]   'forget'

/ kʰeːwᴿ¹ /   [ˈkʰeːw]   'call'

/ kʰwanᴿ¹ tʰawᴿ³ /　[ˌkʰwan ˈtʰa̤ˌw]　 'ax'

/ j /, [j] is a voiced palatal semi-vowel. It occurs in both syllable initial and final positions.

Examples :　/ joːᴿ¹ /　　　　　[ˈjoː]　　　　　 'have sexual
　　　　　　　　　　　　　　　　　　　　　　　　 intercourse'

　　　　　　/ jokᴿ³ /　　　　　[ˈju̯ˇkˀ]　　　　 'build'

　　　　　　/ jɨːŋᴿ³ /　　　　 [ˈjɨ̈ːˎŋ]　　　　 'tall'

　　　　　　/ kəmrujᴿ³ /　　　[kə ˈmru̯j]　　　 'pangolin'

　　　　　　/ poːjᴿ¹ /　　　　 [ˈpoːj]　　　　　 'curse'

3) Classification of consonants

The phonemes in Chong language are divided into three classes according to their function in the syllable : initial consonant (C_1), second member of the consonant cluster (C_2) and the final consonant (C_3).

Class 1 C_1 initial consonants

All 21 consonants can occur in the initial position of the syllable. They are / p, pʰ, b, t, tʰ, d, c, cʰ, k, kʰ, ʔ, m, n, ɲ, ŋ, s, h, l, r, w, j /.

Examples :　/ pɔːtᴿ¹ /　　　　[ˈpɔːtˀ]　　　　 'burn (v. trans)'

　　　　　　/ pʰriːᴿ³ /　　　 [ˈpʰri̤ˎ]　　　　 'forest, woods'

　　　　　　/ biŋᴿ¹ baːŋᴿ¹ /　[ˌbiŋ ˈbaːŋ]　　 'spider'

　　　　　　/ tɨpᴿ¹ /　　　　 [ˈtɨ́pˀ]　　　　　 'bury (the dead)'

　　　　　　/ tʰɨŋᴿ¹ /　　　　[ˈtʰɨŋ]　　　　　 'pus'

　　　　　　/ dɔŋᴿ¹ /　　　　 [ˈdɔŋ]　　　　　 'gourd'

　　　　　　/ ceːtᴿ² /　　　　[ˈtɕêːʔtˀ]　　　 'deer'

　　　　　　/ cʰɔːᴿ¹ /　　　　[ˈtɕʰɔː]　　　　 'dog'

　　　　　　/ kɛːwᴿ² /　　　 [ˈkɛ̂ːʔw]　　　　 'bend'

/ kʰeːt R3 /	['kʰe̤ːˑtˀ]	'cockroach'
/ ʔiːn R1 /	['ʔiːn]	'have'
/ mɛːm R3 /	['mɛ̤ːˑm]	'cheek'
/ nap R3 /	['na̤ˑpˀ]	'count'
/ ɲuːc R3 /	['ɲṳːˑcˀ]	'wrinkled'
/ ŋəj R3 /	['ŋə̤ˑj]	'red'
/ sum R1 /	['sum]	'star'
/ hɨj R1 /	['hɨj]	'to fly'
/ laːc R3 /	['la̤ːˑcˀ]	'lightning'
/ rɔːk R3 /	['rɔ̤ˇːˑkˀ]	'hide, conceal'
/ waː R1 /	['waː]	'monkey'
/ juː R1 /	['juː]	'to send'

Class 2   (C₂) The second member of the consonant clusters.

There are 12 consonant clusters in Chong. The second member of the consonant clusters consist of / r, l, w /. The / r / and / l / which can occur after the first member consonant cluster / p, pʰ, k, kʰ /. The / w / occur only after / k, kʰ / .

Examples :	/ priː R1 /	['priː]	'monitor'
	/ plɔŋ R1 /	['plɔŋ]	'rice (cooked)'
	/ pʰrɔːk R3 /	['pʰrɔ̤ˇːˑkˀ]	'squirrel'
	/ pʰloːm R2 /	['pʰlo̤ːˀm]	'wax (bees)'
	/ krɨp R1 /	['krɨ́pˀ]	'egg plant'
	/ klaːŋ R1 /	['klaːŋ]	'branch'
	/ kʰraːɲ R3 /	['kʰra̤ːˑɲ]	'drink (fermented)'
	/ kⁿleʔ R1 /	['kⁿléʔ]	'shame (n.)'

/ kwaːt^{R1}/   ['kwaːt˥]   'crawl'

/ kʰwan^{R1} tʰaw^{R3} / [ˌkʰwan 'tʰa̰ w] 'axe'

Mediocluster in Chong

In KP Chong there are disyllabic words with ml or mr which can be interpreted as consisting of

1. Open presyllable + major syllable with initial cluster.

C₁ə 'C₁C₂V (C₃)

Examples   [kə 'mlɔ́h]   'young man'

[kə 'mrṳ̇ j]   'pongolin'

[kʰə 'mraː]   'mother'sister'

ml and mr are interpreted as cluster occurring in the initial position of the major syllable.

Or   2. Closed presyllable + major syllable

ˌC₁VC₃ 'C₁V(C₃)

Examples :   [ˌkəm 'rá͓h]   'to wriggle'

[ˌkəm 'lɔ̰ːˀk˥]   'salty'

[ˌkəm 'lə̰ j]   'casumunar'

m is interpreted as the final consonant of the presyllable. l and r are interpreted as the initial consonant of the major syllable.

These interpretations are supported by the way Chong speakers pronounce the word. Different speakers pronounced in different ways. Even in one speakers, the pronunciation of these words may be different.

I interpret these words as the first type. One of the reason is that in natural speech the first part of the disyllabic word can be deleted. Only ml or mr is left and pronounce as initial cluster of the major syllable. This type of cluster is called by some Mon-Khmer linguists such as Bauer (1982) as mediocluster.

e.g.   / kəmrec^{R3} /   ~   / mrec^{R3} /   'pepper'

/ kəmlɛːŋ^{R3} /   ~   / mlɛːŋ^{R3} /   'shoulder'

/ kəmlɨk^{R3} /   ~   / mlɨk^{R3} /   'to wake'

/ kəmlɔːk^{R1} /   ~   / mlɔːk^{R1} /   'shoulder blade'

/ kəmlɔh^{R1} /   ~   / mlɔh^{R1} /   ' young man'

/ kəmlah^{R1} /   ~   / mlah^{R1} /   'small bitter gourd'

/ kəmrah^{R1} /   ~   / mrah^{R1} /   'to wriggle'

/ kəmluː^{R3} /   ~   / mluː^{R3} /   'betel'

/ kəmləj^{R3} /   ~   / mluj^{R3} /   'casumunar'

/ kəmlaːk^{R1} /   ~   / mlaːk^{R1} /   'chisel'

/ kəmlaːŋ^{R2} /   ~   / mlaːŋ^{R2} /   'bright'

/ kəmruj^{R3} /   ~   / mruj^{R3} /   'pongolin'

/ kəmlaŋ^{R3} /   ~   / mlaŋ^{R3} /   'acne'

The initial cluster of the major syllable mr is found only in one word.

/ mrec^{R3} mruːc^{R3} /   'to make eyes at someone'

(เล่นหูเล่นตา)

Class 3 (C3) the final consonants.

There are 12 final consonants in KP Chong. They are / p , t , c , k , ʔ , h , m , n , ɲ , ŋ , w , j /.

Examples :   / kʰɔːt^{R1} /   ['kʰɔːt˺]   'bind'

/ pɛc^{R1}/   ['pɛ́c˺]   'break'

/ cʰak^{R1}/   ['tɕʰák˺]   'seed'

/ kəpɔʔ^{R1}/   [kə 'pɔʔ]   'winnowing basket'

/-pʰrɨh^{R1}/   ['pʰrɨh]   'sow (seed)'

/ kəniːm^{R1}/   [kə 'niːm]   'yoke'

/ pʰoːn^{R2}/   ['pʰô̰ːʔn]   'four'

/ buːɲ ᴿ¹ /	[ˈbuːɲ]	'pressed new rice'
/ kənɨŋ ᴿ⁴ /	[kə ˈnɨˀŋ]	'rice straw'
/ kəneːw ᴿ¹ /	[kə ˈneːw]	'scythe, sickle'
/ cɔːj ᴿ² /	[ˈtɕɔ̂ːˀj]	'flow'

4) Consonant contrast

All consonant phonemes in Chong are phonemically contrastive. The following examples are suspect pairs of consonants which are contrastive in identical environments (IE) and some are contrastive in analogous environments (AE).

Consonant contrast in initial position

Examples :

/ p /	-	/ pʰ /	/ pic ᴿ³ /	'sleepy'
			/ pʰic ᴿ³ /	'to sleep'
/ p /	-	/ b /	/ puk ᴿ¹ /	'bad smelling'
			/ buk ᴿ¹ /	'nest'
/ pʰ /	-	/ b /	/ pʰɔŋ ᴿ¹ /	'dust'
			/ bɔŋ ᴿ¹ /	'damage'
/ b /	-	/ m /	/ bɔːp ᴿ¹ /	'tired'
			/ mɔːp ᴿ¹ /	'crouch'
/ m /	-	/ w /	/ mət ᴿ³ /	'eyes'
			/ wət ᴿ³ /	'find'
/ t /	-	/ tʰ /	/ teːw ᴿ¹ /	'right'
			/ tʰeːw ᴿ¹ /	'to crow'
/ t /	-	/ d /	/ tɔŋ ᴿ¹ /	'house'
			/ dɔŋ ᴿ¹ /	'gourd'
/ d /	-	/ tʰ /	/ duːŋ ᴿ¹ /	'coconut'

	/ tʰuːŋ R3 /	'to transplant (young rice plant)'
/ d / - / n /	/ daːŋ R1 /	'old (not new)'
	/ naːŋ R1 /	'ring finger'
/ d / - / l / - / t /	/ doːn R1 /	'correct, right'
	/ loːn R1 /	'louse'
	/ toːn R1 /	'female sex organ'
/ d / - / l /	/ dɔːŋ R1 /	'times'
	/ lɔːŋ R1 /	'banana'
/ n / - / tʰ /	/ kəniːm R1 /	'yoke'
	/ kətʰiːm R1 /	'garlic'
/ n / - / t /	/ kənɨŋ R4 /	'hay'
	/ kətɨŋ R2 /	'thin (in dimension)'
/ l / - / r /	/ lət R3 /	'to grow'
	/ rət R3 /	'rake'
/ k / - / kʰ /	/ keːw R1 /	'bark'
	/ kʰeːw R1 /	'call (name)'
/ k / - / ʔ /	/ kɔːŋ R1 /	'bracelet'
	/ ʔɔːŋ R1 /	'wasp'
/ k / - / t /	/ kɔːŋ R2 /	'tree frog'
	/ tɔːŋ R2 /	'fear'
/ kʰ / - / tʰ /	/ kʰɨŋ R1 /	'stretch'
	/ tʰɨŋ R1 /	'pus'
/ m / - / n /	/ kʰəmaːj R1 /	'widowed (adj.)'
	/ kʰənaːj R1 /	'elephant'
/ n / - / ɲ /	/ niːp R3 /	'carry-under-arm'

		/ ɲiːp^{R3} /	'chick'
/ ɲ / - / ŋ /		/ ɲət^{R3}/	'dried (pepper)'
		/ ŋət^{R2} /	'bitter'
/ ɲ / - / j /		/ kʰəjaʔ^{R1} /	'ginger'
		/ kʰəɲah^{R1} /	'charcoal'
/ j / - / w /		/ jaː^{R1} /	'tobacco (to smoke)'
		/ waː^{R1} /	'monkey'
/ c / - / cʰ /		/ cuːc^{R3} /	'harvest, crop'
		/ cʰuːc^{R3}/	'meat, flesh'
/ p / - / pr / - / pʰr /		/ piːŋ^{R1} /	'ripe (fruit)'
		/ priːŋ^{R1} /	'oil'
		/ pʰriːŋ^{R1} /	'black plum fruit'
/ pr / - / pl / - / pʰl /		/ prak^{R1} /	'money'
		/ plak^{R1} /	'to break'
		/ pʰlak^{R1} /	'to push'
/ pʰ / - / pʰr /		/ pʰeːm^{R2} /	'angry'
		/ pʰreːm^{R2}/	'land leech'
/ pʰ / - / pʰl /		/ pʰuː^{R3} /	'you (singular)'
		/ pʰluː^{R3} /	'leg'
/ k / - / kl /		/ kaːŋ^{R1} /	'the moon'
		/ klaːŋ^{R1} /	'branch'
/ kr / - / kl /		/ krap^{R1} /	'to hatch (egg)'
		/ klap^{R1} /	'to return (home)'
/ k / - / kʰl /		/ kaːt^{R2} /	'near'
		/ kʰlaːt^{R2} /	'small termite'
/ k / - / kw /		/ kaːŋ^{R1} /	'month'

	/ kwaːŋ^{R1} /	'wide'
/ kʰ / - / kʰr /	/ kəkʰup^{R3} /	'trap'
	/ kəkʰrup^{R3} /	'to pounce'
/ k / - / kʰr /	/ kɔːc^{R2} /	'gruel'
	/ kʰrɔːc^{R2} /	'lemon'
/ m / - / mr / - / ml /	/ kəmah^{R1} /	'smoke (n.)'
	/ kəmrah^{R1} /	'to wriggle'
	/ kəmlah^{R1} /	'small bitter melon'
/ p / - / pʰl /	/ paːk^{R3} /	'to climb'
	/ pʰlaːk^{R3} /	'to split (fire wood)'
/ pʰr / - / pʰl /	/ pʰraŋ^{R1} /	'dry season'
	/ pʰlaŋ^{R1} /	'a kind of vegetable'

Consonant contrast in final position

Examples :

/ ʔ / - / h /	/ pʰɔʔ^{R3}/	'enough'
	/ pʰɔh^{R3}/	'ashes'
/ t / - / c /	/ pʰuːt^{R3} /	'speak'
	/ pʰuːc^{R3}/	'get some water from jar'
/ n / - / ɲ /	/ səbuːn^{R1}/	'womb'
	/ buːɲ^{R1}/	'pressed new rice'
/ ʔ / - / k /	/ cʰoʔ^{R3} /	'citrus fruit'
	/ cʰok^{R3} /	'to pound with fist'
/ m / - / ɲ /	/ tʰaːm^{R1} /	'ask'
	/ tʰaːɲ^{R1} /	'weave' .
/ m / - / n /	/ cɔm^{R1} /	'sink'
	/ cɔn^{R1} /	'poor'

/ n / - / ŋ /	/ kɔn^{R1} /	'to shove'
	/ kɔŋ^{R1} /	'wheel'
/ t / - / p /	/ cʰɨp^{R1} /	'dark'
	/ cʰɨt^{R1} /	'old (not young'
/ t / - / k /	/ weːt^{R3} /	'unripe
	/ weːk^{R3} /	'to rock'

4.4.3 Vowel

1) General definition

Vowels are sounds articulated without a complete closure in the mouth or a degree of narrowing which would produce audible friction; the air escapes evenly over the centre of the tongue. If air escapes solely through the mouth, the vowels are said to be oral; if some air is simultaneously released through the nose, the vowels are nasal. In addition to this, in a phonetic classifacation of vowels, reference would generally be made to two variables, the first of which is easily describable, the second much less so : (a) the position of the lips - whether rounded, spread, or neutral; (b) the part of the tongue raised, and the height to which it moves.(Crystal 1991 : 377)

There are eighteen single vowel phonemes and one diphthong* in KP Chong as followed :

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*/ iə, ɨə / are phonemes that only found in the loan words from Thai. / uə / is the phoneme that can found in three Chong words, the rest found in Thai loan words. So, I would like to include only / uə / in the vowel system.

Table 7 : The vowel phonemes of Khlong Phlu Chong .

Tongue position / Tongue height	Front		Central		Back	
	short	long	short	long	short	long
close	i	iː	ɨ	ɨː	u	uː
close-mid	e	eː			o	oː
mid			ə	əː		
open-mid	ɛ	ɛː			ɔ	ɔː
open			a	aː		
diphthong			uə			

2) Formational statements of vowels (KP Chong).

Single vowels

/ i / [i]   It is a close front unrounded short vowel. It occurs in the closed syllable with all registers except R4.

e.g.

/ tiːw^R1 /	[ˈtiːw]	'sew'
/ kʰiːt^R2 /	[ˈkʰî̤ːʔt˺]	'pour'
/ pʰiʔ^R3 /	[ˈpʰi̤ʔ]	'tasty'
/ kəniʔ^R3 /	[kə ˈni̤ʔ]	'word'

/ iː / [iː]   It is a close front unrounded long vowel. It occurs in both open and closed syllables with all registers except R4.

e.g.

/ cʰiː^R1 /	[ˈt͡ɕʰiː]	'louse'
/ ʔiːn^R1 /	[ˈʔiːn]	'to have'
/ cʰiːm^R2 /	[ˈt͡ɕʰî̤ːʔm]	'bird'
/ pʰriː^R3 /	[ˈpʰri̤ː]	'forest'

/ e / [e] It is a close-mid front unrounded short vowel. It occurs in the closed syllables with R1 and R2.

e.g.   / tʰeʔ^{R1} /   [ˈtʰeʔ]   'soil'

        / kʰleʔ^{R1} /   [ˈkʰleʔ]   'shame'

        / ʔiːn^{R1} lec^{R2} /   [ʔiːn ˈleʔc]   'has a little'

/ eː / [eː] It is a close-mid front unrounded long vowel. It occurs in both open and closed syllables with all registers.

e.g.   / seːn^{R1} /   [ˈseːn]   'bat'

        / kʰəneːw^{R2} /   [kʰə ˈneːʔw]   'child'

        / pʰleːw^{R3} /   [ˈpʰleːw]   'fire'

        / meː^{R3} /   [ˈmeː]   'mother'

        / meːw^{R4} /   [ˈmeːʔw]   'fish'

/ ɛ / [ɛ] ~ [eˇ] .

[ɛ] is an open-mid front unrounded short vowel. It occurs in the closed syllables with R1 and R2.

e.g.   / kɛʔ^{R1} /   [ˈkɛʔ]   'sheep'

        / kəklɛʔ^{R1} /   [kə ˈklɛʔ]   'fish scale'

        / sɛc^{R2} /   [ˈsɛʔc]   'cold'

[eˇ] is a mid front unrounded short vowel. Its height is between [e] and [ɛ]. It occurs in closed syllables with R3.

e.g.   / pʰɛʔ^{R3} /   [ˈpʰeˇʔ]   'goat'

        / kətʰɛh^{R3} /   [kə ˈtʰeˇh]   'cart'

/ ɛː / [ɛː] ~ [eˇː] .

[ɛː] is an open-mid front unrounded long vowel. It occurs in both open and closed syllables with R1 and R2.

e.g.   / sɛː^{R1} /   [ˈsɛː]   'farm'

        / hɛːŋ^{R1} /   [ˈhɛːŋ]   'we'

| / pɛ:kR2 / | ['pɛ̂:ˀk˥] | 'wet' |
| / cɛ:nR2 / | ['tɕɛ̂:ˀn] | 'come' |

[e˅:] is a mid front unrounded long vowel. It occurs in both open and closed syllables with R3.

e.g.	/ kəmɛ:tR3 /	[kə 'me˅:t˥]	'turmeric curcuma'
	/ pʰɛ:kR3 /	['pʰe̯˅:k˥]	'laugh'
	/ kəmlɛ:ŋR3 /	[kə 'mle̯˅:ŋ]	'shoulder'

/ ɨ / [ɨ] It is a close central unrounded short vowel. It occurs in closed syllables with all registers.

e.g.	/ pʰrɨhR1 /	['pʰrɨ́h]	'sow (seed)'
	/ hɨjR1 /	['hɨj]	'to fly'
	/ tʰɨŋR2 /	['tʰɨ̂ˀŋ]	'bamboo shoots'
	/ nɨmR3 /	['nɨ̤m]	'year'
	/ kənɨŋR4 /	[kə 'nɨ̤̀ˀŋ]	'hay'

/ ɨ: / [ɨ:] It is a close central unrounded long vowel. It occurs in both open and closed syllables with all register except R4.

e.g.	/ kəpʰɨ:R1 /	[kə 'pʰɨ:]	'star apple'
	/ cʰɨ:jR1 /	['tɕʰɨ:j]	'kiss'
	/ kɨ:tR2 /	['kɨ̂:ˀt]	'tame'
	/ tʰɨ:tR3 /	['tʰɨ̤:t˥]	'ride'
	/ hɨ:tR3 /	['hɨ̤:t˥]	'sniff'

/ ə / [ə] It is a mid central unrounded short vowel. It occurs in the closed syllables with all registers.

e.g.	/ cəʔR1 /	['tɕə́ʔ]	'to meet'
	/ cʰətR2 /	['tɕʰə̂ˀt˥]	'to leak'
	/ cʰənR3 /	['tɕʰə̤ˌn]	'step on'

| / kətʰən^{R3} / | [kə 'tʰə̰ n] | 'calf of leg' |
| / wən^{R4} / | ['wə̰ˀn] | 'tomorrow' |

/ ə: / [ə:] It is a mid central unrounded long vowel. It occurs in both open and closed syllables with all registers.

e.g.	/ prə:^{R1} /	['prə:]	'to serve'
	/ tʰə:j^{R3} /	['tʰə̰:ˏj]	'heel'
	/ kʰrə:p^{R2} /	['kʰrə̂:ˀpˑ]	'to burp'
	/ jə:ŋ^{R3} /	['jə̰:ˏŋ]	'high'
	/ kəmə:ŋ^{R4} /	[kə 'mə̰:ˀŋ]	'chin'

/ a / [a] It is an open central unrounded short vowel. It occurs in the closed syllables with all registers.

e.g.	/ cʰan^{R1} /	['tɕʰan]	'I'
	/ tap^{R1} /	['tápˑ]	'bite'
	/ kətʰat^{R2} /	[kə 'tʰã̂ˀtˑ]	'fingernail'
	/ kəpʰaŋ^{R3} /	[kə 'pʰa̰ ŋ]	'swamp'
	/ kəlak^{R4} /	[kə 'là̰ˀkˑ]	'fall'

/ a: / [a:] It is an open central unrounded long vowel. It occurs in both open and closed syllables with all registers.

e.g.	/ kəma:^{R1} /	[kə 'ma:]	'porcupine'
	/ tʰa:m^{R2} /	['tʰâ:ˀm]	'crab'
	/ kəmla:p^{R3} /	[kə 'mla̰:ˏpˑ]	'dew'
	/ ma:^{R3} /	['ma̰:ˏ]	'horse'
	/ pʰa:j^{R4} /	['pʰà̰:ˀj]	'two'

/ u / [u] It is a close back rounded short vowel. It occurs in the closed syllables with all registers.

| e.g. | / tuŋ^{R1} / | ['tuŋ] | 'egg' |
| | / kəsut^{R2} / | [kə 'sũ̂ˀtˑ] | 'to get loose' |

/ pʰujᴿ³ /	[ˈpʰṳ.j]	'drunk, intoxicated'
/ kəmrujᴿ³ /	[kə ˈmrṳ.j]	'pangolin'
/ mərujᴿ⁴ /	[mə ˈrṳʔj]	'fruitfly'

/ uː / 　[uː] It is a close back rounded long vowel. It occurs in both open and closed syllables with all registers except register 4.

e.g.

/ ʔuːtᴿ¹ /	[ˈʔuːt˺]	'wood'
/ ʔuːɲᴿ¹ /	[ˈʔuːɲ]	'father'
/ suːc ᴿ² /	[ˈsûːʔc˺]	'ant'
/ pʰluːᴿ³ /	[ˈpʰlṳ.]	'leg'
/ puːᴿ³ /	[ˈpṳ.]	'grandfather'

/ o / 　[o] ~ [ŭ] .

[o] is a close-mid back rounded short vowel. It occurs in closed syllables with R1 and R2.

e.g.

| / kʰəloʔᴿ¹ / | [kʰə ˈloʔ] | 'leather' |
| / koŋᴿ² / | [ˈko͂ʔŋ] | 'long' |

[ŭ] is a lower closed back rounded short vowel. Its height is between [u] and [o]. It occurs in closed syllables with R3 and R4.

e.g.

/ wokᴿ³ /	[ˈwṳ̆.k˺]	'clothes'
/ tʰokᴿ³ /	[ˈtʰṳ̆.k˺]	'boat'
/ cʰokᴿ⁴ /	[ˈtɕʰṳ̆ʔk˺]	'pig'

/ oː / 　[oː] ~ [ŭː] .

[oː] is a close-mid back rounded long vowel. It occurs in both open and closed syllables with R1 and R2.

e.g.

/ joːᴿ¹ /	[ˈjoː]	'have sexual intercourse'
/ hoːcᴿ¹ /	[ˈhoːc˺]	'dead, die'
/ pʰoːnᴿ² /	[ˈpʰo͂ːʔn]	'four'

[uˇː] is a lower close back rounded long vowel. Its height is between [uː] and [oː]. It occurs in both open and closed syllables with R3 and R4.

e.g.   / kəŋoːᴿ³ /   [kə ˈŋuˇːˌ]   'sesame'

             / kəpʰoːtᴿ³ /   [kə ˈpʰuˇːˌtˈ]   'corn'

             / moːjᴿ⁴ /   [ˈmuˇːˀj]   'one'

/ ɔ /   [ɔ] ~ [oˇ] .

[ɔ] is an open-mid back rounded short vowel. It occurs in closed syllables with R1 and R2.

e.g.   / bɔŋᴿ¹ /   [ˈbɔŋ]   'damage'

             / plɔŋᴿ¹ /   [ˈplɔŋ]   'rice (cooked)'

             / kəjɔŋᴿ² /   [kə ˈjɔ̂ˀŋ]   'pincers'

             / kəsɔkᴿ² /   [kə ˈsɔ̂ˀkˈ]   'dribble'

[oˇ] is a mid back rounded short vowel. Its height is between [o] and [ɔ]. It occurs in closed syllables with R3.

e.g.   / pʰrɔʔᴿ³ /   [ˈpʰroˇ̱ʔ]   'because'

             / mɔŋᴿ³ /   [ˈmo̱ˇˌŋ]   'and'

             / pʰɔʔᴿ³ /   [ˈpʰo̱ˇʔ]   'enough'

/ ɔː / [ɔː] ~ [oˇː] .

[ɔː] is an open- mid back rounded long vowel. It occurs in both open and closed syllables with R1 and R2.

e.g.   / tɔːᴿ¹ /   [ˈtɔː]   'join, unite'

             / kʰɔːtᴿ¹ /   [ˈkʰɔːtˈ]   'bind'

             / cɔːjᴿ² /   [ˈtɕɔ̂ːˀj]   'flow'

             / kɔːcᴿ² /   [ˈkɔ̂ːˀcˈ]   'gruel'

·   [oˇː] is a mid back rounded long vowel. Its height is between [oː] and [ɔː]. It occurs in both open and closed syllables with R3 and R4.

e.g.   / pʰlɔːkᴿ³ /   [ˈpʰlo̯ˇːˌkˀ]   'tusk'

           / rɔːjᴿ⁴ /   [ˈro̯ˇːˀj]   'cucumber'

           / mɔːtᴿ³ /   [ˈmo̯ˇːˌtˀ]   'woodborer'

           / cʰɔːŋᴿ⁴ /   [ˈtɕʰo̯ˇːˀŋ]   'Chong people'

           / kəlɔːŋᴿ⁴ /   [kə ˈlo̯ˇːˀŋ]   'broad-walk'

Diphthong

There is only one diphthong.

/ uə /   [uə] It is a diphthong gliding from a close back unrounded to an open central diphthong vowel. It only occurs in closed syllable with R1.

e.g.   / huəcᴿ¹ /   [ˈhuəcˀ]   'to whistle'

           / duəjᴿ¹ /   [ˈduəj]   'plow'

           / kənuəcᴿ¹ /   [kə ˈnuəcˀ]   'cord (used to bind

                                                    thatch roof)'

3) Vowel phonemes contrast

The following are examples of the contrasts of monophthongs in length.

/ i / - / iː /	/ kʰitᴿ³ /	'to think'
	/ ʔuːtᴿ¹ k̲ʰ̲iːt̲ᴿ³ /	'match (n.)'
/ ɛ / - / ɛː /	/ kʰənɛɲᴿ¹ /	'fish net'
	/ nɛːnᴿ¹ /	'tight (of coat)'
/ ə / - / əː /	/ kətʰəjᴿ³ /	'lid (of pot)'
	/ tʰəːjᴿ³ /	'heel'
/ a / - / aː /	/ hajᴿ¹ /	'spicy'
	/ haːjᴿ¹ /	'rice'
/ u / - / uː /	/ pʰujᴿ¹ /	'swell (v.)'
	/ pʰuːjᴿ¹ /	'to burn'
/ o / - / oː /	/ kʰojᴿ² /	'to unclothe'

	/ kʰoːjᴿ² /	'horned lizard'
/ ɔ / - / ɔː /	/ kɔŋᴿ¹ /	'wheel'
	/ kɔːŋᴿ¹ /	'bracelet'
/ ɨ / - / ɨː /	/ kəkʰɨnᴿ¹ /	'wife'
	/ kʰɨːnᴿ¹ /	'return, give back'

The following are examples of the contrasts of monophthongs in tongue height.

/ e / - / a /	/ ɲeɲᴿ¹ /	'a kind of tree'
	/ ɲaɲᴿ¹ /	'curly (hair)'
/ ə / - / a /	/ kʰəjᴿ⁴ /	'sharp'
	/ kʰajᴿ² /	'ringworm'
/ u / - / o /	/ kʰujᴿ² /	'mongoose'
	/ kʰojᴿ² /	'to unclothe'
/ o / - / ɔ /	/ kʰəmoʔᴿ¹ /	'stone'
	/ mɔʔᴿ¹ /	'beautiful'
/ iː / - / eː /	/ tiːwᴿ¹ /	'sew'
	/ teːwᴿ¹ /	'right'
/ eː / - / ɛː /	/ kʰeːnᴿ¹ /	'child'
	/ kʰɛːnᴿ¹ /	'arm'
/ əː / - / aː /	/ kəːtᴿ² /	'shallow'
	/ kaːtᴿ² /	'near'
/ uː / - / oː /	/ ʔuːcᴿ¹ /	'few, little (quantity)'
	/ ʔoːcᴿ¹ /	'take'
/ oː / - / ɔː /	/ kətʰoːŋᴿ³ /	'a kind of tool (to catch fish)'
	/ kətʰɔːŋᴿ³ /	'bunch (of banana)'

4.4.4 Register

Register is one characteristic of suprasegmental features of the language especially in the Austroasiatic language family. It is used to distinguish the meaning of words in the language. There are four registers in KP Chong : / $R1$ /, / $R2$ /, / $R3$ / and / $R4$ /.

1) Formational Statements

/ $R1$ /   The register 1 is represented by [   ] or [´]

The register 1 is characterized by normal clear voice quality. It has two pitches : mid level [   ] and high rising [´]. It has more open or on-gliding vowel. The mid level pitch occurs in both open and closed syllables. In the open syllables, they occur with short or long vowels. In the closed syllable, they occur with long vowels and final consonants / p, t, c, k, m, n, ɲ, ŋ, w, j /. The high rising pitch only occurs with a closed syllable, short vowels and with final consonants / p, t, c, k, ʔ, h /. It is marked by / $R1$ / in phonemic transcription.

Examples of mid level pitch of register 1.

/ cʰɔːʳ¹ /	[ˈtɕʰɔː]	'dog'
/ kəjaːʳ¹ /	[kəˈjaː]	'scorpion'
/ rɔːpʳ¹ /	[ˈrɔːp̚]	'embrace'
/ ceːtʳ¹ /	[ˈtɕeːt̚]	'to sharpen (wood)'
/ hoːcʳ¹ /	[ˈhoːc̚]	'dead'
/ maːkʳ¹ /	[ˈmaːk̚]	'areca'
/ sumʳ¹ /	[ˈsum]	'star'
/ kʰeːnʳ¹ /	[ˈkʰeːn]	'son/ daughter'
/ ʔiɲʳ¹ /	[ˈʔiɲ]	'I'
/ pʰɔŋʳ¹ /	[ˈpʰɔŋ]	'dust'
/ tʰaːwʳ¹ /	[ˈtʰaːw]	'stand'

/ ŋaj^{R1} /	['ŋaj]	'heavy'

Examples of high rising of register 1.

/ tap^{R1} /	['táp˺]	'bite'
/ cʰɨt^{R1} /	['tɕʰɨ́t˺]	'old (not young)'
/ kic^{R1} /	['kíc˺]	'small'
/ sɨk^{R1} /	['sɨ́k˺]	'flour, meal'
/ kʰlɔʔ^{R1} /	['kʰlɔ́ʔ]	'shell'
/ pɔk^{R1} /	['pɔ́k˺]	'wrap'
/ hɛc^{R1} /	['hɛ́c˺]	'jump'
/ prak^{R1} /	['prák˺]	'silver'
/ cʰɨk^{R1} /	['tɕɨ́k˺]	'to pinch'

/ ^{R2} / The register 2 is represented by [ˆʔ].

The register 2 is characterized by normal clear voice quality and followed by glottal constriction.[2] It has high rising - falling pitch and more open vowel. It occurs with final consonants / p, t, c, k, m, n, ŋ, w, j / and occurs only in closed syllable. It is marked by / ^{R2} / in phonemic transcription.

Examples :

/ cʰiːp^{R2}]	['tɕʰîːʔp˺]	'mucus (nasal)'
/ cɔːj^{R2} /	['tɕɔ̂ːʔj]	'to flow'
/ kəpaːt^{R2} /	[kə 'pâːʔt˺]	'cotton'
/ suːc^{R2} /	['sûːʔc˺]	'ant'
/ plɔːk^{R2} /	['plɔ̂ːʔk˺]	'mud'

---

[2] Glottal constrictions are formed by narrowing the glottis beyond its neutral position (Crystal, 1991: 155). It differs from glottal stop because the glottal constriction is occurring near the end of the nucleic vowel and before final consonant, while the glottal stop is occurring in the initial or final position of a syllable.

/ pʰloːmᴿ² /	[ˈpʰlôːˀm]	'wax (bees)'
/ kʰiːnᴿ² /	[ˈkʰîːˀn]	'squash'
/ kəsɔːŋᴿ² /	[kə ˈsɔ̂ːˀŋ]	'ladder'
/ kɛːwᴿ² /	[ˈkɛ̂ːˀw]	'bend'
/ kənajᴿ² /	[kə ˈnâˀj]	'cockspur'
/ kəpʰokᴿ² /	[kə ˈpʰôˀk˺]	hook'
/ kənoŋᴿ² /	[kə ˈnôˀŋ]	'club'
/ kəmeːŋᴿ² /	[kə ˈmɛ̂ːˀŋ]	'jaw'
/ kəloːnᴿ² /	[kə ˈlôːˀn]	'navel'
/ kəsaːjᴿ² /	[kə ˈsâːˀj]	'groan'
/ kʰəmuːcᴿ² /	[kʰə ˈmûːˀc˺]	'spirit'

/ ᴿ³ /   The register 3 is represented by [◌̤].

The register 3 is characterized by breathy voice quality. Breathy is a term used in the phonetic classification of voice quality, on the basis of articulatory and auditory criteria. It refers to a vocal effect produced by allowing a great deal of air to pass through a slightly open glottis : this effect is also sometimes called 'murmur'. (Crystal, 1991 : 43) Most of vowels are higher than clear voice[3]. It usually occurs with aspirated initial consonants. It has a low falling pitch. It can occur both open and closed syllables with all final consonants. It is marked by / ᴿ³ / in phonemic transcription.

Examples :

/ cʰuːcᴿ³ /	[tɕʰṳːˋ c˺]	'flesh'
/ kəlaːŋᴿ³ /	[kəˈla̤ːˋ ŋ]	'ear'
/ rɔːŋᴿ³ /	[ˈrɔ̤ˇːˋ ŋ]	'centipede'

---

[3] This is in agreement with Theraphan L- Thongkum's findings. Her results of the measurements stated that the breathy and breathy-creaky vowels are higher than clear and clear-creaky vowels on the other hand, the clear voice and semi-clear voice vowels are more open than the breathy and semi-breathy voice vowels. (L-Thongkum, 1991 : 146)

/ pʰaːtᴿ³ /	[pʰa̤ːˑt˥]	'peel (v.)'
/ kəmrecᴿ³ /	[kə'mre̤ˑc˥]	'pepper'
/ pʰɔʔᴿ³ /	['pʰo̤ˑʔ]	'enough'
/ kʰuŋᴿ³ /	['kʰṳˑŋ]	'stomach'

/ ᴿ⁴ / The register 4 is represented by [ˋ̤ˀ].

The register 4 is characterized by breathy voice quality and followed by glottal constriction. It occurs only in closed syllable with final consonants / t, c, k, m, n, ɲ, ŋ, w, j /. It has high falling pitch[4] which can be perceived auditorily and raised vowel. It is marked by / ᴿ⁴ / in phonemic transcription.

Examples :

/ kəpʰɨtᴿ⁴ /	[kə 'pʰɨ̤̀ˀt˥]	'prawn'
/ kəlaːkᴿ⁴ /	[kə'la̤ˑˀk˥]	'swallow'
/ kətʰicᴿ⁴ /	[kə 'tʰɨ̤̀ˀc˥]	'to shudder'
/ ŋaːmᴿ⁴ /	['ŋa̤ːˀm]	'sweet'
/ wənᴿ⁴ /	['wè̤ˀn]	'tomorrow'
/ cʰɔːŋᴿ⁴ /	['tɕʰò̤ˑˀŋ]	'Chong people'
/ meːwᴿ⁴ /	['mè̤ˑˀw]	'fish'
/ moːjᴿ⁴ /	['mṳ̀ˑˀj]	'one'
/ pʰaːjᴿ⁴ /	['pʰà̤ˑˀj]	'two'

2) Register Contrast

In Chong, the registers are phonemic. Examples of the registers contrast in identical environment (I.E) and in analogous environment (A.E) are given below.

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[4] This is supported by Theraphan L. Thongkum. She conducted an instrumental study of Chong registers. She concluded that register 4 has a breathy followed by creaky voice phonation and high falling contour. (L-Thongkum, 1991 : 159)

Register	Contrast in	Examples	
$/^{R1}/ - /^{R2}/$	IE	$/ sa:p^{R1} /$	'tasteless, bland'
		$/ sa:p^{R2} /$	'light'
	IE	$/ cɔ:j^{R1} /$	'to plow'
		$/ cɔ:j^{R2} /$	'to flow'
	IE	$/ k^ho:j^{R1} /$	'tooth'
		$/ k^ho:j^{R2} /$	'horned lizard'
	IE	$/ t^ha:m^{R1} /$	'to ask'
		$/ t^ha:m^{R2} /$	'crab'
$/^{R2}/ - /^{R3}/$	IE	$/ ce:t^{R2} /$	'deer'
		$/ ce:t^{R3} /$	'to sharpen'
	IE	$/ lu:c^{R2} /$	'soft'
		$/ lu:c^{R3} /$	'steal'
$/^{R1}/ - /^{R3}/$	IE	$/ kəma:^{R1} /$	'porcupine'
		$/ kəma:^{R3} /$	'needle'
	IE	$/ k^hla:^{R1} /$	'way'
		$/ k^hla:^{R3} /$	'to scearm'
$/^{R1}/ - /^{R4}/$	IE	$/ mo:j^{R1} /$	'cl. of fruit'
		$/ mo:j^{R4} /$	'one'
	IE	$/ lɨŋ^{R1} /$	'older brother or sister'
		$/ lɨŋ^{R4} /$	'deep'
$/^{R3}/ - /^{R4}/$	IE	$/ ŋa:j^{R3} /$	'face'
		$/ ŋa:j^{R4} /$	'far'
	IE	$/ wən^{R3} /$	'day'
		$/ wən^{R4} /$	'tomorrow'
$/^{R1}/ - /^{R2}/ - /^{R3}/$			
	IE	$/ wa:ŋ^{R1} /$	'free'

/ waːŋ^{R2} /   'want'

/ waːŋ^{R3} /   'to put'

/ ^{R1} / - / ^{R2} / - / ^{R3} / - / ^{R4} /

AE   / paːj^{R1} /   'to smear'

/ paːj^{R2} /   'palm (of hand)'

/ pʰaːj^{R3} /   'to paddle'

/ pʰaːj^{R4} /   'two'

The following four tables show the occurrence of four registers with initial consonants, final consonants and vowels.

Table 8 : The co-occurrence of register with single initial consonant.

