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

NUCHANART WAIYANONT

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Nuchanart Waiyanont
Candidate

Suwilai Premrirat, Ph.D.
Major-advisor

Pitsamai Yupho, Ph.D
Co-advisor

Ruengdet Pankhuenkhat, Ph.D
Co-advisor

Pattiya Jimreukat, Ph.D.
Co-advisor

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

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

entitled

THAVUNG PHONOLOGY AT MUANG KHAMKERT, 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 Waiyamont
Candidate
Suwilai Premnarat, Ph.D.
Chairman
Pitsamai Yupho, Ph.D.
Member

Payau Charoenchai, M.A.
Member

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

Pattiya JimreiVat, Ph.D.
Member

Suriya Ratanakul, Ph.D.
Dean
Institute of Language and Culture for Rural Development
Mahidol University
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I would like to express my deepest thanks to my parents, especially my father, for encouragement and financial support. Finally, the people whose names have not been mentioned here for their help in completing this thesis.

Nuchanart Waiyanont
The objective of this thesis is to present a phonological study of the Thavung language spoken in Ban Samhing, Muang Khamkert, Bolikhamsai 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,pʰ,b,t,tʰ,d,c,k,kʰ,ʔ,v,s,h,m,n,n̩,l,w,j/, 20 single vowel phonemes /i,iː,ɛ,ɛː,i,iː,ɔ,ɔː,i,iː,ɑ,ɑː,u,uː,o,oː,ɔ,ɔː/, 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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นุชารง ใจยงนันท์ : ระบบเสียงภาษาไทย เมืองเค็มกิจ จังหวัดพระโขนง ประเทศ
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จุดประสงค์ของวิทยานิพนธ์ฉบับนี้ เพื่อเสนอการศึกษาระบบเสียงภาษาไทย บ้านชิมลี
เมืองเค็มกิจ จังหวัดพระโขนง ประเทศสาธารณรัฐประชาธิปไตยประชาชนลาว การวิเคราะห์
หลักเสียง (Phoneme) พยางค์ (Syllable) กลอนเสียง (Phonological Word) และท่านองเสียง
( intonation Group) วิเคราะห์โดยใช้ทฤษฎีเทคนิค (Tagmemic)

เพื่อหาวิทยานิพนธ์ประกอบด้วยระบบเสียงภาษาไทยพื้นระบบที่ นอกจากนี้ได้ปรับเปลี่ยน
ระบบเสียงในสนามกีฬาอันได้แก่ ภาษาทรงตัวขึ้นชิมลี ภาษาทรงตัวคังเก้ และภาษาทรงตัว
อื่นที่ของวิจัย

ผลการศึกษาพบว่า ระบบเสียงภาษาไทยพื้นที่ขึ้นชิมลี ประกอบด้วยห้องเสียงพญาชนา 20
ห้องเสียงได้แก่ /p, pʰ, b, bʰ, d, dʰ, c, k, kʰ, ?, v, s, h, m, n, n̂, r, l, w, j/ ห้องเสียงระดับเอ 20
ห้องเสียงได้แก่ /iː, eː, e, a, d, dʰ, o, o, m, a, a, n, n̂, o, o, o, w/ ห้องเสียงระดับkf
ห้องเสียง /ia, ia, un/ แต่ นอกจากนี้แล้วถือว่ามี 3 กัญกรณ์ คือ กัญกรณ์เสียงปกติ กัญกรณ์นี่เสียง
ปกติตามด้านการกั้นของเสียงของเรา และ กัญกรณ์นี่เสียงต่างๆ กัญกรณ์เสียงคิม2กัญกรณ์ คือ
พยางค์หลักและพยางค์หน้า กัญกรณ์คิม3 กัญกรณ์ที่ ทำการคัดค้าน ค่าของพยางค์และค่าของ
พยางค์ และท่านองเสียงมี2กัญกรณ์ คือ ท่านองเสียงต่อก และ ท่านองเสียงช้้น

