

**THAVUNG PHONOLOGY AT MUANG KHAMKERT,
BOLIKHAMXAI PROVINCE, LAO P.D.R.**

NUCHANART WAIYANONT

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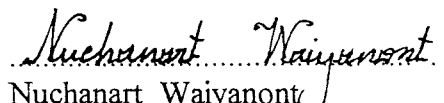
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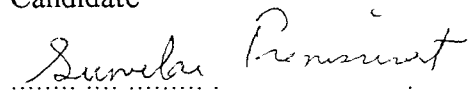
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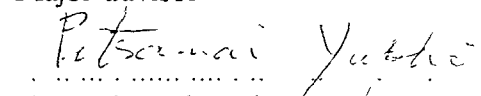
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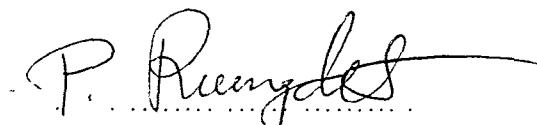
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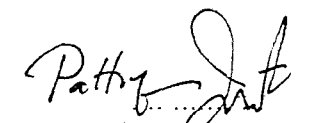
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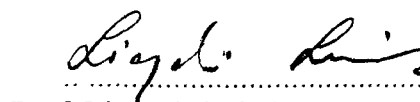

Nuchanart Waiyanont
Candidate

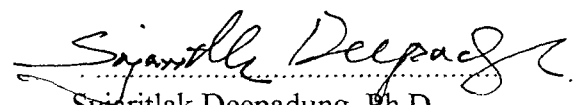

Suwilai Prensirat, Ph.D.
Major-advisor


Pitsamai Yupho, Ph.D.
Co-advisor


Ruengdet Pankhuenkhat, Ph.D.
Co-advisor


Pattiya Jimrengat, Ph.D.
Co-advisor


Prof. Liangchai Limlomwongse
Ph.D.
Dean
Faculty of Graduate Studies


Sujaritlak Deepadung, Ph.D.
Chairman
Master of Arts Programme
in Linguistics
Institute of Language and Culture
for Rural Development

Thesis

entitled

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BOLIKHAMXAI PROVINCE, LAO P.D.R.**

was submitted to the Faculty of Graduate Studies, Mahidol University
for the degree of Master of Arts (Linguistics)

on

November 26, 1998

Nuchanart Waiyanont

Nuchanart Waiyanont

Candidate

Suwilai Pemsrirat

Suwilai Pemsrirat, Ph.D.

Chairman

Pitsamai Yupho

Pitsamai Yupho, Ph.D.

Member

Pattiya Jimreivat

Pattiya Jimreivat, Ph.D.

Member

Payau Charoenchai

Payau Charoenchai, M.A.

Member

Prof. Liangchai Limlomwongse

Prof. Liangchai Limlomwongse

Ph.D.

Dean

Faculty of Graduate Studies

Mahidol University

Suriya Ratanakul

Suriya Ratanakul, Ph.D.

Dean

Institute of Language and Culture

for Rural Development

Mahidol University

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The objective of this thesis is to present a phonological study of the Thavung language spoken in Ban Samhing, Muang Khamkert, Bolikhamxai province, Lao P.D.R. The phoneme, syllable, phonological word and intonation group are analysed by using Tagmemic framework

The thesis presents the phonological system of the Thavung language. A phonological comparison among the three Thavung dialects: Samhing, Khanglek and Nongwaeng Thavung is also briefly investigated

The result of the study shows that the phonological system of the Samhing Thavung is composed of 20 consonant phonemes /p, p^h, b, t, t^h, d, c, k, k^h, ʔ, v, s, h, m, n, ɲ, ɳ, l, w, j/, 20 single vowel phonemes: /i, i:, e, e:, ε, ε:, i:, i:, ə, ə:, ʌ, ʌ:, a, a:, u, u:, o, o:, ɔ, ɔ:/, 3 diphthongs. /ia, ia, ua/ and 3 registers clear voice, clear glottalized voice and breathy voice. There are two types of syllables the major syllables and the presyllables, three types of phonological words: monosyllabic words, disyllabic words and trisyllabic words, two types of intonation groups. falling contour and rising contour

The phonological system of Samhing Thavung is similar to Khanglek and Nongwaeng Thavung. However, there are some differences between the Thavung dialect spoken in different areas

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นุชนารถ ไวยานนท์ : ระบบเสียงภาษาทะวั้ง เมืองคำเกิด จังหวัดบรีคำไซย ประเทศสาธารณรัฐประชาธิปไตยประชาชนลาว (THAVUNG PHONOLOGY AT MUANG KHAMKERT, BOLIKHAMXAI PROVINCE, LAO P.D.R.)

คณะกรรมการควบคุมวิทยานิพนธ์ : สุวิไล เปรมศรีรัตน์, Ph.D., พิศมัย อยู่โพธิ์, Ph.D., กัททिया ยิมเรวัตติ, Ph.D., เรืองเดช ปันเขื่อนขัตต์, Ph.D. 146 หน้า ISBN 974-661-793-1

จุดประสงค์ของวิทยานิพนธ์ฉบับนี้ เพื่อเสนอการศึกษาระบบเสียงภาษาทะวั้ง บ้านซำมอั้ง เมืองคำเกิด จังหวัดบรีคำไซย ประเทศสาธารณรัฐประชาธิปไตยประชาชนลาว การวิเคราะห์หน่วยเสียง(Phoneme) พยางค์(Syllable) ลักษณะคำ(Phonological Word) และทำนองเสียง(Intonation Group) วิเคราะห์โดยใช้ทฤษฎีแทกมีมิก(Tagmemic)

เนื้อหาวิทยานิพนธ์ประกอบด้วยระบบเสียงภาษาทะวั้งทั้งระบบ นอกจากนี้ได้เปรียบเทียบระบบเสียงในสามถิ่นภาษาอื่นได้แก่ ภาษาทะวั้งถิ่นซำมอั้ง ภาษาทะวั้งถิ่นคังเล็ก และภาษาทะวั้งถิ่นหนองแวงไว้ด้วย

ผลการศึกษาพบว่า ระบบเสียงภาษาทะวั้งถิ่นซำมอั้ง ประกอบด้วยหน่วยเสียงพยัญชนะ 20 หน่วยเสียงได้แก่ /p,p^b,b,t,t^b,d,c,k,k^b,ʔ,v,s,h,m,n,ŋ,l,w,j/, หน่วยเสียงสระเดี่ยว 20 หน่วยเสียงได้แก่ /i,i:,e,e:,ɛ,ɛ:,i,i:,ə,ə:, ɤ,ɤ:,a,a:,u,u:,o,o:,ɔ,ɔ:/, หน่วยเสียงสระประสม 3 หน่วยเสียง /ia,ia,ua/ และ ลักษณะน้ำเสียงมี 3 ลักษณะคือ ลักษณะน้ำเสียงปกติ ลักษณะน้ำเสียงปกติตามด้วยการกักของเส้นเสียง และ ลักษณะน้ำเสียงต่ำ-หุ้ม ลักษณะพยางค์มี 2 ลักษณะ คือ พยางค์หลักและพยางค์หน้า ลักษณะคำมี 3 ลักษณะคือ คำพยางค์เดียว คำสองพยางค์และคำสามพยางค์ และทำนองเสียงมี 2 ลักษณะ คือ ทำนองเสียงตก และ ทำนองเสียงขึ้น

ระบบเสียงภาษาทะวั้งถิ่นซำมอั้งมีความคล้ายคลึงกับภาษาทะวั้งถิ่นคังเล็กและภาษาทะวั้งถิ่นหนองแวง อย่างไรก็ตาม พบว่ามีความแตกต่างระหว่างภาษาทะวั้งในต่างที่กันด้วย

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LIST OF ABBREVIATIONS AND SYMBOLS

Asp.	Aspirated
C	Consonant
C1	Initial and final consonant
C2	Initial consonant
C3	Final consonant
F.P	Final Particle
K.T	Khanglek Thavung
N.T	Nongwaeng Thavung
Unasp.	Unaspirated
V	Vowel
Vd.	Voiced
Vl.	Voiceless
R.	Register
/R1/	Clear voice
/R2/	Clear glottalized voice
/R3/	Breathy voice
Req. Particle	Request particle
S T	Samhing Thavung
[']	Strong stress
[,]	Weak stress
[]	Unstress
[^]	High-rising pitch
[^]	High-falling pitch
[-]	Mid-level pitch
[`]	Mid-falling pitch
[~]	Clear glottalized voice
[..]	Breathy voice
·	Syllable break
~	Variation
[—————]	Rising Contour
[—————]	Falling Contour
[]	Phonetic Transcription
/ /	Phonemic Transcription

CHAPTER I

INTRODUCTION

1.1 Background of the study

This thesis is a result of my interest in working with the So(Thavung)* language in Ban Nongwaeng, Sakonnakhon province which was the site for my Field Methods in Linguistics in 1994. From previous research works and some historical information received from interviewing the elderly people in this village, I can summarize that the homeland of these people was in Khamkert district, Khammuan province, Lao People's Democratic Republic (hence P.D.R.). Later, Khammuan was divided into two provinces: Khammuan and Bolikhamxai provinces. Khamkert district was under the administration of Bolikhamxai province. Because of war and famine, their ancestors migrated from there to settle in various places in the northeast of Thailand: Kalasin, Udonthani and Sakonnakhon provinces more than 100 years ago. I was then interested in investigating this Thavung language in Lao P.D.R., where the So (Thavung) in Nongwaeng had migrated from, to see what it looked like and how much it was similar to or different from the So(Thavung).

* The author has used the name So (Thavung) because this Thavung group is known by the name So in Thailand.

1.2 Objective of the study

The objective of the study is to present a phonological description of the Thavung language which is spoken in Ban Samhing, Thavaeng sub-district, Khamkert district, Bolikhamxai province, Lao P.D.R.

1.3 Scope of the study

The study is concentrated on the phonological system of the Samhing Thavung. The analysis covers the phoneme, syllable, phonological word and intonation group.

1.4 Benefits of the study

1.4.1 This study provides an analysis of the sound system of the Samhing Thavung language in Ban Samhing, Thavaeng sub-district, Khamkert district, Bolikhamxai province, Lao P.D.R. which is the homeland of the Thavung in Thailand

1.4.2 This study will give useful data for Mon-Khmer linguists and others who are interested in Vietic languages.

1.5 General information about the Samhing Thavung speakers in Lao P.D.R.

The historical information of the Samhing Thavung speakers given here has been received from the elderly people in Ban Samhing. I can conclude that the Samhing Thavung homeland was in the present Khamkert district, especially

on the foot of the Phu - luang mountain which was a natural boundary between Lao P.D.R and Vietnam. In 1791, after the war Lao P.D.R was under the occupation of Thailand. The people in this country including some Samhing Thavung were compelled to come to Thailand, some of them willing to come to Thailand because of famine and some fled to the forest. The Samhing Thavung speakers lived in the forest for many years, until this land became the colony of France. Later, they went out of the forest and settled in the villages at Ban Samhing and Ban Khanglek

This group of people call themselves “t^hawɿ:ŋ”. The Laos people call them “k^hà:t^hawɿ:ŋ”. In this study will use the name Samhing Thavung to refer to the Thavung speakers in Ban Samhing, Thavaeng sub-district, Khamkert district, Bolikhamxai province, Lao P.D R

1.5.1 Some information concerning the Lao People’s Democratic Republic.

Lao P.D R. is a landlock country on the Indochinese peninsula The southern half of the country lies between the Mekong river on the west and the Annamite on the east. It shares common borders with southern China, northern Thailand and Myanmar in the north and Cambodia in the south. The total area approximately 236,800 square kilometers. The major part of the land is extremely mountainous and full of forests. The country is divided the administration into sixteen provinces . Phongsali, Luang Namtha , Udomxai,

Bokao , Luang Phrabang , Hua Phan , Sayabuli, Xiang Khwang , Bolikhamxai , Khammuan , Savannakhet , Salavan , Sekong , Campasak , Attapue and Vientiane. Each of the sixteen provinces is governed by a governor called Chao Khwaeng. Eighty percentage of the inhabitants are agriculturists. The population in Lao P.D.R. is about 4.5 million comprising sixty-eight different ethnic groups with their own custom, dialects and costumes.

Halpern and Kunstadler (1967), divide the ethnic groups in Lao P D R. into three groups. Highland Lao (calls Lao Sung) includes Meo and Yao. They are generally mountaintop dwellers , dependent on swidden rice agriculture for subsistence, on opium for their income, and on livestock production for sale as well as for sacrifice. Lowland Lao (calls Lao Lum) includes Phu-Thai, Phuan, Thai-Lue and etc. Most of them live in the lowland. Their life depends on rice agriculture. And the last group is Central Lao (calls Lao Thoeng) is a group of people who are descendants of the indigenous Proto - Indochinese. They are Mon-Khmer speakers. They include the Khmu, Thin, Lamet and etc. The Thavung language is in this group

1.5.2 General information about the Samhing Thavung settlement.

I have got the information about the Samhing Thavung settlement from the Education Department of Khamkert district. And I can conclude that in the present time the Samhing Thavung speakers live in

Ban Samhing and Ban Khanglek which are the villages of Thavaeng sub-district, Khamkert district, Bolikhamxai province, Lao P.D.R. And the area of my study focuses on Ban Samhing. Bolikhamxai province consists of six districts and each district is administered by Chao Muang. The following are the districts (Muang) in this province.

- | | |
|------------------------|----------------|
| 1) Paksan district | เมืองปากซัน |
| 2) Pakkrading district | เมืองปากกระดิง |
| 3) Bolikhan district | เมืองบอริซัน |
| 4) Thaphrabad district | เมืองท่าพระบาท |
| 5) Viangthong district | เมืองเวียงทอง |
| 6) Khamkert district | เมืองคำเกิด |

Khamkert district is located in the east of Bolikhamxai province. It is about 195 kilometers from Paksan district. It borders with Viangthong district in the north, Yommalat district of Khammuan province in the south, Vietnam in the east and pakkrading district in the west. The following are the sub-districts (Tasaeng) in Khamkert district.

- | | | | |
|------------------------|--------------|---------------------------|-------------|
| 1) Laksao sub-district | ตาแสงหลักขาว | 9) Sopcak sub-district | ตาแสงซบจาก |
| 2) Napae sub-district | ตาแสงนาแป | 10) Khammuan sub-district | ตาแสงคำม่วน |

- | | | | |
|----------------------------|--------------|---------------------------|---------------|
| 3) Naluang sub-district | ตาแสงนาหลวง | 11)Khamkert sub-district | ตาแสงคำเกิด |
| 4) Nacaeng sub-district | ตาแสงนาแง | 12)Phonthoen sub-district | ตาแสงโพนเทิน |
| 5) Kaengdaeng sub-district | ตาแสงแก่งแดง | 13)Phanviang sub-district | ตาแสงพันเวียง |
| 6) Namvaew sub-district | ตาแสงน้ำแหว | 14) Cam sub-district | ตาแสงจำ |
| 7) Namsak sub-district | ตาแสงน้ำสัก | 15) Ka-an sub-district | ตาแสงกะอาน |
| 8) Soppon sub-district | ตาแสงซบปอน | 16) Thavaeng sub-district | ตาแสงทะเวง |

Thavaeng sub-district is an area of 178 square kilometers It consists of 10 villages The Samhing Thavung people only live in Ban Samhing and Ban Khanglek Different ethnic groups are found in other villages as follows

- | | | |
|-----------------|-------------|---------------------------------|
| 1) Ban Samhing | บ้านซ่มฮิ่ง | (Thavung people) |
| 2) Ban Khanglek | บ้านคังเล็ก | (Thavung people) |
| 3) Ban Samtoey | บ้านซ่มเตย | (Phu-Thai people) |
| 4) Ban Phonsai | บ้านโพนไซ | (White-Meo, Thai-Maen people) |
| 5) Ban Phonkham | บ้านโพนคำ | (Thai-Puak people) |
| 6) Ban Kongphat | บ้านกงพัต | (Phu - Thai, Thai-Phong people) |
| 7) Ban Nakhwan | บ้านนาขวัญ | (Thai-Maen people) |

- 8) Ban Nacalai บ้านนาจะไร (White-Meo, Thai-Moi people)
- 9) Ban Phuviang บ้านภูเวียง (White-Meo people)
- 10) Ban Nonghong บ้านหนองหงส์ (Thai-Kha people)

1.5.3 General information about the Samhing Thavung culture

Birth and death

The woman normally give birth in the house aided by a midwife, husband and relatives or member of the family. The placenta of the baby is cut by a sharp bamboo. Thereafter, they bury the placenta at the foot of the ladder of that baby's home. In this way, they believe that the baby will grow and live in this house and do not stay in other places.

Whenever a Samhing Thavung man or woman is on the verge of death, relatives must prepare the ritual ceremony. For three days that relatives are prohibited to bury the dead people: Monday, Wednesday and Friday. The dead is buried in the forest when the sun is about to set. The villager bring popped rice to the tomb to pay respect. When the body is put into the coffin, the prayer for the dead is done by the monks. The male descendants of the dead must enter the priesthood for a week. If that house do not have male descendants, they will hire a man in the village to be ordained as a monk. Normally the member of the dead's family can not leave the house for seven days after the burial, the wings and legs of chicken will be

put on the tray and brought to worship at the graveyard.

Belief

The Samhing Thavung are animist. They worship ancestor spirit, house guardian spirit and village spirit. They build a village spirit house in the forest. They believe that these spirits still lurk in the village. Furthermore, there is a sacrificing ceremony in January. Three animals (hen, pig and buffalo) are sacrificed to all of spirits. It seems to be a cycle for sacrifice things. For this year hen is the main thing, the next year pig is the main thing and the year after next is buffalo. Then the following year is the year of the hen again. Other offering are four jars of wine, four bamboo stems of glutinous rice, four cups of tea, four plates of rice, four bowls of chicken pork or buffalo curry (depends on what an animal is selected in that year), and the last thing is a couple of candle. The ritual is usually starts at 8 o'clock in the morning and lasts at 3 o'clock in the afternoon. While they were sacrificing, they will have a person (called câw câm) whom prayed for the ritual.

Marriage

When a man and a woman agree to marry, the man and a match maker will bring two pairs of candle to a woman's house for an engagement ceremony. On the wedding day the bridegroom will bring a pot of pig's blood, two jars of wine, two hens, an ox, and a receptacle made of banaba leaves. According to the custom

of this tribe, if the bridegroom lives at the bride's house after marriage. The bride will lose a pig for the ceremony. However, if the bride lives at bridegroom's house, the bride will lose four pigs.

Occupation

The Samhing Thavung people have to depend entirely on themselves. They do not only grow rice and vegetables for consumption, but also like to hunt wild animals. The villager will gather the wild things such as honey and bamboo shoot to sell to the market after the season of agriculture ends. Some Thavung still leave their own cloth as in the old days, but some of them buy it from the mart.

Dwelling

Most of the Samhing Thavung houses have only one room. They sleep, cook and do the weaving in this area. Floors of each were made of wood. Roof and walls were made of drygrass. The space beneath the floor of the house was used to store equipments such as pounding rice mortar and weaving machine.

1.6 Language affiliation

The Thavung language belongs to the Vietic sub-branch of the Mon-Khmer, a major branch of the Austroasiatic. It was first studied by Ferlus in 1979. The relationship between Thavung and other languages in Austroasiatic are shown in the diagram below.

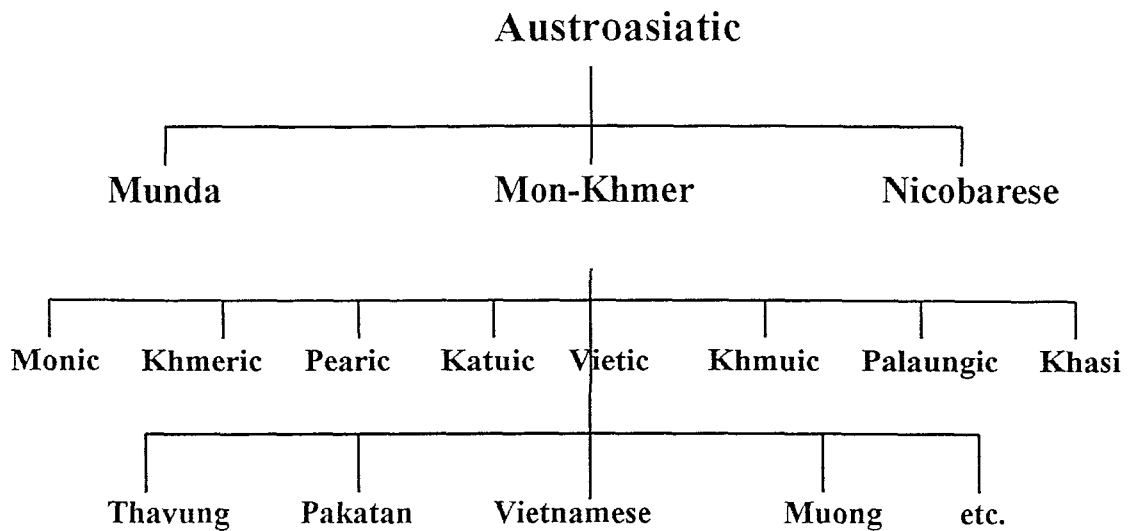


Chart1 · Diagram showing the Thavung language in Austroasiatic Language family (Premsrirat 1996)

1.7 Literature Reviews

The previous studies of the Thavung language can be summarized as follows

1) Lexique Thavung - Francais by Michel Ferlus (1979)

This paper describes the phonology of Thavung language at Khammuan province, Lao P D R. It is the preliminary survey work. The author gives information about the phonology and the comparison of an initial and final consonant phonemes between Thavung and Vietnamese words. There are three sets of initial consonants 1) voiceless unaspirated stops /p,t/ in Thavung corresponds with voiced stops /b, d/ in Vietnamese as in /poon³/ to /b¹on/ ‘four’ and /taŋ¹/ to /đ¹ang/ ‘bitter’, 2) voiced stops of Thavung /b,d/ corresponds with nasals

/m,n/ as in /boh¹/ to /m²/ 'to open' and /daak¹/ to /nu²ɔc/ 'water' and 3) alveolar fricative /s/ corresponds with alveolar stop /t/ as /sók¹/ to /tóc/ 'hair' The final spirant /h,yh/ in Thavung corresponds with words that have tone hoi-ngã in Vietnamese as /kóh/ to /cò²/ 'grass' and /layh¹/ to /lũoi / 'tongue'.