+   occurrence

(blank)   non-occurrence

	p	pʰ	b	t	tʰ	d	c	cʰ	k	kʰ	ʔ	m	n	ɲ	ŋ	s	h	l	r	w	j
R1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
R2	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+
R3	+	+			+		+	+	+	+		+	+	+	+	+	+	+	+	+	+
R4		+					+	+		+		+	+		+			+	+	+	

The co-occurrence of registers with initial consonant as shown in the table 8 can be summarized as follows.

1. All initial consonants can occur with register 1.

e.g.   / kəŋɛː^{R1} /   [kə ˈŋɛː]   'listen'

/ loːt^{R1} /   [ˈloːt˥]   'barking deer'

/ pʰoːj^{R1} /   [ˈpʰoːj]   'after'

2. All single initial consonants except / d, h / can occur with R2.

e.g.   / mɨt^{R2} /   [ˈmɨ̃ʔt˥]   'to take pity on'

/ kɛːw^{R2} /   [ˈkɛ̂ːʔw]   'bend'

/ suːc^{R2} /   [ˈsûːʔc˥]   'ant'

/ luj ^{R2} /   ['lu͂ʔj]   'earthworm'

3. All single initial consonants except / b, t, d, ʔ / can occur with R3.

e.g.   / kəlɛːŋ ^{R3} /   [kə 'lɛːˏŋ]   'young woman'

     / kʰət ^{R3} /   ['kʰəˏtˀ]   'pain'

     / mɔːk ^{R3} /   ['mo̞ˇːˏkˀ]   'fog'

4. There are 11 initial consonants that can occur with R4 : / pʰ, c,
cʰ, kʰ, m, n, ŋ, w, r, l, ml /.

e.g.   / kəpʰɨt ^{R4} /   [kə 'pʰɨ̀ʔtˀ]   'prawn'

     / kʰəj ^{R4} /   ['kʰə̀ʔj]   'sharp'

     / kənaŋ ^{R4} /   [kə 'nà̰ʔŋ]   'bead'

     / ŋaːm ^{R4} /   ['ŋà̰ːʔm]   'sweet'

Table 9 : The co-occurrence of register with consonant cluster.

     +   occurrence

     (blank)   non-occurrence

	pr	pl	pʰr	pʰl	kr	kl	kʰr	kʰl	kw	kʰw	mr	ml
R1	+	+	+	+	+	+	+	+	+	+	+	+
R2	+	+	+	+	+	+	+	+				+
R3	+		+	+	+	+	+	+			+	+
R4												+

The co-occurrence of register with consonant cluster as shown in table 9 can be summarized as follows.

1. All consonant clusters can occur with R1 as in :

e.g.   / kəmliː ^{R1} /   [kə 'mliː]   'a maggot of rhinosceros
                                            beetle'

     / priːŋ ^{R1} /   ['priːŋ]   'oil'

2. All consonant clusters except / kw, kʰw, mr / can occur with R2.

e.g.   / plɔːk^{R2} /   ['plɔ̂ːʔkˈ]   'mud'

          / kʰluːm^{R2} /   ['kʰlûːʔm]   'urinate'

3. All consonant clusters except / pl, kw, kʰw / can occur with R3.

e.g.   / pʰluː^{R3} /   ['pʰlỵ̀ː]   'leg'

          / kʰlic^{R3} /   ['kʰlị̀ cˈ]   'sprain'

          / kəmruj^{R3} /   [kə 'mrỵ̀ j]   'pangolin'

4. Only consonant cluster / ml / can occur with R4.

e.g.   / kəmlɔːk^{R4} /   [kə 'mlǫ̌ːʔkˈ]   'salty'

Table 10 : The co-occurrence of register with final consonant.

+   :   occurrence

(blank)   non-occurrence

	-p	-t	-c	-k	-ʔ	-m	-n	-ɲ	-ŋ	-h	-w	-j
R1	+	+	+	+	+	+	+	+	+	+	+	+
R2	+	+	+	+		+	+		+		+	+
R3	+	+	+	+	+	+	+	+	+	+	+	+
R4		+	+	+		+	+		+		+	+

The co-occurrence of register with final consonant as shown in the table 10 can be summarized as follows.

1. Register 1, 3 can occur with all final consonants.

e.g.   / pʰɨk^{R1} /   ['pʰɨ́kˈ]   'to pick (flower)'

        / cɔːj^{R1} /   ['tɕɔːj]   'to plow'

        / cʰɨp^{R1} /   ['tɕʰɨ́pˈ]   'dark'

        / pʰuh^{R3} /   ['pʰỵ̀ h]   'to boil'

        / cʰiw^{R3} /   ['tɕʰị̀ w]   'soup'

        / cʰən^{R3} /   ['tɕʰə̰̀ n]   'step on'

2. Register 2 can occur with all final consonants except / ʔ, h, ɲ /.

e.g.   / cʰɛːŋ ᴿ² /   [ˈtɕʰɛ̂ːˀŋ]   'to burn'

        / kʰoːt ᴿ² /   [ˈkʰôːˀt˺]   'mosquito'

        / neːm ᴿ² /   [ˈnêːˀm]   'trunk of tree'

3. Register 4 can occur with all final consonants except / p, ʔ, ɲ, h /.

e.g.   / pʰuŋ ᴿ⁴ /   [ˈpʰừˀŋ]   'melon'

        / cʰok ᴿ⁴ /   [ˈtɕʰ ̰̀oˀk˺]   'pig'

        / ŋaːj ᴿ⁴ /   [ˈŋà̰ːˀj]   'far'

Table 11 : The co-occurrence of register with vowel.

                +   occurrence
        (blank)   non-occurrence

	i	e	ɛ	ɨ	ə	a	u	o	ɔ	iː	eː	ɛː	ɨː	əː	aː	uː	oː	ɔː	uə
R1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
R2	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
R3	+			+	+	+	+	+	+	+	+	+	+		+	+	+	+	
R4				+	+	+	+	+			+			+	+		+	+	

The co-occurrence of register with vowel as shown in the table 11 can be summarized as follows.

1. All vowels can occur with R1.

e.g.   / ɲaɲ ᴿ¹ /   [ˈɲaɲ]   'curly'

        / soːc ᴿ¹ /   [ˈsoːc˺]   'horn'

        / lɨk ᴿ¹ /   [ˈlɨ́k˺]   'husk'

        / luj ᴿ¹ /   [ˈluj]   'pointed'

2. All single vowels except / e / can occur with R2.

e.g.   / luːc ᴿ² /   [ˈlûːˀc˺]   'soft (to the touch)'

        / plɔːk ᴿ² /   [ˈplɔ̂ːˀk˺]   'mud'

        / kʰrɛːŋ ᴿ² /   [ˈkʰrɛ̂ːˀŋ]   'night'

/ kɨːt R2 /   [ˈkɨ̂ːʔt˺]   'tame'

3. All single vowels except / e, ɛ, əː / can occur with R3.

e.g.   / pʰəj R3 /   [ˈpʰə̰ j]   'it'

/ pʰaːt R3 /   [ˈpʰa̰ːˑt˺]   'peel'

/ tʰok R3 /   [ˈtʰṵˑk˺]   'boat'

/ kəniʔ R3 /   [kə ˈnḭʔ]   'word'

4. There are eleven vowels that can occur with R4 : / ɨ, ə, a, u, o,

eː, əː, aː, oː, ɔː /.

e.g.   / mɨt R4 /   [ˈmɨ̰̀ʔt˺]   'to take pity on'

/ muːj R4 /   [ˈmṵ̀ːʔj]   'one'

/ cʰɔːŋ /   [ˈtɕʰò̰ːˑʔŋ]   'Chong people'

5. Diphthong / uə / occurs with R1 only.

e.g.   /duəj /   [ˈduəj]   'plow'

/ huəc /   [ˈhuəc˺]   'whistle'

CHAPTER V

WANG KRAPHRAE CHONG PHONOLOGY

5.1 The Intonation Group

There are two types of intonation contour in Wang Kraphrae Chong. They are falling and rising contour.

5.1.1 The falling contour

The falling contour occurs in declarative sentences, content questions and requests. It is indicated by [⌐‾‾‾‾﹨]

1) Declarative sentence

/ kʰəneːwʳ² ceːwʳ¹ roŋʳ³riənʳ³ /   'The children go to school.'

children   to go   school

/ tʰɔmʳ¹ tiːwʳ³ rotʳ³ plaːʳ³ /   'Uncle buy a new car.'

uncle   to buy car new

/ ʔuːɲʳ¹ ceːwʳ¹ sɛːʳ¹ cʰanʳ¹ ceːwʳ¹ mɔːŋʳ³ /

father to go   a field I   to go   with

'If my father go to a field, I will go too.'

/ cʰanʳ¹ jɨːŋʳ³ kwaːʳ¹ miːʳ³ /   'I am taller than my mother.'

   I   tall   than   mother

/ kʰrɛːŋ^{R2} ʔoː^{R1} (cʰan^{R1}) pic^{R3} (ʔi^{R1})lak^{R3} ʔih^{R1} / 'I can not sleep last night.'

Night yesterday (I) to sleep (not) sleep not

/ cʰan^{R1} tʰɨm^{R1} plɔŋ^{R1} (ʔi^{R1})pɛn^{R1} ʔih^{R1} /   'I can not cook rice.'

I   to cook rice   (not) can   not

/ ʔuːn^{R1} (ʔi^{R1}) coːp^{R3} kuŋ^{R1}kiŋ^{R1} tuə^{R1} ʔan^{R1} ʔih^{R1} /

father (not) like   trousers   cl.   this   not

'Father does not like this trousers.'

/ dak^{R1} puːt^{R3} sɛːm^{R2} (ʔi^{R1}) kroːŋ^{R1} ʔih^{R1} /

he/ she   speak Thai   (not) fluent   not

'He / She can not speak Thai fluently.'

2) Content Question

/ dak^{R1} toː^{R3} kəpiʔ^{R1} /   'What does he/ she do?'

he /she   do   what

/ kɛː^{R1} kɨj^{R1} tɔŋ^{R1} mɔːŋ^{R3} ʔəmih^{R1} /   'Whom do you live with?'

you   live house with/ and   who

/ kɛː^{R1} tɛːŋ^{R1} kaːn^{R1} (saː^{R1}) nəʔih^{R1} /   'When did you marry?'
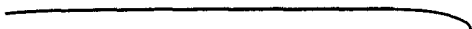
you   marry work particle   when

/ muː^{R1} dak^{R1} klap^{R1} ˌtɔŋ^{R1} jaŋ^{R3} ʔih^{R1} /   'How do they return home?'

they   return home   how

/ dak^{R1} tup^{R3} k^{h}əne:w^{R2} tu:^{R3}ʔih^{R1} /   'Why does he/ she hit a child?'

he/ she   hit   child   why

3) Request

/ cuəj^{R3} la:p^{R3} ca:m^{R1} ʔih^{R1} c^{h}an^{R1} mɔ:ŋ^{R3} ʔu:c^{R1} /

to help wash   bowl   to give I   with   little

'Help me to wash a bowl, please.'

/ cuəj^{R3} ti:w^{R3} k^{h}ɔ:ŋ^{R1} mɔ:ŋ^{R3} ʔu:c^{R1} /

to help   buy   something with   little

'Help me to buy something, please.'

/ cuəj^{R3} ce:w^{R1} pɛn^{R1} pɨən^{R3} c^{h}an^{R1} mɔ:ŋ^{R3} ʔu:c^{R1} /

to help to go to be friend   I   with   little

'To go with me, please.'

5.1.2 The rising contour

The rising contour occurs in polar question. The question marker hiʔ^{R1} is always used in polar question. I notice that WK Chong speakers do not use the question word ʔido:^{R1}, ʔitɛ:^{R1}, ʔitaj^{R1} as often as the KP Chong speakers. The last syllable is slightly rising contour. It is indicated by [⟍].

/ ʔi:n^{R1} kəcɨm^{R3} kɨj^{R1} tɔŋ^{R1} ʔan^{R1} hiʔ^{R1} /   "Do people live in this house?"

to have people stay/ live house this   qw.

/ t^{h}ɔm^{R1} c^{h}o:j^{R1} ha:j^{R1} hiʔ^{R1} /   'Does uncle grow rice?'

uncle to grow   rice qw.

/ nɔːn^{R2} kɨːj^{R3} ceːw^{R1} kuŋ^{R1}tiːp^{R3} hiʔ^{R1} / 'Did you ever go to Bangkok?'

you ever to go Bangkok qw.

/ kɛː^{R1} kʰah^{R1} hiʔ^{R1} / 'Do you know?'

you to know qw.

5.2 Phonological word

The phonological word has only one strongly stressed syllable as its nucleus and may have weakly stressed syllable or unstressed syllable as its periphery.

5.2.1 Word structure

Word structure of WK Chong can be classified into three types of stress group : monosyllabic, disyllabic and trisyllabic words. The word structure is ˌw uˈs or u ˌwˈs.

1) Monosyllabic word

A monosyllabic word has only one major syllable which has strong stress on that only syllable. It can be both open and closed syllable. Its structure is ˈs.

Examples :

/ waː^{R1} /	[ˈwaː]	'monkey'
/ siː^{R1} /	[ˈsiː]	'snake'
/ tʰeʔ^{R1} /	[ˈtʰéʔ]	'soil'
/ kaːŋ^{R1} /	[ˈkaːŋ]	'the moon'
/ pliːw^{R3} /	[ˈpli̤ːw]	'fire'
/ kʰlaːŋ^{R2} /	[ˈkʰlâːʔŋ]	'hawk'

| / suːc^{R2} / | ['sûː^{ʔ}c⁻] | 'ant' |
| / ŋaːj^{R3} / | ['ŋaːˑj] | 'face' |

2) Disyllabic word

There are two sub-types of disyllabic word in WK Chong.

Sub-type A

This subtype is composed of an open presyllable and a major syllable.
The strong stress is on the last syllable and the first syllable is unstress. Its
structure is u's.

Examples :

/ kəkaː^{R1} /	[kə 'kaː]	'mouth'
/ kəloːn^{R2} /	[kə 'lôː^{ʔ}n]	'navel'
/ kəmat^{R1} /	[kə 'mát⁻]	'gall, bile'
/ kʰənam^{R1} /	[kʰə 'nam]	'medicine, drug'
/ kəlaːk^{R4} /	[kə 'là̤ː^{ʔ}k⁻]	'swallow'
/ kəmeːt^{R3} /	[kə 'meːˑt⁻]	'turmeric curcuma'
/ kʰəloʔ^{R1} /	[kʰə 'lóʔ]	'leather'
/ mənəh^{R1} /	[mə 'nə́h]	'pineapple'
/ kətaːn^{R1} /	[kə 'taːn]	'ax'
/ kəpuː^{R3} /	[kə 'pṳːˑ]	'cane'

The following table show the co-occurrence of presyllable which can
occur with the next major syllable.

Table 12 : The co-occurrence of open presyllable with initial consonant of next the major syllable.

+   :   occurrence

(blank)   non-occurrence

	p	pʰ	b	t	tʰ	d	c	cʰ	k	kʰ	ʔ	m	n	ɲ	ŋ	s	h	l	r	w	j
pə			+		+				+			+			+	+			+		
pʰə																					+
tə					+				+											+	
tʰə															+						
kə	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
kʰə												+	+	+	+			+			+
mə									+			+					+		+		
sə			+																		
lə																	+				
prə											+										

The co-occurrence of open presyllable with initial consonant of the next major syllable as shown in the table 12 can be summarized as follows.

1. There are 10 open presyllables : / pə, pʰə, tə, tʰə, kə, kʰə, mə, sə, lə, prə / occurring with initial consonants in major syllable.

2. Only / kə / can occur with all initial consonants of the next major syllable as in :

/ kəpaŋ [R1] /	'a hand of banana'
/ kəpʰaː [R1] /	'soft-shell turtle'
/ kəbɔːŋ [R1] /	'fence'
/ kətaːk [R2] /	'tongue'
/ kətʰuh [R1] /	'poped rice'
/ kədaːj [R1] /	'board'
/ kəcəːm [R1] /	'eyebrow'
/ kəcʰeːŋ [R1] /	'eves'

/ kəkih^{R1} /	'waist'
/ kəkʰoː^{R1} /	'motar'
/ kəmaːŋ^{R3} /	'orphan'
/ kənaːk^{R2} /	'crow'
/ kəɲaːj^{R3} /	'to tell'
/ kəŋuː^{R3} /	'sesame'
/ kəsɔk^{R2} /	'dribble'
/ kəhiː^{R1} /	'pestle'
/ kəlaʔ^{R3} /	'thorn'
/ kəjoːj^{R1} /	'hang up'
/ kəwaːɲ^{R1} /	'cardamon'

3. The open presyllable / pə / is followed by / t, d, k, m, ŋ, s, r / as in :

/ pətaː^{R1} /	'bottom'
/ pədɨŋ^{R1} /	'up, above'
/ pəkaːj^{R2} /	'out side'
/ pəmuːn^{R3} /	'behide'
/ pəŋaːj^{R3} /	'front'
/ pəsaː^{R1} /	'son/ daughter - in -law'
/ pəreʔ^{R1} /	'inside'

4. The open presyllable / pʰə / is only followed by / j / as in :

/ pʰəjaː^{R1} maːn^{R1} /	'enemy'

5. The open presyllable / tə / is followed by / tʰ, k, w / as in :

/ tətʰeʔ^{R1} /	'ground'
/ təkɨp^{R1} /	'the floor'
/ təwec^{R1} /	'the whorl of hair on top of the head'

6. The open presyllable / tʰə / is only followed by / ŋ / as in :

   / tʰəŋeːt^{R2} /   'darkness'

7. The open presyllable / kʰə / is followed by / m, n, ɲ, ŋ, l, j / as in :

   / kʰəmɨk^{R2} /   'sweat'

   / kʰənɨp^{R2} /   'wall'

   / kʰəɲah^{R1} /   'charcoal'

   / kʰəŋaːm^{R2} /   'husked rice'

   / kʰəloʔ^{R1} /   'skin'

   / kʰəjaʔ^{R1} /   'ginger'

8. The open presyllable / mə / is followed by / k, n, h, r / as in :

   / məkeːn^{R2} /   'immediately'

   / mənəh^{R1} /   'pineapple'

   / məhɔːj^{R1} /   'wind (v.)'

   / məroːj^{R4} /   'fly (n.)'

9. The open presyllable / lə / is only followed by / h / as in :

   / ləhuŋ^{R1} /   'papaya'

10. The open presyllable / sə / is only followed by / b / as in :

   / səbuːn^{R1} /   'womb'

11. The open presyllable / prə / is only followed by / ʔ / as in :

   / prəʔoː^{R1} /   'tomorrow'

There are only one open presyllable / kə / which can preceed the consonant cluster of the major syllable. The presyllable / kə / is followed by / pr, pʰl, kr, kl, kʰr / as in :

   / kəpʰləːŋ^{R1} /   'gun'

   / kəpraŋ^{R1} /   'guava'

/ kəkraŋ^{R3} /	'monitor'
/ kəklo:ŋ^{R2} /	'ladder'
/ kəkrət^{R3} /	'termite'

Sub-type B

This subtype is composed of a closed presyllable and a major syllable. The strong stress is on the major syllable and the presyllable is weak stress. Words of this sub-type occur more frequently in WK Change than in KP Chong. Its structure is ˌwˈs.

Examples :

/ cɨm^{R3} kʰɨn^{R1} /	[ˌtɕɨm̩ ˈkʰɨn]	'woman'
/ cɨm^{R3} lo:ŋ^{R3} /	[ˌtɕɨm̩ ˈlo̝:ŋ]	'man (vs. woman)'
/ ɲiŋ^{R1} ɲɔ:ŋ^{R1} /	[ˌɲiŋ ˈɲɔ:ŋ]	'quail'
/ caŋ^{R1} kri:t^{R2} /	[ˌtɕaŋ ˈkrî:ʔt˺]	'cricket'
/ ma:ŋ^{R1} maw^{R2} /	[ˌma:ŋ ˈma̰ʔw]	'butterfly'
/ biŋ^{R1} ba:ŋ^{R1} /	[ˌbiŋ ˈba:ŋ]	'spider'
/ sam^{R1}laŋ^{R1} /	[ˌsamˈlaŋ]	'feel'
/ ti:n^{R1} cup^{R1} /	[ˌti:n ˈtɕup˺] ·	'vegetable'
/ kaŋ^{R1} kri:ŋ^{R1} /	[ˌkaŋ ˈkri:ŋ]	'green okra'
/ me:ŋ^{R1} ka:k^{R1} /	[ˌme:ŋ ˈká:k˺]	'armpit'
/ ti:n^{R1} caŋ^{R2} /	[ˌti:n ˈtɕa̰ʔŋ]	'bear'
/ cut^{R1} ʔɔ:ŋ^{R1} /	[ˌtɕut˺ ˈʔɔ:ŋ]	'to sit on one's heels'

3) Trisyllabic word

A trisyllable word is a word with three syllables. It is rather rare in Chong, some words are therefore borrowed from Thai. This type consists of one major syllable which has strong stress and two presyllable which has weak stress and unstress. Its structure is ˌw uˈs or uˌwˈs.

Examples of [ˌwuˈs] :

/ lukᴿˡ kəmoːjᴿˡ /	[ˌlukˈ kə ˈmoːj]	'salt'
/ manᴿˡ kəlaŋᴿˡ /	[ˌman kə ˈlaŋ]	'manioc, topioca'
/ cakᴿˡ kətəɲᴿˡ /	[ˌtɕaˊkˈ kə ˈtəɲ]	'to bend down'
/ tɨkᴿˡ məhɔːkᴿˡ /	[ˌtɨkˈ mə ˈhɔ̂ːkˈ]	'snore'

As for the stress pattern uˌwˈs , I found only one example :

| / pʰə jaːᴿˡ maːnᴿˡ / | [pʰə ˌjaː ˈmaːn] | 'enemy' |

The WK Chong has variation of monosyllabic and disyllabic words in the same way as those in KP Chong.

5.3 The syllable

5.3.1 Syllable function

The syllable functions in the phonological word. There are two main classes of syllable in term of their functions : nuclear syllable and peripheral syllable.

1) The nuclear syllable

The nuclear syllable refer to the major syllable. It takes a strong stress. It always occurs in the final syllable of the phonological word.

e.g.	/ c̲ʰ̲ɔ̲ːᴿˡ /	[ˈtɕʰɔ̲ː]	'dog'
	/ k̲ɔ̲ː̲ŋ̲ᴿˡ /	[ˈk̲ɔ̲ːŋ]	'bracelet'
	/ kəh̲i̲ːᴿˡ /	[kə ˈh̲i̲ː]	'pastle'
	/ pək̲a̲ː̲j̲ᴿ² /	[pə ˈk̲â̲ː̲ʔ̲j]	'out side'
	/ ɲiŋᴿˡ n̲ɔ̲ː̲ŋ̲ᴿˡ /	[ˌɲiŋ ˈn̲ɔ̲ː̲ŋ]	'quail'
	/ cakᴿˡ kət̲ə̲ɲ̲ᴿˡ /	[ˌtɕaˊk kə ˈt̲ə̲ɲ]	'to bend down'

2) Peripheral syllable

The peripheral syllable of refers to a presyllable. It has a function as the periphery of a phonological word. It can be divided into two sub-classes : a weakly stressed peripheral syllable and an unstressed peripheral syllable.

The weakly stressed peripheral syllable occurs in the first syllable of the disyllabic word and the first syllable or the second syllable of the trisyllabic word.

e.g. / caŋ^{R1} kriːt^{R2} /   [ˌtɕaŋ ˈkriˆːˀtˀ]   'criket'

      / ɲiɲ^{R1} ɲɔːŋ^{R1} /   [ˌɲiɲ ˈɲɔːŋ]   'quail'

      / cɨm^{R3} kʰɨn^{R1} /   [ˌtɕɨ̤m ˈkʰɨn]   'woman'

      / cɨm^{R3} loːŋ^{R3} /   [ˌtɕɨ̤m ˈlo̤ːˏŋ]   'man (vs. woman)'

      / luk^{R1} kəmoːj^{R1} /   [ˌluˊkˀ kə ˈmoːj]   'salt'

      / pʰə jaːˀ^{R1} maːn^{R1} /   [pʰə ˌjaː ˈmaːn]   'enemy'

The unstressed peripheral syllable occurs in the first syllable of a disyllabic word and the first syllable or the second syllable of a trisyllabic word.

Examples :

      / kə puːt^{R3} /   [kə ˈpṳːˏtˀ]   'corn'

      / kʰə ŋaːm^{R2} /   [kʰə ˈŋa̤ˆːˀm]   'husked rice'

      / kə mrec^{R3} /   [kə ˈmre̤ˏcˀ]   'pepper'

      / pʰə jaː^{R1} maːn^{R1} /   [pʰə ˌjaː ˈmaːn]   'enemy'

5.3.2 Syllable structure

In WK Chong, there are two types of syllable structure : open syllable and closed syllable.

1) Open syllables

These syllables is composed of a vowel as a nucleus preceded by a single consonant or cluster consonant and a register functioning as periphery. It can be divided into two sub-types : open presyllable and open major syllable.

Sub-type I : Open presyllable

The open presyllable is definded as a syllable whose nucleus is a neutral vowel [ə] which occurs in free variation with the central vowel [a]. In this study it is analyzed as / ə / in phonemic transcription. Consequently, [ə] is selected as a phonetic form because it occurs more frequently. It is unstressed and precedes the major syllable in disyllabic or trisyllabic words. This sub-type of the presyllable can be deleted in connected speech. Its structure is : Cə- or CCə- .

Cə-	e.g.	/ k̠əwaːj^{R3} /	[k̠ə ˈwạ̀ːj]	'tiger'
		/ m̠əroːj^{R4} /	[m̠ə ˈrọ̀ːˀj]	'fly (n.)'
		/ k̠ʰəloʔ^{R1} /	[k̠ʰə ˈloʔ]	'hide, skin'
		/ s̠əbuːn^{R1} /	[s̠ə ˈbuːn]	'womb'
		/ p̠əkaːj^{R2} /	[p̠ə ˈkâːˀj]	'outside'
		/ l̠əhuŋ^{R1} /	[l̠ə ˈhuŋ]	'papaya'

I found the only one example of the structure CCə- .

| | | / p̠r̠əʔoː^{R1} / | [p̠r̠ə ˈʔoː] | 'yesterday' |

Sub-type II : Open major syllable

The open major syllable is defined as a syllable whose nucleus is a vowel and preceded by an obligatory consonant or an optional cluster functioning as a periphery of the syllable and a register. It has the structure $C_1(C_2)V^{R1-R3}$

Examples of CV^{R1-R3}

		/ cʰiː^{R1} /	[ˈtɕʰiː]	'louse'
		/ sɛː^{R1} /	[ˈsɛː]	'farm'
		/ pʰaː^{R1} /	[ˈpʰaː]	'full (form eating'
		/ luː^{R1} /	[ˈluː]	'howl'
		/ waː^{R1} /	[ˈwaː]	'monkey'

/ ti:^{R1} /	['ti:]	'hand'
/ ce:^{R2} /	['tɕê:ʔ]	'deer'
/ mi:^{R3} /	['mi̤:̖]	'mother'

Examples of CCV^{R1,R3} :

/ pʰli:^{R1} /	['pʰli:]	'fruit'
/ plu:^{R3} /	['plṳ:̖]	'leg'
/ pri:^{R3} /	['pri̤:̖]	'forest'
/ kla:^{R3} /	['kla̤:̖]	'screech'

2) Closed syllables

The closed syllable is composed of a vowel as nucleus preceded by a single consonant or cluster consonant, a final consonant and a register functioning as periphery. It can be divided into two sub-types : closed presyllable and closed major syllable. Its structure is $C_1(C_2)VC_3^{R1-4}$.

Sub-type I : closed presyllable

The closed presylable is composed of initial consonant, vowel, a final consonant and R1 or R3. It has a weak stress and precedes the major syllable in disyllabic and trisyllabic words. Its structure is ˌCVC^{R1,R3} .

e.g.

/ mun^{R1} tih^{R1} /	[ˌmuŋ 'tíh]	'sweet potato'
/ caŋ^{R1} kri:t^{R12} /	[ˌtɕaŋ 'krî:ʔt˥]	'cricket'
/ ti:n^{R1} caŋ^{R2} /	[ˌti:n 'tɕa̰ʔŋ]	'bear'
/ kaŋ^{R1} kri:ŋ^{R1} /	[ˌkaŋ 'kri:ŋ]	'green okra'
/ piŋ^{R1} po:ŋ^{R1} /	[ˌpiŋ 'po:ŋ]	'face powder'
/ cɨm^{R3} kʰɨn^{R1} /	[ˌtɕɨ̤m 'kʰɨn]	'woman'
/ cɨm^{R3} lo:ŋ^{R3} /	[ˌtɕɨ̤m 'lo̤:̖ŋ]	'man (vs. woman)'

Sub-type II : closed major syllable

The closed syllable consists of a vowel as nucleus preceded by an obligatory consonant or an optional cluster and followed by an obligatory final consonant and a register functioning as periphery of the syllable. Its structure is $C_1(C_2)VC_3^{R1-4}$.

Examples of CVC^{R1-4} :

/ $p^hi:\eta^{R1}$ /	[$'p^hi:\eta$]	'fish hook'
/ $b\math2:p^{R1}$ /	[$'b\math2:p\urcorner$]	'tired'
/ tap^{R1} /	[$'táp\urcorner$]	'bite'
/ $t^he?^{R1}$ /	[$'t^hé?$]	'soil'
/ $du:\eta^{R1}$ /	[$'du:\eta$]	'coconut'
/ $ce:w^{R1}$ /	[$'t\varphi e:w$]	'to go'
/ c^hih^{R1} /	[$'t\varphi^híh$]	'dry (v.)'
/ lih^{R1} /	[$'líh$]	'bare'
/ $k^h\math2:t^{R1}$ /	[$'k^h\math2:t\urcorner$]	'to bind'
/ $so:c^{R1}$ /	[$'so:c\urcorner$]	'horn'
/ $?a:w^{R1}$ /	[$'?a:w$]	'day (cl.)"
/ $hu:m^{R1}$ /	[$'hu:m$]	'bathe'
/ ηim^{R2} /	[$'\eta \tilde{i}^?m$]	'warm'
/ $po:t^{R3}$ /	[$'po̠:\cdot t\urcorner$]	'to cut'
/ $ku:t^{R3}$ /	[$'ku̠:\cdot t\urcorner$]	'light (v.)'
/ ηak^{R3} /	[$'\eta a̠\cdot k\urcorner$]	'shiver'
/ $w\ni n^{R3}$ /	[$'w\ni \cdot n$]	'day'
/ $ra:j^{R3}$ /	[$'ra̠:\cdot j$]	'ten'
/ $ja:m^{R3}$ /	[$'ja̠:\cdot m$]	'cry'
/ $mi:w^{R4}$ /	[$'mi̠:\grave{}^?w$]	'fish'

Examples of CCVC$^{R1\text{-}4}$:

/ kruəh^{R1} /	[ˈkruə́h]	'gravel'
/ kʰlə:t^{R2} /	[ˈkʰlə̂:ˀt˥]	'to leak'
/ prɔ:k^{R1} /	[ˈprɔ̰:k˥]	'squirrel'
/ kʰrɛ:ŋ^{R2} /	[ˈkʰrɛ̂:ˀŋ]	'night'
/ pla:k^{R3} /	[ˈpla̰:k˥]	'to chop'
/ kəmlo:k^{R4} /	[kə ˈmlo̰:ˀk˥]	'salty'

The two following tables (table 13 and table 14) show single initial consonants occurring with different vowel (in the open and closed syllables).

Table 13 : The co-occurrence of initial consonant with vowel in the open major syllable.

+   occurrence

(blank)   non-occurrence

	p	pʰ	b	t	tʰ	d	c	cʰ	k	kʰ	ʔ	m	n	ɲ	ŋ	s	h	l	r	w	j
i																					
iː				+				+				+			+	+	+	+			
e																					
eː						+		+				+				+					
ɛ																					
ɛː								+							+	+	+				
a																					
aː	+	+		+			+	+	+	+	+	+	+			+	+			+	+
ə																					
əː																					
u																					
uː	+			+				+				+			+	+		+			+
o																					
oː	+			+		+	+	+	+									+			+
ɔ																					
ɔː	+							+		+								+			
ɨ																					
ɨː	+	+																			

The co-occurrence of initial consonant and vowel in the open major syllable as shown in the table 13 can be summarized as follows.

1. All consonant phonemes except / b, tʰ, r / can be the initial consonant of the open major syllable.

2. All consonant phonemes never occur before short vowel phoneme and long vowel / ə / in the open major syllable.

3. Only the vowel / aː / has the widest distribution in the open major syllable and the vowel / ɨː / has the narrowest distribution.

4. The consonant phoneme / p / can occur with vowel phoneme / aː, uː, oː, ɔː, ɨː /.

e.g.	/ pɔːR1 /	'to carry in one's arm'
	/ puːR3 /	'you (singular)'
	/ kəpaːR2 /	'cotton'
	/ kəpɨːR2 /	'prawn'

5. The consonant phoneme / pʰ / can only occur with vowel phoneme / aː, ɨː /.

e.g.	/ kəpʰaːR1 /	'soft-shell turtle'
	/ kəpʰɨːR1 /	'fan (v.)'

6. The consonant phoneme / t / can occur with vowel phoneme / iː, aː, uː, oː /.

e.g.	/ tiːR1 /	'hand'
	/ kətaːR1 /	'duck'
	/ kətuːR1 /	'grass'
	/ kətoːR1 /	'teach'

7. The consonant phoneme / d / can only occur with vowel / oː /.

e.g.	/ doːR1 /	'a particle used in a yes or no question'

8. The consonant phoneme / c /can occur with vowel phoneme /eː, aː, oː/.

e.g.   / ceː^{R2} /   'deer'

,   / caː^{R2} /   'knife'

            / coː^{R1} /   'grandchild'

9. The consonant phoneme / c^h / can occur with vowel phoneme / iː, aː, uː, ɔː /.

e.g.   / c^{h}iː^{R1} /   'louse'

            / c^{h}aː^{R1} /   'to eat'

            / c^{h}ɔː^{R1} /   'dog'

10. The consonant phoneme / k / can occur with vowel phoneme / eː, ɛː, aː, oː /.

e.g.   / kəkaː^{R1} /   'mouth'

            / kəkoː^{R3} /   'crocodile'

            / kəkeː^{R1} /   'fowl louse'

            / kɛː^{R1} /   'you (polite)'

11. The consonant phoneme / k^h / can occur with vowel phoneme / aː, oː, ɔː /.

e.g.   / k^{h}aː^{R1} /   'spleen'

            / kək^{h}oː^{R1} /   'mortar'

12. The consonant phoneme / ʔ / can only occur with vowel / aː /.

e.g.   / ʔaː^{R1} /   'father's brother'

13. The consonant phoneme / m / can occur with vowel phoneme / iː, eː, aː, uː /.

e.g.   / miː^{R3} /   'mother'

            / kəmeː^{R1} /   'guest'

            / kəmaː^{R1} /   'porcupine'

/ mu:^{R1} / 'multitude'

14. The consonant phoneme / n / can occur with vowel / ɛ:, a: /.

e.g.　　/ ti:^{R1} nɛ:^{R1} /　　　　　　'first finger'

　　　　/ poh^{R1} kəna:^{R2} /　　　　　'fireplace'

15. The consonant phoneme / ɲ / can only occur with vowel / a: /.

e.g.　　/ kəɲa:^{R1} /　　　　　　　　'yam'

16. The consonant phoneme / ŋ /can occur with vowel phoneme / i:, ɛ:, u:/.

e.g.　　/ ŋa:m^{R3} ŋi:^{R1} /　　　　　　'small bee'

　　　　/ kəŋɛ:^{R1} /　　　　　　　　'listen'

　　　　/ kəŋu:^{R3} /　　　　　　　　'sesame'

17. The consonant phoneme / s / can occur with vowel phoneme / i:, e:, ɛ:, a:, u: /.

e.g.　　/ si:^{R1} /　　　　　　　　　'snake'

　　　　/ se:^{R1} /　　　　　　　　　'line, rope'

　　　　/ sɛ:^{R1} /　　　　　　　　　'farm'

　　　　/ pəsa:^{R1} /　　　　　　　　'son/ daughter - in - law'

18. The consonant phoneme / h / can only occur with vowel phoneme / i:, a: /.

e.g.　　/ kəhi:^{R1} /　　　　　　　　'pestle'

　　　　/ ha:^{R1} /　　　　　　　　　'to open (mouth)'

19. The consonant phoneme / l / can occur with vowel phoneme / i:, u:, o:, ɔ: /.

e.g.　　/ kəli:^{R1} /　　　　　　　　'maggot in the fermented fish'

　　　　/ lu:^{R1} /　　　　　　　　　'howl'

　　　　/ kʰlɔʔ^{R1} lo:^{R1} /　　　　　'mud snail'

　　　　/ lɔ:^{R1} /　　　　　　　　　'much, many'

20. The consonant phoneme / w / can only occur with vowel /aː /.

e.g.   / waːR1 /   'monkey'

21. The consonant phoneme / j / can occur with vowel phoneme / aː,

uː, oː /.

e.g.   / jaːR1 /   'tobacco'

          / juːR1 /   'to send'

          / joːR1 /   'have sexual intercourse'

Table 14 : The co-occurrence of single initial consonant and vowel in the closed major syllable.

+   :   occurrence

(blank)   non-occurrence

	p	pʰ	b	t	tʰ	d	c	cʰ	k	kʰ	ʔ	m	n	ɲ	ŋ	s	h	l	r	w	j
i	+	+		+	+			+	+		+	+	+		+		+	+	+	+	
iː	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
e	+			+	+			+				+	+	+	+	+	+	+	+	+	
eː	+	+		+			+	+	+	+	+	+	+		+		+	+		+	+
ɛ				+				+				+				+					+
ɛː	+		+	+			+		+	+		+	+		+	+	+	+			
a	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+
aː	+		+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+
ə	+			+	+		+					+	+	+	+			+		+	
əː	+						+		+	+		+									
u	+	+	+	+	+	+	+	+	+	+	+		+			+	+	+	+	+	+
uː	+		+	+	+	+	+		+	+	+	+	+	+	+	+	+	+			+
o	+	+		+			+		+			+	+	+	+			+		+	+
oː	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+	+		+
ɔ	+		+	+	+	+	+	+	+	+	+	+			+	+	+		+		+
ɔː	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
ɨ	+			+	+	+	+	+	+	+	+	+	+			+	+	+	+	+	+
ɨː			+				+					+					+				+
uə					+												+				

The co-occurrence of initial consonant and vowel in the closed major syllable as shown in the table 14 can be summarized as follows.