ระบบเสียงภาษาทรงตัวขึ้นชิมลีมีความคล้ายคลึงกันภาษาทรงตัวคังเก้และภาษาทรงตัว
อื่นที่ของเรื่อง อย่างไรก็ตาม พบว่ามีความแตกต่างระหว่างภาษาทรงตัวในด้านที่กล่าว
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENT</td>
<td>iii</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>iv</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>vi</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>ix</td>
</tr>
<tr>
<td>LIST OF PICTURES</td>
<td>x</td>
</tr>
<tr>
<td>LIST OF CHARTS</td>
<td>xi</td>
</tr>
<tr>
<td>LIST OF ABBREVIATIONS AND SYMBOLS</td>
<td>xii</td>
</tr>
<tr>
<td>CHAPTER I : INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>1.1 Background of the study</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Objective of the study</td>
<td>2</td>
</tr>
<tr>
<td>1.3 Scope of the study</td>
<td>2</td>
</tr>
<tr>
<td>1.4 Benefits of the study</td>
<td>2</td>
</tr>
<tr>
<td>1.5 General information about the Samhing Thavung speakers</td>
<td>2</td>
</tr>
<tr>
<td>in Lao P D R</td>
<td></td>
</tr>
<tr>
<td>1.5.1 Some information concerning the Lao People’s Democratic Republic</td>
<td>3</td>
</tr>
<tr>
<td>1.5.2 General information about the Samhing Thavung settlements</td>
<td>4</td>
</tr>
<tr>
<td>1.5.3 General information about the Samhing Thavung culture</td>
<td>6</td>
</tr>
<tr>
<td>1.6 Language affiliation</td>
<td>9</td>
</tr>
<tr>
<td>1.7 Literature Reviews</td>
<td>10</td>
</tr>
<tr>
<td>CHAPTER II : METHODOLOGY</td>
<td>18</td>
</tr>
<tr>
<td>2.1 Preparation</td>
<td>18</td>
</tr>
<tr>
<td>2.1.1 Studying the previous works and the research area</td>
<td>18</td>
</tr>
<tr>
<td>2.1.2 Fieldtrip preparation</td>
<td>18</td>
</tr>
<tr>
<td>2.2 Selecting wordlist</td>
<td>19</td>
</tr>
<tr>
<td>2.3 Data collection</td>
<td>20</td>
</tr>
<tr>
<td>2.4 Data analysis</td>
<td>21</td>
</tr>
<tr>
<td>CHAPTER III : PHONEME</td>
<td>22</td>
</tr>
<tr>
<td>3.1 General Definition</td>
<td>22</td>
</tr>
<tr>
<td>3.2 Function</td>
<td>22</td>
</tr>
<tr>
<td>3.3 Consonant Phonemes</td>
<td>22</td>
</tr>
<tr>
<td>3.3.1 The Consonant Chart</td>
<td>23</td>
</tr>
<tr>
<td>3.3.1.1 Formational Statement of Consonants</td>
<td>23</td>
</tr>
<tr>
<td>3.3.2 Distribution of Consonants</td>
<td>34</td>
</tr>
<tr>
<td>3.3.3 Consonant Contrast</td>
<td>36</td>
</tr>
</tbody>
</table>
3 4 Vowel Phonemes
   3 4.1 The Vowel Chart
      3.4.1.1 Formational Statement of Vowels
   3.4.2 Distribution of Vowels
   3.4.3 Vowels Contrast
3 5 Registers
   3.5.1 Formational Statement of Registers
   3.5.2 Register Contrast

**CHAPTER IV : THE SYLLABLE**
4 1 General Definition
4 2 Structure
   4.2.1 Major Syllable
   4.2.2 Presyllable
4 3 Function
   4.3.1 Nuclear Syllable
   4.3.2 Peripheral Syllable
4 4 Syllable boundaries and breaking

**CHAPTER V : THE PHONOLOGICAL WORD**
5 1 General Definition
5 2 Stress
   5.2.1 The Strong Stress
   5.2.2 The Weak stress
   5.2.3 The Unstress
5 3 Structure
   5.3.1 Monosyllabic Word
   5.3.2 Disyllabic Word
   5.3.3 Trisyllabic Word
5 4 Variations of Disyllabic Words

**CHAPTER VI : THE INTONATION GROUP**
6 1 General Definition
6 2 Types of Intonation Group
   6.2.1 The Falling Contour
   6.2.2 The Rising Contour
CHAPTER VII : CONCLUSION AND COMPARISON 88