2) The Mutation of /r/ in Pre-Thavung by La Vaughn H. Hayes (1982)

This paper describes the mutation of /r/ in four positions. First, initial consonant /r/ is described on the Pre-Thavung vibrant which occurs initially in monosyllabic words and in the second syllable forms. In both environments it mutates to the voiceless laryngeal spirant /h/. Second, medial consonant /r/ which occurs after /m/ it changed to /h/ In another case, the /sr/ is changed to aspirated apical stop /t^h/ Furthermore, in cluster with simple stops /-r-/ developed in two patterns depend on whether the cluster was word initial or medial. Third, Pre-Thavung final consonant /-r/ merged into the final lateral Finally, in the presyllable /r/ appeared as a nucleus preceded by a simple stop.

3) Vietnamese tono-genesis and new data on the registers of Thavung by Gerard Diffloth (1990)

This paper shows that Thavung, a dying Vietic language spoken in

central Laos, is related to Vietnamese. It has retained most of the typological features of Mon-Khmer languages and can be described as a 4 register language: clear non-glottalized, breathy non-glottalized, clear glottalized and breathy glottalized. Comparison with Vietnamese, and with the Viet-Muong branch of Vietic shows that the glottalized and non-glottalized contrast of Thavung is also old. Thavung words with final stops, spirants and the glottalized registers have cognates with Vietnamese words having the *sác* or *nang* tones; words of the same type, but with the non-glottalized registers have cognates with the *ngang* or *huyền* tones. Words ending with *-h* or *-y*, which regularly have Vietnamese cognates with the *hoi* or *ngã* tones.

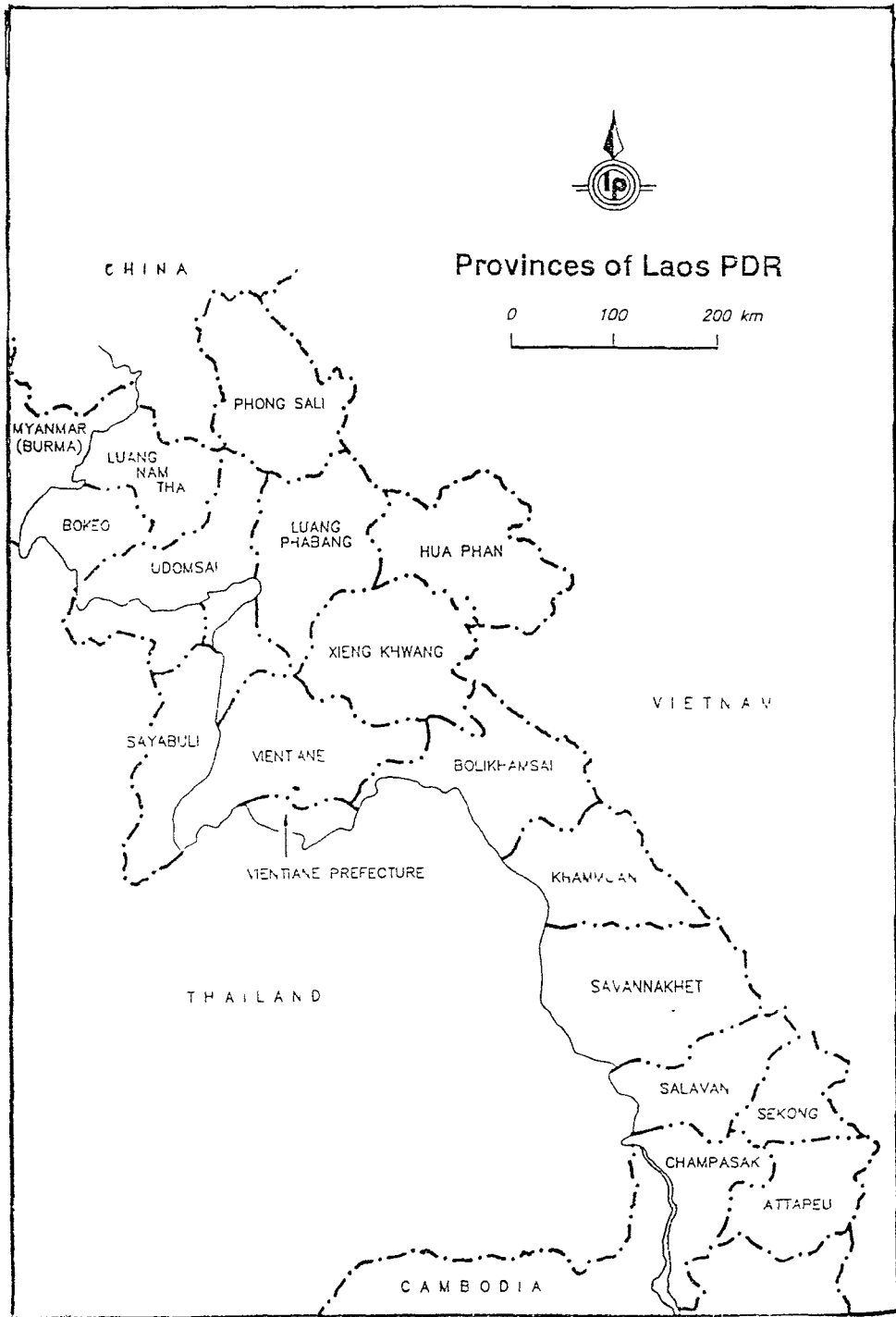
4) Endangered Language of Mainland Southeast Asia by James A. Matisoff (1991)

This paper investigated the endangered language of mainland Southeast Asia. The writer begins with a brief overview of the Southeast Asia linguistic scene and followed by a discussion of some of the theoretical issues involved in language endangerment and as a survey of the situation of minority languages in the twelve nations of the region: China, India, Bangladesh, Nepal, Bhutan, Burma, Thailand, Vietnam, Cambodia, Malaysia and Laos. The writer shows that Laos comprises four language families: Tai-Kadai, Austroasiatic, Hmong-Mien and Tibeto-Burman. It has the largest number of Austroasiatic languages of any country, but with a tiny average number of speakers. Moreover, he indicates that

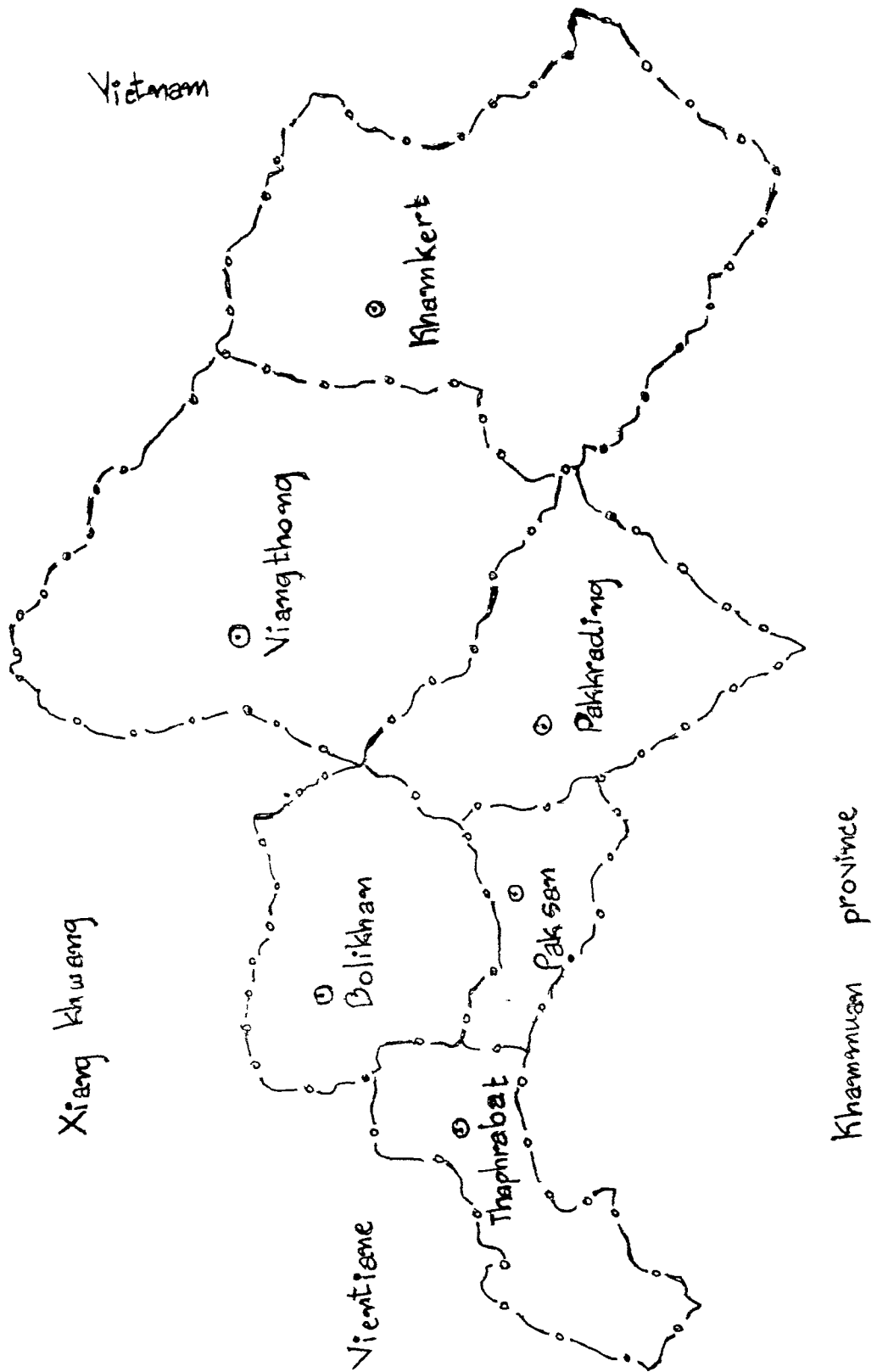
Thavung language (endangered; Viet-Muong) is one of fifty-seven languages of this family

5) Phonological characteristics of So (Thavung), a Vietic language of Thailand by Suwilai Premsrirat (1996)

This article describes the phonology of So(Thavung) language that is spoken in Songdao district of Sakonnakhon province. The author states that this dialect has 21 consonants, all of them can occur as initial consonants: / p, p^h, b, t, t^h, d, c, k, k^h, ʔ, f, v, s, h, m, n, ɲ, ŋ, l, w, j/ and 11 can occur as the final consonants: /p, t, k, ʔ, s, h, m, n, ŋ, v, j/. No consonant cluster have been found in this system. It has 10 single vowel phonemes and 2 diphthongs / i, e, ε, i, ə, ʌ, a, u, o, ɔ, ia, ua/. There are three pitches which consist of rising pitch, rising - falling pitch, and mid-level pitch. Furthermore, she also mentioned that this language has three voice qualities: clear (unmark), creaky (̰) and breathy (̤). She also describes the three types of syllable structure: monosyllabic, disyllabic and trisyllabic word in this language. The differences between the speeches of the old and the young speakers have also been pointed out.



Picture1 : Map of the Lao People's Democratic Republic (Vietnam, Laos & Cambodia - a travel survival kit, 1991)



Picture2 : Map of Bolikhamxai province showing Khamkert district.



Picture3 Map of Khamkert district showing Thavaeng sub-district



Picture4 : Map of Thavaeng sub-district showing Ban Samhing.

CHAPTER II

METHODOLOGY

2.1 Preparation

2.1.1 Studying the previous works and the research area

First of all, I studied previous works and available documents about the Thavung language in order to get some general ideas about the history, language, settlement, etc. Then, I started choosing the area for investigation. I have chosen to study the Thavung language in Khamkert district, Bolikhamxai province which is the homeland of the So (Thavung). After that, a preliminary survey was made in November 1996.

2.1.2 Fieldtrip preparation

2.1.2.1 First of all, I asked for a letter saying that I am a student at the Institute of Language and Culture for Rural Development, Mahidol University and interested in investigating the Thavung language in Lao P D R.

2.1.2.2 I made a visa at the Embassy of the Lao P D R. in Thailand and asked for a letter from the Embassy saying that I would like to study the Thavung language in Bolikhamxai province of Laos and would like to have some helps (safety and convenience) during my stay in this province.

2.1.2.3 Then, I traveled to the immigration office at Bung Kan district, Nongkhai province and crossed the Mekong river by boat to Paksan district which is the capital city of Bolikhamxai province.

2.1.2.4 I contacted the Education Department of Bolikhamxai province and gave two letters from the Institute of Language and Culture for Rural Development, Mahidol university and the Embassy of the Lao P.D.R. to the head of this department informing about the purpose of the trip. Later, the head selected an official to lead the way to Ban Samhing, Thavaeng sub-district, Khamkert district, Bolikhamxai province.

2.1.2.5 I traveled to the Education Department of Khamkert district with an official by bus, contacted with the head of this department so that I could go to the research area. The linguistic field work on the Samhing Thavung was then done during 2 - 22 February 1997.

There were many problems for travelling in Laos especially Bolikhamxai province I could travel only in the winter and summer. It did not suit for travelling in the rainy season because, the roads in this province were under construction. The bus took a long time to get to the destination, so I had to travel in the early morning. Another important thing, I had to go to the research area with an official because villagers were afraid of strangers and did not want to talk to strangers.

2.2 Selecting wordlist

I have collected 1,265 words which are mainly basic words used in daily life including some basic sentences. In collecting data besides the prepared wordlist I also used illustrations and real objects found in the village. The wordlist used for analysis in this thesis is provided in the appendix.

2.3 The data collection

The data of the Samhing Thavung was collected in November 1996 during the survey and between 2-22 February 1997. I did not stay in the village because it was not safe. I, therefore, had to travel from the place where I stayed to the village everyday. I have selected informants according to the following criteria:

1. The informants must be native speakers of the Samhing Thavung language and also use it in their daily life.

2. The informants should be over 60 years old. I chose two elder women I could not find suitable male informants because most of them had to work

3. The informants should be patient and willing to answer the questions

4. The informants must have enough time to work with me

Mrs Pong was chosen to be the main informant. She was 70 years old. She was born and got married with Thavung man at Ban Samhing. She is a housewife. She can speak Lao but can not read and write it. Another important informant was Mrs Yam. She is 65 years old. She was born in Ban Samhing and never moved to live in other place. The interview process used to elicit data follows the steps below.

1. I asked the informants to pronounce each word according to the prepared wordlists and then I repeated the word after the informant until it was accepted by the informants

2. The data were transcribed immediately in phonetic symbols based on the International Phonetic Alphabets (I.P.A.) and were written down in field notebook

3. I recorded all the data on the tape recorder.

2.4 The data analysis

The analysis of this language based on Tagmemics which sees the phonology as a hierarchy of ranks. The four ranks in this study are the phoneme, syllable, phonological word and intonation group. The units of each rank have a structure stated in terms of the rank below (except for the lowest rank) and have function stated in terms of rank above (except for the highest rank). I describes the Thavung phonology from the lowest rank (the phoneme) to the highest rank (the intonation group) According to the phonological hierarchy is shown in the following chart

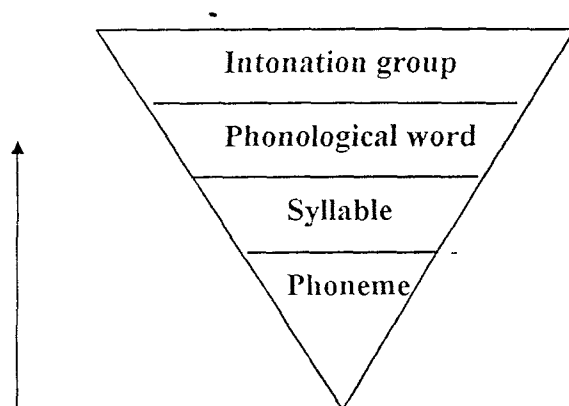


Chart 2 The Phonological hierarchy

CHAPTER III

THE PHONEME

3.1 General definition

The phoneme is defined as the rank whose units function in the syllable. It is the lowest rank of the phonological hierarchy so it has no stable structure. However, the phonetic form of the phonemes may be described.

3.2 Function

The Samhing Thavung language consists of segmental and suprasegmental phonemes. A segmental phoneme is described in terms of consonants and vowels and the suprasegmental phoneme is described in terms of registers. Therefore, the phonemes of this language can be divided into three main classes according to their function in the syllable: consonants, vowels and registers.

3.3 Consonant phonemes

The consonant phonemes function as the periphery of the syllable. There are altogether 20 consonant phonemes in the Samhing Thavung language spoken in Ban Samhing, Khamkert district. All phonemes except /w/ can occur in the initial position: /p, p^h, b, t, t^h, d, c, k, k^h, ʔ, v, s, h, m, n, ɲ, l, j/ and 12 phonemes occur as final consonants: /p, t, k, ʔ, s, h, m, n, ɲ, l, w, j/. There are no consonant clusters in this language.

3.3.1 The Consonant Chart

Points of Articulation / Manners of Articulation		Bilabial	Labio-Dental	Alveolar	Palatal	Velar	Glottal
		Stop	vl.unasp. p vl.asp. p ^h vd.unasp. b		t t ^h d	c	k k ^h
Fricative	vl. vd.		v	s			h
Nasal	vd.	m		n	ɲ	ŋ	
Lateral	vd			l			
Semi-vowel	vd	w			j		

Chart 3 The Samhing Thavung Consonants

- [p^h], [t^h] and [k^h] are interpreted as unit C because there is no initial cluster CC pattern in this language.

3.3.1.1 Formational Statement of Consonants

Stop

A stop is a type of consonant segment produced by a stricture of complete closure, accompanied simultaneously by a velic closure. The air-stream is momentarily completely dammed up, and unable to get through the vocal tract at all. The air is, therefore, compressed behind the point of articulation, and will

escape with a small explosion when the active articulator is removed from contact with the passive one. (Abercrombie 1967:48)

/p/ is a voiceless unaspirated bilabial stop phoneme which has two allophones.

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

[p̚] a voiceless unreleased bilabial stop. It occurs in the final position of the syllable.

Examples:

/pʰiːR1/	[ˈpʰiːl]	‘arm’
/pʰaːmR2/	[ˈpʰaːm]	‘he’
/paːR1/	[ˈpāː]	‘three’
/dɔpR1/	[ˈdɔp̚]	‘to fold’
/ʔuːpR1/	[ˈʔūːp̚]	‘to burn’

/pʰ/ is a voiceless aspirated bilabial stop phoneme. It is realised as

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

Examples:

/pʰiːŋR1/	[ˈpʰiːŋ]	‘please’
/pʰəːR1/	[ˈpʰəː]	‘noodle’
/pʰʌːtR3/	[ˈpʰʌːt̚]	‘to sift’
/pʰoːnR2/	[ˈpʰoːn]	‘to dance (in Thai fashion)’

/b/ is a voiced unaspirated bilabial stop phoneme. It is realised as

/b/ a voiced unaspirated bilabial stop. It occurs in the initial position of the syllable

Examples

/baŋR1/	['bāŋ]	'bamboo shoot'
/bo:jR2/	['bô:j]	'salt'
/bu:mR2/	['bû:m]	'to keep in the mouth'
/bo:tR2/	['bô:t']	'loin cloth for men'

/t/ is a voiceless unaspirated alveolar stop phoneme which has two allophones

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

[t'] a voiceless unreleased alveolar stop It occurs in the final position of the syllable

Examples

/tɪkR1/	['tík']	'to be torn'
/taŋR1/	['tāŋ]	'chair'
/tu:R1/	['tū:]	'to pain'
/ʔo:tR1/	['ʔó:t']	'to give'
/lɔ:tR2/	['lô:t']	'loose'

/t^h/ is a voiceless aspirated alveolar stop phoneme. It is realised as

[t^h] a voiceless aspirated alveolar stop It occurs in the initial position of the syllable.

Examples

/t ^h i:ŋR1/	[^h tʰi:ŋ]	‘bat’
/t ^h ehR1/	[^h tʰéh]	‘sand’
/t ^h ΛkR3/	[^h tʰΛk̃]	‘to be shallow’
/t ^h a:ŋR2/	[^h tʰâ:ŋ]	‘month’

/d/ is a voiced alveolar stop phoneme It is realised as

[d] a voiced alveolar stop It occurs in the initial position of the syllable

Examples

/damR1/	[^h dām]	‘five’
/da:kR2/	[^h dâ:k̃]	‘water’
/do:pR1/	[^h dō:p̃]	‘to smoke’
/do:nR2/	[^h dô:n]	‘hat’

/c/ is a voiceless unaspirated palatal stop phoneme. It is realised as

[c] a voiceless unaspirated palatal stop. It occurs in the initial position of the syllable

Examples

/ci:ŋR3/	[^h c̃i:ŋ]	‘foot’
/ce:mR2/	[^h c̃ê:m]	‘a Siamese lower garment comprising a wide strip of cloth with one end twisted and hitched between the legs’

/cʌ:lR3/	[ˈcʌ:l]	‘hawk’
/cɔmR1/	[ˈcɔm]	‘year’
/co:ŋR3/	[ˈcɔ:ŋ]	‘spade’

/k/ is a voiceless unaspirated velar stop phoneme which has two allophones.

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

[kʰ] a voiceless unreleased velar stop It occurs in the final position of the syllable

Examples

/ki:mR1/	[ˈkᵻ:m]	‘needle’
/kɛ:nR3/	[ˈkɛ:n]	‘ant’
/ka:ŋR1/	[ˈkɑ:ŋ]	‘jar’
/bi:kR1/	[ˈbᵻ:kʰ]	‘to dip up’
/lɔ:kR2/	[ˈlɔ:kʰ]	‘white’

/k^h/ is a voiceless aspirated velar stop phoneme. It is realised as

[k^h] a voiceless aspirated velar stop. It occurs in the initial position of the syllable.