1. All consonant phonemes can occur as initial consonant of closed major syllable.

2. The vowel phoneme / a / can occur with all consonant phonemes except / b, w / in the closed major syllable.

3. The consonant phoneme / p / can occur with all vowel phonemes except / ɛ, ɨː, uə /.

e.g.   / piːŋ^{R1} /   'ripe'

              / peːw^{R2} /   'evening'

              / paːk^{R1} /   'go up ascend'

              / pɔk^{R1} /   'wrap'

4. The consonant phoneme / p^h / can occur with / i, iː, eː, a, u, o, oː /.

e.g.   / p^{h}eːw^{R2} /   'three'

              / p^{h}oːm^{R2} /   'to fast'

              / p^{h}ah^{R1} /   'tail'

              / p^{h}ih^{R1} /   'sweep'

5. The consonant phoneme / b / can occur with / iː, ɛː, aː, u, uː, oː, ɔ, ɔː /.

e.g.   / baːj^{R1} /   'farm'

              / buːɲ^{R1} /   'pressed new rice'

              / boːt^{R1} /   'young brother/ sister'

              / bɔːp^{R1} /   'tired'

6. The consonant phoneme / t^h / can occur with all vowel phonemes except / iː, eː, ɛː, əː, o, oː, ɨː, uə /.

e.g.   / t^{h}aːɲ^{R1} /   'weave'

              / t^{h}uh^{R1} /   'breast'

| / tʰuːj R2 / | 'hornet' |
| / tʰɔm R1 / | 'aunt' |

7. The consonant phoneme / t / can occur with all vowel phonemes except / ɛ, əː, uə /.

	e.g.	/ taŋ R3 /	'see'
		/ taːk R3 /	'water'
		/ tɨːt R3 /	'ride'
		/ tiw R3 /	'buy'

8. The consonant phoneme / d / can occur with / iː, a, aː, u, uː, ɔ, ɔː, ɨ, uə /.

	e.g.	/ dak R1 /	'he/ she'
		/ dɔŋ R1 /	'gourd'
		/ dɔːŋ R1 /	'times'
		/ daːŋ R1 /	'old (not new)'

9. The consonant phoneme / c / can occur with all vowel phonemes except / i, e, ɛ, uə /.

	e.g.	/ ceːt R1 /	'to sharpen (wood)'
		/ cak R1 /	'to shoot'
		/ caːp R1 /	'wash (face)'
		/ cuh R1 /	'go down descend'

10. The consonant phoneme / cʰ / can occur with / i, iː, eː, a, u, oː, ɔ, ɔː, ɨ /.

	e.g.	/ cʰiːm R2 /	'bird'
		/ cʰeːm R1 /	'to feed'
		/ cʰak R1 /	'seeds'
		/ cʰoːj R1 /	'to plant"

/ cʰɔk^{R1} /   'stab'

11. The consonant phoneme / k / can occur with all vowel phonemes except / uə /.

    e.g.   / kat^{R1} /   'to cut down (a tree)'

           / kaːt^{R2} /   'near'

           / kɔŋ^{R1} /   'wheel'

           / kəh^{R1} /   'to pry'

           / kɨːt^{R2} /   'tame'

12. The consonant phoneme / kʰ / can occur with all vowel phonemes except / i, e, ɛ, ə, o, ɨː, uə /.

    e.g.   / kʰuːj^{R1} /   'talk'

           / kʰoːt^{R2} /   'mosquito'

           / kʰəːm^{R2} /   'good smelling'

           / kʰuh^{R1} /   'scrape'

           / kʰɔːt^{R1} /   'bind'

13. The consonant phoneme / ʔ / can occur with / i, iː, eː, a, u, uː, oː, ɔ, ɔː, ɨ /.

    e.g.   / ʔiɲ^{R1} /   'I'

           / ʔan^{R1} /   'this'

           / ʔuh^{R1} /   'wood'

           / ʔuːc^{R1} /   'little (quantity)'

           / ʔoːc^{R1} /   'take'

14. The consonant phoneme / m / can occur with all vowel phonemes except / e, əː, u, uə /.

    e.g.   / maːj^{R3} /   'do not'

           / muːj^{R4} /   'one'

/ moːt^{R3} /	'wood borer'
/ mɔʔ^{R1} /	'beautiful'
/ mɨt^{R2} /	'to take pity on'

15. The consonant phoneme / n / can occur with all vowel phonemes except / ɛ, ɔ, ɨː, uə /.

e.g.	/ nak^{R1} /	'cl. of people'
	/ neːm^{R2} /	'trunk of tree'
	/ nɨm^{R3} /	'year'
	/ kənaːj^{R1} /	'elephant'
	/ mənəh^{R1} /	'rake'

16. The consonant phoneme / ɲ / can occur with / iː, e, a, aː, ə, uː, o, oː, ɔː /.

| e.g. | / ɲak^{R3} / | 'shiver' |
| | / ɲuːc^{R2} / | 'kiss' |

17. The consonant phoneme / ŋ / can occur with all vowel phonemes except / ɛ, əː, u, ɨː, uə /.

e.g.	/ ŋec^{R3} /	'to fall (down)'
	/ ŋaj^{R1} /	'heavy'
	/ ŋoːt^{R1} /	'a kind of beetle'
	/ ŋuːn^{R1} /	'to stoop'
	/ ŋɔːn^{R1} /	'Ionperata cylindrical'

18. The consonant phoneme / h / can occur with all vowel phonemes except / ɛ, ə, əː, o, ɨː /.

e.g.	/ hɛːŋ^{R1} /	'we'
	/ haːj^{R1} /	'rice'
	/ hɔːp^{R1} /	'to eat (rice)'

/ hɨj^{R1} /   'to fly'

/ huəc^{R1} /   'whistle'

19. The consonant phoneme / s / can occur with all vowel phonemes
except / i, eː, ə, əː, o, ɨː, uə /.

    e.g.   / sum^{R1} /   'star'

            / suːc^{R2} /   'ant'

            / sɔːŋ^{R1} /   'dance'

            / sɨk^{R1} /   'flour'

            / soːc^{R1} /   'horn'

20. The consonant phoneme / l / can occur with all vowel phonemes
except / ɛ, əː, ɔ, uə /.

    e.g.   / luːm^{R3} /   'ask'

            / luj^{R1} /   'pointed'

            / ləh^{R1} /   'to grow'

            / laːc^{R3} /   'lightning'

21. The consonant phoneme / r / can occur with / i, iː, e, a, aː, u,
oː, ɔ, ɔː, ɨ /.

    e.g.   / raːp^{R3} /   'wash'

            / roːk^{R3} /   'hide'

            / rɔk^{R1} /   'toad'

            / rɔːp^{R1} /   'embrace'

22. The consonant phoneme / w / can occur with / i, iː, e, eː, aː, ə,
u, o, ɨ /.

    e.g.   / wiːt^{R3} /   'unripe (fruit)'

            / weːŋ^{R1} /   'raw'

            / waːj^{R3} /   'field'

/ wəh^{R1} /   'to measure'

23. The consonant phoneme / j / can occur with / eː, ɛ, a, aː, u, uː, o, oː, ɔ, ɨː /.

e.g.   / jaːŋ^{R1} /   'gibbon'

            / jok^{R3} /   'build'

            / kəjɨːŋ^{R1} /   'shake'

            / kəjɔŋ^{R1} /   'a kind of animal (ตัวลิ่ง)'

There are 6 initial clusters which can preceed long vowels / iː, aː, əː, uː, oː / in the open major syllables.

1. The consonant cluster / pr / can occur with the vowel / iː, əː /.

e.g.   / priː^{R1} /   'monitor'

            / prəː^{R1} /   'employ (v.)'

2. The consonant cluster / pl / can occur with the vowel / aː, uː /.

e.g.   / plaː^{R3} /   'new'

            / pluː^{R3} /   'leg'

3. The consonant cluster / pʰl / can occur with the vowel / iː, oː /.

e.g.   / pʰliː^{R1} /   'fruit'

            / kəpʰloː^{R1} /   'holy basil'

4. The consonant cluster / kr / can only occur with the vowel / iː /.

e.g.   / neːm^{R2} kriː^{R3} /   'banyan'

5. The consonant cluster / kl / can only occur with the vowel / aː /.

e.g.   / klaː^{R3} /   'screech'

6. The consonant cluster / kʰl / can occur with the vowel / aː, oː /.

e.g.   / kʰlaː^{R1} /   'road'

            / kʰloː^{R1} /   'blind'

Table 15 : The co-occurrence of the consonant cluster and vowel in the closed major syllable.

+   occurrence

(blank)   non-occurrence

	pr	pl	pʰr	pʰl	kr	kl	kʰr	kʰl
i	+				+	+		
iː	+	+			+			
e								+
eː		+	+		+			+
ɛ					+	+		
ɛː					+		+	+
a	+	+	+	+	+	+		+
aː	+	+			+	+		+
ə						+		+
əː				+				
u	+		+		+	+		+
uː	+				+			+
o	+	+			+			
oː	+			+	+	+		
ɔ		+			+	+		+
ɔː	+	+			+	+	+	
ɨ	+			+	+	+		
ɨː							+	
uə					+			

The co-occurrence of the consonant cluster and vowel in the closed major syllable as shown in the table 15 can be summarized as follows.

1. The consonant cluster / kr / has the widest distribution. It can occur with all vowel phonemes except / e, ə, əː, ɨː /.

e.g.   / krah^RI /   'thick'

/ kraːk^RI /   'to carry (water)'

/ krɔŋ^RI /   'straight'

2. The consonant cluster / kl / can occur with vowel phonemes / i, ɛ, a, aː, ə, u, oː, ɔ, ɔː, ɨ /.

      e.g.   / klic^{R1} /   'to cut'

               / klaːŋ^{R1} /   'bunch'

               / klɔːŋ^{R1} /   'bone'

3. The consonant cluster / pr / can occur with vowel phonemes / i, iː, a, aː, u, uː, o, oː, ɔː, ɨ /.

      e.g.   / priːŋ^{R1} /   'oil'

               / prak^{R1} /   'silver'

               / proːt^{R3} /   'a kind of bee (ผึ้งโพรง)'

4. The consonant cluster / pl / can occur with vowel phonemes / iː, eː, a, aː, o, ɔ, ɔː /.

      e.g.   / plɔŋ^{R1} /   'rice'

               / pliːw^{R3} /   'fire'

               / ploh^{R1} /   'twins'

5. The consonant cluster / pʰr / can occur with vowel / eː, a, u /.

      e.g.   / pʰram^{R1} /   'five'

               / pʰreːm^{R2} /   'land leech'

               / pʰruh^{R1} /   'gray (hair)'

6. The consonant cluster / pʰl / can occur with vowel phonemes / a, əː, oː, ɨ /.

      e.g.   / pʰloːm^{R2} /   'wax (bees)'

               / pʰlɨŋ^{R1} /   'sky'

               / kəpʰləːŋ^{R1} /   'gun'

7. The consonant cluster / kʰl / can occur with vowel phonemes / e, eː, ɛː, a, aː, ə, u, uː, ɔ /.

e.g. / kʰleʔ^{R1} / 'shame'

/ kʰlaːc^{R3} / 'to scratch'

/ kʰluk^{R1} / 'cover'

8. The consonant cluster / kʰr /can occur with vowel /ɛː, ɔː, ɨː /.

e.g. / kʰrɛːŋ^{R2} / 'night'

/ kʰrɨːp^{R2} / 'to berp'

/ cʰoʔ^{R3} k̲ʰrɔːc^{R2} / 'lemon'

Table 16 : The co-occurrence of vowel and final consonant in the closed major syllable.

+ · occurrence

(blank) non-occurrence

	-p	-t	-c	-k	-ʔ	-m	-n	-ɲ	-ŋ	-h	-w	-j
i			+		+			+	+	+	+	
iː	+	+		+		+	+		+		+	
e		+	+		+			+		+		
eː	+	+		+		+	+	+	+		+	
ɛ			+	+						+	+	
ɛː	+	+		+		+	+		+		⊤	
a	+	+		+	+	+	+		+	+	+	+
aː	+	+	+	+		+	+	+	+		+	+
ə		+		+			+			+		+
əː		+		+		+			+			+
u	+	+	+	+	+	+	+		+	+		+
uː	+	+	+	+		+	+	+	+			+
o				+	+		+		+	+		
oː	+	+	+	+		+	+		+			+
ɔ	+	+		+	+	+	+		+	+		
ɔː	+	+	+	+			+	+	+			+
ɨ	+	+		+	+	+	+		+	+		+
ɨː	+	+					+		+			+
uə			+									+

The co-occurrence of vowel and final consonant in the closed major syllable as shown in the table 16 can be summarized as follows.

1. The final consonant / t, ŋ / have the widest distribution.

2. The final consonant / ɲ / has the narrowest distribution.

3. The final consonant / p / can occur after / iː, eː, ɛː, a, aː, u, uː, oː, ɔ, ɔː, ɨ, ɨː /.

4. The final consonant / t / can occur after all vowel phonemes except / i, ɛ, o. uə /.

5. The final consonant / c / can occur after / i, e, aː, u, uː, oː, ɔː, uə /.

6. The final consonant / k / can occur after all vowel phonemes except / i, e, ə, ɨː, uə /.

7. The final consonant / ʔ, h / can only occur after short vowels.

8. The final conasonant / ŋ / can occur after all vowel phonemes except / e, ɛ, ə, uə /.

9. The final conasonant / n / can occur after all vowel phonemes except / i, e, ɛ, əː, uə /.

10. The final conasonant / m / can occur after all vowel phonemes except / i, e, ɛ, ə, o, ɔː, ɨː, uə /.

11. The final conasonant / ɲ / can occur after / i, e, eː, aː, uː, ɔː /.

12. The final conasonant / w / can occur after / i, iː, eː, ɛ, ɛː, a, aː /.

13. The final conasonant / j / can occur after / a, aː, ə, əː, u, uː, oː, ɔː, ɨ, ɨː, uə /.

5.3.3 Syllable Boundary

In phonetic transcription, the syllable boundaries are marked by the stress. The strong stressed sign ['] shows the beginning of the major syllable, the weakly stressed sign [ˌ] shows the beginning of the closed presyllable and no sign for unstressed syllable. Since stress in the WK Chong is predictable, therefore stress need not to be marked in the phonemic transcription.

In this study used a register /^{R}/ at the end of the syllable in the phonemic transcription. The open presyllable has no register because the vowel in presyllable is a neutral vowel.

	Peripheral syllable (presyllable)	Nuclear syllable (major syllable)
open syllable	C(C)ə	'C(C)V^{R1-3}
closed syllable	₁CVC^{R1,R3}	'C(C)VC^{R1-4}

5.4 The Phonemes

5.4.1 Consonants

The following chart is the consonant that will be grouped according to their manners and points of articulation. There are 21 consonant phonemes in WK Chong : / p, p^h, b, t, t^h, d, c, c^h, k, k^h, ?, m, n, ɲ, ŋ, s, h, l, r, w, j /.

Table 17 : The consonant phonemes of WK Chong

Manner of art. \ Point of art.		Bilabial	Alveolar	Palatal	Velar	Glottal
Stops	vl. unasp.	p	t	c	k	?
	vl. asp.	p^h	t^h	c^h	k^h	
	vd.	b	d			
Nasals		m	n	ɲ	ŋ	
Fricatives			s			h
Lateral			l			
Trill			r			
Semi - vowels		w		j		

1) Formational statements of Consonants. (WK Chong)

/ p / It has two allophones.

[p] is a voiceless unaspirated bilabial stop. It only occurs syllable initially.

e.g.	/ pɔːt^{R1} /	['pɔːt˺]	'to thresh'
	/ paːk^{R1} /	['paːk˺]	'to go ascend'
	/ puː^{R3} /	['pu̪ː]	'you (singular)'
	/ paːt^{R3} /	['pa̪ːt˺]	'peel'

[p˺] a voiceless unaspirated bilabial stop. It only occurs syllable finally and is unreleased.

e.g.	/ kʰlɛːp^{R1} /	['kʰlɛːp˺]	'lick'
	/ saːp^{R1} /	['saːp˺]	'tasteless'
	/ keːp^{R2} /	['kêːˀp˺]	'narrow'
	/ raːp^{R3} /	['ra̪ːp˺]	'wash'

/ pʰ / [pʰ] is a voiceless aspirated bilabial stop. It only occurs syllable initially.

e.g.	/ pʰiːŋ^{R1} /	['pʰiːŋ]	'fishhook'
	/ pʰram^{R1} /	['pʰram]	'five'
	/ pʰeːm^{R2} /	['pʰêːˀm]	'angry'
	/ pʰoːn^{R2} /	['pʰôːˀn]	'four'

/ b / [b] is a voiced bilabial stop. It only occurs syllable initially.

e.g.	/ boːt^{R1} /	['boːt˺]	'younger brother/sister'
	/ bɔːp^{R1} /	['bɔːp˺]	'tired, weary'
	/ bɔt^{R1} /	['bɔ́t˺]	'crush'
	/ bit^{R1} /	['bít˺]	'twist'

/ t / It has two allophones.

[t] is a voiceless unaspirated alveolar stop. It only occurs syllable initially.

e.g.	/ tiː^{R1} /	['tiː]	'hand'

/ tɨp^{R1} /	[ˈtɨ́p˺]	'bury (the dead)'
/ tɨːt^{R3} /	[ˈtɨ̤ːˏt˺]	'ride'
/ tiːŋ^{R3} /	[ˈtiːˏŋ]	'enter'

[t˺] is a voiceless unaspirated alveolar stop. It only occurs syllable finally and is unreleased.

    e.g.

/ keːt^{R1} /	[ˈkeːt˺]	'chew'
/ pʰləːt^{R2} /	[ˈpʰlə̂ːˀt˺]	'blow'
/ kaːt^{R2} /	[ˈkâːˀt˺]	'near'
/ kət^{R3} /	[ˈkə̰t˺]	'pain'

/ tʰ / [tʰ] is a voiceless aspirated alveolar stop. It only occurs syllable initially.

    e.g.

/ tʰaːw^{R1} /	[ˈtʰaːw]	'stand'
/ tʰɔm^{R1} /	[ˈtʰɔm]	'aunt'
/ tʰuʔ^{R1} /	[ˈtʰúʔ]	'hot'
/ tʰɨŋ^{R2} /	[ˈtʰɨ̃̂ˀŋ]	'bamboo shoots'

/ d / [d] is a voiced alveolar stop. It only occurs syllable initially.

    e.g.

/ dɔŋ^{R1} /	[ˈdɔŋ]	'gourd'
/ diːw^{R1} /	[ˈdiːw]	'mat'
/ dak^{R1} /	[ˈdák˺]	'he or she'
/ daːŋ^{R1} /	[ˈdaːŋ]	'old (not new)'

/ c / It has two allophones.

[tɕ] is a voiceless unaspirated alveolo-palatal affricate. It only occurs syllable initially.

    e.g.

/ coː^{R1} /	[ˈtɕoː]	'nephew/ niece'
/ coːc^{R2} /	[ˈtɕôːˀc˺]	'vomit'
/ cət^{R3} /	[ˈtɕə̰t˺]	'clear'
/ cuːc^{R3} /	[ˈtɕṳːˏc˺]	'flesh'

[cˀ]   is a voiceless unaspirated palatal stop. It only occurs syllable finally and is unreleased.

e.g.   / ʔoːc^R1 /   ['ʔoːcˀ]   'take'

/ hoːc^R1 /   ['hoːcˀ]   'dead, _die_'

/ pic^R3 /   ['pi̤ cˀ]   'sleep'

/ huəc^R1 /   ['huəcˀ]   '_whistle_'

/ cʰ / [tɕʰ] is a voiceless aspirated alveolo-palatal affricate. It only occurs syllable initially.

e.g.   / cʰɔːk^R1 /   ['tɕʰɔːkˀ]   'pierce'

/ cʰɨh^R1 /   ['tɕʰɨhˀ]   'old (not young)'

/ cʰiːn^R2 /   ['tɕʰîːˀn]   'cooked (food)'

/ cʰoːj^R1 /   ['tɕʰoːj]   'plant (v.)'

/ k / It has two allophones.

[k] is a voiceless unaspirated velar stop. It only occurs syllable initially.

e.g.   / kec^R1 /   ['kéĉˀ]   'broken'

/ kiːt^R3 /   ['ki̤ːˌtˀ]   'pour'

/ kɛːp^R1 /   ['kɛːpˀ]   'pinch'

/ keːn^R2 /   ['kêːˀn]   'short'

[kˀ] is a voiceless unaspirated velar stop. It only occurs syllable finally and is unreleased.

e.g.   / rɔk^R1 /   ['rɔ́kˀ]   'toad'

/ tɔːk^R1 /   ['tɔːkˀ]   'sell'

/ pɛːk^R2 /   ['pɛ̂ːˀkˀ]   'wet'

/ prɔːk^R3 /   ['prɔ̤ːˌkˀ]   'squirrel'

/ kʰ / [kʰ] is a voiceless aspirated velar stop. It only occurs syllable initially.

e.g.   / kʰeːn^R1 /   ['kʰeːn]   'son/ daughter'

/ kʰuːj^R2 /   ['kʰûːˀj]   'mongoose'

/ kʰɔːnᴿ² /   [ˈkʰɔ̂ːˀn]   'mouse, rat'

/ kʰuhᴿ¹ /   [ˈkʰúh]   'scrape'

/ ʔ / [ʔ] is a glottal stop. It occurs syllable initially and finally.

   e.g.   / ʔoːjᴿ¹ /   [ˈʔoːj]   'caladium'

        / ʔuhᴿ¹ /   [ˈʔúh]   'wood'

        / mɛʔᴿ¹ /   [ˈmɛ́ʔ]   'mother'

        / kʰleʔᴿ¹ /   [ˈkʰlé ʔ]   'shame'

/ m / [m] is a voiced bilabial nasal. It occurs syllable initially and finally.

   e.g.   / mɨtᴿ² /   [ˈmɨ̃ˀt˥]   'to take pity on'

        / miːᴿ³ /   [ˈmḭː]   'mother'

        / tʰɨmᴿ¹ /   [ˈtʰɨm]   'to cook'

        / pʰloːmᴿ² /   [ˈpʰlôːˀm]   'wax (bees)'

/ n / [n] is a voiced alveolar nasal. It occurs syllable initially and finally.

   e.g.   / neːmᴿ² /   [ˈnêːˀm]   'tree'

        / naːkᴿ³ /   [ˈna̰ːk˥]   'otter'

        / wənᴿ² /   [ˈwə̃ˀn]   'tomorrow'

        / ʔeːnᴿ¹ /   [ˈʔeːn]   'come'

/ ɲ / [ɲ] is a voiced palatal nasal. It occurs syllable initially and finally.

   e.g.   / ɲaːmᴿ² /   [ˈɲâːˀm]   'finger'

        / ɲakᴿ³ /   [ˈɲa̰k˥]   'shiver'

        / tʰaːɲᴿ¹ /   [ˈtʰaːɲ]   'weave'

        / ʔiɲᴿ¹ /   [ˈʔiɲ]   'I'

/ ŋ / [ŋ] is a voiced velar nasal. It occurs syllable initially and finally.

   e.g.   / ŋuːnᴿ¹ /   [ˈŋuːn]   'to stoop'

        / ŋɨmᴿ² /   [ˈŋɨ̃ˀm]   'warm'

        / jaːŋᴿ¹ /   [ˈjaːŋ]   'gibbon'

/ klaːŋ^{R1} /   ['klaːŋ]   'bunch'

/ s / [s] is a voiceless alveolar fricative. It only occurs syllable initially.

e.g.   / suːc^{R1} /   ['súːc˥]   'worship'

/ suːc^{R2} /   ['sûːˀc˥]   'ant'

/ saŋ^{R1} /   ['saŋ]   'hear'

/ saːp^{R1} /   ['saːp˥]   'bland, tassels'

/ h / [h] is a voiceless glottal fricative. It occurs syllable initially and finally.

e.g.   / huːm^{R1} /   ['huːm]   'bathe'

/ huːj^{R1} /   ['huːj]   'blow'

/ tʰuh^{R1} /   ['tʰúh]   'breast (of woman)'

/ sɛh^{R1} /   ['sɛ́h]   'horse'

/ l / [l] is a voiced alveolar lateral. It occurs syllable initially and as the second element in the consonant cluster.

e.g.   / lɔː^{R1} /   ['lɔː]   'much, many'

/ loːp^{R3} /   ['lo̰ːˏp˥]   'pick up'

/ kʰluːm^{R2} /   ['kʰlûːˀm]   'urinate'

/ plaːk^{R3} /   ['pla̰ːˏk˥]   'chop'

/ r / [r] is a voiced alveolar trill. It occurs syllable initially and as the second element in the consonant cluster.

e.g.   / roːk^{R3} /   ['ro̰ːˏk˥]   'hide'

/ rih^{R1} /   ['ríh]   'root'

/ krap^{R1} /   ['kráp˥]   'to hatch'

/ kreːm^{R1} /   ['kreːm]   'fish trap'

/ w / [w] is a voiced labio-velar semi-vowel. It occurs syllable initially and as the second element in the consonant cluster.

e.g.   / wən^{R2} /   ['wə̂ˀn]   'tomorrow'

/ wət^{R3} /   ['wə̰ˏt˥]   'find'

/ pe:w^{R2} /	['pê:$^{?}$w]	'evening'
/ ti:w^{R3} /	['tị:ˌw]	'to sew'
/ kwa:ŋ^{R1} /	['kwa:ŋ]	'broad, wide'

/ j / [j] is a voiced palatal semi-vowel. It occurs syllable initially and finally.

e.g.	/ ja:m^{R3} /	['jạːˌm]	'to cry'
	/ jok^{R3} /	['jọˌk˥]	'build'
	/ puj^{R3} /	['pụˌj]	'drunk'
	/ ko:j^{R2} /	['kô:$^{?}$j]	'slow'

2) Classification of consonants

The phonemes in Chong language divided into three classes according to their function in the syllable : initial consonants (C$_1$), second member of the consonant clusters (C$_2$) and the final consonants (C$_3$).

Class 1 C$_1$ initial consonants

All consonants can occur in the initial position of syllable. They are / p, p^h, b, t, t^h, d, c, c^h, k, k^h, ?, m, n, ɲ, ŋ, s, h, l, r, w, j /.

Examples :	/ pe:k^{R3} /	['pẹːˌk˥]	'laugh'
	/ p^{h}i:ŋ^{R1} /	['p^{h}i:ŋ]	'fish hook'
	/ ba:j^{R1} /	['ba:j]	'farm'
	/ tuŋ^{R1} /	['tuŋ]	'egg'
	/ t^{h}ɨm^{R1} /	['t^{h}ɨm]	'to cook'
	/ da:ŋ^{R1} /	['da:ŋ]	'old (not new)'
	/ cah^{R1} /	['tɕáh]	'mow'
	/ c^{h}ɔ:k^{R1} /	['tɕ^{h}ɔ:k˥]	'pierce'
	/ ka:ŋ^{R1} /	['ka:ŋ]	'the moon'
	/ k^{h}ah^{R1} /	['k^{h}áh]	'to know'

/ ʔawᴿ¹ /	['ʔaw]	'clothes'
/ moːkᴿ² /	['môːˀk]	'cloud"
/ naːkᴿ³ /	['na̤ːˌk˺]	'otter'
/ ɲakᴿ³ /	['ɲa̤ˌk˺]	'shiver'
/ ŋɨmᴿ² /	['ŋɨ̂ˀm]	'warm'
/ sakᴿ¹ /	['sák˺]	'tattoo'
/ hiːtᴿ¹ /	['hiːt˺]	'to disappear'
/ lunᴿ¹ /	['lun]	'to push'
/ raːjᴿ³ /	['ra̤ːˌj]	'ten'
/ wiːŋᴿ¹ /	['wiːŋ]	'forget'

Class 2 (C₂) The second member of the consonant clusters

There are 11 consonant clusters in WK Chong. The second member of the consonant cluster consist of / r , l / which can occur following the first member consonant cluster / p, pʰ, k, kʰ /. The / w / occur only after / k /.

Examples :	/ prakᴿ¹ /	['prák˺]	'silver'
	/ plaːᴿ³ /	['pla̤ːˌ]	'new'
	/ pʰreːmᴿ² /	['pʰrêːˀm]	'land leech'
	/ pʰlɨŋᴿ¹ /	['pʰlɨŋ]	'sky'
	/ krapᴿ¹ /	['kráp˺]	'to hatch'
	/ klaːᴿ³ /	['kla̤ːˌ]	'screech'
	/ kʰrɨːpᴿ² /	['kʰrɨ̂ːˀp˺]	'to burp'
	/ kʰlɛːpᴿ¹ /	['kʰlɛːp˺]	'lick'
	/ kwaːŋᴿ¹/	['kwaːŋ]	'wide'

I interpreted ml and mr as the medioclusters similar to KP Chong.

| Examples | / kəmrecᴿ³ / | [kə 'mre̤ˌc˺] | 'pepper' |

/ kəmluː ^{R3} /   [kə 'mlụ̈ː˞]   'betel'

/ kəmlɨk ^{R3} /   [kə 'mlɨ̈ k˺]   'to wake'

Class 3 (C₃) the final consonants.

There are 12 final consonants in WK Chong. They are / p, t, c, k, ?, h,
m, n, ɲ, ŋ, w, j / .

Examples :   / kʰaːp ^{R2} /   ['kʰâːˀp˺]   'itch'

/ kiːt ^{R3} /   ['kị̈ː˞ t˺]   'pour'

/ ŋec ^{R3} /   ['ŋẹ̈˞ c˺]   'to fall (down)'

/ plaːk ^{R3} /   ['plạ̈ː˞ k˺]   'to chop'

/ kəla? ^{R3} /   [kə 'lạ̈ ?]   'thorn'

/ krah ^{R1} /   ['kráh]   'thick'

/ ŋaːm ^{R3} /   ['ŋạ̈ːˑ m]   'bee'

/ kʰɔːn ^{R2} /   ['kʰɔ̂ːˀn]   'mouse, rat'

/ peɲ ^{R1} /   ['peɲ]   'to twist (rope)'

/ kʰrɛːŋ ^{R2} /   ['kʰrɛ̂ːˀŋ]   'night'

/ ?aːw ^{R1} /   ['?aːw]   'day (cl.)'

/ ŋaːj ^{R3} /   ['ŋạ̈ːˑj]   'face'

3) Consonant contrast

All consonant phonemes in Chong are phonemically contrastive. The
following examples are suspect pairs of consonants which are contrastive in
identical environments (IE) and some are contrastive in analogous environments
(AE).

Consonant contrast in the initial position

Examples :

/ p / - / pʰ /	/ piːŋ^{R1} /	'ripe'
	/ pʰiːŋ^{R1} /	'fish hook'
/ p / - / b /	/ pɔt^{R1} /	'lie'
	/ bɔt^{R1} /	'crush'
/ b / - / m /	/ bɔːp^{R1} /	'tired weary'
	/ mɔːp^{R1} /	'crouch'
/ m / - / w /	/ mət^{R3} /	'eyes'
	/ wət^{R3} /	'find'
/ w / - / j /	/ wok^{R3} /	'clothes'
	/ jok^{R3} /	'build'
/ t / - / tʰ /	/ tɔm^{R1} /	'boil'
	/ tʰɔm^{R1} /	'aunt'
/ t / - / d /	/ tiːw^{R1} /	'to crow'
	/ diːw^{R1} /	'mat'
/ t / - / c /	/ tak^{R1} /	'large'
	/ cak^{R1} /	'to shoot'
/ t / - / k /	/ tɔːŋ^{R2} /	'fear'
	/ kɔːŋ^{R2} /	'tree frog'
/ d / - / t / - / tʰ /	/ dɔŋ^{R1} /	'gourd'
	/ tɔŋ^{R1} /	'house'
	/ tʰɔŋ^{R1} /	'handle'
/ d / - / n /	/ dak^{R1} /	'he/ she'
	/ nak^{R1} /	'cl. of person'
/ d / - / l /	/ dɔːŋ^{R1} /	'time'
	/ lɔːŋ^{R1} /	'banana'

/ c / - / cʰ /	/ cak R1 /	'to shoot'
	/ cʰak R1 /	'seed'
/ c / - / k /	/ ciːt R3 /	'wipe'
	/ kiːt R3 /	'pour'
/ k / - / kʰ /	/ keːt R1 /	'chew'
	/ kʰeːt R1 /	'comb(v.)'
/ k / - / ʔ /	/ kɔʔ R1 /	'caterpillar'
	/ ʔɔʔ R1 /	'father'
/ k / - / ŋ /	/ kec R3 /	'get'
	/ ŋec R3 /	'to fall (down)'
/ m / - / n / - / ŋ /	/ maːj R3 /	'do not'
	/ naːj R3 /	'own, possess'
	/ ŋaːj R3 /	'face'
/ m / - / n /	/ kʰəmaːj R1 /	'widowed (adj.)'
	/ kənaːj R1 /	'elephant'
/ ɲ / - / ŋ /	/ kəɲaːm R2 /	'finger'
	/ kʰəŋaːm R2 /	'husked rice'
/ ɲ / - / j /	/ kəɲaː R1 /	'yam'
	/ kəjaː R1 /	'scorpion'
/ ŋ / - / j /	/ ŋaːm R3 /	'bee'
	/ jaːm R3 /	'cry'
/ ʔ / - / h /	/ ʔoːc R1 /	'take'
	/ hoːc R1 /	'dead, die'
/ l / - / r /	/ loːk R3 /	'flay, skin'
	/ roːk R3 /	'hide'
/ s / - / h /	/ siːt R1 /	'mushroom'

	/ hiːt^{R1} /	'to disappear'

Consonant contrast in the final position

Examples :

/ ʔ / - / h /	/ kʰəjaʔ^{R1} /	'ginger'
	/ kʰəjah^{R1} /	'charcoal'
/ t / - / c /	/ puːt^{R3} /	'speak'
	/ puːc^{R3} /	'to scoop (some water)'
/ t / - / p /	/ keːt^{R3} /	'small cockroach'
	/ keːp^{R3} /	'to roast'
/ t / - / k /	/ pɔt^{R1} /	'lie'
	/ pɔk^{R1} /	'wrap'
/ p / - / k /	/ cʰap^{R1} /	'catch'
	/ cʰak^{R1} /	'seed'
/ m / - / n /	/ lum^{R1} /	'fishing rod'
	/ lun^{R1} /	'to push'
/ n / - / ŋ /	/ roːn^{R3} /	'to winnow'
	/ roːŋ^{R3} /	'centipede'
/ ŋ / - / ɲ /	/ ʔɔːŋ^{R1} /	'wasp'
	/ ʔɔːɲ^{R1} /	'pile up'

5.4.2 Vowels

In WK Chong, there are 18 single vowel phonemes / i, iː, e, eː, ɛ, ɛː,

ɨ, ɨː, ə, əː, a, aː, u, uː, o, oː, ɔ, ɔː / and one diphthong / uə /.

Table 18 : The vowel phonemes of WK Chong.

Tongue position / Tongue height	Front		Central		Back	
	short	long	short	long	short	long
closed	i	iː	ɨ	ɨː	u	uː
closed-mid	e	eː			o	oː
mid			ə	əː		
open-mid	ɛ	ɛː			ɔ	ɔː
open			a	aː		
diphthong			uə			

1) Formational statement of vowels. (WK Chong)

Single vowels

There are 18 single vowels in Wang Kraphrae Chong : / i, iː, e, eː, ɛ,

ɛː, a, aː, ə, əː, u, uː, o, oː, ɔ, ɔː, ɨ, ɨː /.

/ i / [i] is a close front unrounded short vowel. It occurs only in the

closed syllable with R1 and R3.

e.g.   / kic^R1 /   [ˈkíc˥]   'small'

       / pʰih^R1 /   [ˈpʰíh]   'sweep'

| / piʔ^{R3} / | [ˈpḭʔ] | 'tasty' |
| / kəniʔ^{R3} / | [kəˈnḭʔ] | 'word' |

/ iː / [iː] is a close front unrounded long vowel. It occurs in both open and closed syllables with all registers.

e.g.	/ siː^{R1} /	[ˈsiː]	'snake'
	/ wiːŋ^{R1} /	[ˈwiːŋ]	'forget'
	/ cʰiːm^{R2} /	[ˈtɕʰiː̂ʔm]	'bird'
	/ pliːw^{R3} /	[ˈpli̤ːˏw]	'fire'
	/ miːw^{R4} /	[ˈm̤ḭːʔw]	'fish'

/ e / [e] is a close-mid front unrounded short vowel. It occurs only in the closed syllables with all registers except R4.

e.g.	/ tʰeʔ^{R1} /	[ˈtʰéʔ]	'soil'
	/ kʰleʔ^{R1} /	[ˈkʰléʔ]	'shame'
	/ peɲ^{R1} /	[ˈpeɲ]	'to twist (rope)'
	/ kətec^{R2} /	[kə ˈtễʔcˈ]	'to shudder'
	/ lec^{R3} /	[ˈle̤ˏcˈ]	'penis'

/ eː / [eː] is a close-mid front unrounded long vowel. It occurs in both open and closed syllables with all registers except R4.

e.g.	/ seː^{R1} /	[ˈseː]	'rattan'
	/ ceːt^{R1} /	[ˈtɕeːtˈ]	'to sharpen (wood)'
	/ kʰleːc^{R2} /	[ˈkʰlê̂ːʔcˈ]	'slide'
	/ keːp^{R2} /	[ˈkê̂ːʔpˈ]	'narrow'
	/ meːm^{R3} /	[ˈme̤ːˏm]	'cheek'

/ ɛ / [ɛ] is an open-mid front unrounded short vowel. It occurs only in the closed syllables with R1 and R2.

| e.g. | / mɛʔ^{R1} / | [ˈmɛ́ʔ] | 'mother' |
| | / kɛh^{R1} / | [ˈkɛ́h] | 'pot' |

| / kətʰɛhᴿ¹ / | [kə'tʰɛ́h] | 'lightning' |
| / kəmlɛwᴿ² / | [kə 'mlɛ̃ʔw] | 'to aim (a target)' |

/ ɛː / [ɛː] is an open-mid front unrounded long vowel. It occurs in both open and closed syllables with all registers except R4.

e.g. | / sɛːᴿ¹ / | ['sɛː] | 'arm' |
/ kʰlɛːpᴿ¹ /	['kʰlɛːpˀ]	'lick'
/ tɛːŋᴿ¹ /	['tɛːŋ]	'left'
/ pɛːkᴿ² /	['pɛ̂ːʔkˀ]	'wet'
/ kɛːwᴿ³ /	['kɛːw]	'a cup'

/ ɨ / [ɨ] is a close central unrounded short vowel. It occurs only in the closed syllables with all registers.

e.g. | / cʰɨhᴿ¹ / | ['tɕʰɨ́h] | 'old (not young)' |
/ wɨjᴿ¹ /	['wɨj]	'to spin (yarn)'
/ tʰɨŋᴿ² /	['tʰɨ̃ʔŋ]	'bamboo shoots'
/ pɨʔᴿ³ /	['pɨ̠.ʔ]	'hate'
/ lɨŋᴿ⁴ /	['lɨ̀ʔŋ]	'deep'

/ ɨː / [ɨː] is a close central unrounded long vowel. It occurs in both open and closed syllables with all registers except R4.

e.g. | / cɨːjᴿ¹ / | ['tɕɨːj] | 'smell (vt.)' |
/ kʰɨːnᴿ¹ /	['kʰɨːn]	'return, give back'
/ kʰrɨːpᴿ² /	['kʰrɨ̂ːʔpˀ]	'to burp'
/ tɨːtᴿ³ /	['tɨ̠ːˑtˀ]	'ride'
/ jɨːŋᴿ³ /	['j ɨ̠ːˑŋ]	'high'

/ ə / [ə] is a mid central unrounded short vowel. It occurs only in the closed syllables with all registers except R4.

e.g. | / k|ənᴿ¹ / | ['klən] | 'trencher' |
| / kəjᴿ² / | ['kə̃ʔj] | 'sharp' |

/ wənR2 /   [ˈwə̃ʔn]   'tomorrow'

/ mətR3 /   [ˈmə̣ˌtˀ]   'eyes'

/ kəkrətR3 /   [kə ˈkrə̣ˌtˀ]   'termite'

/ ə: /, [ə:] is a mid central unrounded long vowel. It occurs in both open and closed syllables with all registers except R3 and R4.

e.g.   / kəpʰlə:ŋR1 /   [kə ˈpʰlə:ŋ]   'gun'

/ prə:R1 /   [ˈprə:]   'to serve'

/ kʰə:mR2 /   [ˈkʰə̂:ʔm]   'good smelling'

/ pʰlə:tR2 /   [ˈpʰlə̂:ʔtˀ]   'blow'

/ a / [a] is an open central unrounded short vowel. It occurs only in the closed syllables with all registers.

e.g.   / pʰramR1 /   [ˈpʰram]   'five'

/ caŋR2 /   [ˈcã̃ʔŋ]   'black'

/ caŋR3 /   [ˈcạˌŋ]   'roast'

/ ɲakR3 /   [ˈɲạˌkˀ]   'shiver'

/ kəlakR4 /   [kə ˈlạ̀ʔkˀ]   'fall'

/ a: / [a:] is an open central unrounded long vowel. It occurs in both open and closed syllables with all registers.

e.g.   / wa:R1 /   [ˈwa:]   'monkey'

/ kʰla:cR1 /   [ˈkʰla:cˀ]   'to scratch'

/ ka:tR2 /   [ˈkâ:ʔtˀ]   'near'

/ ra:pR3 /   [ˈrạ:ˌpˀ]   'wash'

/ kəla:ŋR4 /   [kə ˈlạ̀:ʔŋ]   'sand'

/ u / [u] is a close back rounded short vowel. It occurs only in the closed syllables with all registers except R4.

e.g.   / lujR1 /   [ˈluj]   'pointed'

/ tʰuʔR1 /   [ˈtʰúʔ]   'hot'

| / luj^{R2} / | ['lũˀj] | 'earthworm' |
| / kuŋ^{R3} / | ['ku̱ˏ ŋ] | 'belly' |

/ u: / [u:] is a close back rounded long vowel. It occurs in both open and closed syllables with all registers.

e.g.	/ ŋu:n^{R1} /	['ŋu:n]	'to stoop'
	/ cu:m^{R2} /	['tɕû:ˀm]	'climbers'
	/ plu:^{R3} /	['plu̱:ˏ]	'leg'
	/ pu:t^{R3} /	['pu̱:ˏ t˥]	'speak'
	/ mu:j^{R4} /	['mù̱:ˀj]	'one'

/ o / [o] is a close-mid back rounded short vowel. It occurs only in the closed syllables with all registers except R4.

e.g.	/ krok^{R1} /	['kro̱ˏ k˥]	'pig'
	/ koŋ^{R2} /	['kõˀŋ]	'long'
	/ poʔ^{R3} /	['po̱ˏ ʔ]	'enough'
	/ kətoŋ^{R3} /	[kə 'to̱ˏ ŋ]	'rabbit'
	/ wok^{R3} /	['wo̱ˏ �··˥]	'clothes'

/ o: / [o:] is a close-mid back rounded long vowel. It occurs in both open and closed syllables with all registers.

e.g.	/ jo:^{R1} /	['jo:]	'have sexual intercourse'
	/ so:c^{R1} /	['so:c˥]	'horn'
	/ co:c^{R2} /	['tɕô:ˀc˥]	'vomit'
	/ klo:k^{R3} /	['klo̱:ˏ k˥]	'door'
	/ məro:j^{R4} /	[mə 'rò̱:ˀj]	'fly (n.)'