7.1 Summary of the Samhing Thavung language 88
7.2 Comparison between the Thavung dialect 89
7.3 Weaknesses and suggestions for further studies 95

BIBLIOGRAPHY 96

APPENDIX 99

BIOGRAPHY 134
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>The co-occurrence of vowels and final consonants in the closed major syllable.</td>
<td>65</td>
</tr>
<tr>
<td>Table 2</td>
<td>The co-occurrence of initial consonants and vowels in the closed major</td>
<td>67</td>
</tr>
<tr>
<td>Table 3</td>
<td>The co-occurrence of initial consonants and vowels in the open major syllable</td>
<td>69</td>
</tr>
<tr>
<td>Table 4</td>
<td>The co-occurrence of vowels and final consonants in the closed presyllable</td>
<td>71</td>
</tr>
<tr>
<td>Table 5</td>
<td>The co-occurrence of initial consonants and vowels in the closed presyllable</td>
<td>72</td>
</tr>
<tr>
<td>Table 6</td>
<td>The co-occurrence of initial consonants and vowels in the open presyllable</td>
<td>73</td>
</tr>
</tbody>
</table>
LIST OF PICTURES

<table>
<thead>
<tr>
<th>Picture</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picture1</td>
<td>Map of the Lao People’s Democratic Republic</td>
<td>14</td>
</tr>
<tr>
<td>Picture2</td>
<td>Map of Bolikhamxai province</td>
<td>15</td>
</tr>
<tr>
<td>Picture3</td>
<td>Map of Khamkert district</td>
<td>16</td>
</tr>
<tr>
<td>Picture4</td>
<td>Map of Thavaeng sub-district</td>
<td>17</td>
</tr>
</tbody>
</table>
# LIST OF CHARTS

<table>
<thead>
<tr>
<th>Chart</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chart1</td>
<td>Diagram showing the Thavung language</td>
<td>10</td>
</tr>
<tr>
<td>Chart2</td>
<td>The phonological hierarchy</td>
<td>21</td>
</tr>
<tr>
<td>Chart3</td>
<td>The Samhing Thavung Consonant Chart</td>
<td>23</td>
</tr>
<tr>
<td>Chart4</td>
<td>The Samhing Thavung Vowel Chart</td>
<td>39</td>
</tr>
</tbody>
</table>
# LIST OF ABBREVIATIONS AND SYMBOLS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asp.</td>
<td>Aspirated</td>
</tr>
<tr>
<td>C</td>
<td>Consonant</td>
</tr>
<tr>
<td>C1</td>
<td>Initial and final consonant</td>
</tr>
<tr>
<td>C2</td>
<td>Initial consonant</td>
</tr>
<tr>
<td>C3</td>
<td>Final consonant</td>
</tr>
<tr>
<td>F.P</td>
<td>Final Particle</td>
</tr>
<tr>
<td>K.T</td>
<td>Khanglek Thavung</td>
</tr>
<tr>
<td>N.T</td>
<td>Nongwaeng Thavung</td>
</tr>
<tr>
<td>Unasp.</td>
<td>Unaspirated</td>
</tr>
<tr>
<td>V</td>
<td>Vowel</td>
</tr>
<tr>
<td>Vd.</td>
<td>Voiced</td>
</tr>
<tr>
<td>Vl.</td>
<td>Voiceless</td>
</tr>
<tr>
<td>R.</td>
<td>Register</td>
</tr>
<tr>
<td>/R1/</td>
<td>Clear voice</td>
</tr>
<tr>
<td>/R2/</td>
<td>Clear glottalized voice</td>
</tr>
<tr>
<td>/R3/</td>
<td>Breathy voice</td>
</tr>
<tr>
<td>Req. Particle</td>
<td>Request particle</td>
</tr>
<tr>
<td>S T</td>
<td>Samhing Thavung</td>
</tr>
<tr>
<td>[']</td>
<td>Strong stress</td>
</tr>
<tr>
<td>[,]</td>
<td>Weak stress</td>
</tr>
<tr>
<td>[ ]</td>
<td>Unstress</td>
</tr>
<tr>
<td>['']</td>
<td>High-rising pitch</td>
</tr>
<tr>
<td>['']</td>
<td>High-falling pitch</td>
</tr>
<tr>
<td>[' ']</td>
<td>Mid-level pitch</td>
</tr>
<tr>
<td>['']</td>
<td>Mid-falling pitch</td>
</tr>
<tr>
<td>[ ..]</td>
<td>Clear glottalized voice</td>
</tr>
<tr>
<td>[ . . ]</td>
<td>Breathy voice</td>
</tr>
<tr>
<td>.</td>
<td>Syllable break</td>
</tr>
<tr>
<td>~</td>
<td>Variation</td>
</tr>
<tr>
<td>[_________]</td>
<td>Rising Contour</td>
</tr>
<tr>
<td>[_________]</td>
<td>Falling Contour</td>
</tr>
<tr>
<td>[   ]</td>
<td>Phonetic Transcription</td>
</tr>
<tr>
<td>/ /</td>
<td>Phonemic Transcription</td>
</tr>
</tbody>
</table>
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 came to Thailand, some of them willing to came 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 “tʰawiŋ”. The Laos people call them “kʰàː tʰawiŋ”. 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,
Bokaeo, 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, Bolikhamsai province, Lao P.D.R. And the area of my study focuses on Ban Samhing. Bolikhamsai province consists of six districts and each district is administered by Chao Muang. The following are the districts (Muang) in this province.