Examples:

/k ^h itR1/	[ˈk ^h itʰ]	‘to nudge’
/k ^h i:R3/	[ˈk ^h i:]	‘fin’

/k ^h ɛ:R2/	[^h kɛ:]	‘crocodile’
/k ^h ɔmR1/	[^h kɔm]	‘rancid’

/ʔ/ is a voiceless glottal stop phoneme. It is realised as

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

Examples:

/ʔɛ:R1/	[^h ʔɛ:]	‘to have’
/ʔʌkR1/	[^h ʔʌk]	‘chest’
/ʔanR1/	[^h ʔān]	‘to eat’
/ʔɔ:ŋR1/	[^h ʔɔ:ŋ]	‘wasp’
/k ^h uʔR1/	[^h kúʔ]	‘bucket’

Fricative

A fricative is a term used in the phonetic classification of consonant sounds on the basis of their manner of articulation also sometimes called spirant, it refers to sounds made when two organs come so close together that the air moving between them produces audible friction. There is no complete closure between the organs (Crystal 1992:143)

/v/ is a voiced labio-dental fricative phoneme It is realised as

[v] a voiced labio-dental fricative It occurs in the initial position of the syllable

Examples

/vitR3/	[ˈvɨtʰ]	‘to throw away’
/vΛiR2/	[ˈvɛ̃:]	‘mad’
/vɛlR1/	[ˈvɛ̃l]	‘left’
/vɔːŋR2/	[ˈvɔ̃ːŋ]	‘mad’

/s/ is a voiceless alveolar fricative phoneme which has two allophones.

[s] a voiceless alveolar fricative It occurs in the initial position of the syllable I have found difference between the speech of old and young people that is [s] and [ʃ] sounds are free variation in the initial position of the syllable .Most of the old prefer to use [ʃ] whereas [s] is not heard from the young people The young prefer to use [s] in stead of [ʃ]

[ç] a voiceless palatal fricative It occurs in the final position of the syllable

Examples

/se:R2/	[ˈsɛ̃:] ~ [ˈʃɛ̃:]	‘hand’
/sɔkR1/	[ˈsɔkʰ] ~ [ˈʃɔkʰ]	‘hair’
/so:tR1/	[ˈsɔ:tʰ] ~ [ˈʃɔ:tʰ]	‘to box’
/kusR3/	[ˈkɨç]	‘fire’
/lasR3/	[ˈlɛ̃ç]	‘tongue’

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

Examples

/hi:lR1/	[ˈhīl]	‘to be hot and spicy (of food)’
/he:hR3/	[ˈhɛːh]	‘root of the tree’
/hu:tR1/	[ˈhū:t̚]	‘to sip’
/li:hR3/	[ˈl̩iːh]	‘to carve’
/nʌ:hR3/	[ˈnʌːh]	‘to see’

Nasal

A nasal is a type of consonant segment which, like a stop, is produced by a stricture of complete closure; however, a nasal has no simultaneous, velic closure. The air-stream, therefore, though prevented from passing through the mouth, is not dammed up; it is entirely diverted through the nose (Abercrombie 1967: 48).

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

Examples

/mikR1/	[ˈmík̚]	‘pencil’
/mo:kR1/	[ˈmó:k̚]	‘grey’

/mɔkR1/	['mɔkʰ]	'lap'
/cu:mR1/	['cū:m]	'trap for a rat'
/ɲi:mR1/	['ɲī:m]	'mind'

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

Examples

/na:jR1/	['nā:j]	'aunt'
/numR1/	['nūm]	'to take'
/no:jR2/	['nô:j]	'to stay'
/bu:nR1/	['bū:n]	'ash'
/lɛ:nR1/	['lɛ:n]	'cliff'

/ɲ/ is a voiced palatal nasal phoneme. It is realised as [ɲ] a voiced palatal nasal. It occurs in the initial position of the syllable.

Examples:

/ɲi:R1/	['ɲī:]	'porcupine'
/ɲu:R2/	['ɲû:]	'to drink'
/ɲo:tR2/	['ɲô:tʰ]	'gibbon'
/ɲɔsR3/	['ɲɔ̌ç]	'grasshopper'

/ŋ/ is a voiced velar nasal phoneme It is realised as

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

Examples

/ŋɛnR1/	['ŋɛ̃n]	'to be light (in weight)'
/ŋʌ:R3/	['ŋʌ:]	'branch of the tree'
/ŋu:jR1/	['ŋū:j]	'table'
/pɔ:ŋR3/	['pɔ:ŋ]	'flower'
/ʔo:ŋR1/	['ʔō:ŋ]	'elephant'

Lateral

A lateral is a term used in the phonetic classification of consonant sounds on the basis of their manner of articulation it refers to any sound where the air escapes around one or both sides of a closure made in the mouth (Crystal 1992 195)

/l/ is a voiced alveolar lateral phoneme It is realised as

[l] a voiced alveolar lateral. It occurs both in the initial and final position of the syllable

Examples

/lukR3/	['lʊkʔ]	'snake'
/lo:tR1/	['lō:tʔ]	'penis'
/lo:R1/	['lō:]	'to beg'

/pa:lR1/	['pā:l]	'to sell'
/t ^h o:lR1/	['t ^h ō:l]	'to cure'

Semi-vowel

Semi-vowel is a term used in the classification of consonant sounds on the basis of their manner of articulation: it refers to a sound functioning as a consonant but lacking the phonetic characteristics normally associated with consonants (such as friction or closure), instead, its quality is phonetically that of a vowel, though, occurring as it does at the margins of a syllable, its duration is much less than that typical of vowels (Crystal1991.313)

/w/ is a voiced bilabial semi-vowel phoneme It is realised as [w] a voiced bilabial semi-vowel It occurs in the final position of the syllable

Examples

/kiwR1/	['kīw]	'mole'
/ʔa:wR2/	['ʔā:w]	'shirt'
/ha:wR1/	['hā:w]	'trap'

/j/ is a voiced palatal semi-vowel phoneme It is realised as

[j] a voiced palatal semi-vowel It occurs both in the initial and

final position of the syllable

Examples

/jɛlR1/	['jēl]	'small'
---------	--------	---------

/ja:ŋR1/	['jā:ŋ]	'glutinous'
/jo:lR1/	['jō:l]	'long'
/po:jR2/	['pô:j]	'field'
/ha:jR1/	['hā:j]	'to put some drops on'

3.3.2 Distribution of Consonants

Consonant phonemes in the Samhing Thavung language can be divided into 3 sub-classes according to their position in the syllable.

3.3.2.1 Consonant sub-class C1

The consonant sub-class C1 are all consonants which can occur both initial and final consonants. They consist of /p,t,k,ʔ,s,h,m,n,ŋ,l,j/

Examples

/po:kR3/	'to tie'
/mupR1/	'to cover up'
/to:ŋR1/	'silver'
/hɔ:tR1/	'bowels'
/kihR3/	'stone'
/tɛ:kR3/	'to be deaf'
/ʔi:kR1/	'rat'
/bɛʔR1/	'goat'
/sɛ:kR1/	'to tear'
/kusR3/	'fire'

/ho:lR2/	'blaze'
/suhR1/	'lung'
/ma:ŋR2/	'elder sister-in-law'
/t ^h o:mR1/	'flash light'
/nΛmR3/	'to sleep'
/pe:nR1/	'floor'
/ŋo:lR2/	'cold'
/cΛŋR3/	'to hate'
/le:R1/	'blue'
/ku:lR2/	'pig'
/jɔmR1/	'to put in'
/sa:jR3/	'ear'

3.3 2.2 Consonant sub-class C2

The consonant sub-class C2 are consonants which can only occur as initial consonants. They consist of /p^h, b, t^h, d, c, k^h, v, ɲ/.

Examples:

/p ^h ɔ:ŋR1/	'to brittle'
/bo:lR2/	'lance'
/t ^h ɔkR1/	'to shrink'
/do:mR1/	'to ride'
/ca:jR2/	'yellow'

/k ^h Δ:tR3/	‘a rake’
/vo:lR3/	‘to come’
/ni:mR2/	‘sugar cane’

3.3.2.3 Consonant sub-class C3

The consonant sub-class C3 is the consonant which can occur as final consonant. In S.T language, are found only /w/.

Example

/ca:wR2/	‘rice’
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3.3.3 Consonant Contrast

All consonants described above are phonemically contrastive in Samhing Thavung language. The consonants which are contrastive in identical (C I E) and analogous environment (C A E) are shown below.

<u>Consonant phonemes</u>	<u>Examples</u>	
/p/- /b/	/pa:jR2/	‘cogon grass’
	/ba:jR2/	‘shamed’
/t/ - /d/	/təhR1/	‘red’
	/dəhR1/	‘chopsticks’
/p/- /p ^h /	/po:nR2/	‘four’
	/p ^h o:nR2/	‘todance (in Thai fashion)’

/t/- /t ^h /	/to:R1/	'clf of animal'
	/t ^h o:R1/	'yam'
/k/- /k ^h /	/ka:R1/	'chicken'
	/k ^h a:R1/	'galanga'
/b/ - /m/	/bitR3/	'to recover from illness'
	/mitR1/	'one'
/d/- /n/	/dΛ:tR2/	'to swallow'
	/nΛ:tR2/	'neck'
/d/- /l/	/damR1/	'five'
	• /lamR1/	'stem of the tree'
/t/- /ʔ/	/tihR3/	'worm'
	/ʔihR3/	'big'
/t/- /s/	/tikR1/	'to be torn'
	/sikR1/	'rattan'
/d/- /s/	/də:R1/	'final particle'
	/sə:R1/	'to put on'

/ʔ/- /h/	/ʔo:mR2/	'to bathe'
	/ho:mR1/	'narrow'
/t/ - /c/	/tu:R1/	'to pain'
	/cu:R3/	'sour taste'
/c/ - /k/	/casR3/	'to comb the hair'
	/kasR3/	'vegetable'
/k/ - /ʔ/	/kɔhR1/	'grass'
	/ʔɔhR1/	'not(negative mk)'
/n/- /ɲ/	/numR1/	'to take'
	/ɲumR1/	'black'
/n/- /ŋ/	/na:jR1/	'aunt'
	/ŋa:jR1/	'morning'
/ɲ/- /ŋ/	/ɲɔ:tR2/	'tree top'
	/ŋɔ:tR2/	'sweet'

3.4 Vowel phonemes

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 classification of vowels, reference would general 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 1992:376-377)

The vowel phoneme functions as the nucleus of the syllable. There are twenty single vowels and three diphthongs in the Samhing Thavung language spoken in Ban Samhing, Khamkert district. They are /i,i:,e,e:,ε,ε:,ɨ,ɨ:,ə,ə:,ʌ,ʌ:,a,a:,u,u:,o,o:,ɔ,ɔ:,ia,ia,ua/. The vowel system can be grouped as shown in the chart below

3.4.1 The Vowel Chart

Tongue position \ Tongue height	Front		Central		Back	
	Short	Long	Short	Long	Short	Long
High	i	i:	ɨ	ɨ:	u	u:
Mid	e	e:	ə	ə:	o	o:
Lower-mid	ε	ε:	ʌ	ʌ:	ɔ	ɔ:
Low			a	a:		
Diphthong			ia	ia	ua	

Chart 4. The Samhing Thavung Vowels

In the Samhing Thavung, vowel length (short and long is a distinctive feature). I just only found this feature in single vowels whereas there is no contrast in diphthongs. However, phonetically I found that the diphthong in the open syllable are longer than in closed syllable. But if the last one has a glottalised voice register, this diphthong will slightly long.

3.4.1.1 'Formational Statement of Vowels

Single Vowels

/i/ is a short high front unrounded vowel phoneme. It is realised as

[i] a short high front unrounded vowel It occurs before

/p,t,k,h,n,ŋ,l,w/.

Examples

/pinR1/	['pɪn]	'to turn'
/tihR3/	['tɪh]	'worm'
/ciŋR1/	['ciŋ]	'ripe'
/kiwR1/	['kiw]	'mole'

/i:/ is a long high front unrounded vowel phoneme. It is realised as

[i:] a long high front unrounded vowel. It occurs before/ p,t,k,

m,n,ŋ,l,w/.

Examples.

/pi:tR1/	['pi:t]	'to grow'
/ti:R1/	['ti:]	'to go'

/ci:nR2/	['cɿ:n]	'nine'
/mi:R1/	['mī:]	'you (polite word)'

/e/ is a short mid front unrounded vowel phoneme. It is realised as

[e] a short mid front unrounded vowel. It occurs before /t,ʔ,h,n,ŋ/.

Examples:

/pehR1/	['pɛ:h]	'to break'
/tehR3/	['tɛ:h]	'leech'
/kehR3/	['kɛ:h]	'to be swollen'

/e:/ is a long mid front unrounded vowel phoneme. It is realised as

[e:] a long mid front unrounded vowel. It occurs before

/t,m,n,ŋ,l,w/.

Examples

/ke:R1/	['kē:]	'a weave'
/ʔe:tR1/	['ʔē:t]	'little'
/he:ŋR1/	['hē:ŋ]	'strong'
/me:lR3/	['mè:l]	'gizzard'

/ɛ/ is a short lower-mid front unrounded vowel phoneme. It is realised as

[ɛ] a short lower-mid front unrounded vowel. It occurs before

/p,t,ʔ,h,m,n,l/.

Examples

/benR1/	['bɛn]	'how many'
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/tətR1/	['tét]	'cheap, right'
/ʔətR1/	['ʔét]	'to raise'
/lɛmR1/	['lēm]	'clf. of tooth'

/ɛ:/ is a long lower-mid front unrounded vowel phoneme. It is realised as

[ɛ:] a long lower-mid front unrounded vowel. It occurs before

/p, t, k, m, n, ŋ, l, w/.

Examples:

/kɛ:lR1/	['kē:l]	'cucumber'
/hɛ:R3/	['hè:]	'placenta'
/mɛ:R2/	['mê:]	'to do'
/t ^h ɛ:R3/	['t ^h è:]	'to shave'

/i/ is a short high central unrounded vowel phoneme. It is realised as

[i] a short high central unrounded vowel. It occurs before

/p, t, k, m, n, ŋ/.

Examples:

ˈtiŋR1/	['tīŋ]	'to stand'
/mɪnR1/	['mīn]	'numb'
/ŋítR1/	['ŋít]	'to puzzle'
/lɪmR1/	['līm]	'clf. of thing'

/i:/ is a long high central unrounded vowel phoneme. It is realised as

[i:] a long high central unrounded vowel. It occurs before

/t, k, m, n, ŋ/.

Examples.

/ʔi:nR2/	[¹ ʔi:n]	‘to pull’
/hi:tR1/	[¹ hi:t]	‘cigarette’
/mi:R1/	[¹ mi:]	‘the day’
/li:ŋR2/	[¹ li:ŋ]	‘to be habituated’

/ə/ is a short mid central unrounded vowel phoneme. It is realised as

[ə] a short mid central unrounded vowel. It occurs before

/p,t,k,ʔ,h,n,ŋ,l,w/.

Examples:

/bənR1/	[¹ bən]	‘to full’
/təwR3/	[¹ təw]	‘moss’
/cəlR1/	[¹ cəl]	‘net’
/ʔəʔR1/	[¹ ʔəʔ]	‘that (conj)’

/ə:/ is a long mid central unrounded vowel phoneme. It is realised as

[ə:] a long mid central unrounded vowel. It occurs before

/p,k,m,n,j/.

Examples:

/kə:R1/	[¹ kə:]	‘near’
/sə:R1/	[¹ sə:]	‘to put on’
/mə:R2/	[¹ mə:]	‘mother’
/lə:R2/	[¹ lə:]	‘to speak or act while asleep’

/ʌ/ is a short lower-mid central unrounded vowel phoneme. It is realised as

[ʌ] a short lower-mid central unrounded vowel. It occurs before

/t,k,ʔ,h,m,n,ŋ,l,w/.

Examples

/pʌnR3/	[ˈpʌn]	‘thousand’
/tʌmR3/	[ˈtʌm]	‘right’
/tʰʌkR3/	[ˈtʰʌk]	‘to be shallow’
/ʔʌnR3/	[ˈʔʌn]	‘short’

/ʌ:/ is a long lower-mid central unrounded vowel phoneme. It is realised as

[ʌ:] a long lower-mid central unrounded vowel. It occurs before

/p,t,k,m,n,ŋ,l,j,w/.

Examples

/tʰʌ:ŋR3/	[ˈtʰʌ:ŋ]	‘wood’
/cʌ:tR2/	[ˈcʌ:t]	‘to die’
/kʌ:ŋR3/	[ˈkʌ:ŋ]	‘mouth’
/jʌ:lR3/	[ˈjʌ:l]	‘to slacken’

/a/ is a short low central unrounded vowel phoneme. It is realised as

[a] a short low central unrounded vowel. It occurs before all

final consonants.

Examples:

/tamR1/	[ˈtām]	‘to weave’
/caIR1/	[ˈcā]	‘to be burned’

/matR1/	['mát]	'eyes'
/casR3/	[câç]	'to sow'

/a:/ is a long low central unrounded vowel phoneme. It is realised as

[a:] a long low central unrounded vowel. It occurs before

/p,t,k,m,n,ŋ,l,w,j/.

Examples:

/da:kR2/	['dâ:k]	'water'
/ca:kR2/	['câ:k]	'to buy'
/ha:lR1/	['hā:l]	'two'
/la:tR1/	['lā:t']	'to hammer'

/u/ is a short high back rounded vowel phoneme. It is realised as

[u] a short high back rounded vowel. It occurs before /p,t,k,ʔ,

s,h,m,ŋ,l/.

Examples

/cuŋR1/	['cūŋ]	'to sit'
/numR1/	['nūm]	'to take'
/ɲumR1/	['ɲūm]	'black'
/hulR1/	['hūl]	'to fly'

/u:/ is a long high back rounded vowel phoneme. It is realised as

[u:] a long high back rounded vowel. It occurs before /p,t,k,m,

n,l,j/.

Examples

/tu:nR3/	['tù:n]	'blind'
/ʔu:R3/	['ʔù:]	'to suck the milk'
/su:nR3/	['sù:n]	'wet'
/mu:tR1/	['mú:t]	'one'

/o/ is a short mid back rounded vowel phoneme. It is realised as [o] a short mid back rounded vowel. It occurs before /p,k,ʔ, h,m,n,ŋ,w,j/.

Examples:

/cokR1/	['cók]	'wound'
/koʔR1/	['kókʔ]	'clf for a mouthful'
/sowR1/	['sōw]	'I (polite word)'
/monR1/	['mōn]	'round'

/o:/ is a long mid back rounded vowel phoneme. It is realised as [o:] a long mid back rounded vowel. It occurs before /p,t,k,m, n,ŋ,l,w,j/.

Examples.

/to:jR3/	['tò:j]	'tail'
/co:R1/	['cō:]	'tart taste'
/ko:nR2/	['kô:n]	'mortar'
/ho:jR1/	['hō:j]	'to smell'

/ɔ/ is a short lower-mid back rounded vowel phoneme. It is realised as

[ɔ] a short lower-mid back rounded vowel It occurs before

/p,t,k,ʔ,s,h,m,n,ŋ,l/.

Examples.

/kɔtR1/	['kɔt]	'umbrella'
/ʔɔŋR1/	['ʔɔŋ]	'father'
/hɔʔR1/	['hɔʔ]	'dry'
/lɔkR1/	['lɔk]	'to extract the tooth'

/ɔ:/ is a long lower-mid back rounded vowel phoneme. It is realised as

[ɔ:] a long lower-mid back rounded vowel It occurs before

/p,t,k,m,n,ŋ,l,j/.

Examples:

/hɔ:tR1/	['hɔ:t]	'mushroom'
/cɔ:mR1/	['cɔ:m]	'the whorl of hair on top of the head'
/hɔ:jR1/	['hɔ:j]	'whistle'
/lɔ:nR2/	['lɔ:n]	'to enter'

Diphthongs

There are three diphthongs in the Samhing Thavung language as follows .

/ia/ a diphthong which starts as a high front unrounded vowel [i] gliding

to a low central unrounded vowel [a] It is phonetically realised as [ia].
It occurs before /p,k,m,n,ŋ,w/.

Examples:

/hiaŋR1/	['hīaŋ]	'chopping block'
/ʔiawR1/	['ʔiaw]	'thin'
/viakR2/	['vīak]	'work'

/ia/ a diphthong which starts as a high central unrounded vowel [i] gliding to a low central unrounded vowel [a] It is phonetically realised as [ia].
It occurs before /k,m,n,ŋ/.

Examples.

/liamR1/	['līam]	'gold'
/p ^b aliaŋR1/	[p ^b a . 'līaŋ]	'rubbish'
/ʔahianR1/	[ʔa . 'hīan]	'to learn'

-- --
/ua/ a diphthong which starts as a high back rounded vowel [u] gliding to a low central unrounded vowel [a] It is phonetically realised as [ua].
It occurs before /k,m,n,ŋ/.

Examples.

/buaŋR1/	['būaŋ]	'spoon'
/tuakR1/	['tūak]	'shrimp paste'
/suaŋR1/	['sūaŋ]	'to forget'

3.4.2 Distribution of vowels

Vowel phonemes in the Samhing Thavung can be divided into two sub-classes according to their occurrences in the syllable.

3 4 2 1 Vowel in Open Syllable

These vowels function in both major syllable and presyllable.

- Vowel in open major syllable

All long single vowels and diphthongs can occur in open major syllable.

Examples:

/k ^h i:R3/	[^h k̄i:]	'fin'
/be:R1/	[^h bē:]	'clf of money'
/ŋe:R1/	[^h ŋē:]	'sharp'
/mī:R1/	[^h mī:]	'day'
/sə:R1/	[^h sé:]	'to put on'
/k̄a:R1/	[^h k̄ā:]	'bee'
/pa:R1/	[^h pā:]	'three'
/ku:R3/	[^h k̄ù:]	'couple'
/t ^h o:R2/	[^h t̄ô:]	'yam'
/ho:R3/	[^h h̄ò:]	'tortoise'
/ciaR1/	[^h cīa]	'paper'
/p ^h iaR1/	[^h p̄īa]	'to accompany side by side'
/k ^h aluaR2/	[^h k̄a . ^h l̄ua]	'to slice (with horizontal motion)'

- Vowel in open presyllable

There are seven short vowels : /i,,e,i,ʌ,a,u,o/occurring in open presyllable.