/ ɔ / [ɔ] is an open-mid back rounded short vowel. It only occurs in the closed syllables with R1 and R2.

| e.g. | / kʰlɔʔ^{R1} / | ['kʰlɔ́ʔ] | 'shell' |

/ pɔh^{R1} /	['pɔ́h]	'burn'
/ kʰəmɔk̩^{R2} /	[kʰə 'mɔ̃ʔk̚]	'cough'
/ kəjɔŋ^{R2} /	[kə 'jɔ̃ʔŋ]	'pincers'

/ ɔ: / [ɔ:] is an open-mid back rounded long vowel. It occurs in both open and closed syllables with all registers.

e.g.	/ pɔ:^{R1} /	['pɔ:]	'to carry in one's arms'
	/ ŋɔ:n^{R1} /	['ŋɔ:n]	'Ionpreata cylindrica'
	/ tɔ:j^{R2} /	['tɔ̂:ʔj]	'before'
	/ mɔ:k^{R3} /	['mɔ̰:k̚]	'fog'
	/ kəlɔ:ŋ^{R4} /	[kə 'lɔ̰:ʔŋ]	'broad-walk'

Diphthong

There is only one diphthong in WK Chong : / uə /.

/ uə / [uə] is a diphthong gliding from a close back unrounded to an open central vowel. It occurs closed syllable with register 1. I can found three words in WK Chong.

/ huəc^{R1} /	['huəc̚]	'to whistle'
/ kruəh^{R1} /	['kruəh]	'saucer'
/ kənuəc^{R1} /	[kə 'nuəc̚]	'cord (used to bind thatch roof)'

The other diphthongs are only found in Thai loan words. So, I exclude them from the vowel system.

2) Vowel phonemes contrast

The following are examples of the contrasts of monophthongs in length.

/ i / - / i: /	IE	/ kit^{R3} /	'to think'
		/ ki:t^{R3} /	'pour'
/ e / - / e: /	AE	/ met^{R3} /	'fist'
		/ kəme:t^{R3} /	'furmeric curcuma'

/ ɛ / - / ɛː /	AE	/ cʰiːmᴿ² k̠ʰɛ̠ːŋᴿ¹ /	'hornbill'
		/ namᴿ³ k̠ʰɛ̠ŋᴿ¹ /	'ice'
/ ə / - / əː /	AE	/ kʰlətᴿ² /	'to leak'
		/ kəːtᴿ² /	'low'
/ a / - / aː /	IE	/ ʔawᴿ¹ /	'clothes'
		/ ʔaːwᴿ¹ /	'day (cl.)'
/ u / - / uː /	IE	/ sucᴿ¹ /	'gnat'
		/ suːcᴿ¹ /	'worship'
/ o / - / oː /	IE	/ krokᴿ³/	'pig'
		/ kroːkᴿ¹ /	'run'
/ ɔ / - / ɔː /	IE	/ kɔŋᴿ¹ /	'wheel'
		/ kɔːŋᴿ¹ /	'bracelet'
/ ɨ / - / ɨː /	AE	/ kʰəlɨŋᴿ¹ /	'older brother/ sister'
		/ kəlɨːŋᴿ¹ /	'(house) topple'

The following are examples of the contrasts of monophthongs in tongue height.

/ i / - / e /	IE	/ piʔᴿ³ /	'tasty'
		/ peʔᴿ³ /	'goat'
/ e / - / ɛ /	AE	/ kʰleʔᴿ¹ /	'shame'
		/ klɛʔᴿ¹ /	'fish scale'
/ u / - / o /	IE	/ puhᴿ³ /	'to boil'
		/ pohᴿ³ /	'ashes'
/ o / - / ɔ /	IE	/ tohᴿ¹ /	"head"
		/ tɔhᴿ¹ /	'to undress'
/ ɨ / - / ə /	IE	/ kɨh /	'wake up'
		/ kəh /	'to pry'

/ ə / - / a /	AE	/ kəj^{R4} /	'sharp'
		/ kaj^{R2} /	'olive'
/ ə: / - / a: /	IE	/ kə:t^{R2} /	'shallow'
		/ ka:t^{R2} /	'near'
/ i: / - / e: /	IE	/ wi:ŋ^{R1} /	'forget'
		/ we:ŋ^{R1} /	'raw'
/ e: / - / ɛ: /	IE	/ kəte:ŋ^{R2} /	'brook'
		/ kətɛ:ŋ^{R2} /	'little finger'
/ u: / - / o: /	IE	/ pu:t^{R3} /	'speak'
		/ po:t^{R3} /	'cut'
/ o: / - / ɔ: /	IE	/ pro:k^{R3} /	'tusk'
		/ prɔ:k^{R3} /	'squirrel'

The following are examples of the contrasts of monophthongs in tongue position.

/ i / - / ɨ /	IE	/ cʰih^{R1} /	'dry (v.)'
		/ cʰɨh^{R1} /	'old (not young)'
/ i: / - / ɨ: /	IE	/ ti:t^{R3} /	'preach'
		/ tɨ:t^{R3} /	'ride'
/ e / - / ə /	IE	/ tʰeʔ^{R1} /	'soil'
		/ tʰəʔ^{R1} /	'particle'
/ e: / - / ə: /	IE	/ ke:t^{R1} /	'chew'
		/ kə:t^{R1} /	'birth'
/ ɛ / - / a /	IE	/ sɛt^{R1} /	'finish'
		/ sat^{R1} /	'animal'
/ ɛ: / - / a: /	AE	/ kʰrɛ:ŋ^{R2} /	'night'
		/ kʰla:ŋ^{R2} /	'hawk'
/ ɨ / - / u /	IE	/ kʰɨh^{R1} /	'to flick'

		/ kʰuh^{R1} /	'scrape'
/ ə / - / o /	AE	/ kəh^{R1} /	'to pry'
		/ kroh^{R1} /	'to rinse'
/ əː / - / oː /	AE	/ kəːt^{R2} /	'low'
		/ kʰoːt^{R2} /	'mosquito'
/ a / - / ɔ /	IE	/ kəmlah^{R1} /	'small bitter gourd'
		/ kəmlɔh^{R1} /	'young man'
/ aː / - / ɔː /	IE	/ cʰaː^{R1} /	'to eat'
		/ cʰɔː^{R1} /	'dog'

5.4.3 Register

Register is one characteristic of suprasegmental features of the language. It is used to distinguish the meaning of the words but it is weak in WK Chong. There are 4 registers in WK Chong : / ^{R1} /, / ^{R2} /, / ^{R3} / and / ^{R4} /.

1) Formational Statement of registers

/ ^{R1} /   The register 1 is represented by [ ] or [´]

The register 1 is characterized by a clear voice quality. The pronunciation of sound is the same as KP Chong. It has two pitch patterns : mid level [ ] and high rising [´]. The mid level pitch occurs in both open and closed syllables. The final consonants / p, t, c, k, m, n, ɲ, ŋ, w, j / occur with the mid level. The high rising pitch occurs with a closed syllable with short vowels and final consonants / p, t, c, k, ʔ, h /. It is marked by / ^{R1} / in phonemic transcription.

Examples of mid level pitch of register 1.

/ seː^{R1} /	[ˈseː]	'rope'
/ luː^{R1} /	[ˈluː]	'howl'
/ tɔːk^{R1} /	[ˈtɔːk̚]	'sell'

/ ʔuːcᴿ¹ /	[ˈʔuːc˥]	'little (quantity)'
/ ŋoːtᴿ¹ /	[ˈŋoːt˥]	'a kind of beetle'
/ saːpᴿ¹ /	[ˈsaːp˥]	'tasteless'
/ cʰoːjᴿ¹ /	[ˈtɕʰoːj]	'to plant'
/ diːwᴿ¹ /	[ˈdiːw]	'mat'

Examples of high rising of register 1.

/ pʰahᴿ¹ /	[ˈpʰáh]	'tail'
/ krapᴿ¹ /	[ˈkráp˥]	'to hatch'
/ kicᴿ¹ /	[ˈkíc˥]	'small'
/ lɨkᴿ¹ /	[ˈlɨ́k˥]	'husk'
/ ʔɔʔᴿ¹ /	[ˈʔɔ́ʔ]	'father'

/ ᴿ² /   The register 2 is represented by [ˀ̃].

The register 2 is characterized by a clear voice quality and followed by a glottal constriction. The glottal constriction of register 2 is not as clear as KP Chong. It has high rising falling pitch [ˆ] and occurs with final consonants / p, t, c, k, m, n, ŋ, w, j /. The native speakers told that it can be described as a higher tone. It can occur in both open and closed syllable. It is marked by / ᴿ² / in phonemic transcription.

Examples :	/ tɔːjᴿ² /	[ˈtɔ̂ːˀj]	'before'
	/ kʰrɛːŋᴿ² /	[ˈkʰrɛ̂ːˀŋ]	'night'
	/ caːᴿ² /	[ˈtɕâːˀ]	'knife'
	/ ceːᴿ² /	[ˈtɕêːˀ]	'deer'
	/ cʰiːmᴿ²]	[ˈtɕʰîːˀm]	'bird'

/ ᴿ³ /   The register 3 is represented by [̤ ˋ].

The register 3 is characterized by a breathy voice quality. It has low falling pitch [ˋ]. In WK Chong, register 3 has unaspirated initial consonants

and a breathy voice is weak sound until I hardly distinguish it from clear voice. The native speakers can discriminate the breathiness from clear voice and told me that it can be described as a low tone. It can occur in both open and closed syllables with all final consonants. It is marked by / ^{R3} / in phonemic transcription.

Examples :   / pla:^{R3} /   ['pla̤ː]   'new'

/ kəcak^{R3} /   [kə 'tɕa̤ˌkˀ]   'cold'

/ kət^{R3} /   ['kə̤ˌtˀ]   'pain'

/ kəmle:ŋ^{R3} /   [kə 'mle̤ːˌŋ]   'shoulder'

/ kənu:j^{R3} /   [kə 'nṳːˌj]   'seven'

/ ^{R4} / The register 4 is represented by [ˋ᷵ˀ].

The register 4 is characterized by a breathy voice quality and followed by a glottal constriction. The nature of R4 is a breathy voice followed by a glottal constriction and the nature of R2 is a clear voice followed by glottal constriction, the R4 is merged with R2 in some speakers because the breathiness in WK Chong is not clear. R4 occurs only in closed syllable with final consonants / k, m, ŋ, w, j /. It has high falling pitch [ˋ]. It is marked by / ^{R4} / in phonemic transcription.

Examples :   / co:ŋ^{R4} /   ['tɕo̤ːˀŋ]   'Chong people'

/ mi:w^{R4} /   ['mi̤ːˀw]   'fish'

/ mu:j^{R4} /   ['mṳːˀj]   'one'

/ kəmlo:k^{R4} /   [kə 'mlo̤ːˀkˀ]   'salty'

/ ŋa:m^{R4} /   ['ŋa̤ːˀm]   'sweet'

2) Register Contrast

The following are examples of the register contrast in identical environment (IE) and contrast in analogous environment (AE).

Register	Contrast in	Examples	Gloss
$/^{R1}/ - /^{R2}/$	IE	$/ \text{su:c}^{R1} /$	'worship'
		$/ \text{su:c}^{R2} /$	'ant'
	IE	$/ \text{luj}^{R1} /$	'point'
		$/ \text{luj}^{R2} /$	'earthworm'
	IE	$/ \text{k}^{h}\text{o:j}^{R1} /$	'tooth'
		$/ \text{k}^{h}\text{o:j}^{R2} /$	'horned lizard'
	IE	$/ \text{kɔ:ŋ}^{R1} /$	'bracelet'
		$/ \text{kɔ:ŋ}^{R2} /$	'tree frog'
	IE	$/ \text{kətɨŋ}^{R1} /$	'pus'
		$/ \text{kətɨŋ}^{R2} /$	'thin'
	IE	$/ \text{cɔ:j}^{R1} /$	'to plow'
		$/ \text{cɔ:j}^{R2} /$	'to flow'
$/^{R2}/ - /^{R3}/$	IE	$/ \text{caŋ}^{R2} /$	'black'
		$/ \text{caŋ}^{R3} /$	'to roast'
	IE	$/ \text{lu:c}^{R2} /$	'soft (to the touch)'
		$/ \text{lu:c}^{R3} /$	'steal'
	IE	$/ \text{kəmla:k}^{R2} /$	'lead (n.)'
		$/ \text{kəmla:k}^{R3} /$	'peacock'
	IE	$/ \text{sɔ:k}^{R2} /$	'mango'
		$/ \text{sɔ:k}^{R3} /$	'placenta'
$/^{R1}/ - /^{R3}/$	IE	$/ \text{kəma:}^{R1} /$	'porcupine'
		$/ \text{kəma:}^{R3} /$	'needle'
	IE	$/ \text{pri:}^{R1} /$	'monitor'
		$/ \text{pri:}^{R3} /$	'forest'
	IE	$/ \text{ke:t}^{R1} /$	'chew'

		/ keːt^{R3} /	'small cockroach'
	IE	/ kəniːk^{R1} /	'piece'
		/ kəniːk^{R3} /	'spade'
	IE	/ tiːw^{R1} /	'to crow'
		/ tiːw^{R3} /	'to sew'
/ ^{R1} / - / ^{R4} /	AE	/ lɔːŋ^{R1} /	'banana'
		/ kəlɔːŋ^{R4} /	'broad-walk'
	AE	/ kʰəlɨŋ^{R1} /	'older brother or sister'
		/ lɨŋ^{R4} /	'deep'
	AE	/ roːj^{R1} /	'hundred'
		/ məroːj^{R4} /	'fly (n.)'
/ ^{R3} / - / ^{R4} /	IE	/ ŋaːj^{R3} /	'face'
		/ ŋaːj^{R4} /	'far'
	IE	/ ŋaːm^{R3} /	'bee'
		/ ŋaːm^{R4} /	'sweet'
	IE	/ kəlaːŋ^{R3} /	'ear'
		/ kəlaːŋ^{R4} /	'sand'
/ ^{R1} / - / ^{R2} / - / ^{R3} /			
	AE	/ kəkeːp^{R1} /	'hut'
		/ keːp^{R2} /	'narrow'
		/ keːp^{R3} /	'to roast'
/ ^{R2} / - / ^{R3} / - / ^{R4} /			
	AE	/ kʰəŋaːm^{R2} /	'husked'
		/ ŋaːm^{R3} /	'bee'
		/ ŋaːm^{R4} /	'sweet'
/ ^{R1} / - / ^{R2} / - / ^{R3} / - / ^{R4} /			
	IE	/ paːj^{R1} /	'to smear'

	/ paːj^{R2} /	'palm (of hand)'
	/ paːj^{R3} /	'to paddle, to row'
	/ paːj^{R4} /	'two'
AE	/ muːj^{R1} /	'day after tomorrow'
	/ kəmuːj^{R2} /	'scurf'
	/ muːj^{R3} /	'only, alone'
	/ muːj^{R4} /	'one'

The following tables show the occurrence of four registers with initial consonant, final consonant and vowel.

Table 19 : The co-occurrence of register with single initial consonant.

+   ·   occurrence

(blank)   non-occurrence

	p	pʰ	b	t	tʰ	d	c	cʰ	k	kʰ	ʔ	m	n	ɲ	ŋ	s	h	l	r	w	j
R1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
R2	+	+		+	+		+	+	+	+		+	+	+	+	+	+	+	+	+	+
R3	+			+			+		+			+	+	+	+	+		+	+	+	+
R4	+						+					+	+		+			+	+		

The co-occurrence of register with single initial consonant as shown in the table 19 can be summarized as follows.

1. All single initial consonants can occur with R1.

e.g.   / pɨh^{R1} /   'fat'

    / bɔːj^{R1} /   'sail (v.)'

    / tiː^{R1} /   'hand'

    / haːj^{R1} /   'rice'

2. All single initial consonants except / b, d, ʔ / can occur with R2.

e.g.   / tɔːj^{R2} /   'before'

/ caːp^{R2} /   'fishy'

/ ŋɛːw^{R2} /   'bend'

/ kʰoːj^{R2} /   'horned lizard'

3. All single initial consonants except / pʰ, b, tʰ, d, cʰ, kʰ, ʔ, h / can occur with R3.

e.g.   / puŋ^{R3} /   'belly'

/ koːk^{R3} /   'stable, stall'

/ nɨm^{R3} /   'year'

/ ɲak^{R3} /   'shiver'

4. The single initial consonants / p, c, m, n, ŋ, l, r / can occur with R4.

e.g.   / lɨŋ^{R4} /   'deep'

/ məroːj^{R4} /   'fly (n.)'

/ miːw^{R4} /   'fish'

/ kənɨŋ^{R4} /   'rice straw'

Table 20 : The co-occurrence of register with initial consonant
          clusters.

                    +   occurrence

          (blank)   non-occurrence

	pr	pl	pʰr	pʰl	kr	kl	kʰr	kʰl	kw	mr	ml
R1	+	+	+	+	+	+		+	+	+	+
R2			+	+	+	+	+	+		+	
R3	+	+			+	+				+	+
R4											+

The co-occurrence of register with consonant cluster as shown in table 20 can be summarized as follows.

1. All consonant cluster except / kʰr / can occur with R1.

e.g.   / priːŋ^{R1} /   'oil'

/ plak^{R1} /   'to break'

/ klic ^{R1} /   'to cut'

2. All consonant clusters except / pr, pl, kw / can occur with R2.

e.g.   / kʰlaːŋ^{R2} /   'hawk'

/ pʰreːm^{R2} /   'land leech'

/ pʰloːm^{R2} /   'wax (bees)'

3. The consonant clusters / pr, pl, kr, kl, mr, ml / can occur with R3.

e.g.   / plaːk^{R3} /   'to chop'

/ prɔːk^{R3} /   'squirrel'

4. Only consonant cluster / ml / can occur with R4.

e.g.   / kəmloːk^{R4} /   'salty'

Table 21 : The co-occurrence of register and final consonant.

+   ·   occurrence

(blank)   non-occurrence

	-p	-t	-c	-k	-ʔ	-m	-n	-ɲ	-ŋ	-h	-w	-j
R1	+	+	+	+	+	+	+	+	+	+	+	+
R2	+	+	+	+		+	+		+		+	+
R3	+	+	+	+	+	+	+	+	+	+	+	+
R4				+		+			+		+	+

The co-occurrence of register and final consonant as shown in the table 21 can be summarized as follows.

1. All final consonants can occur with register 1, 3.

e.g.   / kɛh^{R1} /   'pot'

/ keːw^{R1} /   'to bark'

/ daːŋ^{R1} /   'old (not new)'

/ koːp^{R3} /   'to nick'

/ ŋaːm^{R3} /   'bee'

/ puj^{R3} /   'drunk'

2. All final consonants except / ʔ, h, ɲ / can occur with register 2.

e.g.   / suːc^{R2} /   'ant'

/ waːŋ^{R2} /   'want'

/ kʰəːm^{R2} /   'good smelling'

/ peːw^{R2} /   'evening'

3. The final consonant / k, m, ŋ, w, j / can occur with register 4.

e.g.   / lɨŋ^{R4} /   'deep'

/ məroːj^{R4} /   'fly (n.)'

/ kəj^{R4} /   'sharp'

Table 22 : The co-occurrences of register and vowel.

+   occurrence

(blank)   non-occurrence

	i	e	ε	ɨ	ə	a	u	o	ɔ	iː	eː	εː	ɨː	əː	aː	uː	oː	ɔː	uə
R1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
R2		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
R3	+	+		+	+	+	+	+		+	+	+	+		+	+	+	+	
R4				+		+				+					+	+	+	+	

The co-occurrence of register and vowel as shown in the table 22 can be summarized as follows.

1. All vowel phonemes can occur with R1.

e.g.   / mɔʔ^{R1} /   'beautiful'

/ sɨk^{R1} /   'flour'

/ ʔoːj^{R1} /   'caladium'

/ priːŋ^{R1} /   'oil'

2. All vowel phonemes except / i, uə / can occur with R2.

e.g.   / sɛːm^{R2} /   'Thai people'

/ wən^{R2} /   'tomorrow'

/ kaːt^{R2} /   'near'

3. All vowel phonemes except / ɛ, ɔ, əː, uə / can occur with R3.

e.g.   / ɲak^{R3} /   'shiver'

/ wət^{R3} /   'find (v.)'

/ laːp^{R3} /   'to paint'

4. The vowel phonemes / ɨ, a, iː, aː, uː, oː, ɔː / can occur with R4.

e.g.   / miːw^{R4} /   'fish'

/ lɨŋ^{R4} /   'deep'

/ kəlɔːŋ^{R4} /   'broad-walk'

CHAPTER VI

A PHONOLOGICAL COMPARISON BETWEEN
KHLONG PHLU CHONG AND WANGKRAPHRAE CHONG

6.1 The similarity of phonological characteristics between KP Chong and WK Chong.

6.1.1 Intonation

There are two types of intonation groups in both Chong dialects, they are falling and rising contours. The falling contour is found in declaratives, content questions and requests. The rising contour only occurs in polar questions.

6.1.2 Phonological word

The word structure in the two dialects can be monosyllabic, disyllabic and trisyllabic words. Most words in Chong are monosyllabic and disyllabic words. There are a small number of trisyllabic words and some are loan words. Monosyllabic words consist of one major syllable and the strong stress is on that syllable. Its structure is 's. Disyllabic words consist of a presyllable and a major syllable and the strong stress always occurs on the major syllable. It structure is ₁w's or u's. Trisyllabic words consist of two presyllables and one major syllable and the strong stress is on the last syllable. The weak stress is on the closed presyllable and the unstress is on the open presyllable. It structure is u₁w's or ₁w u's. Since the stress in this language is predictable that the strong stress occurs on the last syllable, the stress marks ['], [₁] are not written in the phonemic transcription of words.

6.1.3 Syllable

There are two types of syllable in both dialects : open syllable and closed syllable. An open syllable is composed of initial consonant or consonant

cluster, a vowel and a register. Its structure is C(C)V^{R1,R3}. A closed syllable is composed of initial consonant or consonant cluster, a vowel, a final consonant and a register. Its structure is C(C)VC^{R1-4}. Syllables normally function in the phonological word. There are two main classes : a nuclear syllable and a peripheral syllable. The nuclear syllable functions as a nucleus of the phonological word and takes a strong stress. The peripheral syllable functions as a periphery of the phonological word. This class can be divided into two sub-classes : a weakly stressed peripheral syllable an unstressed peripheral syllable.

6.1.4 Phoneme

Numbers of consonant, vowel and register phonemes are the same in both dialects. There are 21 consonant phonemes : / p, pʰ, b, t, tʰ, d, c, cʰ, k, kʰ, ʔ, m, n, ɲ, ŋ, s, h, l, r, w j /. All consonant phonemes can occur initially. Only / p, t, c, k, ʔ, m, n, ɲ, ŋ, h, w, j / can occur finally. There are 18 single vowel phonemes : / i, iː, e, eː, ɛ, ɛː, ɨ, ɨː, ə, əː, a, aː, u, uː, o, oː, ɔ, ɔː / and one diphthong : / uə /. There are four registers in both dialects : clear voice /^{R1}/, clear voice followed by glottal constriction /^{R2}/, breathy voice /^{R3}/ and breathy voice followed by glottal constriction /^{R4}/.

6.2 Different characteristics between KP Chong and WK Chong

6.2.1 Lexical differences

There are 3 patterns of differences in lexical usage between two Chong dialects. The first is that each dialect has different vocabulary items and both words are Chong words. The second is KP Chong speakers use Thai words whereas WK Chong speakers use Chong words. The third is KP Chong speakers use Chong words whereas WK Chong speakers use Thai words. In this study, the second pattern can be found more than the first and the third patterns. Examples of some lexical variations are shown below.

1) Both two Chong dialects use different lexical items.

KP	**WK**	**Gloss**
e.g. ['mi̤ʔ]	[ˌpɛn 'tɕʰak˥]	'blister'
[ˌtuə 'naːŋ]	['puː˞ʔt˥]	'maggot'
[kə ˌwa̤ːˌj 'sṳːʔt˥]	[ˌtiːn 'tɕãʔŋ]	'bear'
[ˌlaʔ 'tɕʰi̤ˌw]	[ˌtiːn 'tɕup˥]	'vegetable'
['lə̤ˌt˥]	['to̤ˌk˥]	'to grow (plant)'
[ˌʔuːt˥ kə 'kʰṳːˌc˥]	[kə 'nõʔŋ]	'club'
['tɕʰɨ̤ːj]	['ɲũːʔc˥]	'kiss'
['kʰlãʔw]	['ɲam]	'knead'
[pʰlê̤ːʔw]	['ŋɛːm]	'silent'
['tɕʰî̤ːʔp˥]	[ˌsúk˥ 'mo̤ˌk˥]	'mucus'
['ka̤ːˌt˥]	[ˌhâːʔŋ kə 'huəj]	'wound, sore'
['tɕʰṳˌn]	['klən]	'trencher'
['plɔ̂ːʔk˥]	['pruʔ]	'mud'
[ˌʔat˥ tʰə 'tɕan]	['tɕə̤ˌn]	'shelf'
['kwaːt˥]	['wa̤ːˌj]	'crawl'
[ˌmo̤j ˌkʰiə̤ˌn 'ʔan]	[mə 'kê̤ːʔn]	'immediately'
[kə 'kluː]	['krôh]	'to rinse'
['kʰa̤h]	[ˌsam'laŋ]	'feel'
[ˌkʰlɔʔ 'tɕṳːˌc˥]	[ˌkʰlɔʔ 'loː]	'pond snail'
['laːt˥]	[ˌplṳːˌ kə'niːp˥]	'groin'
[kə 'we̤ːˌk˥]	[kə 'ɟɨːŋ]	'shake'

2) It is obvious that KP Chong speakers use more traditional Chong words whereas WK Chong speakers use Thai words.

	KP	**WK**	**Gloss**
e.g.	[sə ˈwiŋ]	[ˈpan]	'spin'
	[ˈpʰuj]	[ˈbuəm]	'to swell'
	[ˈprʉːkˀ]	[ˌtɛːŋ ˈkaːn]	'to marry'
	[kə ˈna̤p˺]	[ˈkʰɔːp˺]	'edge'
	[kə ˈniːm]	[ˈʔɛːkˀ]	'yoke'
	[kə ˈrʉt˺]	[ˈsum]	'a pannier - shaped fish trap made of bamboo strips'
	[ˈbɔŋ]	[ˌsiə ˈhaːj]	'damage'
	[kə ˈna̤ˀŋ]	[ˌlʉːkˀ ˈpatˀ]	'bead'
	[ˈra̤t˺]	[ˈkʰâːˀt˺]	'rake'
	[kə ˈlo̤ː]	[tə ˈkrɛːŋ]	'sieve'
	[ˈpoːŋ]	[ˈpleː]	'cradle'
	[ˌpʰáh ˈkʰoːp˺]	[ˌtɔ́p˺ ˈtiː]	'to applaud'
	[ˈwa̤ŋ]	[ˈʔaːw]	'bay, gulf'
	[ˈhɛ̤ːkˀ]	[ˈrʉ̤ːp˺]	'hurry'
	[ˈkʰɛ̂ːˀn]	[ˈko̤n]	'thick (liquid)'

3) There are some Thai words that are used by KP Chong speakers whereas Chong words are used by WK Chong speakers.

	KP	**WK**	**Gloss**
e.g.	[ˈpɛːŋ]	[ˌpiŋ ˈpoːŋ]	'face powder'
	[ˌtíh ˈtiən]	[ˌtɔː ˈriːn]	'rebuke'
	[kə ˈtʰaː]	[ɲiŋ ˈɲɔːŋ]	'quail'
	[kə ˈkuə]	[kə ˈmrâːˀkˀ]	'lead (n.)'

KP	**WK**	**Gloss**
[ˈŋuə̰ˎ]	[kə ˈsoːŋ]	'ox, cow'
[ˌʔícˈ ˈmḛːkˈ]	[ˈmôːʔkˈ]	'cloud'
[ˈsan]	[ˈɲa̰ˎkˈ]	'shiver'
[ˈma̰ːˎ]	[ˈsɛh]	'horse'
[ˌpákˈ kə ˈtuː]	[ˈklo̰ːˎkˈ]	'door'
[ˈsiəm]	[kə ˈniːkˈ]	'spade'
[ˈʔɔm]	[kə ˈmɛːm]	'hold (in mouth)'
[ˈhɔh]	[ˈpʰlə̂ːʔtˈ]	'blow'
[ˈŋɨəkˈ]	[kə ˈmɛːkˈ]	'gill'
[ˈniːpˈ]	[kə ˈmɛːpˈ]	'carry under arm'
[ˈsaŋ]	[kə ˈpuj]	'fiber of jackfruit'
[ˈkʰiːm]	[ˈkeːpˈ]	'tongs'
[ˌsḛˎn ˈʔen]	[kə ˈsiː]	'tendon'
[ˈhiəw]	[kʰə ˈwîːʔtˈ]	'to droop (flower)'
[ˌkam ˈmátˈ]	[ˌmḛˎtˈ ˈtiː]	'fist'
[ˈleŋ]	[ˌkam ˈlɛ̃ʔw]	'to aim (a target)'
[ˌjɔːm ˈsiː]	[kə ˈlo̰ˎkˈ]	'dye'
[ˈbaw]	[kʰə ˈnɨ̃ʔkˈ]	'light'
[ˌpṵːˎ ˌja̰ːˎ ˌtaː ˈja̰ːˎj]	[ˌkṵːˎtˈ ˈtɕa̰ːˎtˈ]	'ancestors'

6.2.2 Phonological Change

1) The absence of presyllable causes change in word structure.

There are variations in the Chong word structures due to the loss of open presyllable. The variations between disyllabic word and monosyllabic word can occur in various speakers or even in the same speaker of the same dialect. In this study, it can be noticed that in KP Chong the open presyllable is more

frequently deleted than that in WK Chong. Examples of variation between the two Chong dialects are shown below.

KP	WK	Gloss
/ hec^{R1} /	/ k<u>ə</u>hɛc^{R1} /	'jump'
/ weːk^{R3} /	/ k<u>ə</u>weːk^{R3} /	'to rock'
/ buk^{R1} /	/ k<u>ə</u>buk^{R1} /	'nest'
/ pʰuŋ^{R2} /	/ k<u>ə</u>puŋ^{R2} /	'water melon'
/ tʰuːŋ^{R3} /	/ k<u>ə</u>tuːŋ^{R3} /	'to transplant (young riceplant)'
/ loːt^{R1} /	/ k<u>ə</u>loh^{R1} /	'barking deer'
/ tʰɨŋ^{R1} /	/ k<u>ə</u>tɨŋ^{R1} /	'pus'
/ pʰoːj^{R1} /	/ k<u>ə</u>pʰoːj^{R1} /	'after'
/ lɨŋ^{R1} /	/ k<u>ə</u>lɨŋ^{R1} /	'older's brother/sister'
/ <u>mə</u>ŋaːm^{R3} /	/ ŋaːm^{R3} /	'bee'
/ k<u>ə</u>hɔːt^{R1} /	/ hɔːt^{R1} /	'pull'
/ k<u>ə</u>kʰleːt^{R2} /	/ kʰleːt^{R2} /	'slide'
/ k<u>ə</u>koːj^{R1} /	/ koːj^{R1} /	'a frame made of rattan used for carrying things in a basket'

2) Segmental phonemes

    2.1) Consonants

The phonetic realization of consonants in the two Chong dialects are different. The different characteristics of the consonant phonemes can be distinguished by the loss of final consonant, the point of articulation, the manner of articulation and the aspiration of initial consonant. The following examples can noticeable that there are a lot of variations of consonants in some words.

(1) Phonetic variation of initial consonants in presyllable of KP Chong and WK Chong..

- Differences in point of articulation

		KP	WK	Gloss
velar	~ alveolar	[kə ˈkʰrṳ ˌpˀ]	[tə ˈklṳ ˌpˀ]	'to pounce'
[k-]	~ [t-]	[kə ˈkraj [	[tə ˈkraj]	'scissors'
		[kʰə ˈŋêːˀt]	[tʰə ˈŋêːˀt]	'darkness'
velar	~ palatal	[kʰə ˈnáh]	[tɕʰə ˈnáh]	'victory'
[k-]	~ [tɕʰ-]			
velar	~ bilabial	[kə ˈnətˀ]	[mə ˈnə́h]	'pineapple'
[k-]	~ [m-]	[kʰə ˈmɔːj]	[mə ˈhɔːj]	'wind (v.)'
alveolar	~ velar	[tʰə ˈŋíʔ]	[kʰə ˈŋíʔ]	'day time'
[tʰ-]	~ [k-]			

- Differences in point and manner of articulation

		KP	WK	Gloss
stop	~ nasal	[kə ˈnətˀ]	[mə ˈnə́h]	'pineapple'
		[kʰə ˈmɔːj]	[mə ˈhɔːj]	'wind (v.)'
stop	~ lateral	[kə ˈhɔːŋ]	[lə ˈhɔːŋ]	'iron'
		[kə ˈhuŋ]	[lə ˈhuŋ]	'papaya'
fricative	~ lateral	[sə ˈhaːj]	[lə ˈhaːj]	'adultery'

- Differences in aspiration

		KP	WK	Gloss
asp.	~ unasp.	[kʰə ˈmlaː]	[kə ˈmlaː]	'mother's sister'
		[kʰə ˈwaːkˀ]	[kə ˈwaːkˀ]	'hoe'
		[kʰə ˈjɔŋ]	[kə ˈjɔŋ]	'a kind of animal'

| [kʰə ˈpraŋ] | [kə ˈpraŋ] | 'guava' |
| [kʰə ˈlɨ́k˦] | [kə ˈlɨ́k˦] | 'choke' |

(2) Phonetic variation of initial consonants in major syllables.

   - Differences in point of articulation

	KP	**WK**	**Gloss**
palatal ~ glottal	[ˈtɕɛ̂ːˀn]	[ˈʔeːn]	'to come'
[tɕ-] ~ [ʔ-]			
alveolar ~ velar	[kə ˈs̱ɔ̌ːˀŋ]	[kə ˈḵlôːˀŋ]	'ladder'
[s-] ~ [k-]			

   - Manner of articulation

	KP	**WK**	**Gloss**
stop ~ nasal	[ˈḵɛ̂ːˀw]	[ˈn̠ɛ̂ːˀw]	'bend'

   - number of initial consonants

	KP	**WK**	**Gloss**
single ~ cluster	[ˈtɕʰa̠ˌŋ]	[ˈḵra̠ŋ]	'droopiest'
with l,r	[ˈtɕʰo̠ˀk˦]	[ˈḵro̠k˦]	'pig'
	[ˈtɕɛːŋ]	[ˈḵrɛːŋ]	'ring (for finger)'
	[ˈtɕu̠ˌc˦]	[ˈḵru̠ˌc˦]	'harvest'
	[ˈtɕoːk˦]	[ˈḵroːk˦]	'to run'
	[ˈtɕoːŋ]	[ˈḵroːŋ]	'bank (of river)'
	[ˈtɕʰu̠ˌn]	[ˈḵlən]	'trencher'
	[ˈtɕʰə̂ˀt˦]	[ˈḵʰlə̂ːˀt˦]	'to leak'

- Differences in aspiration

KP	**WK**	**Gloss**
asp. ~ unasp. [ˈpʰi̤ cˀ]	[ˈpi̤ cˀ]	'sleep'
[ˈpʰi̤ʔ]	[ˈpi̤ʔ]	'tasty'
[ˈpʰa̤ h]	[ˈpa̤ h]	'dry'
[ˈpʰa̤ː tˀ]	[ˈpa̤ː tˀ]	'peel'
[ˈpʰa̤ː j]	[ˈpa̤ː j]	'row (v.)'
[ˈpʰà̤ːʔj]	[ˈpà̤ːʔj]	'two'
[ˈpʰṳ ŋ]	[ˈpṳ ŋ]	'belly'
[ˈpʰo̤ ˌh]	[ˈpo̤ ˌh]	'ashes'
[ˈpʰi̤ʔ]	[ˈpi̤ʔ]	'hate'
[ˈpʰrṳː ŋ]	[ˈprṳː ŋ]	'white'
[ˈkʰe̠ː tˀ]	[ˈke̠ː tˀ]	'small cockroach'
[ˈkʰa̠ ŋ]	[ˈka̠ ŋ]	'hard'
[ˈkʰa̠ː pˀ]	[ˈka̠ː pˀ]	'gape'
[kə ˈkʰrà̠ŋ]	[kə ˈkra̠ ˌŋ]	'monitor'
[kə ˈkʰa̠ː pˀ]	[kə ˈka̠ː pˀ]	'bamboo'
[ˈkʰə̠ tˀ]	[ˈkə̠ tˀ]	'ill, sick'
[ˈkʰṵ ŋ]	[ˈkṵ ŋ]	'stomach'
[ˈtʰa̠ ŋ]	[ˈta̠ ŋ]	'to see'
[ˈtʰa̠ː kˀ]	[ˈta̠ː kˀ]	'water'
[ˈtʰṳː cˀ]	[ˈtṳː cˀ]	'to sting'
[ˈtʰṵ̆ kˀ]	[ˈto̠ kˀ]	'boat'
[ˈtʰŏ̠ː]	[ˈto̠ː]	'to do'
[ˈtʰo̠ː n]	[ˈto̠ː n]	'correct'

KP	WK	Gloss
['tʰɨ̝ːˏtˀ]	['tɨ̝ːˏtˀ]	'ride'
[kə 'tʰəj]	[kə 'təj]	'pot'
[kə 'tɕʰaˏkˀ]	[kə 'tɕaˏkˀ]	'cold'
[tɕʰɨ̝ːˏtˀ]	['tɕɨ̝ːˏtˀ]	'wipe'
['tɕʰɨ̝ˏw]	['tɕɨ̝ːˏw]	'curry'
['tɕʰə̝ˏtˀ]	['tɕə̝ˏtˀ]	'clear'
['tɕʰə̝ˏn]	['tɕə̝ˏn]	'step on'
['tɕʰuːˏcˀ]	['tɕuːˏcˀ]	'flesh'
['tɕʰûːˀm]	['tɕûːˀm]	'climbers'
['tɕʰo̝ʔ]	['tɕo̝ʔ]	'citrus fruit'
['tɕʰɨ̝ˏm]	['tɕɨ̝ˏm]	'person'
[kə 'tɕʰə̝ˏn]	[kə 'tɕə̝ˏn]	'approach'
[kə 'tɕʰûːˀj]	[kə 'tɕûːˀj]	'buttocks'

(3) Phonetic variation of final consonants in major syllables of two Chong dialects.

-The loss of final consonant

The final / -t / in words with R2, R4 in KP Chong is deleted in WK Chong. The loss of final consonant cause change in syllable structure, that is the closed syllable change to open syllable. Examples are provided below.