1) Pakksan district เมืองปากซัน
2) Pakkrading district เมืองปากกระดึง
3) Bolikhan district เมืองบลีขัน
4) Thaphrabat district เมืองท่าพระบาท
5) Viangthong district เมืองเวียงทอง
6) Khamkert district เมืองคำเกิด

Khamkert district is located in the east of Bolikhamsai province. It is about 195 kilometers from Pakksan 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 ดาลังหลักษาว 9) Sopeak sub-district ดาแงงบาก
2) Napae sub-district ดาแงงน้ำpei 10) Khammuan sub-district ดาแงงคำม่วน
3) Naluang sub-district  ดาภนังพรวงศ์  
4) Nacaeng sub-district  ดาภนังแหง  
5) Kaengdaeng sub-district  ดาภนังจำกแข็ง  
6) Namvaew sub-district  ดาภนังแนว  
7) Namsak sub-district  ดาภนังหลัก  
8) Soppon sub-district  ดาภนังซับปอน  
9) Phonthoeng sub-district  ดาภนังโพนยง  
10) Phanviang sub-district  ดาภนังพันเรียง  
11) Khamkert sub-district  ดาภนังค์เกิด  
12) Cam sub-district  ดาภนังเจ๊  
13) Ka-an sub-district  ดาภนังกาฉาน  
14) Thavaeng sub-district  ดาภนังทะวง  

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  บ้านซามิ้ง (Thavung people)
2) Ban Khanglek  บ้านคิ้งกล้ก (Thavung people)
3) Ban Samtoey  บ้านซามเตย (Phu-Thai people)
4) Ban Phonsai  บ้านโพนไชย (White-Meo, Thai-Maen people)
5) Ban Phonkham  บ้านโพนคำ (Thai-Puak people)
6) Ban Kongphat  บ้านกองพัด (Phu - Thai, Thai-Phong people)
7) Ban Nakhwan  บ้านนางวณ้ (Thai-Maen people)
8) Ban Nacalai บ้านนาชะไร (White-Meo, Thai-Moi people)  
9) Ban Phuviang บ้านภูฟ้าง (White-Meo people)  
10) Ban Nonghong บ้านหนองหงษ์ (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 villagers 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 selectd 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.
1.7 Literature Reviews

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

1) *Lexique Thavung - Français* by Michel Ferlus (1979)

This paper describes the phonology of Thavung language at Khammuan province, Lao PDR. 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 /poom/ to /bõn/ ‘four’ and /tan/ to /dang/ ‘bitter’, 2) voiced stops of Thavung /b, d/ corresponds with nasals
/ m, n/ as in /boh/ to /mɔ̞/ ‘to open’ and /daak/ to /nɔ̞ɔc/ ‘water’ and 3) alveolar fricative /s/ corresponds with alveolar stop / t/ as /sɔ̞k/ to /tɔc/ ‘hair’ The final spirant /h,yh/ in Thavung corresponds with words that have tone hoi-ngā in Vietnamese as /kɔh/ to /co/ ‘grass’ and /layh/ to /lɔdi/ ‘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 /tʰ/ 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 sâc or nang tones; words of the same type, but with the non-glottalized registers have cognates with the ngang or huyèn tones. Words ending with -h or -y, which regularly have Vietnamese cognates with the hoi or ngã tones.