Examples:

/sɪɲuaR1/	[si .ʔnūa]	'gable'
/mekeŋR1/	[me .ʔkēŋ]	'single'
/ɲihianR1/	[ɲi .ʔhīan]	'lizard'
/lʌlʌ:R1/	[lʌ .lʌ:]	'empty'
/pakə:R2/	[pa .ʔkə:]	'wife'
/ʔuca:ɲR1/	[ʔu .ʔcā:ɲ]	'a little small green frog'
/nono:R1/	[no .ʔnō:]	'who'

3 4 2 2 Vowel in Closed Syllable

These vowels function in major syllable and presyllable

- Vowel in closed major syllable

All vowels can occur in closed major syllable

Examples

/kinR1/	[ʔkɪn]	'liquor'
/ci:ŋR3/	[ʔcɪ:ŋ]	'foot'
/tehR3/	[ʔtɛh]	'leech'
/ʔextR1/	[ʔɛ:t]	'small'
/ʔenR3/	[ʔɛn]	'sinew'

/pɛ:nR1/	['pɛ:n]	'floor'
/lipR1/	['líp]	'to rub'
/p ^h i:mR1/	['p ^h i:m]	'an equipment for a weave'
/bənR1/	['bən]	'to full'
/kə:pR1/	['kə:p]	'shoes'
/t ^h ΛwR3/	['t ^h Λw]	'you (normal word)'
/k ^h Λ:wR3/	['k ^h Λ:w]	'to be fishy (in smell)'
/manR1/	['mān]	'diligent'
/t ^h a:ŋR2/	['t ^h â:ŋ]	'month'
/ʔumR1/	['ʔūm]	'to embrace'
/su:nR1/	['sū:n]	'dark red'
kohR1/	['kóh]	'to rise'
/ʔo:R1/	['ʔō:]	'the cradle'
/ʔonR1/	['ʔōn]	'large bamboo rat'
/ŋɔ:tR2/	['ŋô:t]	'sweet'
/kiawR1/	['kíaw]	'to carry (something) at both ends of a pole placed on one's shoulder'
/ʔaliakR1/	['ʔa . 'liak]	'to select'
/nuajR1/.	['nūaj]	'clf of fruit'

- Vowel in closed presyllable

This sub-class functions in the closed presyllable and consists of /i,a,u,ɔ/

Examples

/dinda:kR1/	[,dɪn . 'dā:k]	'clay'
/caŋjɨ:R1/	[,caŋ . 'jɨ:]	'how'
/t ^h uŋk ^h Λ:ŋR3/	[,t ^h uŋ ^h . 'k ^h Λ:ŋ]	'chin'
/pɔŋʔiamR1/	[,pɔŋ . 'ʔiam]	'window'

3.4.3 Vowels Contrast

All vowels described above are phonemically contrastive in Samhing Thavung language. The vowels which are contrastive in identical environments (C I E) and analogous environment (C A E) are shown below

<u>Vowel phonemes</u>	<u>Examples</u>	
/ɪ/ - /i:/	/piŋR1/	'to shoot'
	/pi:ŋR1/	'to roast'
/ɛ/ - /ɛ:/	/lɛmR1/	'clf. of tooth'
	/lɛ:mR2/	'clf. of knife'
/Λ/ - /Λ:/	/nΛŋR3/	'heavy'
	/nΛ:ŋR1/	'to lean'
/a/ - /a:/	/ʔahaŋR1/	'loud'
	/ʔaha:ŋR1/	'to drag'

/o/ - /o:/	/coŋR3/	'boy'
	/co:ŋR3/	'spade'
/ɔ/ - /ɔ:/	/ʔɔŋR1/	'father'
	/ʔɔ:ŋR1/	'wasp'
/i/ - /e/	/tihR3/	'worm'
	/tehR3/	'leech'
/e:/ - /ə:/	/ke:R1/	'a weave'
	/kə:R1/	'near'
/ɛ/ - /a/	/kalɛnR1/	'odor'
	/kalanR1/	'to restrain'
/ɛ:/ - /ʌ:/	/mɛ:R2/	'to do'
	/mʌ:R2/	'horse'
/ə:/ - /ʌ:/	/kə:R2/	'girl'
	/kʌ:R2/	'louse'
/ə:/ - /o:/	/kə:kR1/	'to dumb'
	/ko:kR1/	'clf of chicken nest'

/ʌ/ - /a/	/ʔʌnR3/	‘short’
	/ʔanR1/	‘to eat’
/o/ - /ɔ/	/cokR1/	‘wound’
	/cɔkR1/	‘to pick out an ear’
/o:/ - /ɔ:/	/to:jR3/	‘tail’
	/tɔ:jR1/	‘to tap (on finger)’
/i:/ - /i:/	/mi:iR1/	‘you(polite word)’
	/mi:iR1/	‘day’
/i:/ - /u:/	/hi:tR1/	‘cigarette’
	/hu:tR1/	‘to sip’
/ia/ - /ɛ/	/ʔianR1/	‘eel’
	/ʔɛnR1/	‘next’
/ia/ - /a/	/p ^h iakR1/	‘ankle bone’
	/p ^h atR1/	‘to brush the teeth’
/ua/ - /ɔ/	/luakR1/	‘to scald’
	/lɔkR1/	‘to extract the tooth’

3.5 Registers

The register system is one of the most interesting suprasegmental features of the language in the Austroasiatic language family. Register is a term used in phonetics to refer to the voice quality produced by a specific physiological constitution of the larynx. Variations in the length, thickness and tension of the vocal cords combine to produce the differences between head and chest voice. Some phoneticians use the term in a functional way in relation to speech, to refer to types of phonation which the speaker varies in a controlled manner (as in creaky and breathy voice) (Crystal 1991: 295)

There are three types of registers in the Samhing Thavung language. clear voice, clear glottalized voice and breathy voice.

3.5.1 Formational Statement of Registers.

Register1 (R1) is the clear voice quality. The syllable with R1 in this language contains two types of pitches determined by vowels and final consonants. They are high-rising [ˆ] and mid-level [-] pitches. High-rising pitch occurs in a word which consists of closed syllable with stops /p, t, k, ʔ/ and the glottal fricative /h/. Mid-level pitch occurs in a word which consists of long vowel in open syllable, closed syllable with final nasals /m, n, ŋ/, lateral /l/ and semi-vowels /w, j/. The clear voice quality is not marked in my phonetic transcription.

Examples

/jɔpR1/

[ˈjɔp]

‘to catch’

/t ^h okR1/	[t ^h ókʰ]	'poor'
/pihR1/	[píh]	'seven'
/lo:R1/	[lō:]	'to beg'
/ni:mR1/	[ní:m]	'mind'
/kanR1/	[kān]	'I (normal word)'
/ho:ŋR1/	[hō:ŋ]	'to smell'
/jo:lR1/	[jō:l]	'long'
/sowR1/	[sōw]	'I (polite word)'
/tɔ:jR1/	[tō:j]	'to tap (on finger)'

Register2 (R2) is the clear glottalized voice quality. Glottal constriction is a feature which is used for distinguishing between non-glottalized and glottalized sounds within each register. It is enunciated with laryngeal constriction occurring near the end of the nucleic vowel (Hayes1983:94)

The syllable with R2 in this language contains a high-falling pitch [^]. It normally occurs in a word which consists of long vowel in open syllable and closed syllable with all final consonants except /ʔ,s,h/. The clear glottalized voice quality which is represented by (ˀ) under the vowel in my phonetic transcription.

Examples

/co:R2/	[cô:]	'grandchild'
/nɛ:tR2/	[nê:t]	'neck'
/ca:kR2/	[cê:k]	'to buy'

/sa:mR2/	['sâ:m]	'eight'
/po:nR2/	['pô:m]	'four'
/li:ŋR2/	['lî:ŋ]	'to be habituated'

Register3 (R3) is the breathy voice quality. The breathy voice 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. (Crystal1991:43)

The syllable with R3 in this language contains a mid-falling pitch [˘]. It normally occurs in a word which consists of long vowel in open syllable and closed syllable with all final consonants except /ʔ,h/. The breathy voice quality is represented by (..) under the vowel in my phonetic transcription.

Examples

/lɔ:R3/	['lɔ̃:]	'turtle'
/vitR3/	['vɪ̃t]	'to throw away'
/tɛ:kR3/	['tɛ̃:k]	'to be deaf'
/pɔ:mR3/	['pɔ̃:m]	'cheek'
/tʰʌ:ŋR3/	['tʰʌ̃:ŋ]	'wood'
/ŋʌ:w R3/	['ŋʌ̃:w]	'sword'

4.5.2 Register Contrast

All registers described above are phonemically contrastive in Samhing Thavung language The registers which are contrastive in identical environment (C I E) are shown below with some examples

<u>Registers</u>	<u>Examples</u>	
/R1/ - /R2/	/kə:R1/	'near'
	/kə:R2/	'girl'
	/kʌ:R1/	'bee'
	/kʌ:R2/	'louse'
	/ka:R1/	'chicken'
	/ka:R2/	'fish'
	/bɔ:tR1/	'mushroom'
	/bɔ:tR2/	'loin cloth for men'
	/sa:mR1/	'younger brother or sister'
	/sa:mR2/	'eight'
	/lo:mR1/	'liver'
	/lo:mR2/	'to steal'
	/pado:R1/	'shadow'
	/pado:R2/	'a chess'
	/p ^h ajo:lR1/	'to wake (someone) up'
	/p ^h ajo:lR2/	'navel'

	/t ^h alɔ:kR1/	'rough'
	/t ^h alɔ:kR2/	'a kind of bird'
	/k ^h alɔ:tR1/	'to gnaw'
	/k ^h alɔ:tR2/	'skin'
	/hako:R1/	'to be blurred'
	/hako:R2/	'unhusked rice'
/R1/ - /R3/	/pihR1/	'seven'
	/pihR3/	'to split'
	/tʌmR1/	'to put on'
	/tʌmR3/	'right side'
	/tuhR1/	'to snatch'
	/tuhR3/	'bean'
	/t ^h anu:R1/	'fever'
	/t ^h anu:R3/	'fart'
	/kaduhR1/	'to patch'
	/kaduhR3/	'chameleon'

/R2/ - /R3/

/t^hu:R2/

'to rub'

/t^hu:R3/

'deep'

/do:R2/

'monkey'

/do:R3/

'many'

/kɛ:nR2/

'waist'

/kɛ:nR3/

'ant'

/palʌ:ŋR2/

'to open the palm
of the hand'

/palʌ:ŋR3/

'lonely'

CHAPTER IV

THE SYLLABLE

4.1 General definition

The syllable is defined as the rank whose units function in the phonological word and whose structure is stated in terms of the phoneme.

4.2 Structure

The syllable structure is described in terms of a nucleus formed by the vowel and a periphery formed by consonant. There are two types of syllable structure in Samhing Thavung: major syllable and presyllable.

4.2.1 Major Syllable

A major syllable is defined as a syllable which always receives a strong stress. It is accompanied by an initial consonant, a vowel, a final consonant and a register. It can occur alone or in the 'final' position of disyllabic and trisyllabic word. Its structure is CV(C)R.

This syllable type can be divided into 2 sub-types on the basis of their structure: open syllable and closed syllable.

4.2.1.1 Sub-type I : Open Syllable

The open syllable consists of a vowel as a nucleus and preceded by an initial consonant functioning as periphery of the syllable. Its structure is CVR.

Examples

/pɔːR2/	['pɔː]	'to carry on the shoulder'
/boːR3	['bɔː]	'owl'
/tuːR1/	['tuː]	'to pain'
/cɔːR2/	['cɔː]	'dog'
/kʰɔːR2/	['kʰɔː]	'knife'
/kuaR1/	['kua]	'term of address to younger man or woman that is younger than father or mother'

4.2.1.2 Sub-type II : Closed Syllable

The closed syllable have a vowel as nucleus of the syllable preceded by an initial consonant and followed by a final consonant functioning as periphery of the syllable Its structure is CVCR

Examples

/tʰɔŋR1/	['tʰɔŋ]	'bag'
/cɔŋR3/	['cɔŋ]	'boy'
/sɔmR1/	['sɔm]	'harpoon'
/mɔkR1/	['mɔk]	'lap'
/naːjR1/	['naːj]	'aunt'
/lɛːnR1/	['lɛːn]	'cliff'
/duanR1/	['duan]	'to stab'
/ʔianR1/	['ʔian]	'eel'
/kʰianR1/	['kʰian]	'a metal for build the light'

4.2.2 Presyllable

The presyllable is defined as a syllable which is unstressed in open syllable and receives a weak stress in closed presyllable. It is accompanied by an initial consonant, a vowel, a final consonant and a register. It never occurs alone or in the final position of disyllabic and trisyllabic word. Its structure is CV(C)R

This syllable type can be divided into 2 sub-types on the basis of their structure. open syllable and closed syllable

4.2.2.1 Sub-type I : Open Syllable

The open syllable consists of a short vowel as a nucleus and preceded by an initial consonant functioning as periphery of the syllable. Its structure is CVR

Examples

/padukR1/	[pa . 'dúk]	'to hind'
/p ^h adɔŋR1/	[p ^h a . 'dɔŋ]	'hot'
/tama:R1/	[ta . 'ma:]	'new'
/caɛ:ŋR1/	[ca . 'ɛ:ŋ]	'to glance side ways'
/ʔakuhR1/	[ʔa . 'kúh]	'the day'
/mahe:R1/	[ma . 'hɛ:]	'two days after tomorrow'
/k ^h uli:R1/	[k ^h u . 'li:]	'today'
/mohokR1/	[mo . 'hók]	'today'
/sili:R1/	[si . 'li:]	'hell'

4.2.2.2 Sub-type II : Closed Syllable

The closed syllable have a vowel as nucleus of the syllable preceded by an initial consonant and followed by a final consonant as periphery of the syllable Its structure is CVCR

Examples

/piŋpɔ:tR1/	[,piŋ . 'pɔ:t]	'butterfly'
/t ^h awle:R1/	[,t ^h aw . 'le:]	'why'
/k ^h awhɔ:R1/	[,k ^h aw . 'hɔ:]	'climber with bitter principle'
/saŋka:R1/	[,saŋ . 'ka:]	'monk's robes'
/jaŋje:R1/	[,jaŋ . 'je:]	'tip-toe'

Table1 : The co-occurrences of vowels and final consonants in the closed major syllable.

	p	t	k	ʔ	s	h	m	n	ŋ	l	w	j
i	+	+	+	-	-	+	-	+	+	+	+	-
e	-	+	-	+	-	+	-	+	+	-	-	-
ɛ	+	+	-	+	-	+	+	+	-	+	-	-
ɨ	+	+	+	-	-	-	+	+	+	-	-	-
ə	+	+	+	+	-	+	-	+	+	+	+	-
ʌ	-	+	+	+	-	+	+	+	+	+	+	-
a	+	+	+	+	+	+	+	+	+	+	+	+
u	+	+	+	+	+	+	+	-	+	+	-	-
o	+	-	+	+	-	+	+	+	+	-	+	+
ɔ	+	+	+	+	+	+	+	+	+	+	-	-
i:	+	+	+	-	-	-	+	+	+	+	+	-
e:	-	+	-	-	-	-	+	+	+	+	+	-
ɛ:	+	+	+	-	-	-	+	+	+	+	+	-
ɨ:	-	+	+	-	-	-	+	+	+	-	-	-
ə:	+	-	+	-	-	-	+	+	-	-	-	+
ʌ:	+	+	+	-	-	-	+	+	+	+	+	+
a:	+	+	+	-	-	-	+	+	+	+	+	+
u:	+	+	+	-	-	-	+	+	-	+	-	+
o:	+	+	+	-	-	-	+	+	+	+	+	+
ɔ:	+	+	+	-	-	-	+	+	+	+	-	+
ia	+	-	+	-	-	-	+	+	+	-	+	-
ia	-	-	+	-	-	-	+	+	+	-	-	-
ua	-	-	+	-	-	-	+	+	+	-	-	+

+ = occurrence

= non occurrence

The co-occurrences of vowels and final consonants in the closed major syllable as shown in the Table1 can be summarized as follows

- 1 The vowel phoneme /a/ can occur before all final consonant phonemes in the closed major syllable
- 2 The final consonant phonemes /ʔ,s,h/ never occur after all long vowel and diphthong phonemes in the closed major syllable
- 3 The final consonant phonemes /p,k,ʔ,h,m,ŋ/ can occur after all short back vowel phonemes in the closed major syllable
- 4 The final consonant phoneme /j/ never occur after all front vowel phonemes in the closed major syllable

Table2 : The co-occurrences of initial consonants and vowels in the closed major syllable.

p	p ^h	b	t	t ^h	d	c	k	k ^h	ʔ	v	s	h	m	n	ɲ	l	j	
+	-	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	i
+	-	+	-	-	-	-	+	-	+	-	-	+	+	-	-	-	+	e
+	-	+	+	+	+	+	÷	-	+	+	-	+	+	+	+	+	+	ɛ
-	+	-	+	-	+	-	-	-	-	+	-	-	+	-	-	+	-	i
+	-	+	+	-	-	+	+	-	+	-	+	-	-	-	-	-	+	ə
+	+	-	+	+	-	+	+	-	-	+	+	-	+	+	-	-	+	ʌ
+	+	+	+	-	+	+	+	-	+	+	+	+	+	+	+	+	+	a
+	-	+	+	-	+	+	+	+	+	-	+	+	+	+	+	+	+	u
+	-	+	+	+	-	+	+	-	-	-	+	-	+	-	-	-	+	o
+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	ɔ
+	-	+	-	+	+	+	+	+	+	-	+	+	-	-	+	-	+	i:
+	-	-	-	-	+	+	+	-	+	+	-	+	+	-	+	-	+	e:
+	-	-	+	-	+	+	+	-	+	+	+	+	+	+	-	-	+	ɛ:
-	+	-	+	-	-	-	-	-	+	+	-	+	-	-	-	-	+	i:
-	-	+	+	-	-	+	+	-	+	-	+	-	+	-	-	-	-	ə:
+	+	-	-	+	+	+	+	+	+	-	+	+	+	+	+	+	+	ʌ:
+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	a:
+	-	+	+	-	-	+	+	-	+	-	+	+	+	-	-	+	+	u:
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	o:
+	+	+	+	-	+	+	+	+	+	+	-	+	+	+	+	+	+	ɔ:
-	-	-	-	-	+	-	+	+	+	+	-	+	-	-	-	+	-	ia
-	+	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	+	ia
-	-	+	+	-	+	-	+	-	-	-	+	-	+	+	+	+	-	ua

+ = occurrence

- = non occurrence

The co-occurrences of initial consonants and vowels in the closed major syllable as shown in the Table2 can be summarized as follows

- 1 The consonant phonemes /p,k,ʔ,h,l/ can occur before all front vowel phonemes in the closed major syllable
- 2 The consonant phonemes /p,b,t,c,k,m,l/ can occur before all back vowel phonemes in the closed major syllable
3. The consonant phoneme /t/ is only phoneme occur before all short central vowel phonemes
- 4 The consonant phonemes /t^h,k^h/ have the narrowest distribution in the closed major syllable.
- 5 The vowel phoneme /o:/ has the widest distribution in the closed major syllable.

Table3 : The co-occurrences of initial consonants and vowels in the open major syllable.

p	p ^h	b	t	t ^h	d	c	k	k ^h	ʔ	v	s	h	m	n	ɲ	ŋ	l	j		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	i
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	e
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ɛ
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ɨ
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ə
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ʌ
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	a
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	u
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	o
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ɔ
+	-	-	+	-	+	-	-	+	-	-	+	+	+	-	+	+	+	-	-	ɨr
+	-	+	-	-	+	+	+	-	-	-	+	-	-	-	-	-	-	-	-	eɪ
+	-	-	-	-	-	-	+	+	+	-	-	+	+	-	-	+	+	-	-	ɛɪ
-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	+	ɨr
-	+	-	-	+	+	-	+	-	-	-	+	-	+	-	-	-	-	+	-	əɪ
-	-	+	+	-	+	-	+	-	-	+	+	+	+	+	-	+	+	-	-	ʌɪ
+	-	-	+	-	+	+	+	+	+	-	-	-	+	+	+	+	+	+	+	aɪ
+	-	+	+	+	-	+	+	-	+	-	+	+	+	+	+	-	+	-	-	uɪ
+	-	+	+	+	+	+	+	-	+	+	-	+	+	+	+	-	+	+	-	oɪ
-	-	+	+	-	-	+	-	+	+	-	-	+	-	+	-	-	+	+	-	ɔɪ
-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	+	-	ia
-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ia
-	-	-	-	-	-	-	+	-	-	-	-	+	-	-	+	-	+	-	-	ua

+ = occurrence

- = non occurrence

The co-occurrences of initial consonants and vowels in the open major syllable as shown in the Table3 can be summarized as follows:

- 1 All short vowel phonemes never occur after all consonant phonemes in the open major syllable
- 2 The vowel phoneme /o:/ has the widest distribution in the open major syllable.
- 3 The consonant phoneme /p^h,v/ have narrow distribution in the open major syllable
- 4 The consonant phoneme /l/ has the widest distribution in the open major syllable
- 5 The consonant phoneme /m/ is the only phoneme that can occur before all long central vowel phonemes in the open major syllable.
- 6 The consonant phonemes /b,t,c,ʔ,h,n,l/ can occur before all long back vowel phonemes

Table 4 : The co-occurrences of vowels and final consonants in the closed presyllable.

	p	t	k	ʔ	s	h	m	n	ŋ	l	w	j
i	-	+	-	-	-	-	-	+	+	-	-	-
e	-	-	-	-	-	-	-	-	-	-	-	-
ɛ	-	-	-	-	-	-	-	-	+	-	-	-
ɨ	-	-	-	-	-	-	-	-	-	-	-	-
ə	-	-	-	-	-	-	-	-	-	-	-	-
ʌ	-	-	-	-	-	-	-	-	-	-	-	-
a	+	-	-	-	-	-	+	-	+	-	-	-
u	-	+	-	+	-	-	-	-	-	-	-	-
o	-	-	-	-	-	-	-	-	+	-	-	-
ɔ	-	-	+	-	-	-	-	-	+	-	-	-
i:	-	-	-	-	-	-	-	-	-	-	-	-
e:	-	-	-	-	-	-	-	-	-	-	-	-
ɛ:	-	-	-	-	-	-	-	-	-	-	-	-
ɨ:	-	-	-	-	-	-	-	-	-	-	-	-
ə:	-	-	-	-	-	-	-	-	-	-	-	-
ʌ:	-	-	-	-	-	-	-	-	-	-	-	-
a:	-	-	-	-	-	-	-	-	-	-	-	-
u:	-	-	-	-	-	-	-	-	-	-	-	-
o:	-	-	-	-	-	-	-	-	-	-	-	-
ɔ:	-	-	-	-	-	-	-	-	-	-	-	-
ia	-	-	-	-	-	-	-	-	-	-	-	-
ɨa	-	-	-	-	-	-	-	-	-	-	-	-
ua	-	-	-	-	-	-	-	-	-	-	-	-

+ = occurrence

- = non occurrence

From table 4 we can see that all single long vowels and diphthongs never occur before the consonant phonemes in the closed presyllable. The vowel phonemes that can occur in this syllable type consists of / i,ɛ,a,u,o,ɔ/.