KP	WK	Gloss
['tɕê̞ːˀtˀ]	['tɕê̞ːˀ]	'deer'
['tɕâːˀtˀ]	['tɕâːˀ]	'knife'
[kə 'pâːˀtˀ]	[kə 'pâːˀ]	'cotton'
[kə 'tʰãʔtˀ]	[kə 'sâːˀ]	'fingernail'
[kə 'pʰɨ̃ʔtˀ]	[kə 'pɨ̂ːˀ]	'prawn'

[kə ˈtɕʰâːʔtˀ]   [kə ˈtɕʰâːʔ]   'terrace'

[ˌpʰóh ˈnâːʔtˀ]   [ˌpʰóh nâːʔ]   'fireplace'

I think that the final / -t / in these words in KP Chong should become

the final / -h / in WK Chong but I can not heard from the informant in this

research. This is supported by Diffloth[1]. He showed me the data from tɕʰu̯ʔŋ

speaker[2] in Kampong Som pronounced the word [ˈtɕâːʔ] 'knife' in WK

Chong as [ˈtɕâːʔh] in Kampong Som. Diffloth said, it is possible that some

WK Chong speakers pronounced [ˈtɕâːʔh] and some pronounced [ˈtɕâːʔ]

and the final / -h / is very weak until can not heard. And the data from

Headley's (1985), the other Pear dialects have the final / -h / in these words.

(see more examples in Headley, 1985 : 448).

- Differences in point of articulation

		KP	WK	Gloss
alveolar	~ glottal	[ˈhiːtˀ]	[ˈhíʔ]	'question marker'
/ -t /	~ / -ʔ /	[kə ˌtʰḛːtˀ ˈsɔ́tˀ]	[kə ˌtíh ˈsɔʔ]	'fresh chili'
		[kə ˌtʰḛːtˀ ˈɲə̰tˀ]	[kə ˌtíh ˈɲə́ʔ]	'dried red pepper'

- Differences in point and manner of articulation

		KP	WK	Gloss
stop	~ fricative	[ˈpɔːtˀ]	[ˈpɔ́h]	'burn(v.)'
		[ˈpɨtˀ]	[ˈpɨ́h]	'fat'
		[ˈpʰátˀ]	[ˈpʰáh]	'tail'
		[ˈtoːtˀ]	[ˈtóh]	'head'

---

[1] From personal communication (I talked about this problem with Dr. Gérard Diffloth when he came to join with the 11th Annual Southeast Asia Linguistics conference in Bangkok on 18th May, 2001.)

[2] tɕu̯ʔŋ is one Pearic dialect speak in Kampong Som, Cambodia. The vocabulary items in this language are close to Chong (Diffloth's data).

['tɕʰɨ́t˥]	['tɕʰɨ̠h]	'old (not young)'
[kə 'tʰát˥]	[kə 'tʰa̠h]	'sneeze'
['lo:t̠˥]	[kə 'ló̠h]	'barking deer'
['kʰṵ:.t˥]	['kʰu̠h]	'scrape'
['?u:t̠˥]	['?ú̠h]	'wood'
['?ɨ́t˥]	[?ɨ̠h]	'give'
['re̠:.t˥]	['rɨ̠h]	'root'
['krát˥]	['kra̠h]	'thick'
['kla̠:.t˥]	· ['klá̠h]	'to sharpen'
[kə 'tʰe̠:.t˥]	[kə 'tɨ̠h]	'chili'
['pʰḭ:.t˥]	['pʰɨ̠h]	'sweep'
[kə 'ne̠.t˥]	[mə 'né̠h]	'rake (n.)'
[ˌklɔ:ŋ 'ta̠:.t˥]	[ˌklɔ:ŋ 'tá̠h]	'rib'
[kə 'kʰe̠:.t˥]	['kʰɨ̠h]	'to flick (off)'
[ˌkɨ́t˥ 'dɨŋ]	[ˌkɨ̠h 'dɨŋ]	'wake up'
[ˌti: '?át˥]	[ˌti: '?á̠h]	'swollen hand'
[ˌpʰo:t̠˥ 'kʰuŋ]	[ˌpʰo̠h 'kʰuŋ]	'flatulance'

Headley (1985) says that the final consonant / *s / become / -t / in Chong lɔɔ and become /-h / elsewhere. Headley's Chong lɔɔ may be referred to as KP Chong in my study. I have found that the final / -t / in KP Chong is /-h / in WK Chong. So my finding is a supportive data to Head's.

The mentioned finding is very interesting because in most SEA languages such as Austroasiatic and Sino-Tibetan languages family, the final stops / -p, -t, -k / tend to become / -ʔ / such as in Chinese dialects (Wu dialect, Forrest R.A.D., 1973 : 241, Robert S. Bauer, 1997 : 339 and Hakka dialect / -t / become / -ʔ / Pratoom Wongwantanee, 1984 :82).

The next figure shows the total network of possible sound changes.

∅
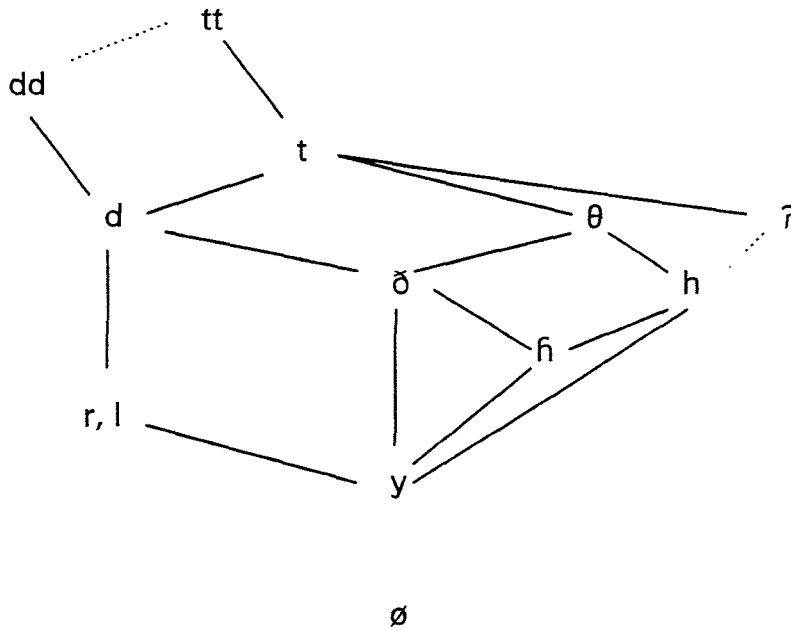
—— indicated a possible sound change

...... indicated a possible sound change but not actually
       observed change

Figure 13 : The weakening hierarchy (Hans Henrick Hock,1986 : 83)

From figure 13, the lines leading to ∅ have been omitted because all segment classes can go directly to ∅ without having to go through intermediate segmental stages. (Hock, 1986) Hock said that these changes have a strong tendency to occur in just two environments : medial intervocalic position and word or syllable final environment. I think, the final / -t / should directly changed to / -ʔ / more than that changed to /-h / These two Chong dialects have words set which the final / -t / in KP Chong changed to /-h / in WK Chong and there are only three words which / -t / changed to / -ʔ /. this is illustrated that the sound changes in Chong dialects is not going the same way.

Thus, it can not predict the direction of development for a class of sound changes in Chong dialects.

    2.2) Vowels

    - Differences in a tongue height

The pronunciation of vowels in the major syllable vary. It is obvious that the vowels of two Chong dialects can be different in tongue height.

e.g.	**KP**	**WK**	**Gloss**
[eː] ~ [iː]	[ˈtʰeːw]	[ˈtiːw]	'to crow'
	[ˈme̤ːˎ]	[ˈm̤iːˎ]	'mother'
	[ˈpʰle̤ːˎw]	[ˈpl̤iːˎw]	'fire'
	[ˈmè̤ːˀw]	[ˈm̤ìːˀw]	'fish'
[ɛ] ~ [e]	[ˈpɛ́cˈ]	[ˈpécˈ]	'break'
	[ˈkɛ́cˈ]	[ˈkécˈ]	'broken'
	[ˈhɛ́cˈ]	[kə ˈhécˈ]	'jump'
	[tə ˈwɛ́cˈ]	[tə ˈwécˈ]	'the whorl of hair on top of head'
[e̬ː] ~ [eː]	[kə ˈle̬̤ːˎŋ]	[kə ˈle̤ːˎŋ]	'young woman'
	[ˈpʰe̬̤ːˎkˈ]	[ˈpe̤ːˎkˈ]	'laugh'
	[ˈle̬̤ːˎŋ]	[ˈle̤ːˎŋ]	'day (cl.)'
	[ˈtʰe̬̤ːˎkˈ]	[ˈte̤ːˎkˈ]	'persuade'
[ɛː] ~ [eː]	[kə ˈmɛ̂ːˀŋ]	[kə ˈmêːˀŋ]	'jaw'
	[ˈkʰɛ̂ːˀpˈ]	[ˈkêːˀpˈ]	'narrow'
[əː] ~ [ɨː]	[kə ˈmə̂ːˀŋ]	[kə ˈmɨ̂ːˀŋ]	'chin'
	[ˈkʰrə̂ːˀpˈ]	[ˈkʰrɨ̂ːˀpˈ]	'to berp'
[u̬] ~ [u]	[ˈtʰu̬̤ːˎj]	[ˈtṳːˎj]	'carry on head'
	[pə ˈmu̬̤ːˎn]	[pə ˈmṳːˎn]	'behide'
[oː] ~ [uː]	[ˈmoːj]	[ˈmuːj]	'alone' only'

	['ŋoːn]	['ŋuːn]	'to stoop'
	['kʰoːn]	['kuːn]	'tree stump'
ː] ~ [oː]	['pʰo̰ˇːkˀ]	['po̰ːˏkˀ]	'hole, hollow
	['ro̰ˇːkˀ]	['ro̰ːˏkˀ]	'hide'
	['tʰo̰ˇː]	['to̰ːˏ]	'make, do'
	['tɕʰo̰ˇːˀŋ]	['tɕo̰ːˀŋ]	'Chong people'
	[kə 'kʰo̰ˇːˏ]	[kə 'ko̰ːˏ]	'crocodile'
] ~ [o]	[kə 'póʰ]	[kə 'póʰ]	'winnowing
			basket'
	['wókˀ]	['wókˀ]	'to scoop'

- Vowel allophones

There are 6 vowels / ε, εː, o, oː, ɔ, ɔː / in KP Chong have their

ɔhones but those in WK Chong don't have allophones.

In KP Chong, each vowel has two allophones as follows.

εː, o, oː, ɔ, ɔː / ⎯⎯→ [eˇ, eˇː, uˇ, uˇː, oˇ, oˇː] / breathy voice

[ε, εː, o, oː, ɔ, ɔː]   / clear voice

/ ε /	[eˇ]	[kə 'tʰḛˇʔ]	'cart'
	[ε]	[kə 'klέʔ]	'fish scale'
/ εː /	[eˇː]	['pʰḛˇːkˀ]	'laugh'
	[εː]	['pɛ̂ːˀkˀ]	'wet'
/ o /	[uˇ]	['wṵˇ·kˀ]	'clothes'
	[o]	[kə 'loʔ]	'leather'
/ oː /	[uˇː]	[kə 'nṵˇː]	'sesame'
	[oː]	['hoːcˀ]	'dead, die'
/ ɔ /	[oˇ]	['pʰo̰ˇʔ]	'enough'
	[ɔ]	['plɔŋ]	'rice (cooked)'

| / ɔː / [o̬ː] | [ˈtɕʰo̬ːˀŋ] | 'Chong people' |
| [ɔː] | [ˈkɔ̂ːˀcˀ] | 'gruel' |

In WK Chong there is no allophone in all vowels.

e.g. / o / [o] | [ˈko᷈ˀŋ] | 'long' |
	[ˈwo̞ˌkˀ]	'clothes'
/ oː / [oː]	[ˈsoːcˀ]	'horn'
	[ˈklo̞ːˌkˀ]	'door'
/ ɔː / [ɔː]	[ˈpɔː]	'to carry in one's arm'
	[ˈmɔ̞ːˌkˀ]	'fog'

3) Suprasegmental phoneme

3.1) Register

The registers are phonetically different in both dialects. The breathiness of the word with R3 and R4 in KP Chong can be heard clearer than that in WK Chong. The phonetic realization of a glottal constriction in words with R2 and R4 in KP Chong is stronger than that in WK Chong. Some words with R4 in KP Chong become words with R2 in WK Chong. It can be predictable that in the future R4 in WK Chong will all become R2 because the breathiness is disappear.

L-Thongkum (1991) suggests the four Chong registers of Chong at Krathing village Chanthaburi province as follows.

R1 : normal voice phonation, more open vowel and level pitch.

R2 : normal voice followed by creaky voice phonation, more open vowel and high rise-fall contour.

R3 : breathy voice phonation, more close vowel and gradual fall contour.

R4 : breathy voice followed by creaky voice phonation, more close vowel and high fall contour.

Besides register she gives the co-occurrence of registers with initial consonant that the initial consonants in words with R3 and R4 are unaspirated stop whereas in words with R1 and R2 are aspirated stop.

The finding of this study agrees with L-Thongkum in the following points.

(1) The numbers of register in both dialects are four as L-Thongkum suggests : R1, R2, R3 and R4. It should be noticed that the breathiness and glottal constriction in WK Chong are weak and may be disappear.

(2) L-Thongkum suggests that the tongue height of vowel in words with R3 and R4 is higher than that vowel in words with R1 and R2. Her suggestion is true for KP Chong but in WK Chong the breathiness is very weak and there is no difference between tongue height in each register.

(3) L-Thongkum says that the initial consonants in words with R3 and R4 are unaspirated. Her claim is all right for WK Chong but it is different from KP Chong.

From this research, it can be predictable that WK Chong may become a tonal language because of the following reasons.

(1) Most words in Chong which preceded by open presyllable can be dropped in rapid speech and disyllabic words will become monosyllabic words in the future as in / kəmaː^{R3} / ~ / maː^{R3} / 'needle'. This is supported by Matisoff (1973), he said that before the language become truly tonal, it must has a basically monosyllabic structure.

(2) In WK dialect, a word with clear voice has become a word with higher pitch whereas a word with breathy voice quality has lower pitch. Even though the breathiness in WK dialect is not strong as in KP dialect yet it is quite distinctive for the native speakers. In Khmu dialects, the tone contrast with voiceless aspirated initial stop is a following step developed after the register contrast. (Suwilai, 2001).

(3) In WK Chong, there are no allophones of vowels because of the weakening of breathiness. Moreover, there is no difference between tongue height in R1 and R3 or R2 and R4. At this stage voice qualities of the vowels are less prominent and the pitch differences become more prominent and significant. This means that WK Chong has developed a contrastive tone.

CHAPTER VII
CONCLUSION AND SUGGESTION

7.1 Conclusion

In this thesis the two major Chong dialects : the Chong spoken in Khlong Phlu village, Khao Khitchakut district and the Chong spoken in Wang Kraphrae village, Pong Nam Ron district, both in Chanthaburi province. A tagmemic framework is used for analyzing the phonological system of each dialect. Then the similarities and differences between the two chong dialects are presented.

The results of the study show that, at the phonemic level, the Khlong Phlu Chong (KP) and Wang Kraphrae Chong (WK) are similar. There are 21 consonant phonemes / p, pʰ, b, t, tʰ, d, c, cʰ, k, kʰ, ʔ, m, n, ɲ, ŋ, s, h, l, r, w, j /, 18 single vowel phonemes / i. iː, e, eː, ɛ, ɛː, ɨ, ɨː, ə, əː, a, aː, u, uː, o, oː, ɔ, ɔː / and one diphthong / uə /. There are four registers : clear voice / [R1] /, clear voice followed by glottal constriction / [R2] /, breathy voice / [R3] / and breathy voice followed by glottal constriction / [R4] /. There are two types of syllables : the open syllable and the closed syllable, and two classes of syllables : nuclear syllable and peripheral syllable. In addition, three types of phonological words were found, namely monosyllabic words, disyllabic words and trisyllabic words and two types of intonation groups were found : falling and rising contours.

After a comparison, it can be summarized that the different characteristics between KP Chong and WK Chong as follows.

1) The KP Chong is different from WK Chong in the vocabulary usage such as both words are Chong words but they are not the same words, or one dialect use Thai words while another use Chong words.

For examples :

KP	WK	Gloss
[ˈplɔ̂ːˀkˀ]	[ˈpruʔ]	'mud'
[ˈŋuə̰]	[kə ˈsoːŋ]	'ox, cow'
[kə ˈkuə]	[kə ˈmrâːˀkˀ]	'lead (n.)'
[kə ˈniːm]	[ˈʔɛːkˀ]	'yoke'
[ˈpoːŋ]	[ˈpleː]	'cradle'

2) In KP Chong, the open presyllable can be normally deleted in natural speech more than those in WK Chong.

For examples :

KP	WK	Gloss
/ buk^{R1} /	/ k̲ə̲buk^{R1} /	'nest'
/ pʰuŋ^{R2} /	/ k̲ə̲puŋ^{R2} /	'water melon'
/ tʰɨŋ^{R1} /	/ k̲ə̲tɨŋ^{R1} /	'pus'
/ pʰoːj^{R1} /	/ k̲ə̲pʰoːj^{R1} /	'after'
/ m̲ə̲ŋaːm^{R3} /	/ ŋaːm^{R3} /	'bee'

3) The phonetic realization of consonant in the syllable are different in the initial and final position. It can be distinguished by point and manner of articulation, the aspiration of initial stops and the loss of final consonant.

For examples :

KP	WK	Gloss
[k̲ə̲ ˈnətˀ]	[m̲ə̲ ˈnəh]	'pineapple'
[k̲ə̲ ˈhɔːŋ]	[l̲ə̲ ˈhɔːŋ]	'iron'
[k̲ʰ̲ə̲ ˈwaːkˀ]	[k̲ə̲ ˈwaːkˀ]	hoe'
[ˈt͡ɕɛ̂ːˀn]	[ˈʔeːn]	'to come'
[ˈkɛ̂ːˀw]	[ˈn̲ɛ̂ːˀw]	'bend'
[ˈt͡ɕɛːŋ]	[ˈk̲r̲ɛːn]	'ring (for finger)'
[ˈp̲ʰ̲à̲ːˀj]	[ˈp̲à̲ːˀj]	'two'

[ˈt̪ʰa˖ŋ]	[ˈta˖ŋ]	'to see'
[ˈʔɨt̪˺]	[ˈʔɨ̤h]	'give'
[ˈpɔːt̪˺]	[ˈpɔ́ḁh]	'burn (v.)'
[ˈhiːt̪˺]	[ˈhɨ́ʔ]	'question marker'
[ˈtɕêːˀt̪˺]	[ˈtɕêːˀ]	'deer'

4) Most vowels in the major syllable in WK Chong are higher than in KP Chong especially in words with R1 and R3. Only 6 vowels / ɛ, ɛː, o, oː, ɔ, ɔː / in KP Chong have two allophones for each but those in WK Chong do not have allophones.

For examples :

	KP	WK	Gloss
[eː] ~ [iː]	[ˈme̤ː˖]	[ˈmḭ̈ː˖]	'mother'
[ěː] ~ [eː]	[ˈpʰe̤ˇː˖k˺]	[ˈpe̤ːk˺]	'laugh'
[ɛ] ~ [e]	[ˈpɛc˺]	[ˈpéc˺]	'break'
[oː] ~ [uː]	[ˈŋoːn]	[ˈŋuːn]	'to stoop'
[ǒː] ~ [oː]	[ˈro̤ˇː˖k˺]	[ˈro̤ːk˺]	'hide'

5) The registers are phonetically different, especially the breathiness of word with R3 and R4 in KP Chong can be heard clearer than that in WK Chong. The glottal constriction in word with R2 and R4 in KP Chong is stronger than that in WK Chong. R4 in WK Chong can be merged with R2 when the breathiness is weak. Therefore, it is predictable that WK Chong may become a tonal language in the future. The important reasons are the voice quality of vowels are less prominent and the influence from Thai language. Therefore, it might be possible that tonal contrast will develop later on in this language. Moreover, the weakening of breathiness and glottal constriction make no significance of voice quality.

From the previous published work of Chong (see Chapter 2) and this study, there are many Chong dialects spoken in Khao Khitchakut and Pong Nam Ron districts. Although they are not much different from one another, there are

some detailed differences. The phonological system are similar such as the number of single consonant phonemes, final consonants and the single vowel phonemes but the phonetic realization is different such as the pronunciation of an initial or final consonants of the syllable and the breathiness or a glottal constriction in a particular register. This is a normal characteristic among the same language dialects.

7.2 Suggestions for further studies.

1. The study of other Chong dialects in all areas is interesting, especially in Cambodia, and will be helpful in understanding Chong.

2. It would be interesting to do a comparative study of Chong registers among Chong dialects.

3. Furthermore, a sociolinguistic study, a grammatical studies of Chong may be carried out.

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Appendix

Chong lexical items are listed. The first column is for Khlong Phlu words (KP) and the second column is for Wang Kraphrae Chong words (WK). The meanings of each word is given in the third column.

The entries are listed according to Khlong Phlu Chong word in the following order.

1. The initial consonants are listed according to their points of articulation. The order of initial consonant is / p, pʰ, b, t, tʰ, d, c, cʰ, k, kʰ, ʔ, m, n̪, ɲ, ŋ, s, h, l, r, w, j, pl, pr, pʰl, pʰr, kl, kr, kʰl, kʰr, kw /.

2. The vowel order is / i, iː, e, eː, ɛ, ɛː, ɨ, ɨː, ə, əː, a, aː, u, uː, o, oː, ɔ, ɔː, iə, ɨə, uə /.

3. The final consonant order is / p, t, c, k, ʔ, m, n, ɲ, ŋ, h, w, j /.

4. The register order is / R1, R2, R3, R4 /.

KP	**WP**	**Gloss**
	/ p /	
/ pit^{R1} /	/ pit^{R1} /	'close, shut'
/ pi:^{R1} /	/ pi:^{R1} /	'pipe'
/ pi:ŋ^{R1} /	/ pi:ŋ^{R1} /	'ripe'
/ pi:w^{R2} /	/ pi:w^{R2} /	'water leech'
/ pe:w^{R2} /	/ pe:w^{R2} /	'evening'
/ pe:w^{R2} kʰi:^{R3} /	/ pe:w^{R2} ki:^{R3} /	'this evening'
/ pɛc^{R1} /	/ pec^{R1} /	'break'
/ pɛn^{R1} kʰaj^{R2} /	/ pɛn^{R1} kʰaj^{R2} /	'ringworm'
/ pɛ:k^{R2} /	/ pɛ:k^{R2} /	'wet'
/ pɛ:k^{R2} tʰa:k^{R3} /	/ pɛ:k^{R2} ta:k^{R3} /	'splash'
/ pɛ:ŋ^{R1} /	/ piŋ^{R1} po:ŋ^{R1} /	'face powder'
/ pɨt^{R1} /	/ pɨh^{R1} /	'fat'
/ pɨt^{R4} /	/ pɨt^{R4} /	'to wear (cloth)'
/ pəta:^{R1} /	/ pəta:^{R1} /	'below'
/ pədɨŋ^{R1} /	/ pədɨŋ^{R1} /	'up, above'
/ pəcʰa:^{R3} /	/ pəca:^{R3} /	'grave, tomb'
/ pəka:j^{R2} /	/ pəka:j^{R2} /	'out side'
/ pəmo:n^{R3} /	/ pəmu:n^{R3} /	'behide'
/ pəmo:n^{R3} kɔ:k^{R1} /	/ pəmu:n^{R3} kɔ:k^{R1} /	'nape of neck (หลังคอ)'
/ pənih^{R1} /	/ dɨŋ^{R1} nih^{R1} /	'where'
/ pəŋa:j^{R3} /	/ pəŋa:j^{R3} /	'front'
/ pəsa:^{R1} /	/ pəsa:^{R1} /	'son/ daughter - in- law'
/ pəreʔ^{R1} /	/ pəreʔ^{R1} /	'inside'
/ pə:k^{R1} /	/ pə:k^{R1} /	'open'

/ pat^{R1} /	/ pat^{R1} /	'to wipe (ปัด)'
/ pak^{R1} kətu:^{R1} /	/ pak^{R1} kətu:^{R1} /	'door'
/ pan^{R1} /	/ pan^{R1} /	'to knead'
/ paɲ^{R1} /	/ peɲ^{R1} /	'to twist (rope) (ควั่น)'
/ pah^{R1} du:ŋ^{R1} /	/ pah^{R1} du:ŋ^{R1} /	'coconut shell (กะลา)'
/ pah^{R1} wok^{R3} /	/ pah^{R1} wok^{R3} /	'to mend (clothes)'
/ pa:t^{R1} /	/ pa:t^{R1} /	'to make something to be plane (ปาดให้เสมอ)'
/ pa:k^{R1} /	/ pa:k^{R1} /	'go up ascend'
/ pa:k^{R1} ka:^{R1} /	/ pa:k^{R1} ka:^{R1} /	'pen'
/ pa:k^{R1} kʰo:k^{R3} /	/ pa:k^{R1} ku:k^{R3} /	'land (v.) (ขึ้นบก)'
/ pa:n^{R2} /	/ pa:n^{R2} /	'blunt, obtuse'
/ pa:ŋ^{R1} ʔu:t^{R1} /	/ pa:ŋ^{R1} ʔuh^{R1} /	'flower'
/ pa:ŋ^{R1} pʰle:w^{R3} /	/ ple:w^{R1} pli:w^{R3} /	'flame'
/ pa:j^{R1} /	/ pa:j^{R1} /	'to smear'
/ pa:j^{R2} ti:^{R1} /	/ pa:j^{R2} ti:^{R1} /	'palm of hand'
/ puk^{R1} /	/ puk^{R1} /	'spoiled (เน่า)'
/ puŋ^{R1} /	/ puŋ^{R1} /	'pregnant'
/ pu:^{R3} /	/ pu:^{R3} /	'grandfather'
/ pu:^{R3} ja:^{R3} ta:^{R1} ja:j^{R3} /	/ ku:t^{R3} ca:t^{R3} /	'ancestors'
/ po:t^{R1} /	/ po:t^{R1} /	'cut (ตัดต้นไม้)'
/ po:ŋ^{R1} /	/ ple:^{R1} /	'cradle'
/ po:j^{R1} /	/ po:j^{R1} /	'curse'
/ pɔt^{R1} /	/ pɔt^{R1} /	'lie'
/ pɔk^{R1} /	/ pɔk^{R1} /	'wrap'
/ pɔk^{R1} ʔaw^{R1} /	/ pɔk^{R1} ʔaw^{R1} /	'collar'

/ pɔː^{R1} /	/ pɔː^{R1} /	'to carry in one's arm (อุ้ม)'
/ pɔːt^{R1} /	/ pɔh^{R1} /	'burn (v.)'
/ pɔːt^{R1} /	/ pɔːt^{R1} /	'lung'
/ pɔːt^{R1} /	/ pɔːt^{R1} /	'to thrash'
/ pɔːk^{R1} /	/ pɔːk^{R1} /	'to peel (by hand)'
/ pɔːŋ^{R3} kan^{R1} /	/ pɔːŋ^{R3} kan^{R1} /	'prevent'
/ pɔːj /	/ pɔːj /	'a pile of log (ไม้สุมเป็นกอง)'

/ pʰ /

/ pʰit^{R1} /	/ pʰit^{R1} /	'wrong'
/ pʰit^{R3} pʰlaːt^{R3} /	/ pit^{R3} plaːt^{R3} /	'fault'
/ pʰic^{R1} pʰleːw^{R3} /	/ pʰic^{R1} pliːw^{R3} /	'extinguish (ดับไฟ)'
/ pʰic^{R3} /	/ pic^{R3} /	'sleep'
/ pʰic^{R3} pʰoʔ^{R1} /	/ pic^{R3} pʰoʔ^{R1} /	'dream'
/ pʰic^{R3} ɲoːj^{R1} /	/ pic^{R3} ɲoːj^{R1} /	'sit down and sleep'
/ pʰic^{R3} ŋiw^{R1} /	/ pic^{R3} ŋiw^{R1} /	'close (the eyes)'
/ pʰiʔ^{R3} /	/ piʔ^{R3} /	'tasty'
/ pʰiːt^{R1} /	/ pʰih^{R1} /	'sweep'
/ pʰiːŋ^{R1} /	/ pʰiːŋ^{R1} /	'fish hook'
/ pʰiːŋ^{R3} /	/ piːŋ^{R3} /	'จาวมะพร้าว'
/ pʰeːm^{R2} /	/ pʰeːm^{R2} /	'angry'
/ pʰeːŋ^{R3} /	/ peːŋ^{R3} /	'expensive'
/ pʰeːw^{R2} /	/ pʰeːw^{R2} /	'three'
/ pʰɛʔ^{R3} /	/ peʔ^{R3} /	'goat'
/ pʰɛː^{R3} /	/ peː^{R3} /	'raft'
/ pʰɛːt^{R1} /	/ pʰɛːt^{R1} /	'atrophy (ของลีบ เช่น เมล็ดผลไม้)'
/ pʰɛːk^{R3} /	/ peːk^{R3} /	'laugh'

/ pʰɨkᴿ¹ /	/ pʰɨkᴿ¹ /	'to pick (flower)'
/ pʰɨʔᴿ³ /	/ pɨʔᴿ³ /	'hate'
/ pʰɨːnᴿ¹ /	/ pʰɨːnᴿ¹ /	'floor'
/ pʰəjaːᴿ¹maːnᴿ¹ /	/ pʰəjaːᴿ¹maːnᴿ¹ /	'enemy'
/ pʰəjaːnᴿ¹ /	/ pʰəjaːnᴿ¹ /	'witness'
/ pʰəjᴿ³ /	/ pəjᴿ³ /	'it'
/ pʰapᴿ³ /	/ papᴿ³ /	'fold'
/ pʰatᴿ¹ /	/ pʰahᴿ¹ /	'tail'
/ pʰakᴿ¹ /	/ pʰakᴿ¹ /	'pick (fruit from tree)'
/ pʰakᴿ¹ puːtᴿ¹ /	/ pʰakᴿ¹ puːtᴿ¹ /	'a kind of vegetable (ผักกูด)'
/ pʰakᴿ¹ kəsɔːŋᴿ² /	/ pʰˡiːᴿ¹ kroːŋᴿ² /	'step (ขั้นบันได)'
/ pʰakᴿ¹ kəsɔːŋᴿ² waːᴿ¹ cʰaːᴿ¹ tʰaːkᴿ³ /	/ sɔːŋᴿ² cʰaːᴿ¹ taːkᴿ³ /	'rainbow'
/ pʰaŋᴿ³ pʰaːŋᴿ³ /	/ paːŋᴿ³ /	'early'
/ pʰaŋᴿ³ kədaːjᴿ¹ /	/ kəpaŋᴿ¹ kədaːjᴿ¹ /	'furrow (between two board)'
/ pʰahᴿ³ /	/ pahᴿ³ /	'dry'
/ pʰahᴿ¹ kʰoːpᴿ¹ /	/ tɔpᴿ¹ tiːᴿ¹ /	'to applaud'
/ pʰaːᴿ¹ /	/ pʰaːᴿ¹ /	'full (from eating)'
/ pʰaːtᴿ³ /	/ paːtᴿ³ /	'peel'
/ pʰaːjᴿ³ /	/ paːjᴿ³ /	'row (v.)'
/ pʰaːjᴿ⁴ /	/ paːjᴿ⁴ /	'two'
/ pʰutᴿ¹ /	/ paːkᴿ¹ /	'rise(v.)'
/ pʰuŋᴿ⁴ /	/ kəpuŋᴿ² /	'melon'
/ pʰuŋᴿ³ /	/ puŋᴿ³ /	'belly'
/ pʰuhᴿ³ /	/ puhᴿ³ /	'to boil (เดือด)'

/ pʰuh^{R1} /   / pʰuh^{R1} /   'to wash clothes'

/ pʰuj^{R1} /   / buəm^{R1} /   'swell (v.)'

/ pʰuj^{R3} /   / puj^{R3} /   'drunk'

/ pʰuː^{R3} /   / puː^{R3} /   'you (singular)'

/ pʰuːt^{R2} /   / puːt^{R2} /   'young (toptree)'

/ pʰuːt^{R3} /   / puːt^{R3} /   'speak'

/ pʰuːc^{R3} /   / puːc^{R3} /   'to scoop (water)'

/ pʰuːm^{R2} /   / pʰoːm^{R2} /   'to fart'

/ pʰuːj^{R1} /   / pʰuːj^{R1} /   'burn (v.) (เผา)'

/ pʰok^{R3} tʰaːk^{R3} /   / kʰə lɨk^{R1} taːk^{R3} /   'to choke on water'

/ pʰoŋ^{R3} tʰaːk^{R3} /   / kə poŋ^{R3} taːk^{R3} /   'landing'

/ pʰoh^{R1} naːt^{R2} /   / poh^{R1} kənaː^{R2} /   'fireplace'

/ pʰɔh^{R3} /   / poh^{R3} /   'ashes'

/ pʰoːt^{R1} kʰuŋ^{R3} /   / pʰoh^{R1} kuŋ^{R3} /   'flatulance (ท้องขึ้น)'

/ pʰoːn^{R2} /   / pʰoːn^{R2} /   'four'

/ pʰoːn^{R2} liəm^{R1} /   / pʰoːn^{R2} liəm^{R1} /   'square

/ pʰoːŋ^{R3} tʰaːk^{R3} /   / poːŋ^{R3} taːk^{R3} /   'to get some water

                                               from the well'

/ pʰoːj^{R1} /   / kəpoːj^{R1} /   'after'

/ pʰɔʔ^{R3} /   / poʔ^{R3} /   'enough'

/ pʰɔŋ^{R1} /   -   'dust'

/ pʰɔːk^{R3} toːn^{R1} /   / poːk^{R3} toːn^{R1} /   'vagina'

/ pʰɨən^{R3} /   / pɨən^{R3} /   'friend'

                       / b /

/ bit^{R1} /   / bit^{R1} /   'twist'

/ biŋ^{R1} baːŋ^{R1} /   / biŋ^{R1} baːŋ^{R1} /   'spider'

/ biːp^{R1} /	/ biːp^{R1} /	'to squeeze (บีบ)'
/ beː^{R1} /	-	'distort (เบี้ยว)'
/ bɛːŋ^{R1} /	/ bɛːŋ^{R1} /	'divide'
/ baŋ^{R2} huː^{R1} /	/ baŋ^{R2} huː^{R1} /	'ear membrane'
/ baw^{R1} /	/ kʰənɨk^{R2} /	'light'
/ baːŋ^{R1} dɔːŋ^{R1} /	/ baːŋ^{R1} dɔːŋ^{R1} /	'sometimes'
/ baːŋ^{R1} kʰɔːn^{R2} /	/ baːŋ^{R1} hɨj^{R1} /	'flying squrrel'
/ baːj^{R1} /	/ baːj^{R1} /	'farm'
/ bup^{R1} /	/ bup^{R1} /	'dented'
/ buk^{R1} /	/ kəbuk^{R1} /	'nest'
/ buk^{R1} biŋ^{R1} baːŋ^{R1} /	/ cəj^{R1} biŋ^{R1} baːŋ^{R1} /	'spider web'
/ buːɲ^{R1} /	/ buːɲ^{R1} /	'pressed new rice (ข้าวเม่า)'
/ boːt^{R1} /	/ boːt^{R1} /	'young brother/sister'
/ boːt^{R1} /	/ boːt^{R1} /	'church'
/ bɔt^{R1} /	/ bɔt^{R1} /	'crush (บด)'
/ bɔŋ^{R1} /	/ siə^{R1} haːj^{R1} /	'damage'
/ bɔj^{R1} /	/ bɔj^{R1} /	'often'
/ bɔːp^{R1} /	/ bɔːp^{R1} /	'tired'
/ bɔːj^{R1} /	/ bɔːj^{R1} /	'sail (v.)'
/ bɔːj^{R1} /	/ bɔːj^{R1} /	'drive'
	/ t /	
/ tit^{R1} ʔaŋ^{R1} /	/ tit^{R1} ʔaŋ^{R1} /	'stutter'
/ tɨh^{R1} tiən^{R1} /	/ tɔː^{R1} riːn^{R1} /	'rebuke'
/ tiː^{R1} /	/ tiː^{R1} /	'hand'
/ tiː^{R1} tɛːŋ^{R2} /	/ tiː^{R1} tɛːŋ^{R2} /	'little finger'
/ tiː^{R1} tak^{R1} /	/ mɨn^{R2} tiː^{R1} /	'thumb'

/ ti:^{R1} kəda:j^{R1} /	/ ti:^{R1} kəda:j^{R1} /	'midle finger'
/ ti:^{R1} ʔat^{R1} /	/ ti:^{R1} ʔah^{R1} /	'swollen hand'
/ ti:^{R1} muh^{R1} kəna:j^{R1} /	/ ti:^{R1} kəna:j^{R1} /	'trank of elephant'
/ ti:^{R1} nɛ:^{R1} /	/ ti:^{R1} nɛ:^{R1} /	'first finger'
/ ti:^{R1} na:ŋ^{R1} /	/ ti:^{R1} na:ŋ^{R1} /	'ring finger'
/ ti:p^{R1} /	/ ti:p^{R1} /	'kerosine can (ปีบ)'
/ ti:w^{R1} /	/ ti:w^{R1} /	'sew (v.)'
/ teʔ^{R1} /	/ teʔ^{R1} /	'kick'
/ te:w^{R1} /	/ te:w^{R1} /	'right (ขวา)'
/ te:w^{R3} wəda:^{R1} /	/ te:w^{R3} wəda:^{R1} /	'angel'
/ tɛm^{R1} /	/ tɛm^{R1} /	'full'
/ tɛ:ŋ^{R1} /	/ tɛ:ŋ^{R1} /	'left'
/ tɛ:ŋ^{R1} tuə^{R1} /	/ tɛ:ŋ^{R1} tuə^{R1} /	'dress (v.)'
/ tɨp^{R1} /	/ tɨp^{R1} /	'bury (the dead)'
/ tɨk^{R1} /	/ tɨk^{R1} /	'to lead'
/ tɨk^{R1} məhɔ:k^{R1} /	/ tɨk^{R1} məhɔ:k^{R1} /	'snore'
/ tətʰeʔ^{R1} /	/ tətʰeʔ^{R1} /	'ground'
/ təkɨp^{R1} /	/ təkɨp^{R1} /	'under the floor'
/ təla:t^{R1} /	/ təla:t^{R1} /	'market'
/ təwɛc ^{R1} /	/ təwec ^{R1} /	'the whorl of hair on top of the head'
/ təklaʔ^{R1} /	/ təklaʔ^{R1} /	'greedy
/ tap^{R1} /	/ tap^{R1} /	'bite'
/ tak^{R1} /	/ tak^{R1} /	'large'
/ taj^{R1} /	/ taj^{R1} /	'kidney'
/ ta:^{R1} /	/ ta:^{R1} /	'grandfather (ตา)'

/ taːm^{R1} /	/ taːm^{R1} /	'follow'
/ tuŋ^{R1} /	/ tuŋ^{R1} /	'egg'
/ tuŋ^{R1} t^{h}eːt^{R3} /	/ muŋ^{R1} tih^{R1} /	'yam'
/ tuŋ^{R1} ʔoːj^{R1} /	/ tuŋ^{R1} ʔoːj^{R1} /	'taro
/ tuŋ^{R1} mən^{R1} talaŋ^{R1} /	/ man^{R1} kalaŋ^{R1} /	'manioc'
/ tuŋ^{R1} k^{h}laːw^{R1} /	/ tuŋ^{R1} k^{h}laːw^{R1} /	'testicle'
/ tuːt^{R1} /	/ tuːt^{R1} /	'to make fire (ก่อไฟ)'
/ tuːt^{R1} /	/ kuːt^{R3} /	'light (v.) (จุดไฟ)'
/ toʔ^{R1} /	/ toʔ^{R1} /	'table'
/ toːt^{R1} /	/ toh^{R1} /	'head'
/ toːt^{R1} kənɨm^{R1} /	/ toh^{R1} kənɨm^{R1} /	'anthill'
/ toːt^{R1} kənoːj^{R1} /	/ toh^{R1} kənuːj^{R1} /	'knee'
/ toːt^{R1} laːn^{R3} /	/ toh^{R1} laːn$^{R3·}$/	'bald'
/ toːk^{R1} /	/ toːk^{R1} /	'to peck'
/ tɔk^{R1} kɛː^{R1} /	/ tok^{R1} kɛː^{R1} /	'gecko'
/ tɔk^{R1} kətuː^{R1} /	/ tɔk^{R1} kətuː^{R1} /	'to pull weeds'
/ tɔm^{R1} /	/ tɔm^{R1} /	'to boil (ต้ม)'
/ tɔm^{R1} huː^{R1} /	/ tɔm^{R1} huː^{R1} /	'earring'
/ tɔŋ^{R1} /	/ tɔŋ^{R1} /	'house'
/ tɔŋ^{R1} kələː ŋ^{R1} /	/ tɔŋ^{R1} kəlɨːŋ^{R1} /	'house topple (บ้านโค่น)'
/ tɔh^{R1} ʔaw^{R1} /	/ tɔh^{R1} ʔaw^{R1} /	'to undress'
/ tɔː^{R1} /	/ ruəm^{R1} saː^{R1} /	'unite'
/ tɔːk^{R1} /	/ tɔːk^{R1} /	'sell'
/ tɔːn^{R1} ʔan^{R1} /	/ tɔːn^{R1} ʔan^{R1} /	'at present'
/ tɔːn^{R1} tih^{R1} /	/ tɔːn^{R1} tih^{R1} /	'at that time'
/ tɔːŋ^{R2} /	/ tɔːŋ^{R2} /	'fear'