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, Malasia and Laos. The writer shows that Laos comprises four language families: Tai-Kadai, Austroasistic, Hmong-Mien and Tibeto-Burman. It has the largest number of Austroasistic 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, pʰ, b, t, tʰ, d, c, k, kʰ, ?, f, v, s, h, m, n, ŋ, l, w, j/ and 11 can occur as the final consonants: /p, t, k, ?, 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, e, i, œ, a, u, o, ə, 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 (₁) and breathy (₂). 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.
Picture 1: Map of the Lao People’s Democratic Republic (Vietnam, Laos & Cambodia - a travel survival kit, 1991)
Picture 2: Map of Bolikhamxai province showing Khamkert district.
Picture 3  Map of Khamkert district showing Thavaeng sub-district
Picture 4: 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 Sambing, 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 Sambing 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 suitable 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. An 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 word list 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 cannot 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](chart.png)
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 statable 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, pʰ, b, t, tʰ, d, c, k, kʰ, ?, v, s, h, m, n, ŋ, l, j/ and 12 phonemes occur as final consonants: /p, t, k, ?, s, h, m, n, ŋ, l, w, j/. There are no consonant clusters in this language.
3.3.1 The Consonant Chart

<table>
<thead>
<tr>
<th>Manners of Articulation</th>
<th>Points of Articulation</th>
<th>Bilabial</th>
<th>Labio-Dental</th>
<th>Alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop</td>
<td>vl.unasp.</td>
<td>p</td>
<td>t</td>
<td>c</td>
<td>k</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>vl.asp.</td>
<td>pʰ</td>
<td>tʰ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>vd.unasp.</td>
<td>b</td>
<td>d</td>
<td></td>
<td>kʰ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricative</td>
<td>vl.</td>
<td>v</td>
<td>s</td>
<td></td>
<td>h</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>vd.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasal</td>
<td>vd.</td>
<td>m</td>
<td>n</td>
<td>jŋ</td>
<td>η</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lateral</td>
<td>vd.</td>
<td></td>
<td>l</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semi-vowel</td>
<td>vd.</td>
<td>w</td>
<td>-</td>
<td></td>
<td>j</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chart 3  The Samhing Thavung Consonants

- [pʰ], [tʰ] and [kʰ] 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 airstream is momentarily complete 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.

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

**Examples:**

/pʰ/ is a voiceless aspirated bilabial stop phoneme. It is realized as [pʰ] a voiceless aspirated bilabial stop. It occurs in the initial position of the syllable.

Examples:

/pʰiŋR1/  ['pʰiŋ]  ‘please’
/pʰɔːR1/  ['pʰɔː]  ‘noodle’
/pʰʌːtR3/  ['pʰʌːt']  ‘to sift’
/pʰɔːnR2/  ['pʰɔːn]  ‘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

/bañR1/ ['bāŋ] 'bamboo shoot'
/bɔjR2/ ['bɔːj] 'salt'
/buːmR2/ ['bũːm] 'to keep in the mouth'
/bɔtR2/ ['bɔːt'] '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

[tʰ] a voiceless unreleased alveolar stop It occurs in the final position of the syllable

Examples

/tikR1/ ['tik'] 'to be torn'
/taŋR1/ ['tāŋ] 'chair'
/tuːR1/ ['tūː] 'to pain'
/?oːtR1/ ['ʔoːt'] 'to give'
/loːtR2/ ['lɔːt'] 'loose'

/tʰ/ is a voiceless aspirated alveolar stop phoneme. It is realised as
[tʰ] a voiceless aspirated alveolar stop. It occurs in the initial position of the syllable.