Table5 : The co-occurrences of initial consonants and vowels in the closed presyllable.

p	p ^h	b	t	t ^h	d	c	k	k ^h	ʔ	v	s	h	m	n	ɲ	ŋ	l	j		
+	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	i
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	e
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	ɛ
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	i
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ə
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ʌ
-	-	-	-	+	-	+	+	+	+	-	+	-	-	-	-	-	-	-	+	a
-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	u
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	o
+	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	+	ɔ
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	i:
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	e:
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ɛ:
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	i:
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ə:
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ʌ:
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	a:
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	u:
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	o:
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ɔ:
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ia
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ia
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ua

+ = occurrence
 - = non occurrence

From table 5 we can see that all single long vowels and diphthongs never occur after the consonant phonemes in the closed presyllable. The vowel phonemes that can occur in this syllable type consists of /i,ɛ,a,u,ɔ/.

Table6 : The co-occurrences of initial consonants and vowels in the open presyllable.

p	p ^h	b	t	t ^h	d	c	k	k ^h	ʔ	v	s	h	m	n	ɲ	ŋ	l	j	
-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	i
-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	e
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ɛ
-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	i
-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	ə
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	ʌ
+	+	+	+	+	-	+	+	-	+	-	-	+	+	-	-	-	+	+	a
+	-	-	+	-	-	+	+	+	+	-	+	-	-	-	-	-	+	+	u
-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	o
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ɔ
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ɪ
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	eɪ
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ɛɪ
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-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	əɪ
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ʌɪ
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	aɪ
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	uɪ
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	oɪ
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ɔɪ
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ia
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ia
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ua

+ = occurrence

- = non occurrence

From table 6 we can see that the vowel phonemes / a , u/ can occur with many initial consonants in the open presyllable

4.3 Function

There are two main classes of syllables divided according to their functions nuclear syllables and peripheral syllables

4.3.1 Nuclear Syllable

The syllable function as the nucleus of the phonological word It refers to the syllable occurring as monosyllabic word or occurring in the last position of disyllabic and trisyllabic word It always takes a strong stress.

Examples

/ca:kR2/	[ˈcâ:kʰ]	‘to buy’
/ho:ŋR1/	[ˈhō:ŋ]	‘to smell’
/kalo:ŋR1/	[ka .ˈlō:ŋ]	‘iron bucket’
/saŋiapR1/	[sa .ˈŋi̯apʰ]	‘sash of monk’

4.3.2 Peripheral syllable

The syllable function as the periphery in the phonological word It never occurs in monosyllabic word or in the final position of disyllabic and trisyllabic word The peripheral syllable can be the open presyllable which is unstressed and the closed presyllable which is takes a weak stress.

Examples

/tamunR1/	[ta .ˈmūŋ]	‘palmcivit’
/caku:R3/	[ca .ˈkù:]	‘bear’
/dokme:tR1/	[ˌdɔk .ˈmé:t]	‘collar bone’
/kapke:R2/	[ˌkap .ˈkê:]	‘geeko’

4.4 Syllable boundaries and breaking

The syllable boundaries are marked by three types of stress. strong stress, weak stress and the unstress The strong stress falls on the monosyllabic word and on the last position of disyllabic word and trisyllabic word. The unstress occur before the last syllable of the word

Examples

[bɔ̌:j]	‘salt’
[lu .’kɔ̌:]	‘milled rice’
[,kɔ̌ŋ .’kɔ̌ŋ]	‘prawn’
[,leŋ .ka .’jo:R1]	‘yesterday’

The syllable breaks is not normally marked in phonemic transcription.

Examples

/bɔ̌:jR2/	- ‘salt’
/luko:R2/	‘milled rice’
/kɔ̌ŋkɔ̌ŋR1/	‘prawn’
/leŋkajo:R1/	‘yesterday’

CHAPTER V

THE PHONOLOGICAL WORD

5.1 General Definition

The phonological word is defined as the rank whose units function in the intonation group and whose structure is described in terms of syllables. It is the linguistics unit indicated by a stress. It is also called a stress group.

5.2 Stress

The stress is described in terms of loudness. The degree of a stress in the Samhing Thavung is predictable from the position of the stress in a word and the syllable structure. There are three phonetic levels of word stress in this language as follows.

5.2.1 The Strong Stress

The strong stress always occurs in the major syllable and so makes this syllable to have more volume than the closed presyllable. It is marked by [']

Examples

['tóp']	'to clap the hands'
['ʔō:]	'the cradle'
['lùh]	'to exit'
[ca . 'lê:k]	'brook'

5.2.2 The Weak Stress

The weak stress always occurs in the closed presyllable of disyllabic and trisyllabic words and so makes this syllable to have more volume than the open presyllable. It is marked by [,].

Examples

[,kin. 't ^h in]	'horse-tamarind'
[,k ^h aw . 'hɔ:]	'climber with bitter pringle'
[,saŋ 'ka:]	'monk's robes'

5.2.3 The Unstress

The unstress always occurs in the open presyllable of disyllabic and trisyllabic words and so makes this syllable to have less volume. It is unmarked in the data.

Examples

[ta . 'kʰ:]	'thorn'
[ca . 'bɔ̃:ŋ]	'roof'
[ka . 'cúh]	'shell'
[k ^h a . 'mâ:j]	'woman'
[ʔa . 'jɿ:w]	'tomorrow'
[ma . 'lɤ:j]	'sky'

Stress in the Samhing Thavung is predictable. Therefore, it does not marked in phonemic writing.

5.3 Structure

The phonological word of the Samhing Thavung may have from one to three syllables. There are a number of words with one and two syllables while words with three syllables are very rare. It has only one strongly stressed syllable as its nucleus, and may be preceded by the unstressed as its periphery. There are three types of word structure, depending on the number of syllables: *monosyllabic, disyllabic and trisyllabic word.*

5.3.1 Monosyllabic word

A monosyllabic word is formed by only one meaningful syllable which always receives a strong stress. The structure of a monosyllabic word is ['CV(C)]

Examples

['dò:]	'many'
['cūŋ]	'to sit'
['l̥k]	'white'
['ŋ̥:l]	'cold'
['hā:n]	'to ask'

5.3.2 Disyllabic Word

A disyllabic word is formed by two syllables. There are two types of disyllabic words.

5.3.2.1 A disyllabic word of type A is a word in which the first syllable is an unstressed open presyllable. The second syllable is a stressed major syllable. The structure is [CV.'CV(C)].

Examples

[pa . 'tō:j]	'to tell'
[ka . 'péh]	'bran'
[k ^h a . 'líh]	'to be hard'
[sa . 'nâ:]	'crossbow'
[ma . 'lâ:t]	'to be tasteless'
[cu . 'ʔéʔ]	'brain'
[su . 't̚i:t]	'button'

5 3 2 2 A disyllabic word of typeB is a word of which the first syllable is the closed presyllable and receives a weak stress. The second syllable is a stressed major syllable. The structure is [CVC . 'CV(C)].

Examples

[,duʔ . 'dúʔ]	'often'
[,dɔk . 'dók]	'adam's apple'
[,kin̄ . 't̚in̄]	'horse-tamarind'
[,kaŋ . 'kê:]	'pigeon'

5.3.3 Trisyllabic Word

A trisyllabic word is a word that consists of three syllables. The strong stress is on the third syllable while the first syllable is the closed presyllable and receives a weak stress and the second syllable is an unstressed open presyllable. The structure is [CVC CV.'CV].

Examples

[,kiŋ .ka .'jō:]	‘red ant’
[,ʔam .ma .'hī:]	‘last night’
[,lɛŋ .ka .'jō:]	‘yesterday’

5.4 Variation of Disyllabic Words

In Samhing Thavung, it is noticeable that some of the disyllabic word can be pronounce as monosyllabic word. The presyllable is dropped out as shown in the examples below.

Examples

[ta .'kō:k]	['kō:k]	‘bone’
[ta .'dēn]	['dēn]	‘to put out the tongue’
[ta .'mŋ:]	['mŋ:]	‘blood’
[ta .'ŋō:n]	['ŋō:n]	‘delicious’
[ka .'sām]	['sām]	‘nail’
[tam .'ʔák]	['ʔák]	‘chest’
[kiŋ .'kō:ŋ]	['kō:ŋ]	‘back’
[kɔŋ .'kōŋ]	['kōŋ]	‘prawn’

CHAPTER VI

THE INTONATION GROUP

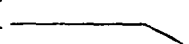
6.1 General Definition

The intonation group is defined as the unit of the highest rank of the phonological hierarchy and so has no function. Its structure is described in terms of a phonological word

6.2 Types of Intonation Group

There are two types of intonation contour in the Samhing Thavung falling contour and rising contour

6.2.1 The Falling Contour

The falling contour is used for the content question, affirmative, negative and request sentences.- It starts with a mid-high pitch and lowers to a mid-low at the end It is phonetically marked by [].

- Content question

For the content question, it is noticeable that the Samhing Thavung speakers prefer to put the question markers in the final position of the sentence However, there are three question markers /ʔahΛ:R2/ 'what', /t^hawle:R1/ 'why', /nono:R1/ 'who' which can occur at the initial position of the sentence

Examples

[t^hɔ̀w ʔān cə:w túʔ ʔahâ:]
 you eat rice with what
 ‘What do you have for your meal?’

[m̂: nō:j ʔajō:]
 mother stay where
 ‘Where is your mother?’

[ʔadō: k̄: m̂: caŋj̄:]
 curry chicken do how
 ‘How do you cook a chicken curry?’

[ʔɔŋ jà:kt̄n ʔatū: nɔ:ŋjō:]
 father want oil how much
 ‘How much oil does your father want?’

[t^hɔ̀w ʔalāʔ lāʔ m̂:n nɔnō:]
 you that is who
 ‘Who is that?’

[ʔahâ: nō:j kaf̄: ŋū:j]
 what stay below table
 ‘What is under the table?’

[t^hawlē: lā? salâ:n samâ:]
 why fear ghost
 'Why did (you) fear the ghost?'

[nonō: ?ōŋ mê: t^hâw]
 who father mother you
 'Who is your parent?'

- **Affirmative statement**

Examples

[salâ: t^hâŋ palō:j]
 leaf wood fall
 'The leaves fall down'

[cō: lā? ?alê:m malū:]
 dog lick leg
 'A dog licks my leg'

[mê: ?adē:ŋ ?â:w tamā:]
 mother wear shirt new
 'A mother wears a new shirt'

[sōw ?apō: nâh samâ:]
 I dream see ghost
 'I dreamed that I saw ghost.'

[sōw ʔaŋo:mát kō:n k^halâ:]
 I sympathize child orphan
 ' I have sympathy for orphan child '

- **Negative statement**

The negative marker /ʔohR1/ 'not' occurs before verb of the affirmative sentence

Examples:

[ʔōŋ ʔóh dō:p hí:t]
 father not smoke cigarette
 ' The father does not smoke cigarette '

[kō:n ʔóh ʔŭ: p^hanû:]
 child not suck milk
 ' The child does not drink milk '

[sōw ʔóh tɪn nūm pacòŋ]
 I not have husband
 ' I am not got married '

[k^hulí: ʔóh ʔô:m dâ:k]
 today not bath water
 ' I have not taken a bath today '

- Request statement

Examples

[kəjāw p^hasa: t^havi:ŋ ʔó:t kān nē:]
 speak language Thavung give I F.P
 ' Speak the Thavung language for me.'

[cə:k t^həŋc̥i:ŋ ʔó:t kān nē:]
 buy socks give I F.P
 ' Please buy a pair of socks '

[bóh ʔabúh ʔó:t kān nē:]
 open door give I F.P
 ' Please open the door '

[kad̥ɔ:t ʔabúh ʔó:t dē:]
 close door give F.P
 ' Close the door, please '

[ʔahīw t^həŋ ʔó:t dē:]
 carry bag give F.P
 ' Carry my bag, please '

6.2.2 The Rising Contour

The rising contour is used for polar question and imperative sentences. It is noticeable that the Samhing Thavung speakers borrow Lao question particle. It starts with a mid-high pitch and higher to a mid-high at the end. It is phonetically by [_____ /]

· Polar question

For polar question, it is the question that requires a simple answer in yes or no.

Examples

_____ /
 [mǐ: ʔaŋúh nəm bǔ:]
 you sleep F P
 ‘Are you asleep?’

_____ /
 [mahǔŋ cǎ:w bǔ:]
 hungry rice F P
 ‘Are you hungry?’

_____ /
 [tʰəw maʔŋ:il bǔ:]
 you bore F P
 ‘Are you bored?’

_____ /
 [ʔaŋít kʰamâ:j bǔ:]
 miss woman F.P
 ‘Do you miss your girlfriend?’

- Imperative sentences

The imperative sentence of the Samhing Thavung can be divided into imperative and prohibitive sentences. Prohibitive sentence is marked by /ma:R1/ which always occurs at the initial position in the sentence.

Examples.

_____ /
 [mā: kapāw hē:ŋ dǎ:]
 don't speak loud F P
 ' Don't speak loudly '

_____ /
 [mā: tí: dǎ:]
 don't go F.P
 ' Don't go '

_____ /
 [mā: pahí: kǎn dǎ:]
 don't flee I F P
 ' Don't leave me '

_____ /
 [ʔǎn cǎ:w ʔó:t hít]
 eat -rice - give whole
 ' Eat it all '

_____ /
 [tǐŋ kóh]
 stand up
 ' Stand up '

The intonation group in this language is predictable from the type of sentence, that is, in content question, affirmative, negative and request sentences the falling contour occurs whereas in polar question and imperative sentences the rising contour occurs.

CHAPTER VII

CONCLUSION AND COMPARISON

7.1 Summary of the Samhing Thavung language.

The phonological study of the Samhing Thavung can be summarized below

7.1.1 Phoneme

Consonants

The consonant system in Samhing Thavung consists of twenty phonemes /p, p^h, b, t, t^h, d, c, k, k^h, ʔ, v, s, h, m, n, ɲ, ɳ, l, w, j/. All of them except /w/ can occur initially in a syllable. The consonant phonemes: /p, t, k, ʔ, s, h, m, n, ɳ, l, w, j/ can also occur finally in a syllable.

Vowels

The vowel system consists of twenty-three phonemes. There are twenty single vowels : / i, i:, e, e:, ε, ε:, ɨ, ɨ:, ə, ə:, ʌ, ʌ:, a, a:, u, u:, o, o:, ɔ, ɔ:/ and three diphthongs: /ia, ia, ua/.

Registers

The register system consists of three registers : clear voice, clear glottalized voice and breathy voice

7.1.2 Syllable

There are two types of syllables in the Samhing Thavung. They are the major syllable and the presyllable

7.1.3 Phonological word

The phonological words are described in term of stress. There are three types of stresses in Samhing Thavung the strong stress, the weak stress and the unstress. The strong stress is on the major syllable, the weak stress is on the closed presyllable and the unstress is on the open presyllable.

7.1.4 Intonation group

There are two types of intonation groups in this language. They are falling contour and rising contour.

7.2 Comparison between the Thavung dialect

The Thavung language have already been studied by two scholars. The first study was carried out by Michel Ferlus at Ban Khanglek, Khamkert district, Bolikhamxai province, Lao P D R in 1979. The second one was carried out by Suwilai Premsrirat at Ban Nongwaeng, Sakonnakhon province, Thailand in 1996. I therefore would like to make a brief comparison between my own study of Samhing Thavung (S.T), the Khanglek Thavung (K T) and Nongwaeng Thavung (N T)*

* I used N T instead of So (Thavung) here because I want to make it parallel with the name of the other two dialects which are named after the village names

7.2.1 Phonological comparison

7.2.1.1 Consonant

S T /p,p^h,b,t,t^h,d,c,k,k^h,ʔ,v,s,h,m,n,ɲ,l,w,j/

K T : /p,p^h,b,t,t^h,d,c,k,k^h,ʔ,v,s,h,m,n,ɲ,l,w,j,y,y^h/

N T · /p,p^h,b,t,t^h,d,c,k,k^h,ʔ,f,v,s,h,m,n,ɲ,l,w,j/

From the consonant phonemes above, I can assume that the initial consonant of these three Thavung dialects are similar. But, there are some differences for description. First, the consonant /w/ only occurs in the initial position of N T. The author explained that the informants speak both /v/ and /w/ sounds in this dialect. Second, in S.T and N.T has only one /j/ sound whereas in K T has a palatal spirant /y/ and palatal semi-vowel /j/ as initial consonant. Apart from this the voiceless labio-dental fricative sound /f/ is a Thai-Lao loanwords that only exists in N.T. The main reason is that in the study of N T the author includes the young generation speech which was received a lot of Thai influence.

For the final consonants, more differences have been found. The N.T have lost most of the Mon-Khmer final consonants such as /c, l, ɲ/ whereas the K T still keep them. And the S T is still keep /l/ sound. However, the Mon-Khmer final /r/ has lost in all dialects whereas /ç/ an allophone of the phoneme /s/ in S T and N T or /yh/ in K T are still kept in all dialects.

7.2.1.2 Vowel

Single vowels

S.T / i, i:, e, e:, ε, ε:, i, i:, ə, ə:, ʌ, ʌ:, a, a:, u, u:, o, o:, ɔ, ɔ: /

K T / i, i:, e, e:, ε, ε:, i, i:, ə, ə:, ʌ, ʌ:, a, a:, u, u:, o, o:, ɔ, ɔ:, E, A, O /

N T / i, i:, e, e:, ε, ε:, i, i:, ə, ə:, ʌ, ʌ:, a, a:, u, u:, o, o:, ɔ, ɔ: /

Diphthongs .

S T . / ia, ia, ua/

K T . / ia, ia, ua/

N T / ia , ua/

From the vowel phonemes above, I can assume that the single vowel of these three Thavung are similar except the three single vowels /E,A,O/ in K T. The author explained that there is no register in K.T, so these three vowels are described as vowel with breathy voiced. The diphthong vowel /ia/ disappears in N.T, but it is found in S T and K.T.

7.2.1.3 Register and Tone

S T clear voice, clear glottalized voice and breathy voice

K T clear non-glottalized tone, clear glottalized tone

breathy non-glottalized tone and breathy glottalized tone

N T clear voice, creaky voice and breathy voice

Apart from consonant and vowel in the phonological system of these three languages (S T, K.T, and N T) There is still another important suprasegmental feature which is described differently In N.T and S.T this feature is described as register while in K.T is described as tone There are three registers in N T and S T and tone in K T as stated before.

7.2.1.4 Phonological word and syllable structures

S T	monosyllabic word	CV(C)
	disyllabic word	CV(C) CV(C)
	trisyllabic word	CV(C)CVCV
K T	monosyllabic word	CV(C)
	disyllabic word	CVCV(C)
N T	monosyllabic word	CV(C) [˙]
	disyllabic word	CV(C) CV(C)
	trisyllabic word	CV(C)CVCV(C)

The phonological word in K T consists of one and two syllable whereas the S T and N T consist of one to three syllables. We can see clearly that disyllabic words are most frequent and trisyllabic words are rare. The major syllable of the disyllabic words and trisyllabic words in these three dialects is in the last syllable of the word In disyllabic words of K T , the first syllables are always presyllable, so this position became an open syllable However, the first syllable can be both open and close in another two dialects The trisyllabic word is not found in K.T but this word structure is found in S T and N T

From studying the phonology of three Thavung dialects, I can conclude that Samhing Thavung, Khanglek Thavung and Nongwaeng Thavung are the same language and belong to the Vietic group of mon-Khmer family.

7.2.2 Phonetic variations among three dialects

7.2.2.1 Variation of consonants

In Samhing Thavung, the / l / final consonant corresponds to / l / in the final position of K T and / n / in N.T.