/ tɔːŋ^{R3} kaːn^{R1} /   / waːŋ^{R2} ʔiːn^{R1} /   'want'

/ tɔːj^{R2} /   / tɔːj^{R2} /   'before'

/ tiəŋ^{R1} /   / tiəŋ^{R1} /   'bed'

/ tuə^{R1} nih^{R1} /   / ʔan^{R1} nih^{R1} /   'which'

/ tuə^{R1} naːŋ^{R3} /   / puːt^{R2} /   'larva (ตัวอ่อน)'

/ tuə^{R1} nɔːn^{R2} /   / tuə^{R1} nɔːn^{R2} /   'myself'

/ tʰ /

/ tʰiw^{R3} /   / tiw^{R3} /   'buy'

/ tʰiːŋ^{R3} /   / tiːŋ^{R3} /   'enter'

/ tʰeʔ^{R1} /   / tʰeʔ^{R1} /   'soil'

/ tʰeʔ^{R1} niəw^{R1} /   / tʰeʔ^{R1} niəw^{R1} / 'clay'

/ tʰeʔ^{R1} ruən^{R1} /   / tʰeʔ^{R1} ruən^{R1} / 'mold'

/ tʰeːt^{R3} /   / tiːt^{R3} /   'preach'

/ tʰeːw^{R3} /   / tiːw^{R3} /   'to crow'

/ tʰɛːk^{R3} /   / teːk^{R3} /   'persuade'

/ tʰɨp^{R3} /   / tun^{R1} ʔɔːɲ^{R1} /   'to store'

/ tʰɨm^{R1} /   / tʰɨm^{R1} /   'to cook'

/ tʰɨŋ^{R1} /   / kətɨŋ^{R1} /   'pus'

/ tʰɨŋ^{R2} /   / tʰɨŋ^{R2} /   'bamboo shoots'

/ tʰɨːt^{R3} /   / tɨːt^{R3} /   'ride'

/ tʰəɲiʔ^{R1} /   / kʰəɲiʔ^{R1} /   'daytime'

/ tʰəleː^{R1} /   / tʰəleː^{R1} /   'sea'

/ tʰəleː^{R1} saːp^{R1} /   / tʰəleː^{R1} saːp^{R1} / 'lake'

/ tʰəːj^{R3} /   / kətəj^{R3} cʰoːp^{R1} / 'heel'

/ tʰam^{R1} laːj^{R1} /   / tam^{R1} laːj^{R1} /   'destroy'

/ tʰaŋ^{R1} /   / tʰaŋ^{R1} /   'anvil (ทั่งตีเหล็ก)'

/ tʰaŋ^{R3} /	/ taŋ^{R3} /	'see'
/ tʰaŋ^{R3} mat^{R1} /	/ taŋ^{R3} mat^{R1} /	'all'
/ tʰaŋ^{R3} krɨk^{R1} /	/ krɨk^{R1} /	'chest'
/ tʰaː^{R3} /	/ taː^{R3} /	'if'
/ tʰaː^{R3} tʰaːŋ^{R1} /	/ taː^{R3} taːŋ^{R1} /	'manner'
/ tʰaːk^{R3} /	/ taːk^{R3} /	'water'
/ tʰaːk^{R3} tʰuʔ^{R1} /	/ taːk^{R3} tʰuʔ^{R1} /	'hot water'
/ tʰaːk^{R3} tʰuəm^{R3} /	/ taːk^{R3} tɨp^{R1} /	'flood'
/ tʰaːk^{R3} cʰoːc^{R2} /	/ taːk^{R3} coːc^{R2} /	'saliva'
/ tʰaːk^{R3} kəcʰak^{R3} /	/ taːk^{R3} kəcak^{R3} /	'cool water'
/ tʰaːk^{R3} kəmlaːp^{R3} /	/ taːk^{R3} kəŋaːp^{R3} /	'dew'
/ tʰaːk^{R3} kəlak^{R4} /	/ taːk^{R3} kəlak^{R4} /	'waterfall'
/ tʰaːk^{R3} kʰɨn^{R3} /	/ taːk^{R3} paːk^{R1} /	'high tide'
/ tʰaːk^{R3} nom^{R3}taːn^{R1} /	/ taːk^{R3} nam^{R3}taːn^{R1} /	'sugar'
/ tʰaːk^{R3} loŋ^{R3} /	/ taːk^{R3} cuh^{R1} /	'low tide'
/ tʰaːk^{R3} wuj^{R1} /	/ taːk^{R3} wuj^{R1} /	'whirl pool'
/ tʰaːm^{R1} /	/ tʰaːm^{R1} /	'ask'
/ tʰaːm^{R2} /	/ tʰaːm^{R2} /	'crab'
/ tʰaːɲ^{R1} /	/ tʰaːɲ^{R1} /	'weave'
/ tʰaːw^{R1} /	/ tʰaːw^{R1} /	'stand'
/ tʰaːw^{R1} ɲɔh^{R1} /	/ tʰaːw^{R1} ɲɔh^{R1} /	'to learn to stand on one's feet (ตั้งไข่)'
/ tʰaːj^{R3} /	/ taːj^{R3} /	'end'
/ tʰaːj^{R1} kuŋ^{R1} /	/ tʰaːj^{R1} kuŋ^{R1} /	'diarrhea'
/ tʰaːj^{R2} /	/ tʰaːj^{R2} /	'drink'
/ tʰup^{R3} /	/ tup^{R3} /	'hit'

/ tʰuk^{R3} tʰuk^{R3} /	/ tuk^{R3} tuk^{R3} /	'every'
/ tʰuʔ^{R1} /	/ tʰuʔ^{R1} /	'hot'
/ tʰuh^{R1} /	/ tʰuh^{R1} /	'breast'
/ tʰuj^{R1} /	/ cɨːj^{R1} /	'smell (v.) (ดม)'
/ tʰuː^{R1} /	/ tʰuː^{R1} /	'rub'
/ tʰuː^{R1} ləpʰiː^{R1} /	/ taj^{R1} kəpiː^{R1} /	'ladle'
/ tʰuː^{R3} /	/ niː^{R1} /	'flee'
/ tʰuːc^{R3} /	/ tuːc^{R3} /	'to sting'
/ tʰuːk^{R1} /	/ tʰuːk^{R1} /	'cheap'
/ tʰuːŋ^{R3} /	/ kətuːŋ^{R3} /	'to transplant (young rice plant)'
/ tʰuːj^{R2} /	/ tʰuːj^{R2} /	'hornet (ตัวแตน)'
/ tʰok^{R3} /	/ tok^{R3} /	'boat'
/ tʰok^{R3} /	/ tok^{R3} /	'to grow (plant) (งอก)'
/ tʰoː^{R3} ʔih^{R1} /	/ tuː^{R3} ʔih^{R1} /	'why'
/ tʰoːt^{R3} /	/ toːt^{R3} /	'fry'
/ tʰoːn^{R3} /	/ toːn^{R3} /	'correct'
/ tʰoːj^{R3} dɨŋ^{R1} toːt^{R1} /	/ tuːj^{R3} dɨŋ^{R1} toh^{R1} /	'carry on head'
/ tʰɔm^{R1} /	/ tʰɔm^{R1} /	'aunt'
/ tʰɔm^{R1} səhaːj^{R1} /	/ tʰɔm^{R1} ləhaːj^{R1} /	'elder aunt-in-law'
/ tʰɔŋ^{R1} kətaːn^{R1} /	/ tʰɔŋ^{R1} kətaːn^{R1} /	'axe holder'
/ tʰɔː^{R3} /	/ toː^{R3} /	'cook'
/ tʰɔː^{R3} /	/ toː^{R3} /	'make, do'
/ tʰɔː^{R3} kaːn^{R1} /	/ toː^{R3} kaːn^{R1} /	'work'
/ tʰɔːŋ^{R1} /	/ kətuŋ^{R1} /	'to jab one's elbow (ถอง)'
/ tʰɔːŋ^{R3} kʰam^{R3} /	/ toːŋ^{R3} kam^{R3} /	'gold'

/ tʰɔːjᴿ¹ /	/ tʰɔːjᴿ¹ /	'pursue'
/ tʰɔːjᴿ¹ klapᴿ¹ /	/ tʰɔːjᴿ¹ klapᴿ¹ /	'retreat'
/ tʰiənᴿ¹ /	/ tiənᴿ¹ /	'candle'
/ tʰuəjᴿ¹ /	/ tuəjᴿ¹ /	'saucer'

/ d /

/ diːᴿ¹ /	/ diːᴿ¹ /	'good'
/ diːtᴿ¹ /	/ diːtᴿ¹ /	'to finger (ดีด)'
/ diːwᴿ¹ /	/ diːwᴿ¹ /	'mat'
/ deːwᴿ¹ /	/ leːwᴿ¹ /	'true'
/ deːwᴿ¹ /		'unwanted food (ของเหลือเดน)'
/ dakᴿ¹ /	/ dakᴿ¹ /	'he/ she'
/ daːŋᴿ¹ /	/ daːŋᴿ¹ /	'old (not new)'
/ dutᴿ¹ /	/ dutᴿ¹ /	'ฝนยา'
/ duːᴿ¹ /	/ kaːŋᴿ¹ /	'season'
/ duːᴿ¹ pəsaːᴿ¹ /	/ kaːŋᴿ¹ pəsaːᴿ¹ /	'rainy season'
/ duːᴿ¹ tʰuʔᴿ¹ /	/ kaːŋᴿ¹ tʰuʔᴿ¹ /	'summer'
/ duːᴿ¹ sɛcᴿ² /	/ kaːŋᴿ¹ sɛcᴿ² /	'winter'
/ duːᴿ¹ pʰraŋᴿ¹ /	/ kaːŋᴿ¹ pʰraŋᴿ¹ /	'dry season'
/ duːtᴿ¹ /	/ duːtᴿ¹ /	'to suck'
/ duːŋᴿ¹ /	/ duːŋᴿ¹ /	'coconut'
/ doːᴿ¹ /	/ doːᴿ¹ /	'a particle used in a yes or no question'
/ dɔnᴿ¹ /		'to venture into the forest (ดันป่า)'
/ dɔŋᴿ¹ /	/ dɔŋᴿ¹ /	'gourd'

/ dɔːŋ^{R1} /   / dɔːŋ^{R1} /   'times'

/ duəj^{R1} /   / duəj^{R1} /   'plow'

/ c /

/ ciŋ^{R1} cɔk^{R1} /   / ciŋ^{R1} cɔk^{R1} /   'lizard'

/ ceːt^{R1} /   / ceːt^{R1} /   'to sharpen (wood)'

/ ceːt^{R2} /   / ceː^{R2} /   'deer'

/ ceːn^{R2} /   / ʔeːn^{R1} /   'come'

/ ceːn^{R2} tʰɨŋ^{R1} /   / ʔeːn^{R1} tʰɨŋ^{R1} /   'arrive reach'

/ ceːn^{R2} ŋok^{R3} /   / ʔeːn^{R1} ŋok^{R3} /   'to visit'

/ ceːw^{R1} /   / ceːw^{R1} /   'to go'

/ cɛːk^{R1} /   / cɛːk^{R1} /   'share'

/ cɛːŋ^{R1} /   / krɛːŋ^{R1} /   'ring (for finger)'

/ cə?^{R1} /   / cə?^{R1} /   'to meet'

/ cak^{R1} /   / cak^{R1} /   'to shoot'

/ cak^{R1} kətic^{R2} /   / kətec^{R2} /   'to shudder (สะดุ้ง)'

/ cak^{R1} kəteɲ^{R1} /   / cak^{R1} kəteɲ^{R1} /   'to bend down (ก้มโค้ง)'

/ cak^{R1} kəcan^{R1} /   / cak^{R1} kəcan^{R1} /   'cicada'

/ cak^{R1} kəne?^{R1} /   / cak^{R1} kəni?^{R1} /   'bamboo wicker (จักตอก)'

/ cak^{R1} ʔɨk^{R1} /   / cak^{R1} ʔɨk^{R1} /   'hiccough'

/ cam^{R1} kʰɨn^{R1} /   / cɨm^{R3} kʰɨn^{R1} /   'woman'

/ cam^{R1} ləːj^{R1} /   / cam^{R1} ləːj^{R1} /   'defendant'

/ cam^{R1} lɔːŋ^{R3} /   / cɨm^{R3} lɔːŋ^{R3} /   'man (vs. woman)'

/ can^{R3} tʰan^{R1} /   / can^{R3} tʰən^{R3} /   'rafter'

/ caŋ^{R1} kriːt^{R2} /   / caŋ^{R1} kriːt^{R2} /   'criket'

/ caŋ^{R3} kʰriw^{R1} /   / maːŋ^{R1} maw^{R2} /   'butterfly'

/ cah^{R1} /   / cah^{R1} /   'mow grass (ดายหญ้า)'

/ ca:p^{R1} /	/ ca:p^{R1} /	'wash (face)'
/ ca:p^{R2} /	/ ca:p^{R2} /	'fishy'
/ ca:t^{R2} /	/ ca:^{R2} /	'knife'
/ ca:t^{R2} da:w^{R1} /	/ ca:^{R2} da:w^{R1} /	'sword'
/ ca:t^{R2} k^{h}ɔ:^{R1} /	/ ca:^{R2} k^{h}ɔ:^{R1} /	'jungle knife'
/ ca:k^{R1} /	/ su:n^{R1} siə^{R1} /	'lose'
/ ca:n^{R1} /	/ ca:n^{R1} /	'dish'
/ ca:n^{R1} kətə?^{R1} /	/ ca:n^{R1} kətə?^{R1} /	'plate'
/ ca:ŋ^{R1} /	/ ca:ŋ^{R1} /	'hire'
/ ca:j^{R1} /	/ ca:j^{R1} /	'pay (v.)'
/ cut^{R1} ?ɔ:ŋ^{R1} /	/ cut^{R1} ?ɔ:ŋ^{R1} /	'to sit on one's heels (นั่งยองๆ)'
/ cuc^{R1} /	/ ku:t^{R3} /	'light (v.)'
/ cuk^{R1} ŋu:j^{R1} /	/ cuc^{R1} ŋu:j^{R1} /	'to muffle up'
/ cuh^{R1} /	/ cuh^{R1} /	'go down descend'
/ cu:c^{R3} /	/ kru:c^{R3} /	'harvest'
/ co:^{R1} /	/ co:^{R1} /	'grandchild'
-	/ co:^{R1} /	'bunch (of a tree) (ช่อดอก)'
/ co:p^{R1} no:p^{R2} /	/ co:p^{R1} no:p^{R2} /	'poncho'
/ co:c^{R2} /	/ co:c^{R2} /	'vomit'
/ co:k^{R1} /	/ kro:k^{R1} /	'run (v.)'
/ co:ŋ^{R1} /	/ kro:ŋ^{R1} /	'bank (of river)'
/ co:j^{R1} /	/ co:j^{R1} /	'perch (v.) (เกาะอยู่ บนต้นไม้)'
/ cɔp^{R1} /	/ cɔp^{R1} /	'end'
/ cɔm^{R1} /	/ cɔm^{R1} /	'sink'
/ cɔn^{R1} /	/ cɔn^{R1} /	'poor'

/ cɔh^{R1} /	/ cɔh^{R1} /	'to pick (fruit by means of a long pole with a . bamboo basket (สอย)'
/ cɔːk^{R1} /	/ cɔːk^{R1} /	'to pay one's debt'
/ cɔːk^{R1} /	/ cɔːk^{R1} /	'a small cup (จอก)'
/ cɔːj^{R1} /	/ cɔːj^{R1} /	'to plow'
/ cɔːj^{R2} /	/ cɔːj^{R2} /	'to flow'

/ cʰ /

/ cʰih^{R1} /	/ cʰih^{R1} /	'dry (v.) (ตากผ้า)'
/ cʰiw^{R3} /	/ ciːw^{R3} /	'soup'
/ cʰjiː^{R1} /	/ cʰjiː^{R1} /	'louse'
/ cʰjiː^{R1}wit^{R3} /	/ ciː^{R1}wit^{R3} /	'alive'
/ cʰiːp^{R2} /	/ suk^{R1} mok^{R3} /	'mucus'
/ cʰjiːt^{R3} /	/ ciːt^{R3} /	'wipe'
/ cʰiːm^{R2} /	/ cʰiːm^{R2} /	'bird'
/ cʰiːm^{R2} kəpaːt^{R2} /	/ cʰiːm^{R2} kəpaː^{R2} /	'bulbul (นกปรอด)'
/ cʰiːm^{R2} təwɛc^{R1} /	/ cʰiːm^{R2} təwec^{R1} /	'plover (นกต้อยตีวิด)'
/ cʰiːm^{R2} cuːc^{R1} /	/ cʰiːm^{R2} cuːc^{R1} /	'magpie robin (นกกางเขน)'
/ cʰiːm^{R2} kətʰaː^{R1} /	/ cʰiːm^{R2} ɲiŋ^{R1} ɲɔːŋ^{R1} /	'a kind of bird (นกกระทา)'
/ cʰiːm^{R2} kəcʰeːk^{R2} /	/ cʰiːm^{R2} kreːk^{R2} /	'singing myna (นกเอี้ยง)'
/ cʰiːm^{R2} kəkɨj^{R1} /	·/ cʰiːm^{R2} kəkɨj^{R1} /	'dove'
/ cʰiːm^{R2} kəwaːŋ^{R1} /	/ cʰiːm^{R2} kəwaːŋ^{R1} /	'a kind of bird (นกกะวะ)'
/ cʰiːm^{R2} kuːk^{R3} /	/ cʰiːm^{R2} kuːk^{R3} /	'owl'
/ cʰiːm^{R2} kʰɛːŋ^{R1} /	/ cʰiːm^{R2} kʰɛːŋ^{R1} /	'hornbill (นกเงือก)'
/ cʰiːm^{R2} kʰun^{R1} tʰoːŋ^{R3} /	/ cʰiːm^{R2} toːŋ^{R3} /	'mynah (นกขุนทอง)'
/ cʰiːm^{R2} ʔiʔɛːn^{R1} /	/ cʰiːm^{R2} ʔiʔɛːn^{R1} /	'swallow (นกนางแอ่น)'

/ $c^hi{:}m^{R2}$ $ʔe{:}t^{R1}$ /	/ $c^hi{:}m^{R2}$ $ʔe{:}t^{R1}$ /	'parrot'
/ $c^hi{:}m^{R2}$ $məcɔ{:}k^{R1}$ /	/ $c^hi{:}m^{R2}$ $məcɔ{:}k^{R1}$ /	'sparrow (นกกระจอก)'
/ $c^hi{:}m^{R2}$ $se{:}n^{R1}$ /	/ $c^hi{:}m^{R2}$ $k^ha{:}w^{R1}$ /	'bat'
/ $c^hi{:}m^{R2}$ ric^{R1} /	/ $c^hi{:}m^{R2}$ ric^{R1} /	'warbler (นกกระจิบ)'
/ $c^hi{:}m^{R2}$ $rɔ{:}k^{R1}$ /	/ $c^hi{:}m^{R2}$ $rɔ{:}k^{R1}$ /	'heron, egret (นกกระยาง)'
/ $c^hi{:}m^{R2}$ $krɛh^{R1}$ /	/ $c^hi{:}m^{R2}$ $krɛh^{R1}$ /	'wood pecker (นกหัวขวาน)'
	/ $c^hi{:}m^{R2}$ $na{:}ŋ^{R1}$ $ŋuən^{R1}$ /	'seagull'
	/ $c^hi{:}m^{R2}$ $kəmra{:}k^{R3}$ /	'peacock'
/ $c^hi{:}n^{R2}$ /	/ $c^hi{:}n^{R2}$ /	'cooked (food)'
/ $c^hi{:}w^{R2}$ /	/ $c^hi{:}w^{R2}$ /	'how many (used for question)'
/ $c^he{:}m^{R1}$ /	/ $c^he{:}m^{R1}$ /	'to feed'
/ $c^hɛ{:}ŋ^{R2}$ /	/ $c^hɛ{:}ŋ^{R2}$ /	'to burn (ไหม้)'
/ $c^hɨp^{R1}$ /	/ $c^hɨp^{R1}$ /	'dark'
/ $c^hɨt^{R1}$ /	/ $c^hɨh^{R1}$ /	'old (not young)'
/ $c^hɨk^{R1}$ /	/ $c^hɨk^{R1}$ /	'to pinch'
/ $c^hɨm^{R3}$ $ba{:}^{R3}$ /	/ $cɨm^{R3}$ $ba{:}^{R3}$ /	'insane'
/ $c^hɨm^{R3}$ $hɛ{:}ŋ^{R1}$	/ $tuə^{R1}$ $hɛ{:}ŋ^{R1}$ /	'body'
/ $c^hɨm^{R3}$ ruj^{R4} /	/ $cɨm^{R3}$ ruj^{R2} /	'living person'
/ $c^hɨ{:}j^{R1}$ /	/ $ɲu{:}c^{R2}$ /	'kiss'
/ $c^həla{:}t^{R1}$ /	/ $c^həla{:}t^{R1}$ /	'clever'
/ $c^hət^{R2}$ /	/ $k^hlət^{R2}$ /	'to leak'
/ $c^hət^{R3}$ /	/ $cət^{R3}$ /	'clear'
/ $c^hən^{R3}$ /	/ $cən^{R3}$ /	'step on'
/ $c^həj^{R3}$ $k^hənuj^{R1}$ /	/ $cəj^{R3}$ $k^hənuj^{R1}$ /	'gum of jackfruit (ยางขนุน)'
/ $c^həj^{R3}$ /	/ $cəj^{R3}$ /	'yes'

/ cʰap^R1 /   / cʰap^R1 /   'catch'

/ cʰak^R1 /   / cʰak^R1 /   'seed'

/ cʰam^R4 /   / cam^R2 ?ah^R1 /   'bruise'

/ cʰan^R1 /   / cʰan^R1 /   'I'

/ cʰaŋ^R3 /   / caŋ^R3 /   'roast (ย่าง)'

/ cʰaŋ^R3 /   / caŋ^R3 /   'weigh'

/ cʰaŋ^R3 /   / kraŋ^R3 /   'doorpost (เสาเรือน)'

/ cʰa:^R1 /   / cʰa:^R1 /   'to eat'

/ cʰa:m^R3 /   / ca:m^R3 /   'bowl'

/ cʰa:ŋ^R3 ?u:t^R1 / / ca:ŋ^R3 ?uh^R1 /   'carpenter'

/ cʰut^R1 ?ɔ:k^R1 / / cʰut^R1 ?ɔ:k^R1 /   'pull out'

/ cʰun^R1 /   / kʰraŋ^R1 /   'acrid (ฉุน)'

/ cʰun^R1 /   / cʰun^R1 /   'darn (v.) (ชุนแห)'

/ cʰuh^R1 /   / cʰuh^R1 /   'to spit (ถ่ม)'

/ cʰu:^R1 /   / co:^R1 /   'nephew/ niece'

/ cʰu:c^R3 /   / cu:c^R3 /   'flesh'

/ cʰu:m^R2 /   / cu:m^R2 /   'climbers'

/ cʰu:n^R3 /   / cu:n^R3 /   'to send (ส่งกลับ)'

/ cʰok^R3 /   / cok^R3 /   'to pound with fist'

/ cʰok^R4 /   / krok^R3 /   'pig'

/ cʰok^R4 pʰri:^R3 / / krok^R3 pri:^R3 /   'wild boar'

/ cʰo?^R3 /   / co?^R3 /   'citrus fruit'

/ cʰo?^R3 pʰo:k^R3 / / co?^R3 po:k^R3 /   'rambai (มะไฟ)'

/ cʰo?^R3 kəpʰe:w^R1 / / co?^R3 kəpʰe:w^R1 /   'a kind of fruit (มะอึก)'

/ cʰo?^R3 kəpʰɨ:^R1 / / co?^R3 mafɨəŋ^R1 /   'star apple (มะเฟือง)'

/ cʰo?^R3 mə?o:^R1 / / co?^R3 mə?o:^R1 /   'pomelo'

/ c^{h}o?^{R3} ləkam^{R1} /	/ co?^{R3} ləkam^{R1} /	'salacca wallichiana'
/ c^{h}o?^{R3} sɔ:k^{R2} /	/ co?^{R3} sɔ:k^{R2} /	'mango'
/ c^{h}o?^{R3} ja:k^{R2} /	/ co?^{R3} kəmuəŋ^{R1} /	'a kind of vegetable (ชมวง)'
/ c^{h}o?^{R3} k^{h}rɔ:c^{R2} /	/ co?^{R3} k^{h}rɔ:c^{R2} /	'lemon'
	/ co?^{R3} pɔh^{R1} /	'tomato'
	/ co?^{R3} kaŋ^{R3} kri:ŋ^{R1} /	'green okra (กระเจี๊ยบเขียว)'
	/ co?^{R3} mətɛ:k^{R1} /	'a kind of fruit (ลูกสารภี)'
/ c^{h}oɲ^{R3} /	/ klən^{R1} /	'trencher'
/ c^{h}o:n^{R3} /	/ co:n^{R3} /	'spoon'
/ c^{h}o:j^{R1} /	/ c^{h}o:j^{R1} /	'to plant'
/ c^{h}o:j^{R1} /	/ c^{h}o:j^{R1} /	'the tail of the eye'
/ c^{h}o:j^{R2} /	/ c^{h}o:j^{R2} /	'extremity'
/ c^{h}o:j^{R2} mət^{R3} /	/ c^{h}o:j^{R2} mət^{R3} /	'the tail of the eyes'
/ c^{h}ɔk^{R1} /	/ c^{h}ɔk^{R1} /	'stab (เจาะ)'
/ c^{h}ɔ:^{R1} /	/ c^{h}ɔ:^{R1} /	'dog'
/ c^{h}ɔ:^{R1} ciŋ^{R1} cɔ:k^{R1} /	/ c^{h}ɔ:^{R1} ciŋ^{R1} cɔ:k^{R1} /	'fox'
/ c^{h}ɔ:k^{R1} /	/ c^{h}ɔ:k^{R1} /	'pound (v.) (ป่น,ตำ)'
/ c^{h}ɔ:k^{R1} /	/ c^{h}ɔ:k^{R1} /	'pierce (แทง)'
/ c^{h}ɔ:k^{R3} mət^{R3} /	/ ŋi?^{R1} pra:ŋ^{R3} /	'sunshine'
/ c^{h}ɔ:ŋ^{R4} ?i:n^{R3} t^{h}uk^{R3} /	/ co:t^{R1} /	'plain tiff'
/ c^{h}ɔ:ŋ^{R4} /	/ co:ŋ^{R4} /	'Chong people'
/ c^{h}ɔ:ŋ^{R4} sɛ:^{R1} /	/ co:ŋ^{R4} sɛ:^{R1} /	'farmer'
/ c^{h}ɔ:ŋ^{R4} lu:c^{R3} /	/ co:j^{R1} /	'robber'
/ c^{h}ɔ:ŋ^{R4} nam^{R1} /	/ cɨm^{R3} nam^{R1} /	'chief'
/ c^{h}ɨə^{R3} /	/ cɨa^{R3} /	'believe'

/ cʰuəj^{R1} lɨa^{R1} /	/ cuəj^{R1} lɨə^{R1} /	'rescue'

/ k /

/ kit^{R3} /	/ kit^{R3} /	'conceive'
/ kic^{R1} /	/ kic^{R1} /	'small'
/ keːt^{R1} /	/ keːt^{R1} /	'chew'
/ keːm^{R1} /	-	'chew (เคี้ยวให้ละเอียด)'
/ keːw^{R1} /	/ keːw^{R1} /	'to bark'
/ kɛc^{R1} /	/ kec^{R1} /	'broken'
-	/ kec^{R3} /	'get'
/ kɛʔ^{R1} /	/ kɛʔ^{R1} /	'sheep'
/ kɛʔ^{R1} /	/ cʰɔk^{R1} /	'bore (v.)(คว้าน, ไช)'
/ kɛh^{R1} /	/ kɛh^{R1}/	'pot'
/ kɛː^{R1} /	/ kɛː^{R1} /	'you (singular)'
/ kɛːn^{R1} kəpʰoːt^{R3} /	/ kɛːn^{R1} kəpuːt^{R3} /	'cob'
/ kɛːw^{R2} /	/ ŋɛːw^{R2} /	'bend (โค้ง,งอ)'
/ kɛːw^{R3} /	/ kɛːw^{R3} /	'cup'
/ kɨt^{R1} /	/ kɨt^{R1} /	'to sit'
/ kɨt^{R1} dɨŋ^{R1} /	/ kɨh^{R1} dɨŋ^{R1} /	'wake up'
/ kɨj^{R1} /	/ kɨj^{R1} /	'to sit'
/ kɨj^{R1} kəʔeːk^{R1} /	/ kɨj^{R1} kəʔeːk^{R1} /	'to sit and lean (sth.)'
/ kɨːt^{R2} /	/ kɨːt^{R2} /	'tam
/ kəpiʔ^{R1} /	/ kəpiʔ^{R1} /	'what'
/ kəpih^{R1} /	/ kəpih^{R1} /	'paste'
/ kəpaŋ^{R1} /	/ kəpaŋ^{R1} /	'a hand of bananas'
/ kəpaw^{R1} /	/ kəpaw^{R1} /	'pocket'
/ kəpaːt^{R2} /	/ kəpaː^{R2} /	'cotton'

/ kəpa:w^{R1} /	/ kəpa:w^{R1} /	'buffalo'
/ kəpu:^{R1} /	/ kəpu:^{R1} /	'nail'
/ kəpɔʔ^{R1} /	/ kəpoʔ^{R1} /	'winnowing basket (กระด้ง)'
/ kəpɔh^{R1} /	/ kəpɔh^{R1} /	'thread'
/ kəpɔ:t^{R1} cʰo:p^{R1} /	/ kəpɔ:t^{R1} cʰo:p^{R1} /	'footprint'
/ kəpʰɨt^{R4} /	/ kəpɨ:^{R2} /	'prawn'
/ kəpʰɨk^{R4} /	-	'to stumble (สะดุด)'
/ kəpʰət^{R2} /	/ kəpət^{R2} /	'rattan'
/ kəpʰət^{R3} /	/ kəpʰɨ:^{R1} /	'fan (v.)'
/ kəpʰə:^{R1} /	/ kəpʰə:^{R1} /	'grope'
/ kəpʰak^{R3} /	/ kəpak^{R3} /	'cudgel (ไม้คมแฝก)'
/ kəpʰaŋ^{R3} /	/ kəpaŋ^{R3} /	'swarmp'
/ kəpʰaw^{R3} /	/ kəpo:^{R3} /	'pumpkin'
/ kəpʰa:^{R1} /	/ kəpʰa:^{R1} /	'soft-shell turtle'
/ kəpʰuk^{R3} /	/ kəpuk^{R3} /	'to rot'
/ kəpʰu:^{R3} /	/ kəpu:^{R3} /	'cane'
/ kəpʰok^{R2} /	/ kəpok^{R2} /	'hook'
/ kəpʰoŋ^{R2} /	/ kəpo:ŋ^{R2} /	'foam (ฟองน้ำ)'
/ kəpʰo:t^{R3} /	/ kəpu:t^{R3} /	'corn'
/ kəpʰo:k^{R3} /	/ kəpo:k^{R3} /	'hole'
/ kəpʰo:k^{R3} /	/ kəpo:k^{R3} /	'hip'
/ kəpʰo:k^{R3} kətu:t^{R1} /	/ kəpo:k^{R3} kətu:t^{R1} /	'nostril'
/ kəpʰo:n^{R3} /	/ kəpu:n^{R3} /	'drum'
/ kəban^{R1} /	/ kəban^{R1} /	'to pound the betel nut (ตะบันหมาก)'

/ kəbuːj^{R1} /	/ kəbuːj^{R1} /	'roof'
/ kəboːk^{R1} /	/ kəboːk^{R1} /	'cock-fighting (ไก่ตีกัน)'
/ kəboːj^{R1} /	/ kəboːj^{R1} /	'betelnut chalk'
/ kəbɔːk^{R1} /		'glutinous rice in the bamboo (ข้าวหลาม)'
/ kəbɔːŋ^{R1} /	/ kəbɔːŋ^{R1} /	'fence'
/ kətiː^{R1} /	/ kətiː^{R1} /	'eight'
/ kətɨŋ^{R2} /	/ kətɨŋ^{R2} /	'thin'
/ kətɨj^{R1} /	/ kətɨj^{R1} /	'water basin'
/ kətaː^{R1} /	/ kətaː^{R1} /	'duck'
/ kətaːk^{R2} /	/ kətaːk^{R2} /	'tongue'
/ kətaːk^{R3} /	/ kətaːk^{R3} /	'bean'
/ kətaːk^{R3} liəm^{R1} /	/ kətaːk^{R3} klɨŋ^{R1} /	'winged bean (ถั่วพลู)'
/ kətaːn^{R1} /	/ kətaːn^{R1} /	'battle-ax (ขวานปูลู)'
/ kətaːj^{R1} /	/ kətaːj^{R1} /	'coconut grater (กระต่ายขูดมะพร้าว)'
/ kətuŋ^{R4} /	/ kətuŋ^{R2} /	'squash (ฟักเขียว)'
/ kətuː^{R1} /	/ kətuː^{R1} /	'grass'
/ kətuːt^{R1} /	/ kətuːt^{R1} /	'nose'
/ kətoː^{R1} /	/ kətoː^{R1} /	'teach'
/ kətɔːŋ^{R1} /	/ kətɔːŋ^{R1} /	'six'
/ kət^{h}iʔ^{R3} /	/ kətiʔ^{R3} /	'coconut cream (กะทิ)'
/ kət^{h}iw^{R1} /	/ kət^{h}iw^{R1} /	'grass hopper'
/ kət^{h}iːm^{R3} /	/ kətiːm^{R3} /	'garlic'
/ kət^{h}eːt^{R3} /	/ kətih^{R1} /	'chilli'
/ kət^{h}eːt^{R3} p^{h}ɔŋ^{R1} /	/ kətih^{R1} pɔn^{R1} /	'chilli pepper'

/ kətʰeːt^{R3} ɲət^{R1} /	/ kətih^{R1} ɲəʔ^{R1} /	'dried red pepper'
/ kətʰeːt^{R3} sɔt^{R1} /	/ kətih^{R1} sɔʔ^{R1} /	'fresh chilli'
/ kətʰeːŋ^{R2} /	/ kəteːŋ^{R2} /	'brook'
/ kətʰɛh^{R1} cak^{R1} /	/ kətʰɛh^{R1} cak^{R1} /	'lightning (as striking)'
/ kətʰɛh^{R3} /	/ kəteh^{R3} /	'cart'
/ kətʰɨm^{R3} /	/ kətɨm^{R3} /	'to ripen (of fruit)'
/ kətʰən^{R3} /	/ kətən^{R3} /	'calf of leg'
/ kətʰəj^{R3} kɛh^{R1} /	/ kətəj^{R3} kɛh^{R1} /	'lid of pot'
/ kətʰat^{R1} /	/ kətʰah^{R1} /	'sneeze'
/ kətʰat^{R2} /	/ kəsaː^{R2} /	'fingernail'
/ kətʰat^{R2} tip^{R1} /	/ kəsaː^{R2} kʰɔp^{R1} /	'pain fingernail (เล็บขบ)'
/ kətʰah^{R3} /	/ kətah^{R3} /	'pan'
/ kətʰaːj^{R3} /	/ kətaːj^{R3} /	'scuttle (กระบุง)'
/ kətʰuʔ^{R1} /	/ kətuʔ^{R1} /	'just now'
/ kətʰuh^{R1} /	/ kətʰuh^{R1} /	'poped rice (ข้าวตอก)'
/ kətʰum^{R3} /	/ kətum^{R3} /	'in the shade (ที่ร่ม)'
/ kətʰoŋ^{R3} /	/ kətoŋ^{R3} /	'rabbit
/ kətʰoːŋ^{R3} /	/ kətoːŋ^{R3} /	'a kind of fish trap (ขนางช้อนปลา)'
/ kədiːŋ^{R1} /	/ kədiːŋ^{R1} /	'galangal'
/ kədam^{R1} /	/ kədam^{R1} /	'order'
/ kədaːt^{R1} /	/ kədah^{R1} /	'paper'
/ kədaːj^{R1} /	/ kədaːj^{R1} /	'board'
/ kədaːj^{R1} /	/ kədaːj^{R1} /	'centre'
/ kədum^{R1} /	/ kədum^{R1} /	'button'
/ kəduːŋ^{R1} /	/ kəduːŋ^{R1} /	'pond, pool'

/ kədo:k^{R1} /	-	'เกลาะแขวนคอควาย (ใช้ไม้ทำ)'
/ kədɔ:ŋ^{R1} /	/ kədɔ:ŋ^{R1} /	'a wood used for removing straw (ไม้คัดฟาง)'
/ kəcə:m^{R1} /	/ kəcə:m^{R1} /	'eyebrow'
/ kəca:j^{R1} /	/ kəcu:j^{R1} kə ca:j^{R1} /	'spread out'
/ kəcɔk^{R1} /	/ kəcɔk^{R1} /	'mirror'
/ kəcʰe:ŋ^{R1} /	/ kəcʰe:ŋ^{R1} /	'eves (ชายคา)'
/ kəcʰɨm^{R3} /	/ kəcɨm^{R3} /	'person'
/ kəcʰən^{R3} /	/ kəcən^{R3} /	'approach'
/ kəcʰak^{R3} /	/ kəcak^{R3} /	'cold'
/ kəcʰa:t^{R2} /	/ kəcʰa:^{R2} /	'terrace (นอกชาน)'
/ kəcʰa:j^{R3} /	/ kəca:j^{R3} /	'nine'
/ kəcʰuʔ^{R1} /	/ kəcʰuʔ^{R1} /	'tub (for keeping rice) (ถังใส่ข้าว)'
/ kəcʰu:j^{R2} /	/ kəcu:j^{R2} /	'buttocks'
/ kəcʰo:p^{R1} /	/ kəcʰo:p^{R1} /	'foot'
/ kəcʰɔ:n^{R3} /	/ kəco:n^{R3} /	'strain (กระชอน)'
/ kəkih^{R1} /	/ kəkih^{R1} /	'waist'
/ kəke:p^{R1} /	/ kəke:p^{R1} /	'hut'
/ kəkɛ:ŋ^{R1} /	/ kəkɛ:ŋ^{R1} /	'elbow'
/ kəka:^{R1} /	/ kəka:^{R1} /	'mouth'
/ kəka:w^{R1} /	/ kəka:w^{R1} /	'to step'
/ kəkup^{R1} /	/ kəkup^{R1} /	'turn over (คว่ำ)'
/ kəko:j^{R1} /	/ ko:j^{R1} /	'a frame made of rattan used for carrying things in a basket (สาแหรก)'

/ kəkɔʔ^{R1} /	/ kəkɔʔ^{R1} /	'worm'
/ kəkɔʔ^{R1} ʔuːt^{R1} /	/ kəkɔʔ^{R1} ʔuh^{R1} /	'bark (เปลือกไม้)'
/ kəkɔŋ^{R1} /	/ kəkɔŋ^{R1} /	'to carry (something at one end of a pole by placing on one's shoulder) (คอน)'
/ kəkuə^{R1} /	/ kəmraːk^{R2} /	'lead (n.)'
/ kəkʰiʔ^{R3} /	/ kəkiʔ^{R3} /	'skinny'
/ kəkʰeː^{R3} /	/ kəkeː^{R3} /	'fowl louse (ไรไก่)'
/ kəkʰɨn^{R1} /	/ kəkʰɨn^{R1} /	'wife'
/ kəkʰəːt^{R3} /	/ kʰɨh^{R1} /	'to flick (off) (เขี่ยออก)'
/ kəkʰaj^{R1} /		'ladle made from wood (ไม้ด้ามตักข้าว)'
/ kəkʰaːp^{R3} /	/ kəkaːp^{R3} /	'bamboo'
/ kəkʰuj^{R3} /	/ kəkuj^{R3} /	'shade, shadow'
/ kəkʰoː^{R1} /	/ kəkʰoː^{R1} /	'mortar'
/ kəkʰɔː^{R3} /	/ kəkoː^{R3} /	'crocodile'
/ kəʔiː^{R1} /	/ kaw^{R1} ʔiː^{R3} /	'chair'
/ kəmeː^{R1} /	/ kəmeː^{R1} /	'guest'
/ kəmɛːt^{R3} /	/ kəmeːt^{R3} /	'turmeric curcuma'
/ kəmɛːŋ^{R2} /	/ kəmeːŋ^{R2} /	'jaw'
/ kəməːŋ^{R4} /	/ kəmɨːŋ^{R2} /	'chin'
/ kəmap^{R1} /	/ kəmap^{R1} /	'side of head (ขมับ)'
/ kəmat^{R1} /	/ kəmat^{R1} /	'gall, bile'
/ kəmaʔ^{R3} /	/ kəmaʔ^{R3} /	'rain (n.)'
/ kəmaʔ^{R3} kɛːw^{R1} /	/ kəmaʔ^{R3} riə^{R1} /	'hail'
/ kəmaː^{R1} /	/ kəmaː^{R1} /	'porcupine'