<u>S T</u>	<u>K T</u>	<u>N T</u>	
pi:lR1	pi:l	pi:n	'arm'
calR1	cal	cân	'burnt'
ku:lR2	ku:l	kû:n	'pig'
ha:lR1	ha:l	hâ:n	'two'
bo:lR2	bo:l	bô:n	'lance'
jo:lR1	jo:l	jô:n	'long,high'
tahu:lR2	tahu:l	tahû:n	'ax'
?atalR1	?atal	?atan	'rope'
k ^h amo:lR2	k ^h amo:l	k ^h amô:n	'termite'
mane:lR3	mane:l	manê:n	'calf'

The / t / final consonant of S.T corresponds to / c / in the final position of the K T and / t / in N T

<u>S T</u>	<u>K T</u>	<u>N T</u>	
ʔamo:tR1	ʔamu:c	ʔamû:t	‘the day after tomorrow’
k ^h ala:tR1	k ^h ala:c	k ^h alâ:t	‘to scratch’
bɔ:tR1	bɔ:c	bô:t	‘mushroom’
hɔ:tR1	hɔ:c	hô:t	‘intestine’
lo:tR1	lo:c	lô:t	‘penis’

7.2.2.2 Variation of vowels

- The /o:/ phoneme in S T is /o:/ in K.T and /i:/ in N T as

in the examples below

<u>S T</u>	<u>K T</u>	<u>N T</u>	
to:jR3	to:j	t̚i:j	‘tail’
ho:ŋR1	ho:ŋ	hi:ŋ	‘to smell’
wo:lR3	vo:l	v̚i:n	‘to come’
no:jR2 --	-no:j	n̚i:j	‘to stay’
t ^h alo:jR3	t ^h alo:j	t ^h al̚i:j	‘to fall’
t ^h avo:ŋR3	t ^h avo:ŋ	t ^h av̚i:ŋ	‘mosquito’
malɔ:jR3	malɔ:j	mal̚i:j	‘rain’

In some cases the /o:/ phoneme in S.T corresponds to /o:/ in K T and /ɔ:/ in N T as in the examples below

<u>S T</u>	<u>K T</u>	<u>N T</u>	
cako:ŋR3	cako:ŋ	cakɔ̌:ŋ	'ginger'
calo:ŋR3	calo:ŋ	calɔ̌:ŋ	'raw'
ʔako:lR3	ʔako:l	ʔakɔ̌:n	'to vomit'
ʔamo:ŋR1	ʔamo:ŋ	ʔamɔ̌:ŋ	'flesh'

7.3 Weaknesses and suggestions for further studies.

7.3.1 Weaknesses

The field trips to work with minority groups in Laos were very difficult. It took a long time to get the permission and I could have only a short stay in the field area. It was not very safe to stay in the village. Apart from that, the expenses were quite a lot. I could not afford to go there as often and as long as I wished.

7.3.2 Suggestions for further studies

From my study in the Samhing Thavung, I focus on a phonological study and there are other topics that are interesting such as an acoustic study of Thavung language in Thailand and Laos, a syntactic study, a comparative study of the Thavung speaker between the young and the old people and a comparative study of this language with other languages in the Vietic branch or even with other branches of the Mon-Khmer language family.

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APPENDIX

APPENDIX

Some lexical items of the Samhing Thavung spoken in Ban Samhing, Muang Khamkert, Blikhamxai province, Lao P.D R are presented with their general meaning in English. The entries in this appendix are listed in the following order

1 The consonants are ordered in accordance with the points of articulation bilabial, labio-dental, alveolar, palatal, velar and glottal and manners of articulation stop, fricative, nasal, lateral and semi-vowel

- Initial consonants are ordered as follows

p, p^h, b, t, t^h, d, c, k, k^h, ʔ, v, s, h, m, n, ɲ, ɳ, l, j

- Final consonants are ordered as follows

p, t, k, ʔ, s, h, m, n, ɳ, l, w, j

2 The vowels are ordered in accordance with the tongue positions:

front, central and back as follows

i, i:, e, e:, ē, ē:, ε:, ε:, ĩ, ĩ:, ə, ə:, ʌ, ʌ:, a, a:, u, u:, o, o:, ɔ, ɔ:, ia, ia, ua

3 The registers are ordered as follows:

R1, R2 and R3

/p/

/pitpitR1/	'use with /jumR1/ means very'
/pihR1/	'seven'
/pihR3/	'to split'
/pinR1/	'to turn'
/pinR1 kə:ŋR1/	'to turn one's back'
/pinR1 matR1/	'to turn one's face'
/piŋR1/	'to shoot'
/piŋpə:tR1/	'butterfly'
/pi:tR1/	'to grow'
/pi:ŋR1/	'to roast'
/pi:lR1/	'arm'
/pehR1/	'to break'
/pe:ŋR3/	'to love'
/pe:R3/	'raft'
/pe:nR1/	'floor'
/pe:lR1/	'to chop'
/pʌnR3/	'thousand'
/pʌ:mR2/	'he'
/patiŋR1/	'warm'
/patə:jR1/	'to tell (normal word)'
/patə:R2/	'a kind of bee'
/padukR1/	'to hide'
/pado:R1/	'shadow'
/pado:R2/	'a chess'
/pacehR3/	'to feed (to the mouth)'
/pacu:R1/	'house post'
/pacəŋR3/	'husband'
/pakə:R2/	'wife'
/pakə:R2 ?ihR3/	'principal wife'
/pakə:R2 ?e:tR1/	'minor wife'
/pako:R1/	'dove'
/pasi:R1/	'to be full (from eating)'
/pasətR1/	'to turn off the light'
/pasə:mR2/	'to exhale'
/pasʌ:R2/	'otter'
/pasaʔR1/	'a mat'
/pasaŋR1/	'to be thin'
/pasa:nR2/	'to plait'
/pasa:jR1/	'battery (for flashlight)'

/pahi:R1/	‘to flee’
/pan.ɿ:ŋR2/	‘areca-nut’
/palenR1/	‘to turn over’
/palɛ:ŋR1/	‘to mend’
/paləhR1/	‘to put’
/pal.ɿ:mR2/	‘landleech’
/pal.ɿ:ŋR2/	‘to open the palm of the hand’
/pal.ɿ:ŋR3/	‘to be lonely’
/palukR1/	‘brown’
/palu:R3/	‘betel’
/palu:kR1/	‘grey’
/palo:R2/	‘to emerge’
/palɔ:ŋR2/	‘clif of bamboo’
/palɔ:jR2/	‘to duck in order to escape from danger’
/paliɿaR1/	‘to be sluggish’
/pa:R1/	‘three’
/pa:tR1/	‘to slice’
/pa:lR1/	‘to sell’
/pa:jR2/	‘cogon grass’
/pulo:ŋR3/	‘moon’
/pulo:ŋR3 kohR1/	‘crescent moon’
/punR1 hɔ:tR1/	‘nauseous’
/pusR3/	‘to sweep’
/pu:tR3/	‘to blow’
/pu:nR1 sɔ:kR1/	‘hair done in a knot’
/po:R2/	‘to carry on the shoulder’
/po:kR3/	‘to tie’
/po:nR2/	‘four’
/po:ŋR3/	‘flower’
/po:ŋR3 kalawR1/	‘a kind of flower’
/po:ŋR3 ʔinʔa:R1/	‘a kind of flower’
/po:ŋR3 matR1 k ^h ala:ŋR1/	‘sun flower’
/po:jR2/	‘farm, filed’
/pɔhR1/	‘to hit’
/pɔnR1/	‘to mix’
/pɔŋʔiamR1/	‘window’
/pɔ:kR1/	‘cone shaped woven bamboo’
/pɔ:mR3/	‘cheek’

/p^h/

/p ^h iŋR1/	‘please’
/p ^h i:mR1/	‘an equipment for a weave’
/p ^h ə:R1/	‘noodle’
/p ^h ʌ:tR3/	‘to sift’
/p ^h atR1/	‘to brush the teeth’
/p ^h aŋR1/	‘to bury’
/p ^h adihR1/	‘to throw off’
/p ^h adə:R1 kə:nR1/	‘to be pregnant’
/p ^h ada:lR1/	‘wall’
/p ^h adəŋR1/	‘hot’
/p ^h anu:R2/	‘breasts’
/p ^h aŋaʔR1/	‘to look up’
/p ^h ali:R1/	‘to be drunken’
/p ^h alɛ:R2/	‘fish-hook’
/p ^h alʌ:R1/	‘fruit’
/p ^h alʌ:R1 pi:R1/	‘jack fruit’
/p ^h alʌ:R1 tə:nR1/	‘sandorica’
/p ^h alʌ:R1 t ^h aŋə:kR1/	‘gourd’
/p ^h alʌ:R1 diaR1/	‘fig’
/p ^h alʌ:R1 cu:R3/	‘orange’
/p ^h alʌ:R1 cu:R3 ʔihR3/	‘pamelo’
/p ^h alʌ:R1 katiŋR1/	‘cavilla fruit’
/p ^h alʌ:R1 kano:jR1/	‘egg-plant’
/p ^h alʌ:R1 ʔasa:nR1/	‘rambeh’
/p ^h alʌ:nR1/	‘to prophesy’
/p ^h aluʔR1/	‘six’
/p ^h aluŋR1 nilR1/	‘to blow the nasal secretion’
/p ^h alu:jR1/	‘to fall’
/p ^h alo:tR1/	‘to fall off’
/p ^h alo:jR1/	‘to wither and drop off (of flower parts)’
/p ^h aliaŋR1/	‘rubbish’
/p ^h ajo:lR1/	‘to wake (someone) up’
/p ^h ajo:lR2/	‘navel’
/p ^h ajəŋR1/	‘man’
/p ^h a:R1 kaŋR1/	‘curtain’
/p ^h a:R1 kaɸ:kR1/	‘the torn cloth’
/p ^h a:R1 ʔahupR1/	‘rags’
/p ^h a:R1 səpR1/	‘blanket’
/p ^h a:R1 və:ŋR2/	‘lid’

/p ^h a:kR1/	‘to put (something) in the care of’
/p ^h o:nR2/	‘to dance (in Thai fashion)’
/p ^h o:ŋR1/	‘to be brittle’
/p ^h iaR1/	‘to accompany side by side’
/p ^h iakR1/	‘ankle bone’
/p ^h iaŋR1 halɔ:R2/	‘straw’

/b/

/bitR3/	‘to recover from illness’
/bi:kR1/	‘to dip up’
/be:R1/	‘clf of money’
/bɛʔR1/	‘goat’
/bɛnR1/	‘how many’
/bɛnR1/	‘to full’
/baŋR1/	‘bamboo shoot’
/baŋR1 p ^h uʔR1/	‘bamboo for blow the feather tipped darts’
/baŋR1 soŋR1/	‘electric light’
/balipR1/	‘to dive’
/balahR1/	‘to spit out from the mouth’
/ba:tR1/	‘to wound’
/ba:kR1/	‘to chip off the sides’
/ba:nR1/	‘village’
/ba:jR2/	‘shamed’
/butR1 bu:tR1/	‘use with /lɔ:kR2/ means very’
/bu:mR2/ - -	‘to keep in the mouth’
/bu:nR1/	‘ashes’
/bohR1/	‘to open’
/bo:R3/	‘owl’
/bo:lR2/	‘lance’
/bɔnR1 lɪ:R1/	‘here’
/bɔnR1 la:R1/	‘there’
/bɔnR1 lo:wR1/	‘over there’
/bɔ:R1/	‘particle’
/bɔ:tR1/	‘mushroom’
/bɔ:tR1 p ^h iaŋR1/	‘a kind of mushroom’
/bɔ:tR1 kaŋɛnR1/	‘a kind of mushroom’
/bɔ:tR1 lɔ:kR2/	‘a kind of mushroom’
/bɔ:tR2/	‘loin cloth for man’
/bɔ:jR2/	‘salt’
/buaŋR1/	‘spoon’
/buaŋR1 ʔihR3/	‘ladle’

/t/

/tipR1 ca:wR2/	‘vessel for put on the glutinous rice’
/titR1/	‘to weigh’
/tikR1/	‘to be torn’
/tihR3/	‘worm’
/tihR3 lɔ:kR2/	‘a kind of worm’
/ti:R1/	‘to go’
/tehR3/	‘leech’
/tetR1/	‘cheap, right’
/teʔR1/	‘to kick’
/tehR3 kɔ:nR1/	‘to give birth’
/te:kR3/	‘to be deaf’
/te:mR2/	‘to draw’
/tiŋR1/	‘to stand’
/təwR3/	‘moss’
/tʌmR1/	‘to put on’
/tʌmR3/	‘right side’
/tatR1/	‘to cut’
/tamR1/	‘to weave’
/taŋR1/	‘chair’
/taŋR2/	‘bitter’
/tapɛlR1/	‘to blow’
/tapahR1/	‘to slap’
/tapusR3/	‘to wipe’
/tapɔŋR1/	‘to hang’
/tapɔŋR1 sa:jR3/	‘external ear’
/tabəlR1/	‘to roll up’
/taba:tR1 kusR3/	‘a composition of rasin and rotten wood used as tinder’
/tabu:kR3/	‘mud’
/tadenR1/	‘to put out the tongue’
/takɛlR1/	‘to crow’
/take:pR1/	‘to take up (with forceps, chopsticks, etc)’
/takʌ:R2/	‘thorn’
/takokR1 ka:R2/	‘fish bone’
/takokR1 kɔ:ŋR1/	‘back bone’
/takokR1 mane:lR3/	‘calf bone’
/takokR1 lamtʰʌ:ŋR3/	‘stump of a tree’
/tako:kR2/	‘bone’
/tako:lR1/	‘to prop up’

/takɔ:tR2/	‘monitor’
/takɔ:jR2/	‘horn’
/takɔ:jR2 tɔhR1/	‘ox’
/takɔ:jR2 numR1/	‘buffalo’
/tak ^h i:wR2/	‘eye-brows’
/taʔihR1/	‘to establish’
/taʔu:mR1/	‘to be rotten’
/tahu:lR2/	‘ax’
/taho:tR2/	‘to steam’
/taho:nR1/	‘to be greedy’
/taho:pR2/	‘to yawn’
/tamikR1/	‘flea’
/tamə:kR3/	‘to look up’
/tamaŋR3/	‘to listen’
/tama:R1/	‘new’
/tamuŋR1/	‘palmcivit’
/tamu:R2/	‘blood’
/tamu:R2 musR3/	‘blood from a nosebleed’
/tano:R2/	‘a kind of monkey’
/taŋɔ:nR2/	‘delicious’
/talukR1/	‘fog’
/talo:lR2/	‘egg’
/talɔ:ŋR1/	‘clear’
/ta:R1/	‘uncle’
/tuʔR1/	‘with’
/tuhR1/	‘to snatch’
/tuhR3/	‘bean’
/tuhR3 p ^h uŋR1/	‘short bean’
/tuhR3 ca:jR1/	‘soy bean’
/tuhR3 ʔʌnR3/	‘short bean’
/tuhR3 saɛ:wR2/	‘green bean’
/tuhR3 ŋɔ:kR1/	‘bean sprout’
/tuhR3 jo:lR2/	‘long-podded cowpea’
/tumR1/	‘jar’
/tumR3/	‘to stap’
/tukusR3/	‘a stove’
/tu:R1/	‘to pain’
/tu:R1 pi:lR1/	‘armache’
/tu:R1 kɔ:ŋR1/	‘backache’
/tu:R1 kasaŋR1/	‘toothache’
/tu:R1 k ^h aʔaɪR1/	‘stomachache’
/tu:R1 ʔɔ:kR2/	‘headache’

/tu:R1 malu:R2/	'legache'
/tu:R1 nA:tR2/s	'sore throat'
/tu:tR1 kusR3/	'to set a fire'
/tu:nR3/	'blind'
/tu:nR3 da:kR2/	'to drown'
/to:R1/	'clf of animal'
/to:ŋR1/	'silver'
/to:jR1/	'bowl'
/to:jR3/	'tail'
/tɔpR1/	'to clap the hands'
/tɔhR1/	'red'
/tɔmR1/	'to boiled'
/tɔ:ŋR1/	'earring'
/tɔ:jR1/	'to tap (on finger)'
/tuakR1/	'shrimp paste'
/tuaŋR1/	'to growl'

/t^h/

/t ^h i:ŋR1/	'bat'
/t ^h ɛhR1/	'sand'
/t ^h ɛ:R3/	'to shave'
/t ^h ΔkR3/	'to be shallow'
/t ^h ΔŋRi tAmR3/	'right side'
/t ^h ΔŋR1 kɔ:ŋR1/	'behind'
/t ^h ΔŋR1 matR1/	'in front of'
/t ^h ΔŋR1 vɛlR1/	'left side'
/t ^h ΔwR3/	'you (normal)'
/t ^h Δ:ŋR3/	'wood'
/t ^h awR1/	'old'
/t ^h aw ɛ:R1/	'why'
/t ^h ave: R1/	'whirlpool'
/t ^h avi:ŋR3/	'Thavung people'
/t ^h ava:kR2/	'armpit'
/t ^h avo:ŋR3/	'mosquito'
/t ^h ama:tR1/	'flat pillow for the monk sit while he is sermoning'
/t ^h anɛhR3/	'lighter'
/t ^h anu:R1/	'fever'
/t ^h anu:R3/	'fart'
/t ^h ala:kR2/	'to wake (of oneself)'
/t ^h alo:R2/	'grave'

/t ^h alo:mR1/	‘to threaten, intimidate’
/t ^h alo:jR3/	‘to fall down’
/t ^h alo:jR3 ni:mR1/	‘to get frighten’
/t ^h alɔŋR1/	‘clf. of soap’
/t ^h alɔ:kR1/	‘rough’
/t ^h alɔ:kR2/	‘a kind of bird’
/t ^h a:ŋR2/	‘month’
/t ^h a:ŋR2 ʔɛnR1/	‘next month’
/t ^h a:ŋR2 li:R1/	‘this month’
/t ^h uŋk ^h ʌ:ŋR3/	‘chin’
/t ^h u:R2/	‘to rub’
/t ^h u:R3/	‘deep’
/t ^h okR1/	‘poor’
/t ^h o:R2/	‘yam’
/t ^h o:mR1/	‘flash light’
/t ^h o:nR1/	‘to blow’
/t ^h o:lR1/	‘to cure’
/t ^h ɔkR1/	‘to shrink’
/t ^h ɔŋR1/	‘bag’
/t ^h ɔŋR1 ci:ŋR3/	‘socks’
/t ^h ɔŋR1 se:R2/	‘gloves’
/t ^h ɔŋR1 ʔa:wR2/	‘pocket of the shirt’
/t ^h ɔŋR1 halɔ:R2/	‘gunny bag’

/d/

/dinda:kR1/	‘clay’
/di:R1/	‘good’
/dikR1/	‘dawn’
/dɔ:R1/	‘particle’
/dʌ:tR2/	‘to swallow’
/dakR1 talɔ:ŋR1/	‘clear water’
/dakR1 tɔhR1/	‘mercurochrome’
/dakR1 cu:R3/	‘vinegar’
/dakR1 ka:R2/	‘fish soy’
/dakR1 ʔaku:R3/	‘unclear water’
/dakR1 ʔahɔ:mR1/	‘perfume’
/dakR1 t ^h alo:jR3/	‘waterfall’
/dakR1 matR1/	‘tear’
/dakR1 nilR1/	‘nasal secretion’
/dakR1 ŋi:R1/	‘saliva’

/damR1/	'five'
/da:kR2/	'water'
/du?du?R1/	'often'
/do:R2/	'monkey'
/do:R3/	'many'
/do:pR1/	'to smoke'
/do:kR1/	'boat'
/do:mR1/	'to ride'
/dopR1/	'to fold'
/dɔkdɔkR1/	'adam's apple'
/dɔkR1 me:tR1/	'collar bone'
/dɔhR1/	'chopsticks'
/dɔ:nR2/	'hat'
/duanR1/	'to stab'

/c/

/ci:nR2/	'nine'
/ci:ŋR1/	'ripe'
/ci:ŋR3/	'foot'
/ci:ŋR3 lɛ:nR1/	'hillfoot'
/cɛ:mR2/	'a Siamese lower garment comprising a wide strip of cloth with one end twisted and hitched between the legs'
/cɛ:ŋR1/	'to be bright'
/cəlR1/	'net'
/cʌŋR3/	'to hate'
/cʌ:tR2/	'to die'
/cʌ:lR3/	'hawk'
/cakR1/	'I(normal word)'
/caŋji:R1/	'how'
/caɪR1/	'to be burned'
/casR3/	'to comb the hair'
/capi:lR1/	'a kind of gourd'
/capa:jR2/	'to wear over the shoulder'
/cabɔ:ŋR1/	'roof'
/cadaŋR1/	'straight'
/cadɔ:jR2/	'to point'
/cake:ŋR1/	'to tilt'
/cake:tR2/	'ugly'
/caku:R2/	'bear'
/cako:ŋR3/	'ginger'

/cahuaR1/	‘monk’
/canihR3/	‘gum’
/calihR3/	‘to tired’
/calɛ:ŋR1/	‘to glance side ways’
/caluŋR3/	‘fat’
/calo:tR3/	‘to be slippery’
/calo:mR1/	‘to bump into’
/calo:ŋR3/	‘to be raw’
/calɔkR1 na:tR2/	‘windppipe’
/caloŋR1 kasaŋR1/	‘have a feeling of darting pain of the teeth’
/calɔ:kR2/	‘brook’
/ca:kR2/	‘to buy’
/ca:wR2/	‘rice’
/ca:wR2 p ^h adu?R1/	‘popped rice’
/ca:wR2 tɔmR1/	‘sticky rice cooked with milk banana, and peas and wrapped in banana leave’
/ca:wR2 ciŋR1/	‘boiled rice’
/ca:wR2 kasa:jR1/	‘a kind of rice’
/ca:wR2 k ^h aŋu:R2/	‘roasted rice’
/ca:wR2 majR1/	‘a kind of rice’
/ca:wR2 ɲumR1/	‘black sticky rice’
/ca:wR2 lɔ:kR2/	‘white sticky rice’
/ca:wR2 ja:ŋR1/	‘glutious rice’
/ca:jR2/	‘yellow’
/cu?R1/	‘to kiss’
/cu?e?R1/	‘brain’
/cuŋR1/	‘to sit’
/cuŋR1 t ^h amo:pR1/	‘to sit with the both legs folded back to one side’
/cuŋR1 k ^h att ^h ama:tR1/	‘to sit cross-legged’
/cuŋR1 jɔŋjɔ:R1/	‘to sit on one’s heels’
/cu:R3/	‘sour taste’
/cu:mR1/	‘trap for a rat’
/cokR1/	‘wound’
/coŋR3/	‘boy’
/co:R1/	‘tart taste’
/co:R2/	‘grandchild’
/co:ŋR3/	‘spade’
/cɔkR1/	‘to pick out an ear’
/cɔ?R1/	‘to make a hole’

/cɔmR1/	'year, to complain'
/cɔmR1 ʔɛnR1/	'next year'
/cɔmR1 li:R1/	'this year'
/cɔ:R2/	'dog'
/cɔ:R2 kɔlɔ:nR2/	'fox'
/cɔ:kR1/	'glass'
/cɔ:mR1/	'the whorl of hair on top of the head'
/ciaR1/	'paper'

/k/

/kihR3/	'stone'
/kinR1/	'liquor'
/kinR1 lɔ:kR2/	'white liquor'
/kint ^h inR1/	'horse-tamarind'
/kiŋkajo:R1/	'red ant'
/kiŋku:R2/	'spider'
/kiwR1	'mole'
/ki:mR1/	'needle'
/ki:wR1/	'cramps'
/kehR3/	'to be swollen'
/ke:R1/	'a weave'
ʔke:ŋR1/	'short trousers'
/kɛ:nR1 sɔ:kR1/	'elbow'
/kɛ:nR2/	'waist'
/kɛ:nR3/	'ant'
/kɛ:nR3 k ^h aʔa:R1/	'a kind of ant'
/kɛ:nR3 k ^h a:R1/	'a kind of ant'
/kɛ:nR3 su:nR1/	'a kind of ant'
/kɛ:nR3 ho:ŋR1/	'a kind of ant'
/kɛ:nR3 ɲumR1/	'black ant'
/kɛ:lR1/	'cucumber'
/kə:R1/	'near'
/kə:R2/	'girl'
/kə:pR1/	'shoes'
/kə:kR1/	'to be dumb'
/kʌ:R1/	'bee'
/kʌ:R2/	'louse'
/kʌ:ŋR3/	'mouth'
/kapkɛ:R2/	'gecko'
/kanR1/	'I (normal word)'

/kaŋkɛ:R2/	‘pigeon’
/kasR3/	‘vegetable’
/kasR3 pɔ:ŋR3/	‘choy sum leaves’
/kasR3 tʰə:mR3/	‘sweet basil’
/kasR3 cakehR1/	‘a kind of vegetable’
/kasR3 salatR1/	‘lettuce’
/kasR3 lɔ:kR2/	‘chinese cabbage’
/kapihR1 pɔ:kR1/	‘cone-shaped woven bamboo’
/kape:R1/	‘a crate’
/kapehR3/	‘scale’
/kape:kR1/	‘to be torn’
/kapəhR1/	‘bran’
/kapaŋR1 ci:ŋR3/	‘sole of the foot’
/kapaŋR1 se:R2/	‘palm of the hand’
/kapasR3/	‘cotton’
/kapa:jR2/	‘cloth’
/kapa:jR2 pado:R1/	‘loin cloth’
/kapa:jR2 kʰi:nɔ:nR1/	‘blanket’
/kapa:jR2 ʔu:mR2 da:kR2/	‘towel’
/kapa:jR2 sɔpR2/	‘a kind of cloth’
/kapu:lR2/	‘lime’
/kapu:lR2 lasR3/	‘skum’
/kapoʔR1/	‘half coconut shell’
/kapo:lR1/	‘caterpillar’
/kapo:lR1 kʰado:jR1/	‘a kind of caterpillar’
/kapʰʌʔR1/	‘smelling salts’
/kapʰo:kR2/	‘hip’
/kabeŋR1/	‘to swell out’
/kabə:kR1/	‘have an abrasion’
/kaba:nR1/	‘a strainer, tray’
/kabuŋR1/	‘a kind of basket’
/kabu:R1/	‘thick’
/kabɔ:ŋR1/	‘clf. of wood’
/katiŋR1 ba:nR1/	‘villager’
/kati:R2/	‘below’
/katɛ:pR2/	‘to be abortive’
/kati:kR1/	‘parasitic worm (in bodies of people, animals)’
/katə:jR1/	‘a kind of basket’
/katawR1/	‘sticky’
/katamR1/	‘a kind of trap’
/kata:R1/	‘a basket’

/kata:tR1/	'a kind of basket'
/kata:mR2/	'crab'
/kata:lR2/	'testis'
/kato:jR1/	'to trip over'
/kato:tR2/	'wart'
/kato:ŋR1/	'bra'
/kat ^h i:kR1/	'trap for a rat'
/kat ^h əpR1/	'to bump against'
/kat ^h ʌ:ŋR3/	'a kind of a caterpillar'
/kat ^h a:tR1/	'ply wood that made of bamboo'
/kat ^h o:R1/	'satchel'
/kat ^h əmR1/	'to cover with earth'
/kade:R1/	'deer'
/kade:mR1/	'to put on top of'
/kade:tR1/	'to be tight'
/kade:kR1/	'to deceive'
/kadawR1/	'a kind of vegetable'
/kada:R1/	'spinach'
/kada:nR1/	'to roll the tongue'
/kaduhR1/	'to patch'
/kaduhR3/	'chameleon'
/kadɔlR1/	'occipital bone'
/kadɔlR1 ci:ŋR3/	'heel'
/kado:tR1/	'to close'
/kado:jR2 ci:ŋR3/	'toe'
/kado:jR2 ci:ŋR3 ʔihR3/	'great toe'
/kado:jR2 cado:jR2/	'index finger'
/kado:jR2 ka:ŋR1/	'ring finger'
/kado:jR2 ʔihR3/	'thumb'
/kado:jR2 ʔe:tR1/	'index toe'
/kado:jR2 ʔat ^h ihR3/	'middle finger'
/kado:jR2 se:R2/	'finger'
/kado:jR2 jɛlR1/	'little finger'
/kadianR1/	'ceiling'
/kace:R2/	'vagina'
/kacɛʔR1 matR1/	'eye tip'
/kacʌ:tR2/	'to kill'
/kacakR1/	'mirror'
/kacaŋR1/	'charcoal'
/kaca:R2/	'hail-stone'
/kaca:kR2/	'squirrel'
/kacuhR1/	'shell'

/kacuhR1 taŋR1/	‘a kind of shell’
/kacuhR1 ʔʌ:kR1/	‘a kind of shell’
/kacoʔR1/	‘a little basket for put of areca-nut set’
/kaveɪR1/	‘to fry’
/kavahR1/	‘toothless’
/kavanR1/	‘to embrace’
/kavʌʔR1/	‘chipped, nicked’
/kavɔŋR1/	‘peacock’
/kasiwR1/	‘pimple’
/kasi:pR1/	‘centipede’
/kasamR1/	‘nail’
/kasaŋR1/	‘tooth’
/kasaŋR1 kumR1/	‘molar tooth’
/kasaŋR1 mɛ:ŋR1/	‘dental caries’
/kasaŋR1 ŋɛ:R1/	‘canine tooth’
/kasa:mR1/	‘chaff’
/kasu:nR2/	‘to whistle’
/kaha:lR2/	‘tiger’
/kahɔ:jR2/	‘dust, smoke of the fire’
/kamitR1/	‘flea’
/kameŋR1/	‘chicken lice’
/kamʌŋR1/	‘lymph’
/kamu:tR3/	‘cricket’
/kamoŋR1/	‘hammer’
/kamo:R2/	‘hollow of the palm of the foot and hand’
/kamo:R2 ci:ŋR3/	- ‘plantar arch’
/kamɔkR1 kusR3/	‘fire-wood’
/kanɛ:tR2/	‘comb’
/kana:lR2/	‘skink’
/kanɔ:nR1/	‘young’
/kaŋi:pR1 matR1/	‘to close one’s eye’
/kaŋawR1/	‘to speak’
/kaŋawR1 ha:mR1/	‘to stammer’
/kaŋu:R2/	‘wind’
/kaŋɔmR1/	‘to grasp’
/kali:mR1/	‘clf. of money’
/kali:ŋR2/	‘to roll’
/kale:ŋR1/	‘(two or more people) to carry’
/kalehR1/	‘to fall in ruins’
/kalɛnR1/	‘odor’

/kalɛ:mR1/	‘food’
/kalʌŋR1 ʔihR3/	‘forest’
/kalʌ:nR2/	‘to be bald’
/kalʌ:nR3/	‘to crawl on hands and knees’
/kalanR1/	‘to restrain’
/kalo:ŋR1/	‘iron bucket’
/kaloʔR1/	‘clf of cigarette’
/kalɔmR1/	‘ellipse’
/kajilR1/	‘to pinch’
/kajuhR1/	‘to spit the saliva’
/kajɔŋR1/	‘millipede’
/ka:R1/	‘chicken’
/ka:R2/	‘fish’
/ka:R2 calɔ:nR1/	‘serpent-head’
/ka:R2 kadɛ:tR1/	‘gouramy’
/ka:R2 ʔatɔŋR1/	‘carp’
/ka:R2 salɔ:jR1/	‘wild fowl’
/ka:R2 lajR1/	‘a kind of fish’
/ka:pR1 t ^h ʌ:ŋR3/	‘shell sea’
/ka:tR1/	‘insect bite’
/ka:ŋR1/	‘jar’
/kumR1/	‘to cremate’
/kunR1 coŋR3/	‘male’
/kunR1 kə:R2/	‘female’
/kusR3/	‘fire’
/kumi:R1	‘everyday’
/ku:R3/	‘couple’
/ku:tR1/	‘small green frog’
/ku:nR2/	‘male of animal’
/ku:lR2/	‘pig’
/ku:lR2 kanɛhR1/	‘wild boar’
/kopR1/	‘to plane wood’
/kokR1 ka:R1/	‘chicken coop’
/koʔR1/	‘clf for a mouthful’
/kohR1/	‘to rise’
/ko:R1 ci:ŋR3/	‘ankle’
/ko:R1 se:R2/	‘wrist’
/ko:kR1/	‘clf. of chicken nest’
/ko:mR1/	‘to stoop’
/ko:nR2/	‘mortar’
/ko:jR1/	‘to unfold’
/ko:jR1 ʔaŋa:ŋR3/	‘to sneak’

/kɔːjR1 tʰʌːŋR3/	‘cavity tree’
/kɔtR1/	‘umbrella’
/kɔhR1/	‘grass’
/kɔŋkɔŋR1/	‘prawn’
/kɔːkR2/	‘to hook’
/kɔːnR1 tɔhR1/	‘baby’
/kɔːnR1 tʰanaːR1/	‘feather tipped darts’
/kɔːnR1 tʰavɔːŋR3/	‘mosquito larva’
/kɔːnR1 cɔːR2/	‘puppy’
/kɔːnR1 kamɛnR1/	‘daughter-in-law’
/kɔːnR1 kuncoŋR3/	‘son’
/kɔːnR1 kunkɔːR2/	‘daughter’
/kɔːnR1 kunʔeːtR1/	‘child’
/kɔːnR1 kʰal ʌːR2/	‘the orphan child’
/kɔːnR1 kʰiaR1/	‘son-in-law’
/kɔːnR1 ʔalaːŋR2/	‘twin child’
/kɔːnR1 san ʌːtR2/	‘bullet’
/kɔːŋR1/	‘back’
/kiawR1/	‘to carry (something) at both ends of a pole placed on one’s shoulder’
/kuaR2/	‘term of address to younger man or woman’
/kuanR1/	‘to be naughty’
/kuaŋR1/	‘wide’

. /kʰ/

/kʰitR1/	‘to nudge’
/kʰiŋR1 musR3/	‘ridge of nose’
/kʰiːR3/	‘fin’
/kʰɛːR2/	‘crocodile’
/kʰʌːtR3/	‘a rake’
/kʰʌːwR1/	‘to be fishy (in smell)’
/kʰanR1 tʰawR1/	‘walking stick’
/kʰawhɔːR1/	‘climber with bitter principles’
/kʰabuːlR2/	‘boiling water’
/kʰabɔhR1/	‘bark of the tree’
/kʰabɔhR1 makpʰaːwR1/	‘coir of coconut’
/kʰabɔːtR2/	‘to spit out’
/kʰadahR1/	‘to be irritating in the eye’
/kʰadoːŋR1 hɔːR3/	‘tortoise shell’

/k ^h aʔεʔR1 kɛ:nR3/	‘excrement of ant’
/k ^h aʔεʔR1 ka:R1/	‘excrement of chicken’
/k ^h aʔεʔR1 ku:lR2/	‘excrement of pig’
/k ^h aʔεʔR1 sa:jR3/	‘ear-wax’
/k ^h aʔεʔR1 matR1/	‘eye-wax’
/k ^h aʔεʔR1 mɔsR3/	‘freckles’
/k ^h aʔεʔR1 ɲilR1/	‘mucus’
/k ^h aʔε:R2/	‘excrement’
/k ^h aʔε:R2 kade:ŋR1/	‘to be constipated’
/k ^h aʔə:jR1/	‘to play’
/k ^h aʔalR1/	‘abdomen’
/k ^h aʔalR1 ʔihR3/	‘belly’
/k ^h aʔa:kR1/	‘crow’
/k ^h aʔɔ:R2/	‘urine’
/k ^h aʔɪamR1/	‘to belch’
/k ^h ame:lR1/	‘termalic’
/k ^h amasR3/	‘to laugh’
/k ^h ama:jR2/	‘woman’
/k ^h amo:lR2/	‘termite’
/k ^h aŋɔmR1/	‘to clench the fists’
/k ^h alihR1/	‘to be hard’
/k ^h alɔ:R2/	‘to be orphan’
/k ^h ala:R1/	‘to be old’
/k ^h ala:R2/	‘the way’
/k ^h ala:tR1/	‘to scratch’
/k ^h ala:ŋR1/	‘sunlight’
/k ^h aluhR3/	‘to bark’
/k ^h alu:tR1/	‘to scrape’
/k ^h alo:tR1/	‘to gnaw’
/k ^h alo:tR2/	‘skin’
/k ^h alo:tR2 matR1/	‘eyelid’
/k ^h alɔŋR3/	‘inside’
/k ^h alɔmR1/	‘to brood over’
/k ^h alo:ŋR1/	‘seed’
/k ^h alo:ŋR1 matR1/	‘eye ball’
/k ^h aluaR2/	‘to slice (with horizontal motion)’
/k ^h a:R1/	‘galanga’
/k ^h uʔR1/	‘bucket’
/k ^h uli:R1/	‘today’
/k ^h okR1 mo:ŋR1/	‘mortar for pierce the paddy’
/k ^h ɔmR1/	‘rancid’
/k ^h ɔ:R2/	‘knife’

/k ^h ɔ:R2 pasəŋR1/	'light knife'
/k ^h ɔ:R2 set:R2/	'knuckle'
/k ^h ɔ:R2 lo:nR1/	'sharp knife'
/k ^h ɔ:tR1/	'to sharpen'
/k ^h ianR1/	'a metal for build the light'

/?/

/ʔihR3/	'big'
/ʔi:kR1/	'rat'
/ʔi:ŋR1/	'to lean against'
/ʔe:tR1/	'small'
/ʔetR1/	'to raise'
/ʔenR1/	'next'
/ʔenR3/	'sinew'
/ʔe:R1/	'to have'
/ʔe:R1 ʔaʋa:nR2/	'rich'
/ʔe:mR1/	'partition'
/ʔe:wR1 k ^h okmo:ŋR1/	'ladle of mortar for pierce the paddy'
/ʔi:nR2/	'to pull'
/ʔəʔR1/	'that (conj)'
/ʔə:jR1/	'elder sister'
/ʔʌkR1/	'chest'
/ʔʌnR3/	'short'
/ʔʌ:pR1/	'to stretch out'
/ʔammahi:R1/	'last night'
/ʔanR1/	'to eat'
/ʔanR1 do:ŋR1/	'wedding'
/ʔa:nR1/	'saddle'
/ʔa:jR1/	'elder brother'
/ʔa:jR1 sa:mR1/	'cousins'
/ʔape:R3/	'bracelet'
/ʔape:ŋR3/	'shoulder'
/ʔape:ŋ R1/	'wing'
/ʔapəR1/	'lips'
/ʔapʌ:ŋR3/	'to hear'
/ʔapaŋR1 nʌ:R3/	'farm hut'
/ʔapukR1/	'to wash'
/ʔapokR1/	'to be dilapidated'
/ʔapo:R1/	'dream'
/ʔapo:ŋR1/	'cavity'

/ʔap ^h amR1/	‘clf. of yam’
/ʔabilR1/	‘to sharpen’
/ʔabuhR1/	‘the door’
/ʔabo:lR2/	‘to swarm around (as an noying flies or insects)’
/ʔatikR1/	‘to be bold, resolute’
/ʔatilR1/	‘to sway’
/ʔatehR1/	‘to sprout’
/ʔate:nR1/	‘to shout’
/ʔata:R3/	‘duck’
/ʔatakR1/	‘soil’
/ʔatanR1 kalohR1/	‘throat’
/ʔatalR1/	‘rope’
/ʔatalR1 na:tR2/	‘necklace’
/ʔatasR3/	‘to spread (in the sun)’
/ʔata:tR2 ci:ŋR3/	‘foot prints’
/ʔatukR1/	‘to push’
/ʔatumR1/	‘to tease by poking’
/ʔatuŋR2/	‘liana’
/ʔatu:R1/	‘oil’
/ʔatu:R1 ku:lR2/	‘lard’
/ʔatu:tR2/	‘lazy’
/ʔato:R1/	‘to scold, cruel’
/ʔato:ŋR1/	‘to run’
/ʔato:lR1/	‘rosary’
/ʔatohR1/	‘to wrap up’
/ʔatohR1 k ^h ale:ŋR1/	‘a bamboo pole used for carrying loads on the shoulder’
/ʔat ^h a:kR2/	‘to cut (with diagonal or almost horizontal motion’
/ʔat ^h okR1/	‘to pull with jerks’
/ʔadikR1/	‘to shake the head’
/ʔadinR1/	‘to press with hand’
/ʔadi:R1/	‘to tell like an order’
/ʔade:ŋR1/	‘to wear’
/ʔadakR1/	‘to cook’
/ʔadalR1/	‘to climb’
/ʔada:ŋR1/	‘to bake’
/ʔado:R2/	‘curry’
/ʔado:R2 ka:R1/	‘chicken curry’
/ʔado:R2 ku:lR2/	‘pork curry’
/ʔado:jR1/	‘to ride above the neck’

/ʔadəkR1/	‘to pull up’
/ʔadəhR1/	‘to cough’
/ʔadə:lR2/	‘the bridge’
/ʔaci:ŋR3/	‘ladder’
/ʔace:mR2/	‘to look after’
/ʔace:tR1/	‘to insert’
/ʔace:kR1/	‘to pick out the tooth’
/ʔacə:nR1/	‘to dig (with claws, as a dog)’
/ʔacahR1/	‘to dig’
/ʔacusR3/	‘to sew’
/ʔaco:pR3 malo:jR3 /	‘lightning’
/ʔacəkR1/	‘to put one’s hand(s) in one’s pocket(s)’
/ʔacə:jR2/	‘bird’
/ʔacə:jR2 kaca:kR1/	‘warbler’
/ʔacə:jR2 ʔakikR1/	‘wood pecker’
/ʔacə:ŋR1/	‘a kind of tree’
/ʔakilR1/	‘to sway’
/ʔakilR3 malo:jR3/	‘thunder’
/ʔake:mR1/	‘seashore’
/ʔake:lR1/	‘to be ticklish’
/ʔakepR1/	‘to keep’
/ʔake:R2/	‘to seek’
/ʔakəlR1/	‘to squeeze’
/ʔak ʌmR1/	‘to borrow’
/ʔak ʌlR1/	‘clf. of vehicle’
/ʔak ʌ:nR3/	‘sensitive condition of denuded teeth’
/ʔak ʌ:jR2/	‘a kind of deer’
/ʔakasR3/	‘to scratch’
/ʔaka:pR2/	‘bamboo’
/ʔaka:tR1/	‘to bite’
/ʔakuhR1/	‘the day’
/ʔaku:R2/	‘unclear’
/ʔaku:lR2/	‘to wash the hair’
/ʔako:R1/	‘to spit betel’
/ʔako:pR1 ci:ŋR3/	‘back of the foot’
/ʔako:pR1 se:R2/	‘back of the hand’
/ʔako:ŋR1 halo:R2/	‘an ear of corn’
/ʔako:lR3/	‘to vomit’
/ʔako:lR1/	‘knee’
/ʔako:jR1/	‘to scoop together’

/ʔakəkR1/	'to twisted'
/ʔakəmR1/	'bracelet'
/ʔakəŋR1/	'to be crooked'
/ʔakəhR1/	'to knock'
/ʔakə:lR2/	'star'
/ʔakə:lR2 musəŋR1/	'a kind of star'
/ʔakə:lR2 ha:wR1/	'comet'
/ʔakə:jR2/	'the end of paddy'
/ʔak ^h i:tR1/	'to write'
/ʔak ^h o:tR1 makp ^h a:wR1/	'coconut cream'
/ʔaʔε:ŋR1/	'to worm at the fire'
/ʔaʔi:nR1/	'to lead by the hand'
/ʔaʔə:kR2/	'above, the north'
/ʔaviŋR3/	'sesami'
/ʔava:nR2/	'money'
/ʔavo:R1/	'to watch carefully'
/ʔavə:ŋR2/	'to call'
/ʔasi:R1/	'to rub'
/ʔasu:R1/	'hole'
/ʔasu:R1 sa:jR3/	'hole of ears'
/ʔasu:R1 musR3/	'nostril'
/ʔasu:R2/	'to sneeze'
/ʔasəkR1/	'hair of human or animal'
/ʔasəkR1 pi:lR1/	'down (soft under feathers); fuzz (body hair)'
/ʔasəkR1 matR1/	'eyelashes'
/ʔasəkR1 malu:R2/	'down (soft under feathers); fuzz (body hair)'
.	
/ʔasəkR1 musR3/	'hair in a nose'
/ʔasuamR1/	'room'
/ʔasuam1 da:kR2/	'bathroom'
/ʔasuamR1 nɔmR3/	'bedroom'
/ʔahiŋR2/	'a kind of louse'
/ʔahiwR1/	'to hold by hand'
/ʔahitR1/	'to inhale'
/ʔahi:mR2/	'to cry'
/ʔahɔ:R2/	'what'
/ʔahɔ:ŋR3/	'to divorced'
/ʔahawR1/	'to whisper'
/ʔahamR1/	'brittle'
/ʔahalR1/	'to mince'
/ʔahanŋR1/	'loud'