/ kəma:^{R3} /	/ kəma:^{R3} /	'needle'
/ kəma:t^{R1} /	/ kəma:t^{R1} /	'rhinoceros'
/ kəma:ŋ^{R3} /	/ kəma:ŋ^{R3} /	'orphan'
/ kəmu:j^{R4} /	/ kəmu:j^{R2} /	'scuef (หินโสโครก)'
/ kəmu:c^{R1} /	/ kəmu:c^{R1} /	'lemon grass'
/ kəni?^{R3} /	/ kəni?^{R3} /	'word'
/ kəni:k^{R1} /	/ kəni:k^{R1} /	'piece, part'
/ kəni:m^{R1} /	/ ?ɛ:k^{R1} /	'yoke'
/ kəne:w^{R1} /	/ kəne:w^{R1} /	'sickle'
/ kəne:w^{R2} /	/ kʰəne:w^{R2} /	'child'
/ kənɛ:p^{R2} /	/ kəne:p^{R2} /	'skewer (for fish)'
/ kənɛ:t^{R2} /	-	'crowd (คนแน่น)'
/ kənɛ:ŋ^{R1} /		'Melorum Fruticosum (ผลลำดวน)'
/ kənɨŋ^{R4} /	/ kənɨŋ^{R4} /	'rice straw'
/ kənət^{R1} /	/ mənəh^{R1} /	'rake (n.) (คราด)'
/ kənət^{R1} /	/ mənəh^{R1} /	'pineapple'
/ kənap^{R3} /	/ kʰɔ:p^{R1} /	'edge'
/ kənaŋ^{R4} /	/ lu:k^{R3} pat^{R1} /	'bead'
/ kənaj^{R2} lɛ:k^{R1} /	/ kənaj^{R2} lɛ:k^{R1} /	'cock spur'
/ kəna:k^{R2} /	/ kəna:k^{R2} /	'crow'
/ kəna:j^{R1} /	/ kəna:j^{R1} /	'elephant'
/ kənu:j^{R3} /	/ kənu:j^{R3} /	'seven'
/ kənoŋ^{R2} /	/ kənoŋ^{R2} /	'club'
/ kəno:t^{R2} tʰuh^{R1} /	/ kəno:t^{R2} tʰuh^{R1} /	'nipple'
/ kəno:j^{R2} /	/ kəno:j^{R2} /	'shell of crab'

/ kənɔːk^{R2} /	/ kʰaːn^{R1} /	'pole'
/ kənɔːk^{R2} /	/ kənɔːk^{R2} /	'shoulder-pole'
/ kənɔːŋ^{R3} /	/ kənoːŋ^{R3} /	'hill, mountain'
/ kənuəc^{R1} /	/ kənuəc^{R1} /	'cord (used to bind thatch roof) (เชือกผูกจากหลังคาบ้าน)'
/ kəɲiːt^{R1} /	/ kəɲiːt^{R1} /	'crush (cloth) (ขยี้ผ้า)'
/ kəɲaː^{R3} /	/ kəɲaː^{R3} /	'yam'
/ kəɲaːm^{R2} tiː^{R1} /	/ kəɲaːm^{R2} tiː^{R1}/	'finger'
/ kəɲaːj^{R3} /	/ kəɲaːj^{R3} /	'to tell'
/ kəŋeː^{R3} /	/ ŋaːm^{R3} ŋiː^{R1} /	'small bee (ผึ้ม)'
/ kəŋɛː^{R1} /	/ kəŋɛː^{R1} /	'listen'
/ kəŋoː^{R3} /	/ kəŋuː^{R3} /	'sesame'
/ kəsaːj^{R2} /	/ kəsaːj^{R2} /	'groan (ร้องคราง)'
/ kəsut^{R2} /	/ kəsut^{R2} /	'badly (หลุดลุ่ย)'
/ kəsuk^{R1} /	/ kəsuk^{R1} /	'hair'
/ kəsuːc^{R1} /	/ kəsuːc^{R1} /	'boil (n.) (ฝี)'
/ kəsɔk^{R2} /	/ kəsɔk^{R2} /	'dribble (หยด)'
/ kəsɔːŋ^{R2} /	/ kəkloːŋ^{R2} /	'ladder'
/ kəhiː^{R1} /	/ kəhiː^{R1} /	'pestle'
/ kəhɛt^{R1} /		'to be scattered all over (ของเรี่ยราด)'
/ kəhuŋ^{R1} /	/ ləhuŋ^{R1} /	'papaya'
/ kəhɔːt^{R1} /	/ hɔːt^{R1} /	'pull'
/ kəhɔːŋ^{R1} /	/ ləhɔːŋ^{R1} /	'iron'
/ kəhɔːŋ^{R1} lɔː^{R1} /	/ ləhɔːŋ^{R1} lɔː^{R1} /	'cast (metals)

/ kəle:^{R3} /	/ kəli:^{R3} /	'maggot in the fermented fish'
/ kəlɛ:ŋ^{R3} /	/ kəle:ŋ^{R3} /	'young woman'
/ kəlɨt^{R3} /		'to leave suddenly (สะบัดมือ)'
/ kəlɨm^{R1} /	/ kəlɨm^{R1} /	'to fall (a tree)'
/ kəlak^{R4} /	/ kəlak^{R4} /	'fall'
/ kəla?^{R3} /	/ kəla?^{R3} /	'thorn'
/ kəla:k^{R4} /	/ kəla:k^{R4} /	'swallow'
/ kəla:ŋ^{R3} /	/ kəla:ŋ^{R3} /	'ear'
/ kəla:ŋ^{R3} klak^{R1} /	/ kəla:ŋ^{R3} klak^{R1} /	'deaf'
/ kəla:ŋ^{R4} /	/ kəla:ŋ^{R4} /	'sand'
/ kəla:j^{R3} /	/ kəla:j^{R3} /	'to melt'
/ kəlo:^{R3} /	/ təkrɛ:ŋ^{R1} /	'sieve (คะแกรง)'
/ kəlo:k^{R3} toh^{R1} /	/ kəlo:k^{R3} to:t^{R1} /	'skull'
/ kəlo:n^{R2} /	/ kəlo:n^{R2} /	'navel'
/ kəlɔ:ŋ^{R3} /	/ kəlo:ŋ^{R3} /	'husband'
/ kəlɔ:ŋ^{R4} /	/ kəlɔ:ŋ^{R4} /	'broad-walk'
/ kərɨt^{R1} /	/ ?uh^{R1} kərut^{R1} /	'walking stick'
/ kərut^{R3} /	/ sum^{R1} /	'a pannier-shaped fish trap made of bamboo strips (สุ่ม)'
/ kəwe:k^{R3} /	/ kəjaw^{R1} /	'shake (v.)'
/ kəwe:k^{R3} /	/ kəjɨ:ŋ^{R1} /	'shake'
/ kəwa:ɲ^{R1} /	/ kəwa:ɲ^{R1} /	'cardamom'
/ kəwa:j^{R3} /	/ kəwa:j^{R3} /	'tiger'
/ kəwa:j^{R3} su:t^{R2} /	/ ti:n^{R1} caŋ^{R2} /	'bear'

/ kəja:^{R1} /	/ kəja:^{R1} /	'scorpion'
/ kəja:ŋ^{R1} /	/ kəja:ŋ^{R1} /	'turtle'
/ kəjo:j^{R1} /	/ kəjo:j^{R1} /	'hang up'
/ kəjɔŋ^{R2} /	/ kəjɔŋ^{R2} /	'pincers'
/ kəp^{h}lə:ŋ^{R1} /	/ kəp^{h}lə:ŋ^{R1} /	'gun'
/ kəklɛʔ^{R1} me:w^{R4} /	/ klɛʔ^{R1} mi:w^{R4} /	'fish scale'
/ kəklu:^{R1} ka:^{R1} /	/ kroh^{R1} ka:^{R1} /	'to rinse'
/ kəkraj^{R1} /	/ təkraj^{R1} /	'scissors'
/ kəkru:k^{R1} /	/ kəkru:k^{R1} /	'basket'
/ kək^{h}le:t^{R2} /	/ k^{h}le:t^{R2} /	'slide (ลื่นไถล)'
/ kək^{h}raŋ^{R3} /	/ kəkraŋ^{R3} /	'monitor'
/ kək^{h}rət^{R3} /	/ kəkrət^{R3} /	'termite (ปลวก)'
/ kək^{h}rup^{R3} /	/ təklup^{R3} /	'to pounce'
/ kəmlɛ:ŋ^{R3} /	/ kəmle:ŋ^{R3} /	'shoulder'
/ kəmlɨk^{R3} /	/ kəmlɨk^{R3} /	'to wake'
/ kəmləj^{R3} /	/ kəmləj^{R3} /	'casumunar'
/ kəmlaŋ^{R3} /	/ kəmlaŋ^{R3} /	'acne'
/ kəmlah^{R1} /	/ kəmlah^{R1} /	'small bitter gourd'
/ kəmla:k^{R1} /	/ kəmla:k^{R1} /	'to open one's eyes (ลืมตา)'
/ kəmla:k^{R1} /	/ kəmla:k^{R1} /	'chisel'
/ kəmla:ŋ^{R2} /	/ kəmla:ŋ^{R2} /	'bright'
/ kəmluŋ^{R3} /	/ kəmluŋ^{R3} /	'chasm'
/ kəmlu:^{R3} /	/ kəmlu:^{R3} /	'betel'
/ kəmlɔh^{R1} /	/ kəmlɔh^{R1} /	'young man'
/ kəmlɔ:k^{R1}	/ kəmlɔ:k^{R1} /	'shoulder blade (สะบัก)

/ kəmlɔ:k^{R4} /	/ kəmlɔ:k^{R4} /	'salty'
/ kəmlɔ:ŋ^{R3} /	/ kəmlɔ:ŋ^{R3} /	'eel'
/ kəmrec^{R3} /	/ kəmrec^{R3} /	'pepper'
/ kəmrah^{R1} /	/ kəmrah^{R1} /	'to wriggle'
/ kəmruj^{R3} /	/ kəmruj^{R3} /	'pongolin'
-	/ kətɨ:n^{R1} /	'to put on top of (ทับ,ทบ)'
/ kət^{R1} /	/ kəh^{R1} /	'to pry (งัด)'
/ kəj^{R2} lən^{R3} /	/ kɨj^{R2} lən^{R3} /	'thunder'
/ kə:t^{R1} /	/ kə:t^{R1} /	'birth'
/ kə:t^{R2} /	/ kə:t^{R2} /	'low, shallow'
/ kat^{R1} /	/ kat^{R1} /	'to cut down (a tree)'
/ kam^{R1} mat^{R1} /	/ met^{R3} ti:^{R1} /	'fist'
/ ka:t^{R2} /	/ ka:t^{R2} /	'near'
/ ka:t^{R3} /	/ ha:ŋ^{R2} kəhuəj^{R1} /	'wound, sore'
/ ka:ŋ^{R1} /	/ ka:ŋ^{R1} /	'moon, month'
/ ka:ŋ^{R1} tɔ:j^{R2} /	/ ka:ŋ^{R1} tɔ:j^{R2} /	'last month'
/ ka:ŋ^{R1} ʔan^{R1} /	/ ka:ŋ^{R1} ʔan^{R1} /	'this year'
/ ka:ŋ^{R1} ŋa:j^{R3} /	/ ka:ŋ^{R1} po:j^{R1} /	'next year'
/ kuŋ^{R1} kiŋ^{R1} /	/ kuŋ^{R1} kiŋ^{R1} /	'trousers'
/ ku:^{R3} /	/ ku:^{R3} /	'borrow'
/ ku:p^{R2} /	/ ku:p^{R2} /	'frog'
/ ku:j^{R1} /	/ ku:j^{R1} /	'mix (กวน)'
/ koŋ^{R2} /	/ koŋ^{R2} /	'long'
/ ko:j^{R1} /	/ ko:j^{R1} /	'shave'
/ kɔp^{R1} /	/ ku:p^{R2} /	'plane (n.)'
/ kɔt^{R1} /	/ kɔt^{R1} /	'press'

/ kɔʔ^{R1} /	/ kɔʔ^{R1} /	'island'
/ kɔʔ^{R1} caŋ^{R1} kʰriw^{R1} /	/ kɔʔ^{R1} /	'caterpillar'
/ kɔn^{R1} /	/ kɔn^{R1} /	'to shove (thing)'
/ kɔŋ^{R1} /	/ kɔŋ^{R1} /	'wheel'
/ kɔ:p^{R1} /	/ kɔ:p^{R1} /	'wait'
/ kɔ:t^{R1} /	/ kɔ:t^{R1} /	'to cut (to pieces)'
/ kɔ:c^{R2} /	/ kɔ:c^{R2} /	'gruel'
/ kɔ:k^{R1} /	/ kɔ:k^{R1} /	'neck'
/ kɔ:k^{R1} /	/ kɔ:k^{R1} /	'carry'
/ kɔ:k^{R1} pʰɔ:k^{R3} /	/ kɔ:k^{R1} po:k^{R3} /	'goiter'
/ kɔ:ŋ^{R1} /	/ kɔ:ŋ^{R1} /	'bracelet'
/ kɔ:ŋ^{R1} ruəm^{R3} sa:^{R1} /	/ kɔ:ŋ^{R1} ʔɔ:ɲ^{R1} /	'pile up (เก็บรวบรวม)'
/ kɔ:ŋ^{R2} /	/ kɔ:ŋ^{R2} /	'tree frog'
/ kɔ:j^{R1} /	/ kɔ:j^{R1} /	'unrefined cane sugar (น้ำอ้อย)'
/ kɨ̵ək^{R1} /	/ kɨ̵ək^{R1} /	'shoe'

/ kʰ /

/ kʰit^{R3} /	/ kit^{R3} /	'think'
/ kʰit^{R3} ban^{R1}cʰi:^{R3} /	/ kit^{R3} ban^{R1}ci:^{R3} /	'account'
/ kʰi:^{R1} kliət^{R1} /	/ kʰi:^{R1} kliət^{R1} /	'lazy'
/ kʰi:^{R1} kʰleʔ^{R1} /	/ kʰi:^{R1} kʰleʔ^{R1} /	'shy'
/ kʰi:^{R1} niəw^{R1} /	/ kʰi:^{R1} niəw^{R1} /	'stingy'
/ kʰi:t^{R3} /	/ ki:t^{R3} /	'pour (ริ่นน้ำ)'
/ kʰi:m^{R1} /	/ kɛ:p^{R1} /	'tongs'
/ kʰi:n^{R2} /	/ kʰi:n^{R2} /	'squash'
/ kʰem^{R1} kʰat^{R1} /	/ sam^{R1} kʰat^{R1} /	'belt'

/ kʰemR¹ klatR¹ /	/ kʰemR¹ klatR¹ /	'pin'
/ kʰeːtR¹ /	/ kʰeːtR¹ /	'comb (v.)'
/ kʰeːtR³ /	/ keːtR³ /	'small cockroach'
/ kʰeːnR¹ /	/ kʰeːnR¹ /	'son/ daughter'
/ kʰeːnR¹ ɲiːpR³ /	/ kʰeːnR¹ ɲiːpR³ /	'chick'
/ kʰeːnR¹ ŋɛːtR³ /	/ kʰəneːwR² ŋɛːtR³ /	'baby, infant'
/ kʰeːnR¹ liəŋR³ /	/ kʰeːnR¹ liəŋR³ /	'stepson'
/ kʰeːwR¹ /	/ kʰeːwR¹ /	'to call'
/ kʰɛŋR³ lɛːŋR³ /	/ kʰɛŋR³ leːŋR³ /	'strong'
/ kʰɛːpR² /	/ keːpR² /	'narrow'
/ kʰɛːnR¹ /	/ kʰɛːnR¹ /	'arm'
/ kʰɛːnR² /	/ konR³ /	'thick (liquid)'
/ kʰɨpR³ /	/ kɨpR³ /	'body'
/ kʰɨŋR¹ /	/ kʰɨŋR¹ /	'stretch (ขึง,ยืด)'
/ kʰɨŋR¹ /	/ kɨŋR¹ /	'hold'
/ kʰɨːR¹ /	/ kʰɨːR¹ pɛːR¹ /	'beam'
/ kʰɨːnR¹ /	/ kʰɨːnR¹ /	'give back'
/ kʰəmɨkR² /	/ kʰəmɨkR² /	'sweat'
/ kʰəmahR¹ /	/ kʰəmahR¹ /	'smoke (n.)'
/ kʰəmaːjR¹ /	/ kʰəmaːjR¹ /	'widow'
/ kʰəmuːcR² /	/ kʰəmuːcR² /	'spirit'
/ kʰəmoʔR¹ /	/ kʰəmoʔR¹ /	'stone, rock'
/ kʰəmoːjR² /	/ kʰəmuːjR² /	'rubbish'
/ kʰəmɔkR² /	/ kʰəmɔkR² /	'cough'
/ kʰəmɔːŋR¹ /	/ kʰəmɔːŋR¹ /	'brain'
/ kʰəmɔːjR¹ /	/ məhɔːjR¹ /	'wind (v.)'

/ kʰəneːt^{R2} /	/ kʰəneːt^{R2} /	'comb (n.)'
/ kʰəneːt^{R2} /	/ tʰəneːt^{R2} /	'darkness'
/ kʰənɛɲ^{R1} /	/ kʰəneɲ^{R1} /	'fish net'
/ kʰənɨp^{R2} /	/ kʰənɨp^{R2} /	'wall'
/ kʰənəːj^{R1} /	/ kʰənəːj^{R1} /	'pillow(made from wood)'
/ kʰənaʔ^{R1} /	/ kʰənaʔ^{R1} /	'opossum'
/ kʰənam^{R1} /	/ kʰənam^{R1} /	'medicine'
/ kʰənah^{R1} /	/ cʰənah^{R1} /	'victory'.
/ kʰənaːp^{R1} /	/ kʰənaːp^{R1} /	'rice seedings'
/ kʰənuj^{R1} /	/ kʰənuj^{R1} /	'jack fruit'
/ kʰəɲah^{R1} /	/ kʰəɲah^{R1} /	'charcoal'
/ tʰəŋeːt^{R2} /	/ kʰəŋeːt^{R2} /	'darkness'
/ kʰəŋaːm^{R2} /	/ kʰəŋaːm^{R2} /·	'husked rice'
/ kʰəleːt^{R1} /	/ kʰəleːt^{R1} /	'sputum'
/ kʰəleːt^{R1} tʰaːk^{R3} /	/ kəmuːj^{R2} /	'reef (หินโสโครก)'
/ kʰəlɛh^{R1} /	-	'to remove stitches (เลาะ)'
/ kʰəlaːp^{R1} /	/ kʰəlaːp^{Ri} /	'wing'
/ kʰəloʔ^{R1} /	/ kʰəloʔ^{R1} /	'skin'
/ kʰəlɨk^{R1} /	/ kəlɨk^{R1} /	'choke (สำลัก)'
/ kʰəwaːk^{R1} /	/ kəwaːk^{R1} /	'hoe'
/ kʰəjaʔ^{R1} /	/ kʰəjaʔ^{R1} /	'ginger'
/ kʰəjaːt^{R1} /	/ kʰəjaːt^{R1} kəkaː^{R1} /	'lip'
/ kʰəjaːj^{R2} /	/ kʰəjaːj^{R2} /	'wind'
/ kʰəjuh^{R1} /	/ kʰəjuh^{R1} /	'strom'
/ kʰəjɔk^{R1} /	/ kʰəjɔk^{R1} kʰəjɛk^{R1} /	'limp (v.)'
/ kʰəjɔŋ^{R1} /	/ kəjɔŋ^{R1} /	'a kind of animal

กิ้งก่ายักษ์ (ตัวถึ้ง)'

/ kʰəpraŋ^R1 /	/ kəpraŋ^R1 /	'guava'
/ kʰəmlaː^R1 /	/ kəmlaː^R1 /	'mother's sister'
/ kʰət^R3 /	/ kət^R3 /	'ill, sick'
/ kʰət^R3 /	/ kət^R3 /	'pain'
/ kʰət^R3 pʰic^R3 /	/ kət^R3 pic^R3 /	'to be sleepy'
/ kʰən^R3 /	/ tən^R3 /	'that'
/ kʰəj^R4 /	/ kəj^R4 /	'sharp'
/ kʰəj^R3 /	/ kəːj^R3 /	'ever'
/ kʰəːm^R2 /	/ kʰəːm^R2 /	'good smelling'
/ kʰaŋ^R3 /	/ kaŋ^R3 /	'hard'
/ kʰah^R1 /	/ kʰah^R1 /	'to know'
/ kʰah^R1 /	/ samlaŋ^R1 /	'feel'
-	/ kʰaː^R1 /	'spleen'
/ kʰaː^R3 prap^R1 /	/ kaː^R3 prap^R1 /	'fine'
/ kʰaːp^R2 /	/ kʰaːp^R2 /	'itch'
/ kʰaːp^R3 /	/ kaːp^R3 /	'gape'
/ kʰaːŋ^R1 /	/ kʰaːŋ^R1 /	'side'
/ kʰut^R1 /	/ kʰut^R1 /	'to dig'
/ kʰuk^R3 /	/ kuk^R3 /	'prison'
/ kʰuk^R3 kʰaːw^R1 /	/ kuk^R3 toh^R1 nuːj^R1 /	'kneel'
/ kʰuŋ^R3 /	/ kuŋ^R3 /	'stomach'
/ kʰuː^R1 /	/ kʰuː^R1 /	'threaten'
/ kʰuː^R3 /	/ kuː^R3 /	'pair'
/ kʰuːt^R3 /	/ kʰuh^R1 /	'scrape (ขูด)'
/ kʰuːc^R3 /	/ kuːc^R1 /	'piece (of wood) (ท่อน)

/ kʰuːmᴿ¹haːjᴿ¹ /	/ kʰuːmᴿ¹ haːjᴿ¹ /	'to winnow'
/ kʰùːjᴿ¹ /	/ kʰùːjᴿ¹ /	'talk'
/ kʰuːjᴿ¹ /	/ kʰuːjᴿ¹ /	'to scratch (คุ้ย)'
/ kʰuːjᴿ¹ ləŋumᴿ¹ /	/ bɔnᴿ¹ /	'mumble'
/ kʰuːjᴿ² /	/ kʰuːjᴿ² /	'mongoose'
/ kʰuːjᴿ² cʰəmutᴿ³ /	/ kʰuːjᴿ² cʰəmotᴿ¹ /	'civet cat'
/ kʰomᴿ³ kʰaːpᴿ³ /	/ komᴿ³ kaːpᴿ³ /	'a clump of bamboo'
/ kʰonᴿ³ wətᴿ³ /	/ konᴿ³ wətᴿ³ /	'look for'
/ kʰohᴿ¹ tʰaŋᴿ¹ /	/ kohᴿ¹ tʰaŋᴿ¹ /	'to knock (a pail)'
/ kʰojᴿ² wokᴿ³ /	/ kʰojᴿ² wokᴿ³ /	'bare'
/ kʰojᴿ⁴ /	/ koːjᴿ² /	'slow'
/ kʰoːᴿ¹ pʰoːjᴿ¹ /	/ kʰoːᴿ¹ pʰoːjᴿ¹ /	'polished rice'
/ kʰoːᴿ¹ kəmiːpᴿ³ /	/ kʰoːᴿ¹ kəmiːpᴿ³ /	'glutinous rice'
/ kʰoːpᴿ³ /	/ koːpᴿ³ /	'to nick (บิ่น)'
/ kʰoːtᴿ¹ /	/ kʰoːtᴿ¹ /	'bite (กัด)'
/ kʰoːtᴿ² /	/ kʰoːtᴿ² /	'mosquito'
/ kʰoːnᴿ¹ ʔuːtᴿ¹ /	/ kuːnᴿ¹ ʔuhᴿ¹ /	'tree stump'
/ kʰoːjᴿ¹ /	/ kʰoːjᴿ¹ /	'tooth'
/ kʰoːjᴿ¹ kraːmᴿ¹ /	/ kʰoːjᴿ¹ kraːmᴿ¹ /	'molar tooth'
/ kʰoːjᴿ² /	/ kʰoːjᴿ² /	'horned lizard'
/ kʰɔːtᴿ¹ /	/ kʰɔːtᴿ¹ /	'bind'
/ kʰɔːkᴿ³ /	/ koːkᴿ³ /	'stable, stall'
/ kʰɔːnᴿ² /	/ kʰɔːnᴿ² /	'mouse, rat'
/ kʰɔːnᴿ² /	/ kʰɔːnᴿ² /	'hammer'
/ kʰɔːnᴿ² pukᴿ³ /	/ kʰɔːnᴿ² pukᴿ³ /	'mole (ตัวตุ่น)'
/ kʰɔːŋᴿ¹ /	/ kʰɔːŋᴿ¹ /	'thing'

/ kʰɔːŋ^{R3} /   -   'gong (ฆ้อง)'

/ kʰɔːŋ^{R1} lɔː^{R3} /   / jɨə^{R1} /   'bait'

/ kʰɔːŋ^{R1} lɨə^{R1} /   / kʰɔːŋ^{R1} lɨə^{R1} / 'remains'

/ kʰɔːŋ^{R3} /   / koːŋ^{R1} /   'creel (ข้องใส่ปลา)'

/ kʰiən^{R1} /   / kʰiən^{R1} /   'write'

/ ʔ /

/ ʔic^{R1} /   / ʔic^{R1} /   'defecate'

/ ʔic^{R1} pʰuŋ^{R1} /   / ʔic^{R1} puŋ^{R1} /   'intestine'

/ ʔic^{R1} taj^{R1} /   / ʔic^{R1} taj^{R1} /   'punk (ขี้ไต้)'

/ ʔic^{R1} meːk^{R3} /   / moːk^{R2} /   'cloud'

/ ʔiɲ^{R1} /   / ʔiɲ^{R1} /   'I'

/ ʔih^{R1} /   / ʔih^{R1} /   'not'

/ ʔiːn^{R1} /   / ʔiːn^{R1} /   'have'

/ ʔemih^{R1}/   / ʔemih^{R1} /   'who'

/ ʔɨt^{R1} /   / ʔɨh^{R1} /   'give'

/ ʔɨt^{R1} jɨːm^{R1} /   / ʔɨh^{R1} jɨːm^{R1} /   'lend'

/ ʔat^{R1} tʰəcan^{R1} /   / cən^{R3} /   'shelf'

/ ʔan^{R1} /   / ʔan^{R1} /   'this'

/ ʔaw^{R1} /   / ʔaw^{R1} /   'blouse or shirt'

/ ʔaw^{R1} cʰən^{R3} kaːj^{R2} /   / ʔaw^{R1} kaːj^{R2} /   'coat'

/ ʔaw^{R1} cʰəːt^{R2} /   / ʔaw^{R1} cʰəːt^{R2} /   'shirt'

/ ʔaw^{R1} kak^{R1} /   / ʔaw^{R1} kətoːŋ^{R1} /   '(เสื้อคอกระเช้า)'

/ ʔaw^{R1} kəlaːj^{R4} /   / ʔaw^{R1} kəlaːj^{R4} /   'loose (clothes)'

/ ʔaw^{R1} nɛːn^{R1} /   / ʔaw^{R1} nɛːn^{R1} /   'tight (clothes)'

/ ʔaː^{R1} /   / ʔaː^{R1} /   'father'sbrother'

/ ʔaː^{R1} kaːt^{R1} /   / ʔaː^{R1} kaːt^{R1} /   'air'

/ ʔaː^{R1}juʔ^{R1} /	/ ʔaː^{R1}juʔ^{R1} /	'age'
/ ʔaːn^{R1} /	/ ʔaːn^{R1} /	'read'
/ ʔaːw^{R1} /	/ ʔaːw^{R1} /	'day (cl.)'
/ ʔun^{R1} /	/ ŋɨm^{R2} /	'warm'
/ ʔuːt^{R1} /	/ ʔuh^{R1} /	'wood'
/ ʔuːt^{R1} kəkʰuːc^{R3} /	/ kənoŋ^{R2} /	'club'
/ ʔuːt^{R1} kʰiːt^{R3} /	/ ʔuh^{R1} kʰiːt^{R3} /	'match (n.)'
/ ʔuːt^{R1} kraːt^{R3} /	/ ʔuh^{R1} krah^{R1} /	'broom'
-	/ ʔuh^{R1} pruːŋ^{R3} /	'birch'
/ ʔuːc^{R1} /	/ ʔuːc^{R1} /	'little (quantity)'
/ ʔuːɲ^{R1} /	/ ʔuːɲ^{R1} /	'father'
/ ʔuːɲ^{R1} liəŋ^{R3} /	/ ʔuːɲ^{R1} liəŋ^{R3} /	'step father'
/ ʔuːɲ^{R1} jaː^{R1} mɔːk^{R1} /	/ ʔuːɲ^{R1} jaː^{R1} mɔːk^{R1} /	'father-in-law'
/ ʔok^{R1} kaːj^{R1} /	/ ʔok^{R1} kaːj^{R1} /	'ridge pole'
/ ʔoːc^{R1} /	/ ʔoːc^{R1} /	'take'
/ ʔoːc^{R1} cakʰɨŋ^{R1} ʔɔːɲ^{R1} /	/ nak^{R3} toːt^{R3} /	'prisoner'
/ ʔoːc^{R1} jaːŋ^{R1} /	/ liən^{R1} bɛːp^{R1} /	'imitate'
/ ʔoːj^{R1} /	/ ʔoːj^{R1} /	'caladium'
/ ʔɔt^{R1} /	/ ʔɔt^{R1} plɔŋ^{R1} /	'fast (v.)(อดอยาก)'
/ ʔɔt^{R1} tʰon^{R3} /	/ ʔɔt^{R1} ton^{R3} /	'endure'
/ ʔɔʔ^{R1} /	/ ʔɔʔ^{R1} /	'father'
/ ʔɔm^{R1} /	/ kəmɛːm^{R1} /	'hold (ในmouth)'
/ ʔɔːp^{R1} /		'cl. of Ionperata cylindrica (หญ้าคา) 1 ตับ'
/ ʔɔːɲ^{R1} /	/ ʔɔːɲ^{R1} /	'leave (เก็บ) ไว้'
/ ʔɔːŋ^{R1} /	/ ʔɔːŋ^{R1} /	'wasp'

/ ʔuət^{R1} /   / ʔuət^{R1} /   'boast'

/ ʔuən^{R1}/   / ʔuən^{R1} /   'fat (adj.)'

/ m /

/ miʔ^{R3} /   / pɛn^{R1} cʰak^{R1} /   'blister'

/ me:^{R3} /   / mi:^{R3} /   'mother'

/ me:^{R3} liəŋ^{R3} /   / mi:^{R3} liəŋ^{R3} /   'step mother'

/ me:^{R3} ja:^{R1} mɔ:k^{R1} /   / mi:^{R3} ja:^{R1} mɔ:k^{R1} /   'mother-in-law'

/ me:w^{R4} /   / mi:w^{R4} /   'fish'

/ me:w^{R4} tʰoŋ^{R1} hi:n^{R2} /   -   'a kind of fish
                                                          (ปลากระทุงเหว)'

/ me:w^{R4} coŋ^{R1}ŋa:^{R1} ŋəj^{R2} /   -   'a kind of fish (ปลาซิว)'

/ me:w^{R4} kətʰiŋ^{R1} /   / mi:w^{R4} ciŋ^{R1} /   'burbot (ปลากระทิง)'

/ me:w^{R4} kəlɛ:ŋ^{R3} /   / mi:w^{R4} kəle:ŋ^{R3} /   'catfish (ปลาดุก)'

/ me:w^{R4} ja:k^{R2} /   -   'a kind of fish (ปลากา)'

/ me:w^{R4} pʰru:ŋ^{R3} /   / mi:w^{R4} kʰəja:w^{R1} /   'white fish (ปลาขาว)'

/ me:w^{R4} kro:j^{R2} /   / mi:w^{R4} kro:j^{R2} /   'snakehead'

/ mɛʔ^{R1} /   / mɛʔ^{R1} /   'mother'

/ mɛ:m^{R3} /   / me:m^{R3} /   'cheek'

/ mɛ:w^{R1} /   / mɛ:w^{R1} /   'cat'

/ mɨt^{R4} /   / mɨt^{R2} /   'to take pity on (สมเพช)'

/ mɨt^{R3} /   / mɨt^{R3} /   'a wanton growth of
                                                          weeds (หญ้ารก)'

/ məŋɛ:^{R1} /   -   'small bee'

/ məŋa:m^{R3} /   / ŋa:m^{R3} /   'bee'

/ məha:m^{R1} /   / məha:m^{R1} /   'blood' .

/ məho:c^{R1} /   / məho:c^{R1} /   'kill'

/ məruj^{R2} /	/ məruj^{R2} /	'fruit fly'
/ məro:j^{R4}/	/ məro:j^{R4} /	'fly (n.)'
/ mən^{R3} ka:k^{R1} /	/ me:ŋ^{R1} ka:k^{R1} /	'armpit'
/ mət^{R3} /	/ mət^{R3} /	'eyes'
/ mət^{R3} tʰəŋiʔ^{R1} /	/ mət^{R3} ŋiʔ^{R1} /	'sun'
/ mət^{R3} caŋ^{R2} /	/ mət^{R3} caŋ^{R2} /	'black eyes'
/ mət^{R3} pʰro:ŋ^{R3} /	/ mət^{R3} pru:ŋ^{R3} /	'white eyes'
/ mət^{R3} kʰlo:^{R1} /	/ mət^{R3} kʰlo:^{R1} /	'blind'
/ ma:^{R3} /	/ sɛh^{R1} /	'horse'
/ ma:k^{R1}/	/ ma:k^{R1} /	'areca'
/ ma:j^{R3} /	/ ma:j^{R3} /	'do not'
/ mum^{R1} /	/ mum^{R1} /	'corner'
/ mu:^{R1} /	/ mu:^{R1} /	'multitude'
/ mu:c^{R1} tʰa:k^{R3} /	/ mu:c^{R1} ta:k^{R3} /	'dive'
/ mu:c^{R2} joʔ^{R3} /	/ mu:c^{R2} joʔ^{R3} /	'to be scared by an evil spirit (ผีหลอก)'
/ mu:j^{R1} /	/ mu:j^{R1} /	'day after tomorrow'
/ mu:j^{R4} /	/ mu:j^{R4} /	'one'
/ mu:j^{R1} tih^{R1}/	/ mu:j^{R1} tih^{R1}/	'two day after tomorrow'
/ moʔ^{R1} kə:n^{R1} /	/ moʔ^{R1} kan^{R1} /	'three stone for cooking (ก้อนเส้า)'
/ moj^{R3} pʰən^{R3} /	/ muj^{R3} pən^{R1} /	'thousand'
/ moj^{R3} tʰa:k^{R1} /	/ muj^{R3} tʰa:k^{R1} /	'span'
/ moj^{R3} kʰiən^{R3} ʔan^{R1} /	/ məke:n^{R2} /	'immediately'
/ moj^{R3} ʔih^{R1} /	/ muj^{R3} ʔih^{R1} /	'how many'
/ moj^{R3} mo:j^{R1} /	/ muj^{R3} mu:j^{R1} /	'nothing'

/ moj^{R3} hat^{R1} /	/ muj^{R3} hat^{R1} /	'Thai unit of length (equivalent to half a yard)'
/ moj^{R3} ro:j^{R1} /	/ muj^{R3} ro:j^{R1} /	'hundred'
/ mo:^{R3} /	/ mo:^{R3} /	'mill (v.) (ไม่)'
/ mo:ŋ^{R3} rəj^{R3} /	/ mo:ŋ^{R3} taŋ^{R3} /	'look at'
/ mo:j^{R1} /	/ mo:j^{R1} /	'a, an (for fruits)'
/ mo:j^{R3} /	/ mu:j^{R3} /	'alone, only'
/ mɔk^{R1} /	-	'to bury (thing)(หมกของ)'
/ mɔʔ^{R1} /	/ mɔʔ^{R1} /	'beautiful'
/ mɔʔ^{R1} di:^{R1} /	/ mɔʔ^{R1} di:^{R1} /	'grow (งอกงาม)'
/ mɔŋ^{R3} /	/ mo:ŋ^{R3} /	'and'
/ mɔ:^{R1} /	/ mɔ:^{R1} /	'doctor'
/ mɔ:p^{R1} /	/ mɔ:p^{R1} /	'crouch'
/ mɔ:t^{R3} /	/ mo:t^{R3} /	'wood borer'
/ mɔ:k^{R3} /	/ mɔ:k^{R3} /	'fog'
/ mɔ:n^{R1} /	/ mɔ:n^{R1} /	'pillow'

/ n /

/ ni:^{R3} /	/ ni:^{R3} /	'debt'
/ ni:p^{R1} /	/ kɛ:p^{R1} /	'pinch'
/ ni:p^{R1} /	/ kəmɛ:p^{R1} /	'carry under arm'
/ ne:m^{R2} /	/ ne:m^{R2} /	'trunk of tree'
/ ne:m^{R2} cʰi:^{R3} /	/ ne:m^{R2} kri:^{R3} /	'banyan'
/ ne:m^{R2} kʰaj^{R2} /	/ ne:m^{R2} kaj^{R2} /	'olive'
/ ne:m^{R2} pa:m^{R1} /	/ ne:m^{R2} pa:m^{R1} /	'palm tree'
/ ne:m^{R2} kəwa:^{R3} /	/ ne:m^{R2} kəwa:^{R3} /	'beech (มะเดื่อ)'

/ ne:m^{R2} ?əŋun^{R1} /	/ ne:m^{R2} ?əŋun^{R1} /	'vine (องุ่น)'
/ ne:m^{R2} məkʰa:m^{R1} /	/ ne:m^{R2} məkʰa:m^{R1} /	'tamarind'
/ ne:m^{R2} nun^{R3} /	/ ne:m^{R2} nun^{R3} /	'kapok'
/ ne:m^{R2} ?u:t^{R1} /	/ ne:m^{R2} ?uh^{R1} /	'tree'
/ ne:m^{R2} son^{R1} /	/ ne:m^{R2} son^{R1} /	'fir'
/ ne:w^{R2} riən^{R3} /	/ nak^{R3} riən^{R3} /	'pupil'
/ nɛ:^{R3} caj^{R1} /	/ ne:^{R3} caj^{R1} /	'sure'
/ nɨm^{R3} /	/ nɨm^{R3} /	'year'
/ nɨm^{R3} tʰi:^{R1} /	/ nɨm^{R3} ti:^{R1} /	'next year'
/ nɨm^{R3} ?an^{R1} /	/ nɨm^{R3} ?an^{R1} /	'this year'
/ nə?ih^{R1} /	/ nə?ih^{R1} /	'when'
/ nərok^{R3} /	/ nərok^{R3} /	'hell'
/ nap^{R3} /	/ nap^{R3} /	'count'
/ nak^{R1} /	/ nak^{R1} /	'cl. of person'
/ nam^{R3} /	/ nam^{R3} /	'lead (v.)'
/ nam^{R3}ta:n^{R1} kruh^{R1} /	/ nam^{R3}ta:n^{R1} kruh^{R1} /	'lump sugar (น้ำตาลก้อน)'
/ nam^{R1} cɛ:n^{R2} /	/ ?e:n^{R1} cu:n^{R1} /	'bring'
/ nam^{R3} kʰɛŋ^{R1} /	/ nam^{R3} kʰɛŋ^{R1} /	'ice'
/ naŋ^{R1} sɨ:^{R1} /	/ naŋ^{R1} sɨ:^{R1} /	'book'
/ na:^{R3} pʰa:^{R1} /	/ na:^{R3} pʰa:^{R1} /	'cliff, precipice'
/ na:^{R3} pʰa:k^{R1} /	/ na:^{R3} pʰa:k^{R1} /	'forehead'
/ na:p^{R1} /	-	'ทำให้หญ้าราบลงโดยใช้ไม้'
/ na:k^{R3} /	/ na:k^{R3} /	'otter'
/ na:j^{R3} /	/ na:j^{R3} /	'own, possess'