/ʔaha:ŋR1/	‘to drag’
/ʔahukR1/	‘rag’
/ʔaho:R1/	‘to answer’
/ʔaho:tR2/	‘to leak’
/ʔaho:mR2/	‘dark’
/ʔaho:mR2 malo:jR3/	‘dark sky’
/ʔahɔlR1/	‘to remove’
/ʔahɔ:mR1/	‘to be fragrant’
/ʔahiaR1/	‘to lost’
/ʔahianR1/	‘to learn’
/ʔame:nR1/	‘soft’
/ʔamahR1/	‘the night’
/ʔamo:tR1/	‘the day after tomorrow’
/ʔamo:ŋR1/	‘meat’
/ʔan.ʌmR3/	‘to carry on the shoulder’
/ʔanumR1/	‘to carry (a child, an animal) in one’s arms’
/ʔanɔmR1/	‘to mould’
/ʔaŋɛlR1/	‘to struggle’
/ʔaŋa:R2/	‘to chew’
/ʔaŋa:ŋR3/	‘to walk’
/ʔaŋo:R1 matR1/	‘sympathy’
/ʔaŋɔmR1/	‘to caress’
/ʔaŋo:ŋR2/	‘to flatter’
/ʔaŋuaR1/	‘to urge on’
/ʔaŋuaŋR1/	‘to persuade’
/ʔaŋitR1/	‘to miss’
/ʔaŋa:R1/	‘to irritate’
/ʔaŋuhR3/	‘to sleepy’
/ʔaŋɔmR1/	‘to dive for’
/ʔali:R1/	‘this’
/ʔalɛ:mR2/	‘to lick’
/ʔal.ʌ:ŋR1/	‘to sharpen’
/ʔala:R1/	‘that’
/ʔala:ŋR1/	‘to wash’
/ʔala:ŋR2/	‘twin’
/ʔalukR1/	‘to push’
/ʔaluhR1/	‘to separate’
/ʔalu:pR1/	‘to stroke’
/ʔalu:tR2/	‘to miscarry’
/ʔalowR1/	‘those’
/ʔalɔ:ŋR1/	‘mountain’

/ʔaliakR1/	‘to select’
/ʔaji:wR1/	‘tomorrow’
/ʔajamR1/	‘to wait’
/ʔajo:R1/	‘where’
/ʔajɔ:R1/	‘to shake the leg’
/ʔajɔ:kR2/	‘to joke’
/ʔa:wR1/	‘term of address to younger man or woman’
/ʔa:wR2/	‘shirt’
/ʔa:wR2 pi:lR1 ʔʌnR3/	‘short-sleeved shirt’
/ʔa:wR2 pi:lR1 jo:lR1/	‘long-sleeved shirt’
/ʔuhR3/	‘house’
/ʔuhR3 tu:lR1/	‘wasp nest’
/ʔuhR3 kʌ:R1/	‘bee-hive’
/ʔumR1/	‘to embrace’
/ʔuca:jR1/	‘a little small green frog’
/ʔu:R3/	‘to suck the milk’
/ʔu:pR1/	‘to burn’
/ʔu:tR1/	‘to stretch out’
/ʔo:R1/	‘the cradle’
/ʔo:tR1/	‘to give’
/ʔo:kR1/	‘before’
/ʔo:mR2/	‘to bathe’
/ʔo:nR1/	‘to distribute’
/ʔo:ŋR1/	‘elephant’
/ʔɔkR1 tʰo:R2/	‘taro root’
/ʔɔkR1 se:nR1/	‘lemon grass’
/ʔɔkR1 hɔ:mR1/	‘onion’
/ʔɔhR1/	‘not (negative marker)’
/ʔɔnR1/	‘large bamboo rat’
/ʔɔŋR1/	‘father’
/ʔɔŋR1 ka:R1/	‘ridge pole’
/ʔɔŋR1 kama:jR1/	‘widower from his wife is dead’
/ʔɔŋR1 ʔahʌ:ŋR3/	‘widower from divorcement’
/ʔɔŋR1 tʰawR3/	‘father-in-law’
/ʔɔŋR1 majR1/	‘step father’
/ʔɔŋR1 nʌ:R1/	‘step father’
/ʔɔŋR1 mə:R2/	‘parent’
/ʔɔ:R2/	‘term of address to an elder woman or man’
/ʔo:kR2/	‘head’
/ʔɔ:ŋR1/	‘wasp’

/ʔianR1/	‘eel’
/ʔiawR1/	‘thin’
/v/	
/vitR3/	‘to throw away’
/vitR3 ʔo:R1/	‘to rock the cradle’
/vi:lR1 matR1/	‘have a dizzy spell’
/vɛhR3/	‘knife’
/vɛlR1/	‘left’
/vɛ:nR2/	‘ring’
/vʌ:R2/	‘crazy, mad’
/vatR1 pi:mR1/	‘sad’
/vajR1/	‘fast’
/vasR3/	‘to sow’
/vo:kR1/	‘to poke (one’s head) out’
/vo:lR3/	‘to come’
/vo:ŋR2/	‘pot;
/vo:ŋR2 taho:tR2/	‘rice pot’
/vɔ:nR2 ha:ŋR1/	‘pan’
/viakR2/	‘work’
/s/	
/sikR1/	‘rattan’
/sili:R1/	‘nomadic’
/sijnuaR1/	‘gable’
/si:wR1/	‘blue green’..
/se:R2/	‘hand’
/se:kR1/	‘to tear’
/səlo:kR1/	‘basin’
/sə:R1/	‘to put on’
/sʌ:nR3/	‘to plait’
/saŋka:R1/	‘monk’s robes’
/sapiŋR1/	‘zip’
/sabe:hR3/	‘moustache’
/sabʌ:R3/	‘corn’
/sabɔŋR1/	‘monk’s loin cloth’
/saduŋR1/	‘a dip-net’
/sadɔŋR1/	‘to thrust’
/sado:ŋR1/	‘to jump’
/saʔəkR1/	‘to hiccup’

/saʔo:nR1/	'jealous'
/samaʔR1/	'cemetery'
/samΛ:R3/	'ghost'
/samΛ:R3 pe:tR1/	'an evil-doer'
/samΛ:R3 p ^h Λ:jR3/	'spirit that the sorcerers entertain in their houses'
/samΛ:R3 su:nR1/	'soul'
/samakR1/	'to choke'
/samutR1/	'colic'
/sanΛ:tR2/	'gun'
/sanaʔR1/	'triangle pillow'
/sana:R2/	'crossbow'
/sana:R2 t ^h anu:R1/	'the sack tree'
/sanokR1/	'ill'
/saŋΛ:jR2/	'far'
/saŋo:lR2/	'to snore'
/saŋiapR1/	'sash of monk'
/salitR1/	'underwear'
/salehR1/	'to prune'
/sale:wR2/	'green'
/sale:wR2 kanonR1/	'light green'
/sale:wR2 k ^h ala:R1/	'dark green'
/salΛ:nR2/	'fear'
/salanR1/	'to shake'
/salaŋR1/	'cool'
/sala:R2/	'leaf'
/salo:jR1/	'to flow'
/sa:mR1/	'younger brother or sister'
/sa:mR2/	'eight'
/sa:mR1 kamenR1/	'sister-in-law'
/sa:mR1 kuncoŋR3/	'younger brother'
/sa:mR1 kunkə:R2/	'younger sister'
/sa:jR3/	'ear'
/sa:jR3 tɛ:kR3/	'dumb'
/sa:jR3 k ^h i:R3/	'eaves'
/sa:jR3 ʔɛ:wR1/	'belt'
/sa:jR3 jo:lR /	'rabbit'
/sa:jR3 jo:nR1/	'earlobe'
/sutR1/	'mosquito net'
/sukR1 ʔaco:jR2/	'bird nest'
/sumR1/	'a kind of fish- hook'
/suhR1/	'lung'

/suti:tR2/	‘button’
/suti:tR2 loŋR1 tɔmR3/	‘right button’
/suti:tR2 loŋR1 vɛlR1/	‘left button’
/su:mR1/	‘dark red’
/su:nR3/	‘wet’
/sɔmR1/	‘harpoon’
/sowR1/	‘I (polite word)’
/so:tR1/	‘to box’
/so:ŋR1/	‘trousers’
/so:jR1/	‘to help’
/sɔkR1/	‘hair’
/sɔkR1 palu:kR1/	‘grey hair’
/sɔkR1 cadaŋR1/	‘straight hair’
/sɔkR1 ko:tR1/	‘curly hair’
/sɔkR1 ?ɔnR3/	‘short hair’
/sɔkR1 lɔ:mR2/	‘sideburn’
/sɔkR1 jo:lR /	‘long hair’
/suaŋR1/	‘to forget’

/h/

/hilR1/	‘to be hot and spicy (of food)’
/he:ŋR1/	‘strong’
/he:ŋR2/	‘to pour off’
/hɛhR3/	‘root of the tree’
/hɛ:R3/	‘placenta’
/hɛ:mR2/	‘salty’
/hi:tR1/	‘cigarette’
/hi:tR1 mala:tR2/	‘a kind of food that eat with areca-nut and betel vine leaves of the old people’
/hi:tR1 jaja:ŋR1/	‘opium’
/hɔ:R1 kɔ:ŋR2/	‘to open one’s mouth’
/hapu:R1/	‘rash’
/habɔhR1/	‘the bird’s mouthtip’
/hadɔmR1/	‘knife handle’
/hako:R1/	‘to be blurred’
/hako:R2/	‘unhusked rice’
/hako:R2 tabaŋR1/	‘fermented rice’
/hajaŋkR1/	‘to drop’
/halemR1/	‘to trim’
/hala:kR1/	‘to peel’

/hala:jR2/	‘medicine’
/hala:jR2 k ^h alR1/	‘pill’
/hala:jR2 da:kR2/	‘potion’
/hala:jR2 maʔu:lR2/	‘strychnine’
/halo:R2/	‘paddy’
/halo:R2 pap ^h anR1/	‘the paddy that has yellow and round seed’
/halo:R2 po:mR3/	‘the paddy that has black stripe and round seed’
/halo:R2 p ^h aduʔR1/	‘popped rice’
/halo:R2 ba:jR1/	‘the paddy that has yellow, fat and round seed; furthermore, do not has the stripe’
/halo:R2 de:ŋR1/	‘the paddy that has red and long seed’
/halo:R2 kamR1/	‘the paddy that has black and long seed’
/halo:R2 k ^h o:nR1/	‘the paddy that has white seed and longer than /halo:R2 he:nR1/’
/halo:R2 va:lR3/	‘the paddy that has the stripe and big seed’
/halo:R2 he:nR1/	‘the paddy that is like /halo:R2 ba:jR1/, but has white seed’
/halo:R2 na:p ^h o:nR1/	‘the paddy that has yellow and long seed’
/halo:R2 liaŋR1 ko:mR1/	‘the paddy that has yellow, round and short seed’
/ha:tR1/	‘a kind of tree’
/ha:wR1/	‘trap’
/ha:nR1/	‘to ask’
/ha:lR1/	‘two’
/ha:jR1/	‘to put some drops on’
/hu:lR1/	‘to fly’
/hu:tR1/	‘to sip’
/ho:wR1/	‘to cheer’
/ho:mR1/	‘narrow’
/ho:ŋR1/	‘to smell’
/ho:lR1/	‘blaze’
/ho:jR1/	‘bad smell’
/ho:tR1/	‘to shrink’
/hoʔR1/	‘dry’

/hɔːR3/	‘tortoise’
/hɔːR3 patasR3/	‘a kind of tortoise’
/hɔːR3 da:kR2/	‘a kind of tortoise’
/hɔːtR1/	‘intestine’
/hɔːtR1 ʔihR3/	‘large intestine’
/hɔːtR1 ʔe:tR1/	‘small intestine’
/hɔːjR1/	‘whistle’
/hɔːkR1 ka:R1/	‘chicken nest’
/hiaŋR1/	‘chopping block’

/m/

/mitR1/	‘one’
/mitR3/	‘gall’
/mikR1/	‘pencil’
/mi:R1/	‘you (polite word)’
/mekeŋR1/	‘single’
/me:lR3/	‘gizzard’
/me:R2/	‘to do’
/me:nR1/	‘verb to be’
/me:nR3/	‘to hem’
/me:ŋR1 tʰalɔŋR1 ʔɔŋR1/	‘dragon fly’
/me:ŋR1 cɔŋcɔŋR1/	‘a kind of insect like cicada’
/me:ŋR1 kasa:pR1/	‘cockroach’
/me:ŋR1 kʰamde:tR1/	‘grub’
/me:ŋR1 majɯ:R2/	‘a kind of insect’
/me:ŋR1 mɔsR3/	‘fly’
/me:ŋR1 ŋɔ:tR2/	‘scorpion’
/me:ŋR1 liamR1/	‘beetle’
/minR1/	‘numb’
/mi:R1/	‘day’
/mijo:R1/	‘when’
/mə:R2/	‘mother’
/mə:R2 tʰawR1/	‘mother-in-law’
/mə:R2 da:kR2/	‘river’
/mə:R2 cɔ:nkanɔ:mR1/	‘mother who has just get the baby’
/mə:R2 kama:jR1/	‘widow from her husband is dead’
/mə:R2 ka:R1/	‘cicada’
/mə:R2 ʔahΛ:ŋR3/	‘widow from divorcement’
/mə:R2 majR1/	‘step-mother’
/mə:R2 nΛ:R1/	‘step-mother’

/mΛ:mR3/	'spleen'
/matR1/	'eyes, face'
/matR1 talo:lR1/	'corneal ulcer'
/matR1 tu:nR3/	'blind'
/matR1 tɔhR1/	'conjunctivitis'
/matR1 tɔ:nR1/	'a kind of disease about eyes'
/matR1 cale:ŋR1/	'cross eyed'
/matR1 kusR3/	'fire-work'
/matR1 k ^h ala:ŋR1/	'sun'
/matR1 k ^h ɔmR1/	'to have an angry face'
/matR1 jumR1/	'pupil'
/matR1 lɔ:kR2/	'white eyes'
/makR1 p ^h etR1/	'chilli'
/makR1 p ^h etR1 ?ihR3/	'spur pepper'
/makR1 p ^h etR1 ?e:tR1/	'bird chilli'
/makR1 tiŋR1/	'button'
/makR1 tɛ:kR3/	'to burst'
/makR1 kadŋR1/	'bell'
/makR1 kalenR1/	'tomato'
/makR1 suaŋR1/	'forgetful'
/mapinR1/	'to spin'
/matŋR1/	'five days after tomorrow'
matanŋR1/	'six days after tomorrow'
/ma?u:lR2/	'to be bored'
/mahŋR1/	'rainbow'
/mahi:nR1/	'beautiful'
/mahehR1/	'four days after tomorrow'
/mahe:R1/	'two days after tomorrow'
/mahe:tR1 pihR3/	'thunderbolt'
/mahu:R1/	'three days after tomorrow'
/mahɔ:R1/	'to be angry'
/mahɔ:wR1/	'sweat'
/mahɔ:mR1/	'steam'
/mahɔŋR1/	'to be hungry'
/manɛ:lR3/	'calf'
/mapapR1 matR1/	'to have one's eyes half closed with drowsiness'
/maləŋR3 matR1/	'to open an eyes'
/malΛ:ŋR1/	'dead person'
/malu:R3/	'leg'
/malahR1/	'to cross'
/mala:tR2/	'to be tasteless'

/malɔːjR3/	‘rain’
/malɔːjR3 tʰalɔːjR3/	‘raining’
/malɔːjR3/	‘sky’
/mamR1 maluːR2/	‘the leg above knee’
/manR1 capʰaːwR1/	‘yam bean’
/manR1 daːnR1/	‘yam bean’
/manR1/	‘to be diligent’
/maːR1/	‘don’t’
/maːŋR2/	‘elder sister-in-law’
/maːjR1 pʰʌːjR3/	‘paddle’
/maːjR1 ʔeːwR1/	‘wood for beat paddy’
/mupR1/	‘to cover up’
/musR3/	‘nose’
/muːtR1/	‘one’
/monR1	‘round’
/mohokR1/	‘hell’
/moːR1/	‘female of animal’
/moːkR1	‘grey’
/mɔkR1	‘lap’
/mɔːR1 pʰʌːlR3/	‘hunter’
/muanR1/	‘amused’

/n/

/nʌhR3	‘to see’
/nʌmR3	‘to sleep’
/nʌmR1 pʰaŋaʔR1/	‘to lie flat on the back’
/nʌmR1 cakeːŋR1/	‘to lie on one’s side’
/nʌmR1 kʰaluːmR1/	‘to lie flat on the face’
/nʌmR1 ʔʌːpR1/	‘to lie down at full length’
/nʌŋR3/	‘heavy’
/nʌːR3/	‘field’
/nʌːtR2/	‘neck’
/nʌːŋR1/	‘to lean’
/naːpʰʌːkR3/	‘forehead’
/naːjR1/	‘aunt’
/numR1/	‘to take’
/nonoːR1/	‘who’
/noːkR3/	‘outside’
/noːjR2/	‘to stay’
/nɔŋjoːR1/	‘how much’

/nɔ:ŋR1/	‘well’
/nɔ:R1 makp ^h a:wR1/	‘oar’
/nuajR1/	‘clf. of fruit’

/ɲ/

/ɲɪ:R1/	‘porcupine’
/ɲi:mR1/	‘mind’
/ɲi:mR1 p ^h adɔŋR1/	‘to be hasty’
/ɲi:mR1 jo:lR2/	‘to be good-natured’
/ɲi:mR2/	‘sugar cane’
/ɲe:mR1/	‘to smile’
/ɲihianR1/	‘lizard’
/ɲʌ:tR2/	‘to struggle to take’
/ɲapR1/	‘to move slightly’
/ɲakR1/	‘clf. of being’
/ɲaha:jR1/	‘thread’
/ɲa:mR1 p ^h adɔŋR1/	‘summer’
/ɲa:mR1 malɔ:jR3/	‘rainy season’
/ɲa:mR1 ŋɔ:lR2/	‘winter’
/ɲumR1/	‘black’
/ɲu:R2/	‘to drink’
/ɲo:tR2	‘gibbon’
/ɲo:kR1/	‘to pound rice(paddy) in a mortar (in order to remove husks and to polish it for cooking use)’
/ɲo:nR1/	‘to throw’
-/ɲɔsR3/ -	‘grasshopper’
/ɲɔ:tR2/	‘tree top’
/ɲɔ:kR1/	‘clf. of flat thing’

/ŋ/

/ŋɛnR1/	‘to be light (in weight)’
/ŋɛ:R1/	‘sharp’
/ŋitR1/	‘to be dazed’
/ŋʌ:R3/	‘branch of the tree’
/ŋʌ:mR3/	‘clean’
/ŋʌ:wR3/	‘sword’
/ŋawR1 pe:ŋR3/	‘tip of the shoulder’
/ŋa:R1 ʔo:ŋR1/	‘tusk’
/ŋa:jR1/	‘morning’

/ŋupR1 ʔo:kR2/	‘to nod onr’s head’
/ŋu:jR1/	‘table’
/ŋo:tR2/	‘sweet’
/ŋo:lR2/	‘cold’
/ŋo:nR1 makp ^h a:wR1/	‘tree top of coconut tree’
/ŋuanŋR1/	‘trunk’

/l/

/likR1/	‘to pick out’
/lihR3/	‘to carve’
/lehR3/	‘verb to be’
/lemR1/	‘clf. of tooth’
/leŋkajo:R1/	‘yesterday’
/le:R1/	‘blue’
/le:mR2/	‘clf. of knife’
/le:nR1/	‘cliff’
/le:ŋR1/	‘evening’
/le:wR1/	‘already’
/lipR1/	‘to rub’
/limR1/	‘clf. of thing’
/li:ŋR2/	‘to be habituated’
/lɔ:R2/	‘to speak or act while asleep’
/lɔlɔ:R1/	‘empty’
/latR1/	‘to block’
/lamR1/	‘stem of the tree’
/lamR1 t ^h ɔ:ŋR3/	‘tree’
/lamR1 pɔ:ŋR1/	‘a kind of tree’
/lamR1 tawenR1/	‘a kind of tree’
/lamR1 ci:kR1/	‘a kind of tree’
/lamR1 kɔkR1/	‘stump of the tree’
/lamR1 ʔaka:pR2/	‘bamboo tree’
/lasR3/	‘tongue’
/lamo:lR1/	‘mulberry leaf’
/lala:tR1/	‘use with /tɔhR1/ means very’
/la:tR1/	‘to hammer’
/la:jR1 dɔ:kR1 tawR1/	‘striped of loincloth for woman’
/la:jR1 dɔ:kR1 ka:pR1/	‘striped of loincloth for woman’
/la:jR1 dɔ:kR1 ʔe:wR1/	‘striped of loincloth for woman’
/lukR3/	‘snake’

/lukR3 taɦɛ:R1/	‘a kind of snake’
/lukR3 taɦɛnR1/	‘boa’
/lukR3 kusR3/	‘a kind of snake’
/lukR3 k ^h Δ:nR3/	‘earth worm’
/luɦR3/	‘to exit’
/luko:R2/	‘milled rice’
/lu:jR1/	‘to wear out’
/lomR1/	‘to talk’
/lo:mR1/	‘liver’
/lo:mR2/	‘to steal’
/lo:nR1/	‘use with the tip of the knife means sharp’
/lo:tR1/	‘penis’
/lopR1 vo:lR3/	‘to return’
/lokR1/	‘to extract the tooth’
/lo:R1/	‘to beg’
/lo:tR2/	‘loose’
/lo:kR2/	‘white’
/lo:nR2/	‘to enter’
/lo:jR2/	‘to swim’
/liamR1/	‘gold’
/luakR ₂ /	‘to scald’

/j/

/jɛlR1/	‘small’
/jΔ:lR3/	‘to slacken’
/jaŋjɛ:R1/	‘tip-toe’
/ja:ninR1/	‘a kind of tree’
/ja:kR1 tinR1/	‘want’
/ja:kR2/	‘difficult’
/ja:ŋR1/	‘glutinous’
/ja:ŋR1 bɔŋR1/	‘plant in the crude form’
/ja:jR1/	‘to shift’
/jupusR3/	‘broom’
/jo:R1/	‘interogatif marker’
/jo:lR1/	‘long, high’
/jɔpR1/	‘to catch’
/jɔmR1/	‘to put in’

BIOGRAPHY

NAME	Miss Nuchanart Waiyanont
DATE OF BIRTH	August 22, 1972
PLACE OF BIRTH	Bangkok, Thailand
INSTITUTIONS ATTENDED	The Institute of Social Technology Bachelor of Arts (English) Mahidol University Master of Arts (Linguistics)