/ ɲ /

/ ɲeɲ^{R1} /	/ ɲeɲ^{R1} /	'a kind of tree

(ต้นโคลงเคลง)'

/ ɲam^{R1} /	/ ɲam^{R1} /	'to mix together (ยำ)'
/ ɲaɲ^{R1} /	/ ɲaɲ^{R1} /	'curly (hair)'
/ ɲuːc^{R3} /		'to wrinkle'

/ ŋ /

/ ŋic^{R3} /	/ ŋȩc^{R3} /	'to fall (down)'
/ ŋiʔ^{R1} kətʰoːj^{R3} /	/ ŋiʔ^{R1} tuːj^{R3} /	'noon'
/ ŋiʔ^{R1} tʰok^{R3} /	/ ŋiʔ^{R1} tok^{R3} /	'east'
/ ŋiʔ^{R1} pʰlam^{R1} /	/ ŋiʔ^{R1} plam^{R1} /	'west'
/ ŋət^{R2} /	/ ŋət^{R2} /	'bitter'
/ ŋaj^{R1} /	/ ŋaj^{R1} /	'heavy'
/ ŋaːm^{R4} /	/ ŋaːm^{R4} /	'sweet'
/ ŋaːj^{R3} /	/ ŋaːj^{R3} /	'face'
/ ŋaːj^{R3} /	/ ŋaːj^{R3} /	'easy'
/ ŋaːj^{R4} /	/ ŋaːj^{R4} /	'far'
/ ŋɔʔ^{R1} /	/ ŋɔʔ^{R1} /	'rambutan'
/ ŋoː^{R3} /	/ ŋoː^{R3} /	'foolish'
/ ŋoːt^{R1} /	/ ŋoːt^{R1} /	'a kind of beetle (แมงกวาง)'
/ ŋoːn^{R1} /	/ ŋuːn^{R1} /	'to stoop (ก้มหลัง)'
/ ŋɔːn^{R1} /	/ ŋɔːn^{R1} /	'Ionperata cylindrica'
/ ŋɔːn^{R1} lɛːk^{R1} /	/ ŋɔːn^{R1} lɛːk^{R1} /	'cockscomb'
/ ŋiəp^{R3} /	/ ŋiəp^{R3} /	'quiet'
/ ŋɨək^{R3} /	/ ŋɨək^{R3} /	'gums'
/ ŋɨək^{R1} meːw^{R4} /	/ kəmɛːk^{R1} miːw^{R4} /	'gill'
/ ŋuə^{R3} /	/ kəsoːŋ^{R1} /	'ox, cow'

/ s /

/ si:^{R1} /	/ si:^{R1} /	'snake'
/ si:^{R1} /	/ si:^{R1} /	'paint, color'
/ si:^{R1} to:k^{R1} /	/ si:^{R1} to:k^{R1} /	'snake bite'
/ si:^{R1} caŋ^{R2} /	/ si:^{R1} caŋ^{R2} /	'black'
/ si:^{R1} cʰe:m^{R1} /	/ si:^{R1} cʰe:m^{R1} /	'boa constrictor (งูเหลือม)'
/ si:^{R1} kəpaʔ^{R1} /	/ si:^{R1} kəpaʔ^{R1} /	'a kind of snake (งูกะปะ)'
/ si:^{R1} kʰiəw^{R1} /	/ si:^{R1} kʰiəw^{R1} /	'green'
/ si:^{R1} ŋəj^{R3} /	/ si:^{R1} ŋəj^{R3} /	'red'
/ si:^{R1} ɬiəŋ^{R1} /	/ si:^{R1} ɬiəŋ^{R1} /	'yellow'
/ si:^{R1} wa:k^{R1} /	/ si:^{R1} wa:k^{R1} /	'cobra'
/ si:^{R1} pʰru:ŋ^{R3} /	/ si:^{R1} pru:ŋ^{R3} /	'white'
/ si:t^{R1} /	/ si:t^{R1} /	'mushroom'
/ sen^{R3} ʔen^{R1} /	/ kəsi:^{R1} /	'tendon'
/ se:^{R1} /	/ se:^{R1} /	'line, rope'
/ se:^{R1} /	/ se:^{R1} /	'rattan'
/ se:^{R1} pʰi:ŋ^{R1} /	/ lum^{R1} pʰi:ŋ^{R1} /	'fish rod'
/ se:k^{R1} /	/ se:k^{R1} /	'magic (เสก)'
/ sɛt^{R1} /	/ sɛt^{R1} /	'finish'
/ sɛc^{R2} /	/ sec^{R2} /	'cold'
/ sɛ:^{R1} /	/ sɛ:^{R1} /	'farm'
/ sɛ:m^{R2} /	/ sɛ:m^{R2} /	'Thai people'
-	/ sɛ:w^{R2} cat^{R1} /	'thunder(v.)'
/ sɨk^{R1} /	/ sɨk^{R1} /	'flour'
/ sɨm^{R1} /	/ pəsɨm^{R1} /	'seep (v.)'
/ sɨ:^{R3} sat^{R1} /	/ sɨ:^{R3} sat^{R1} /	'faithful'

/ səbuːn^{R1} /   / səbuːn^{R1} /   'womb'

/ sədaŋ^{R1} /   'post in the central area

of a house(เสากลางบ้าน)'

/ səməː^{R1} /   / riəp^{R3} roːj^{R1} /   'flat'

/ səhaːj^{R1} /   / ləhaːj^{R1} /   'adultery'

/ səwiŋ^{R1} /   / pan^{R1} /   'spin'

/ səwiŋ^{R1} /   / wɨj^{R1} /   'to spin (yarn)'

/ səwan^{R1} /   / səwan^{R1} /   'heaven'

/ səwaːn^{R1} /   / səwaːn^{R1} /   'awl'

/ səbaːj^{R1} kʰɨp^{R3} /   / kənɨp^{R2} kɨp^{R3} /   'health'

/ səbuː^{R1} /   / səbuː^{R1} /   'soap'

/ sə?aːt^{R1} /   / sə?aːt^{R1} /   'clean'

/ səːt^{R1} /   / səːt^{R1} /   'to lift, to raise

(one's skirt) เลิก (ผ้า)'

/ sap^{R1} pədaː^{R1} /   / sap^{R1} pədaː^{R1} /   'week'

/ sat^{R1} /   / sat^{R1} /   'animal'

/ sak^{R1} /   / sak^{R1} /   'tattoo'

/ sak^{R1} sit^{R1} /   / sak^{R1} sit^{R1} /   'sacred (ศักดิ์สิทธิ์)'

/ sam^{R1} /   / sam^{R1} /   'to hush (ซ้อมข้าว)'

/ san^{R1} /   / ɲak^{R3} /   'shiver'

/ san^{R1} jaː^{R1} /   / san^{R1} jaː^{R1} /   'promise'

/ saŋ^{R1} /   / saŋ^{R1} /   'hear'

/ saŋ^{R1} kʰənuj^{R1} /   / kəpuj^{R1} kʰənuj^{R1} /   'fiber of jack fruit

(ซังขนุน)'

/ saː^{R1} baːn^{R1} /   / saː^{R1} baːn^{R1} /   'swear'

/ saːp^{R1} /   / saːp^{R1} /   'tasteless'

/ saːjR1 sɔːjR3 /	/ sɔːjR1 /	'necklace'
/ supR1 kəsiəwR1 /	/ kəsɨpR1 saːR1 /	'whisper'
/ sucR1 /	/ sucR1 /	'gnat'
/ sukR1 toːnR1 /	/ kə sukR1 toːnR1 /	'pubic hair'
/ sukR1 mɛːŋR3 /	/ sukR1 meːmR1 /	'beard'
/ sukR1 ŋiːpR3 /	/ sukR1 ŋiːpR3 /	'the hair line (above the forehead)'
/ sukR1 pʰruhR1 /	/ sukR1 pʰruhR1 /	'grey hair'
/ sumR1 /	/ sumR1 /	'star'
/ sumR1 kəlakR4 /	/ sumR1 kəlakR4 /	'meteor (ดาวตก)'
/ suːcR1 /	/ suːcR1 /	'worship (เช่นผี)'
/ suːcR2 /	/ suːcR2 /	'ant'
/ suːcR2 caŋR2 /	/ suːcR2caŋR2·/	'black ant'
/ suːcR2 məhɔːŋR1 /	/ suːcR2 məhɔːŋR1 /	'a kind of ant (มดตะนอย)'
/ suːcR2 suːR1 /	/ suːcR2 suːR1 /	'red ant'
/ sokR3 prokR1 /	/ sokR3 prokR1 /	'dirty'
/ somR3 puːR1 /	-	'okra (กระเจี๊ยบ)'
/ soːR3 /	/ soːR3 /	'chain'
/ soːcR1 /	/ soːcR1 /	'horn'
/ sɔpR1 /	/ sɔpR1 /	'corpse'
/ sɔŋR1 /	-	'สงฟางข้าว'
/ sɔŋR1 klinR1 /	/ cuːnR1 klinR1 /	'smell'
/ sɔŋR1 sajR1 /	/ soŋR1 sajR1 /	'doubt'
/ sɔːkR1 /	/ sɔːkR1 /	'placenta'
/ sɔːkR3 nɔːŋR3 /	/ sɔːkR3 noːŋR3 /	'valley'
/ sɔːŋR1 /	/ sɔːŋR1 /	'dance'

/ siəm^{R1} /   / kəni:k^{R3} /   'spade'

/ siəŋ^{R1} /   / siəŋ^{R1} /   'sound'

/ suən^{R1} /   / suən^{R1} /   'garden'

/ h /

/ hiw^{R1} /   / hiw^{R1} /   'hunger'

/ hiw^{R1} /   / hiw^{R1} /   'to carry'

/ hi:^{R1} lɔ:k^{R1} /   / hi:^{R1} lɔ:k^{R1} /   'pastle'

/ hi:t^{R1} /   / hi:t^{R1} /   'to disappear'

/ hi:t^{R1} /   / hiʔ^{R1} /   'question marker'

/ hɛc^{R1} /   / kəhec^{R1} /   'jump'

/ hɛ:k^{R3} /   / ri:p^{R3} /   'hurry'

/ hɛ:ŋ^{R1} /   / hɛ:ŋ^{R1} /   'we'

/ hɨj^{R1} /   / hɨj^{R1} /   'to fly'

/ hɨ:t^{R1} /   / hɨ:t^{R1} /   'to scent'

/ ha:^{R1} ka:^{R1} /   / ha:^{R1} ka:^{R1} /   'to open (mouth)'

/ ha:m^{R1} /   / ha:m^{R1} /   'forbid'

/ haj^{R1} /   / haj^{R1} /   'hot'

/ ha:j^{R1} /   / ha:j^{R1} /   'rice'

/ ha:j^{R1} /   / kəha:j^{R1} /   'thirst'

/ ha:j^{R1} kəno:j^{R2} /   / kəɲo:m^{R2} /   'millet'

/ ha:j^{R1} kəno:j^{R2} /   / kəko:j^{R1} /   'millet'

/ ha:j^{R1} kɔʔ^{R1} /   / ha:j^{R1} kɔʔ^{R1} /   'paddy'

/ hu:t^{R1} /   / hu:t^{R1} /   'to sip (soup) ซด(น้ำแกง)'

/ hu:m^{R1} /   / hu:m^{R1} /   'bathe'

/ hu:j^{R1} /   / hu:j^{R1} /   'blow'

/ ho:c^{R1} /   / ho:c^{R1} /   'dead, die'

/ hɔt^{R1} /	/ hɔt^{R1} /	'to shrink'
/ hɔk^{R1} /	/ hɔk^{R1} /	'to pull (wood) (ถอนไม้)'
/ hɔh^{R1} /	/ pʰləː t^{R2} /	'blow'
/ hɔː p^{R3} /	/ hɔː p^{R3} /	'to eat (rice)'
/ hɔː p^{R1} /, / bɔː p^{R1} /	/ hɔː p^{R1} / ‾	'to gasp'
/ hɔː k^{R1} /	/ hɔː k^{R1} /	'spear'
/ hɔː j^{R1} /	/ hɔː j^{R1} /	'gullet (คอหอย)'
/ hiəw^{R1} /	/ kʰəwiː t^{R2} /	'to droop (flower)'
/ huə^{R1} caj^{R1} /	/ huə^{R1} caj^{R1} /	'heart'
/ huə^{R1} hɔː m^{R1} /	/ toh^{R1} hɔː m^{R1} /	'onion'
/ huəc^{R1} /	/ huəc^{R1} /	'whistle'
/ huəc^{R1} /	/ pʰiw^{R1} kəkaː^{R1} /	'to whistle'
/ huəŋ^{R1} /	/ huəŋ^{R1} /	'jealousy'

/ l /

/ lic^{R3} /	/ lec^{R3} /	'penis'
/ lih^{R1} /	/ lih^{R1} /	'bare'
/ lec^{R2} /	/ lec^{R2} /	'some'
/ leʔ^{R1} /	/ leʔ^{R1} /	'a kind of Thai farmer's hat (งอบ)'
/ leŋ^{R1} /	/ kəmlɛw^{R2} /	'to aim (a target)'
/ leː n^{R1} /	/ cʰuː^{R1} /	'great-grandchild'
/ leː n^{R3} kətaː k^{R2} /	/ leː n^{R3} kətaː k^{R2} /	'stick out (tongue)'
/ leː ŋ^{R3} /	/ liː ŋ^{R3} /	'play'
/ leː w^{R1} /	/ cuə^{R1} /	'bad'
/ lɛː k^{R1} /	/ lɛː k^{R1} /	'chicken'
/ lɛː ŋ^{R1} /	/ leː ŋ^{R1} /	'day (cl.)'

/ lɨk^R1 /	/ lɨk^R1 /	'husk'
/ lɨk^R2 /	/ lɨk^R2 /	'turbidity (น้ำขุ่น)'
/ lɨʔ^R1 /	/ lɨʔ^R1 /	'grubby'
/ lɨŋ^R1 /	/ kʰəlɨŋ^R1 /	'older brother/ sister'
/ lɨŋ^R4 /	/ lɨŋ^R4 /	'deep'
/ ləpʰaːŋ^R3 /	/ paːŋ^R3 paːŋ^R3 /	'dawn'
/ ləbɨŋ^R1 /	-	'lagoon'
/ lətɔŋ^R1 /	/ lətɔŋ^R1 /	'room'
/ ləʔaːw^R1 /	/ ləʔaːw^R1 /	'gulf'
/ ləwaːŋ^R1 /	/ ləwaːŋ^R1 /	'between'
/ lət^R1 /	/ luj^R1 /	'cape, headland'
/ lət^R1 /	/ kʰlaːt^R2 /	'rake'
/ lət^R3 /	/ ləh^R1 /	'to grow (งอก)'
/ ləːj^R1 tʰaːk^R3 /	/ waːj^R1 taːk^R3 /	'swim'
/ lak^R3 tʰeʔ^R1 /	/ lak^R3 tʰeʔ^R1 /	'tick (เห็บ)'
/ lak^R3 tʰəːk^R1 /	/ lak^R3 tʰəːk^R1 /	'Achilles tendon'
/ laʔ^R1 /	/ laʔ^R1 /	'leaf'
/ laʔ^R1 cʰiw^R3 /	/ tiːn^R1 cup^R1 /	'vegetable'
/ laʔ^R1 kəpʰlaw^R1 /	/ laʔ^R1 kəpʰloː^R1 /	'holy basil'
/ laʔ^R1 naŋ^R3 lak^R3 /	/ pʰraŋ^R1 /	'sweet basil'
/ laʔ^R1 pric^R1 /	/ laʔ^R1 pric^R1 /	'a kind of vegetable (ผักหวาน)'
/ laʔ^R1 pʰlaŋ^R1 /		'a kind of vegetable (ผักปรัง)'
/ lam^R1 kɔːk^R1 /	/ lam^R1 kɔːk^R1 /	'throat'
/ laːp^R3 /	/ laːp^R3 /	'to paint'

/ la:t^{R3} /	/ lah^{R1} /	'Thai unit of length (equivalent to 2 meters)'
/ la:t^{R3} /	/ plu:^{R3} kəni:p^{R1} /	'groin'
/ la:c^{R3} /	/ la:c^{R3} /	'lightning'
/ la:k^{R3} /	/ la:k^{R3} /	'untie'
/ la:n^{R3} /	/ la:n^{R3} /	'threshing-floor (ลานนวกข้าว)'
/ luk^{R1} /	/ luk^{R1} /	'pepper sauce (น้ำพริก)'
/ luk^{R1} kəp^{h}rik^{R1} /	/ luk^{R1} kəp^{h}rik^{R1} /	'pepper sauce (pound already)'
/ luk^{R1} kəmo:j^{R1} /	/ luk^{R1} kəmo:j^{R1} /	'salt'
/ luh^{R1} k^{h}e:n^{R1} /	/ kəluh^{R1} /	'to have an abortion'
/ luj^{R1} /	/ luj^{R1} /	'pointed'
/ luj^{R2} /	/ luj^{R2} /	'earthworm'
/ lu:^{R1} /	/ lu:^{R1} /	'howl'
/ lu:c^{R2} /	/ lu:c^{R2} /	'soft (to the touch)'
/ lu:c^{R3} /	/ lu:c^{R3} /	'steal'
/ lu:m^{R3} /	/ lu:m^{R3} /	'ask'
/ lu:m^{R3} t^{h}a:n^{R3} /	/ lu:m^{R3} ta:n^{R3} /	'beggar'
/ lu:m^{R3} t^{h}əʔ^{R1} /	/ lu:m^{R3} t^{h}əʔ^{R1} /	'request'
/ lu:ŋ^{R3} /	/ lu:ŋ^{R3} /	'back'
/ lu:ŋ^{R3} koŋ^{R2} /	/ lu:ŋ^{R3} kuʔ^{R1} /	'hunchbacked (หลังโกง)'
/ lu:j^{R1} /	/ lu:j^{R1} /	'to drop off'
/ lo:t^{R1} /	/ kəloh^{R1} /	'barking deer'
/ lo:k^{R1} /	/ lo:k^{R1} /	'world'
/ lo:ŋ^{R3} t^{h}a:k^{R3} /	/ lɔ:ŋ^{R3} ta:k^{R3} /	'ditch'
/ lo:ŋ^{R1} rəj^{R3} /	/ lo:ŋ^{R1} mo:ŋ^{R1} /	'try'

/ lo:ŋ^R3 kʰluə^R3 /	/ lu:ŋ^R3 kluə^R3 /	'cook house'
/ lo:j^R3 /	/ lo:j^R3 /	'float'
/ lɔ:^R1 /	/ lɔ:^R1 /	'many'
/ lɔ:^R1 kwa:^R1 /	/ lɔ:^R1 kwa:^R1 /	'more'
/ lɔ:p^R3 /	/ lo:p^R3 /	'pick up (เก็บ)'
/ lɔ:k^R3 /	/ lo:k^R3 /	'flay, skin (ถลกหนัง)'
/ lo:m^R3 /	/ lo:m^R3 /	'liver'
/ lɔ:ŋ^R1 /	/ lɔ:ŋ^R1 /	'banana'
/ lɔ:ŋ^R1 ti:^R1 kriw^R2 /	-	'a kind of banana (กล้วยเล็บมือนาง)'
/ lɨək^R3 /	/ lɨək^R3 /	'choose'
/ lɨəj^R3 /	/ lɨəj^R3 /	'saw (v.)'

/ r /

/ rew^R3 /	/ wəj^R1 /	'fast'
/ re:t^R3 /	/ rih^R1 /	'root'
/ rap^R3 /	/ rap^R3 /	'take'
/ rak^R3 /	/ rak^R3 /	'love'
/ rak^R3 sa:^R1 /	/ rak^R3 sa:^R1 /	'cure'
/ raʔ^R1 /	/ raʔ^R1 /	'encumbered (with old and useless things)(ของรก)'
/ raŋ^R3 /	/ raŋ^R3 /	'dry (of weather)'
/ ra:^R3 kʰa:^R3 /	/ ra:^R3 ka:^R3 /	'price'
/ ra:p^R3 /	/ ra:p^R3 /	'wash'
/ ra:n^R3 /	/ ra:n^R3 /	'store'
/ ra:ŋ^R1 tʰa:k^R3 /	/ ra:ŋ^R1 ta:k^R3 /	'trough (รางน้ำ)'
/ ra:j^R3 /	/ ra:j^R3 /	'ten'

/ raːj^{R3} tʰam^{R3} /	/ raːj^{R3} tam^{R3} /	'fifteen'
/ raːj^{R3} moːj^{R4} /	/ raːj^{R3} muːj^{R1} /	'eleven'
/ rəːm^{R3} /	/ rəːm^{R3} /	'begin'
/ run^{R1} /	/ run^{R1} /	'to push (ฉุยล้อเลื่อน)'
/ ruj^{R3} /	/ ruj^{R3} /	'to burn slightly, singe (ลนไฟ)'
/ ruːt^{R3} tʰaːk^{R3} /	/ ruh^{R1} taːk^{R3} /	'to water'
/ ruːc^{R3} /	/ ruːc^{R3} /	'to deforest (ถางป่า)'
/ rop^{R3} saː^{R1} /	/ rop^{R3} saː^{R1} /	'fight'
/ rot^{R3} cʰaːt^{R3} /	/ rot^{R3} caːt^{R3} /	'taste'
/ roŋ^{R3} riən^{R3} /	/ ruŋ^{R3} riən^{R3} /	'school'
/ roːŋ^{R3} /	-	'farmhouse grange (โรงนา)'
/ roːj^{R2} mən^{R1} /	/ roːj^{R2} mən^{R1} /	'cantaloup'
/ rɔk^{R1} /	/ rɔk^{R1} /	'toad'
/ rɔːp^{R1} /	/ rɔːp^{R1} /	'embrace'
/ rɔːk^{R3} /	/ roːk^{R3} /	'hide (ซุกของ)'
/ rɔːn^{R3} /	/ roːn^{R3} /	'to winnow'
/ rɔːŋ^{R3} /	/ roːŋ^{R3} /	'centipade'
/ rɔːj^{R4} /	/ roːj^{R2} tɔːŋ^{R1} /	'cucumber'
/ rɨʔ^{R1} /	/ rɨʔ^{R1} /	'or'
/ rɨh^{R1} /	/ rɨh^{R1} /	'to sing'
/ riən^{R3} /	/ riən^{R3} /	'study'
/ ruəj^{R1} /	/ ruəj^{R1} /	'rich'

/ w /

/ wic^{R1} /	/ wic^{R1} /	'again'
/ wiː^{R1} waːt^{R1} saː^{R1} /	/ kəsup^{R1} saː^{R1} /	'quarrel'

/ wiː^{R3} /		'to wave (hand) (แกว่งมือ)'
/ wiːŋ^{R1} /	/ wiːŋ^{R1} /	'forget'
/ weːt^{R3} /	/ wiːt^{R3} /	'unripe (fruit)'
/ wɛːk^{R3} /	/ kəweːk^{R3} /	'to rock'
/ weːŋ^{R1} /	/ weːŋ^{R1} /	'raw'
/ wət^{R3} /	/ wət^{R3} /	'find (v.)'
/ wət^{R3} /	/ wət^{R3} /	'temple'
/ wət^{R3} /	/ wəh^{R1} /	'to measure'
/ wət^{R3} məheːm^{R1} /	/ wət^{R3} məheːm^{R1} /	'breathe'
/ wən^{R3} /	/ wən^{R3} /	'day'
/ wən^{R2} /	/ wən^{R2} /	'tomorrow'
/ wən^{R3} put^{R3} /	/ wən^{R3} put^{R3} /	'Wednesday'
/ wən^{R3} pʰəhat^{R1} /	/ wən^{R3} pəhat^{R1} /	'Thursday'
/ wən^{R3} can^{R1} /	/ wən^{R3} can^{R1} /	'Monday'
/ wən^{R3} ʔətʰit^{R3} /	/ wən^{R3} ʔətit^{R3} /	'Sunday'
/ wən^{R3} ʔəkʰaːn^{R3} /	/ wən^{R3} ʔəkaːn^{R3} /	'Tuesday'
/ wən^{R3} ʔan^{R1} /	/ wən^{R3} ʔan^{R1} /	'today'
/ wən^{R3} saw^{R1} /	/ wən^{R3} saw^{R1} /	'Saturday'
/ wən^{R3} suk^{R1} /	/ wən^{R3} suk^{R1} /	'Friday'
/ waŋ^{R3} /	/ ʔaːw^{R1} /	'bay, gulf '
/ waŋ^{R3} coːc^{R2} /	/ muj^{R3} kuŋ^{R3} /	'nausea'
/ wah^{R1} /	-	'เปิดน้ำ (ออกจากนา)'
/ waː^{R1} /	/ waː^{R1} /	'monkey'
/ waː^{R1} krɛh^{R1} /	/ waː^{R1} krɛh^{R1} /	'langur (ค่าง)'
/ waːŋ^{R1} /	/ waːŋ^{R1} /	'empty'
/ waːŋ^{R2} /	/ waːŋ^{R2} /	'want'

/ waːŋ^{R3} /	/ waːŋ^{R3} /	'to put'
/ waːj^{R3} /	/ waːj^{R3} /	'field'
/ waːj^{R3} kəhɔːŋ^{R1} /	/ tuːn^{R1} ləhɔːŋ^{R1} /	'forge (ตีเหล็ก)'
/ wok^{R3} /	/ wok^{R3} /	'clothes'
/ wok^{R3} pʰuəj^{R1} krat^{R1} /	/ wok^{R3} kʰluk^{R1} krah^{R1} /	'rug'
/ wok^{R3} kəpɨt^{R1} /	/ wok^{R3} kəpɨt^{R1} /	'sarong'
/ wok^{R3} kətʰɛːŋ^{R1} /	/ wok^{R3} ciːt^{R3} tɔŋ^{R1} /	'rag, duster'
/ wok^{R3} kʰəmaː^{R3} /	/ wok^{R3} kəmaː^{R3} /	'loincloth'
/ wok^{R3} pʰrɛː^{R3} /	/ wok^{R3} preː^{R1} /	'taffeta'
/ wok^{R3} kʰluk^{R1} /	/ wok^{R3} kʰluk^{R1} /	'blanket'
/ wɔk^{R1} /	/ wok^{R1} /	'to scoop'
/ wiən^{R1} /	/ mun^{R1} /	'turn around'

/ j /

/ jim^{R1} /	/ jim^{R1} /	'smile'
/ jiː^{R1} /	/ jiː^{R1} /	'joke หลอก (ของ)'
/ jeːk^{R3} /	/ jeːk^{R3} /	'separate'
/ jəːŋ^{R3} /	/ jɨːŋ^{R3} /	'high'
/ jəːŋ^{R3} /	/ jɨːŋ^{R3} /	'tall'
/ jaŋ^{R3} ʔih^{R1} /	/ jaŋ^{R3} ʔih^{R1} /	'how'
/ jaŋ^{R3} saː^{R1} /	/ jaŋ^{R3} saː^{R1} /	'similar'
/ jaː^{R1} /	/ jaː^{R1} /	'tobacco'
/ jaː^{R3} /	/ jaː^{R3} /	'grandmother (ย่า)'
/ jaːk^{R3} /	/ jaːk^{R3} /	'difficult'
/ jaːm^{R3} /	/ jaːm^{R3} /	'cry'
/ jaːm^{R3} /	/ jaːm^{R3} /	'guard'
/ jaːŋ^{R1} /	/ jaːŋ^{R1} /	'gibbon'

/ ja:j^{R3} /   / ja:j^{R3} /   'grandmother'

/ jut^{R3} /   / jut^{R3} /   'seize (ยึด)'

/ juŋ^{R3} /   / juŋ^{R3} /   'rice store-house (ยุ้งข้าว)'

/ ju:^{R3} /   / ju:^{R3} /   'to send (ส่งของ)'

/ jok^{R3} /   / jok^{R3} /   'lift'

/ jok^{R3} /   / jok^{R3} /   'build'

/ jok^{R3} t^{h}o:t^{R3} /   / jok^{R3} tu:t^{R3} /   'forgive'

/ jok^{R3} ʔɨt^{R1} p^{h}əj^{R3} /   / jok^{R3} jɔ:ŋ^{R1} /   'praise'

/ jo:^{R1} /   / jo:^{R1} /   'have sexual intercourse'

/ jo:n^{R1} /   / kəju:n^{R1} /   'throw out'

/ jo:ŋ^{R3} /   -   'to hoist (ชักรอก)'

/ jɔ:m^{R3} p^{h}ɛ:^{R3} /   / jo:m^{R3} pe:^{R3} /   'surrender'

/ jɔ:m^{R1} si:^{R1} /   / kəlok^{R3} /   'dye'

/ jɔ:m^{R3} rap^{R3} /   / jɔ:m^{R3} rap^{R3} /   'confess'

/ pl /

/ plak^{R1} /   / plak^{R1} /   'to break'

/ plɔŋ^{R1} /   / plɔŋ^{R1} /   'rice (cooked)'

/ plɔŋ^{R1} pe:w^{R2} /   / plɔŋ^{R1} pe:w^{R2} /   'dinner'

/ plɔŋ^{R1} p^{h}a:ŋ^{R3} /   / plɔŋ^{R1} pa:ŋ^{R3} /   'breaskfast'

/ plɔŋ^{R1} kəmi:p^{R3} /   / plɔŋ^{R1} kəmi:p^{R3} /   'glutinous rice'

/ plɔ:k^{R2} /   / pruʔ^{R1} /   'mud'

/ plɔ:j^{R1} /   / plɔ:j^{R1} /   'release'

/ pliən^{R1} /   / pliən^{R1} /   'change'

/ pr /

/ pri:^{R1} /   / pri:^{R1} /   'monitor'

/ pri:ŋ^{R1} /   / pri:ŋ^{R1} /   'oil'

/ prə?o:^{R1} /	/ prə?o:^{R1} /	'yesterday'
/ prə:^{R1} /	/ prə:^{R1} /	'employ (v.)'
/ prak^{R1} /	/ prak^{R1} /	'silver'
/ prak^{R1} ka:ŋ^{R3} /	/ ka:^{R3} ca:ŋ^{R1} /	'wages'
/ prak^{R1} rian^{R1} /	/ rian^{R1} prak^{R1} /	'coin'
/ pra?^{R3} sɔŋ^{R1} /	/ pra?^{R3} sɔŋ^{R1} /	'priest'
/ pru:k^{R3} /	/ tɛ:ŋ^{R1} ka:n^{R1} /	to marry'
-	/ pro:t^{R3} /	'a kind of bee (ผึ้งโพรง)'
/ prɔ:ŋ^{R2} /	/ prɔ:ŋ^{R2} /	'coffin'

/ pʰl /

/ pʰli:^{R1} /	/ pʰli:^{R1} /	'fruit'
/ pʰli:^{R1} kəno:t^{R1} /		'sugar plam fruit'
/ pʰli:^{R1}jɔ:^{R1} /		'Morinda citriforia'
/ pʰle:ŋ^{R3} /	/ pli:ŋ^{R3} /	'song'
/ pʰle:w^{R2} /	/ ŋɛ:m^{R1} /	'silent'
/ pʰle:w^{R3} /	/ pli:w^{R3} /	'fire'
/ pʰle:w^{R3} kʰəle:w^{R1} /	/ pli:w^{R3} kʰəle:w^{R1} /	'to be on fire (ไฟไหม้)'
/ pʰlɛ:^{R1} pɛn^{R1} /	/ pʰlɛ:^{R1} ruj^{R2} /	'scar'
/ pʰlɛ:k^{R3} /	/ plɛ:k^{R3} /	'to open (something)'
/ pʰlɨŋ^{R1} /	/ pʰlɨŋ^{R1} /	'sky
/ pʰlak^{R1} /	/ pʰlak^{R1} /	'push'
/ pʰla:^{R3} /	/ pla:^{R3} /	'new'
/ pʰla:t^{R3} /	/ pla:t^{R3} /	'miss (target)'
/ pʰla:k^{R3} /	/ pla:k^{R3} /	'chop (v.)'
/ pʰlu:^{R3} /	/ plu:^{R3} /	'leg'
/ pʰloh^{R1} /	/ ploh^{R1} /	'twins'

/ pʰloːmᴿ² /   / pʰloːmᴿ² /   'wax (bees)'

/ pʰlɔːkᴿ³ kənaːjᴿ¹ /   / proːkᴿ³ kənaːjᴿ¹ /   'tusk'

/ pʰr /

/ pʰricᴿ³ mətᴿ³ /   / kricᴿ³ mətᴿ³ /   'blink'

/ pʰriːᴿ³ /   / priːᴿ³ /   'forest'

/ pʰriːŋᴿ¹ /   -   'black plum'

-                      / pʰriːᴿ¹ ŋeːɲᴿ¹ /   'longan'

/ pʰreːmᴿ² /   / pʰreːmᴿ² /   'land leech'

/ pʰrɨhᴿ¹ haːjᴿ¹ /   / prɨhᴿ¹ haːjᴿ¹ /   'to sow'

/ pʰrətᴿ³ /   'to slip out of one's

                                                hand (หลุดมือ)'

/ pʰramᴿ¹ /   / pʰramᴿ¹ /   'five'

/ pʰraːnᴿ³ /   / naːjᴿ³ praːnᴿ³ /   'hunter'

/ pʰroːmᴿ³ /   / proːmᴿ³ /   'ready'

/ pʰrɔʔᴿ³ /   / proʔᴿ³ /   'because'

/ pʰrɔːkᴿ³ /   / prɔːkᴿ³ /   'squirrel'

/ kl /

/ klicᴿ¹ /   / klicᴿ¹ /   'to cut'

/ klapᴿ¹ /   / klapᴿ¹ /   'return'

/ klaːᴿ³ /   / klaːᴿ³ /   'dare'

/ klaːtᴿ³ caːtᴿ² /   / klahᴿ¹ caːᴿ² /   'to sharpen'

/ kloːmᴿ¹ /   / kloːmᴿ¹ /   'Cambodian'

/ klɔmᴿ¹ /   / klɔmᴿ¹ /   'round'

/ klɔːnᴿ¹ /   / klɔːnᴿ¹ /   'door-bolt (กลอน)'

/ klɔːŋᴿ¹ /   / klɔːŋᴿ¹ /   'bone'

/ klɔːŋᴿ¹ taːtᴿ³ /   / klɔːŋᴿ¹ tahᴿ¹ /   'rib'

/ klɔːŋ^{R1} koŋ^{R1}loːŋ^{R1} /	/ klɔːŋ^{R1} luːŋ^{R1} /	'spine'
/ klɔːŋ^{R1} məkʰɔːŋ^{R1} /	/ klɔːŋ^{R1} məkʰɔːŋ^{R1} /	'shin (หน้าแข้ง)'
/ klɔːŋ^{R1} plaː^{R1} raː^{R1} /	/ klɔːŋ^{R1} plaː^{R1} raː^{R1} /	'collar bone'
/ klɨəŋ^{R1} buː^{R1}cʰaː^{R3} /	/ klɨəŋ^{R1} buː^{R1}caː^{R3} /	'offering'

/ kr /

/ krɨp^{R1} /	/ krɨp^{R1} /	'eggplant'
/ krɨp^{R1} pʰuəŋ^{R1} /	/ krɨp^{R1} puəŋ^{R1} /	'small eggplant (มะเขือพวง)'
/ krɨp^{R1} koŋ^{R2} /	/ krɨp^{R1} koŋ^{R2} /	'long eggplant (มะเขือยาว)'
/ krɨp^{R1} krɔːp^{R2} /	/ krɨp^{R1} krɔːp^{R2} /	'a kind of eggplant (มะเขือเปราะ)'
/ krap^{R1} /	/ krap^{R1} /	'to hatch'
-	/ kraɲ^{R1} /	'climbing fish (ปลาหมอ)'
/ kram^{R1} /	-	'soak (water)'
/ krat^{R1} /	/ krah^{R1} /	thick'
/ kraːp^{R3} /	/ kraːp^{R3} /	'to prostrate'
/ kraːk^{R1} /	/ kraːk^{R1} /	'to carry (water)'
/ kraːŋ^{R1} /	/ kraːŋ^{R1} /	'bunch'
/ kruk^{R1} tʰaːk^{R3} /	/ kruk^{R1} taːk^{R3} /	'to pour (water)'
/ krɔŋ^{R1} /	/ krɔŋ^{R1} /	'straight'
/ krɔːk^{R2} haːj^{R1} /	/ krɔːk^{R2} haːj^{R1} /	'ear (of rice)'
/ krɔːŋ^{R1} tʰuj^{R1} /	/ krɔːŋ^{R1} tuj^{R1} /	'millepade'
/ kruət^{R1} /	/ kruəh^{R1} /	'gravel'

/ kʰl /

/ kʰlic^{R3} /	-	'sprain (เคล็ดยอก)'
/ kʰleʔ^{R1} /	/ kʰleʔ^{R1} /	'shame'
/ kʰlɛːp^{R1} /	/ klɛːp^{R1} /	'lick'

/ kʰlɨŋ^{R1} /	/ klɨŋ^{R1} /	'confine (ขัง)'
/ kʰlɨːn^{R1} /	/ kʰlɨːn^{R1} /	'wave'
/ kʰlaʔ^{R1} /		'to spit (something from mouth)'
/ kʰlaw^{R2} /	/ ɲam^{R1} /	'knead'
/ kʰlaw^{R2} /	/ klaw^{R2} /	'newt'
/ kʰlaː^{R1} /	/ kʰlaː^{R1} /	'road'
/ kʰlaː^{R3} /	/ klaː^{R3} /	'screech'
/ kʰlaːt^{R2} /	/ kʰlaːt^{R2} /	'small termite'
/ kʰlaːc^{R1} /	/ kʰlaːc^{R1} /	'to scratch'
/ kʰlaːŋ^{R2} /	/ kʰlaːŋ^{R2} /	'hawk'
/ kʰluk^{R1} /	/ kʰluk^{R1} /	'cover'
/ kʰluj^{R1} /	/ kʰluj^{R1} /	'flute'
/ kʰluːm^{R2} /	/ kʰluːm^{R2} /	'urinate'
/ kʰloːp^{R3} kʰluə^{R1} /	/ kloːp^{R3} kluə^{R1} /	'family'
/ kʰloŋ^{R4} /	/ kroːŋ^{R2} ʔuh^{R1} /	'log'
/ kʰlɔʔ^{R1} /	/ kʰlɔʔ^{R1} /	'shellfish'
/ kʰlɔʔ^{R1} loː^{R1} /	/ kʰlɔʔ^{R1} loː^{R1} /	'pond snail'
/ kʰlɔʔ^{R1} cuːc^{R3} /	/ kʰlɔʔ^{R1} ŋət^{R1} /	'mud snail'
/ kʰlɨəŋ^{R1} tiː^{R1} /	/ kʰlɨəŋ^{R1} tiː^{R1} /	'tool'

/ kʰr /

/ kʰreːm^{R1} /	/ kreːm^{R1} /	'creel (ไซ, ลอบ)'
/ kʰrɛːŋ^{R2} /	/ kʰrɛːŋ^{R2} /	'night'
/ kʰrɨŋ^{R1} /	/ krɨŋ^{R1} /	'half'
/ kʰrəːp^{R2} /	/ kʰrɨːp^{R2} /	'to berp'
/ kʰraːɲ^{R3} /	/ kraːɲ^{R3} /	'drink (fermented)'

/ kʰrur̥^{R1} /	/ kruŋ^{R3} /	'pigsty'
/ kʰruː^{R3} /	/ kruː^{R3} /	'teacher'
	/ kw /	
/ kwak^{R1} tiː^{R1} /	/ kwak^{R1} tiː^{R1} /	'to beckon'
/ kwaːt^{R1} /	/ waːj^{R3} /	'crawl' .
/ kwaːm^{R1} kʰit^{R3} /	/ kwaːm^{R1} kit^{R3} /	'idea'
/ kwaːm^{R1} lap^{R3} /	/ kwaːm^{R1} lap^{R3} /	'secret'
/ kwaːm^{R1} waŋ^{R1} /	/ waŋ^{R1} ʔiːn^{R1} lec^{R2} /	'hope'

BIOGRAPHY

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