Examples
/tʰiːŋR1/ [tʰiːŋ] 'bat'
/tʰɛhR1/ [tʰɛh] 'sand'
/tʰΛkR3/ ['tʰΛk'] 'to be shallow'
/tʰaŋR2/ [tʰaŋ] '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/ ['dɑm] 'five'
/dakR2/ ['dɑk'] 'water'
/doːpR1/ ['dɔːp'] 'to smoke'
/doːnR2/ ['dɔːn] '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
/ciːŋR3/ ['cːŋ] 'foot'
/ceːmR2/ ['cːm] 'a Siamese lower garment comprising a wide strip of cloth with one end twisted and hitched between the legs'
/comR1/ ['kɔm] ‘year’
/koːŋR3/ ['kɔŋ] ‘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:
/kiːmR1/ ['kʰiːm] ‘needle’
/kenR3/ ['kʰɛn] ‘ant’
/kaːŋR1/ ['kʰaːŋ] ‘jar’
/biːkR1/ ['bʰiːk'] ‘to dip up’
/lɔːkR2/ ['lɔːkʰ] ‘white’

/kʰ/ is a voiceless aspirated velar stop phoneme. It is realised as

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

Examples:
/kʰitR1/ ['kʰiːt'] ‘to nudge’
/kʰiːR3/ ['kʰiː] ‘fin’
/kʰɛːR2/ \([kʰɛː]\) ‘crocodile’
/kʰɔmR1/ \([kʰɔm]\) ‘rancid’

/r/ is a voiceless glottal stop phoneme. It is realised as \([?]\) a voiceless glottal stop. It occurs both in the initial and final position of the syllable.

Examples:
/rɛːR1/ \([rɛː]\) ‘to have’
/rɔkR1/ \([rɔk’\]\) ‘chest’
/rɔnR1/ \([rɔn]\) ‘to eat’
/rɔŋR1/ \([rɔŋ]\) ‘wasp’
/kʰuʔR1/ \([kʰuʔ]\) ‘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/ [ˈvɪt̚] ‘to throw away’
/να:R2/ [ˈvɑː] ‘mad’
/velR1/ [ˈvɛl] ‘left’
/ναηR2/ [ˈvɑːŋ] ‘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 [ʃ] is not heard from the young people. The young prefer to use [s] in stead of [ʃ].

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

Examples

/se:R2/ [ˈsɛː] - [ˈʃɛː] ‘hand’
/sɔkR1/ [ˈsɔk̚] - [ˈʃɔk̚] ‘hair’
/sɔtR1/ [ˈsɔt̚] - [ˈʃɔt̚] ‘to box’
/kusR3/ [ˈkʊʂ] ‘fire’
/laςR3/ [ˈlɑːʂ] ‘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

/hilR1/ ['hɪl] ‘to be hot and spicy (of food)’
/hehR3/ ['hɛːh] ‘root of the tree’
/hu:tR1/ ['hʊ:t] ‘to sip’
/lihR3/ ['liːh] ‘to carve’
/nɔːhR3/ ['nɔːh] ‘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/ ['mɪk] ‘pencil’
/mɔːkR1/ ['mɔːk] ‘grey’
/məkR1/ ['mək'] 'lap'

/cu:mR1/ ['cũm] 'trap for a rat'

/ni:mR1/ ['nĩ: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

/naːjR1/ ['nâːj] 'aunt'

/numR1/ ['nũm] 'to take'

/noːjR2/ ['nũːj] 'to stay'

/buːnR1/ ['bũːn] 'ash'

/leːnR1/ ['lẽːn] 'cliff'

/j/ is a voiced palatal nasal phoneme. It is realised as

[n̥] a voiced palatal nasal. It occurs in the initial position of the syllable.

Examples

/niːR1/ ['nũː] 'porcupine'

/nuːR2/ ['nũː] 'to drink'

/noːtR2/ ['nũːt] 'gibbon'

/nɔsR3/ ['nɔːs] '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/ [ŋɛn] ‘to be light (in weight)’
/ŋʌiR3/ [ŋʌi] ‘branch of the tree’
/ŋuiR1/ [ŋui] ‘table’
/pɔŋR3/ [pɔŋ] ‘flower’
/ʔɔŋR1/ [ʔɔŋ] ‘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/ [lʊk] ‘snake’
/lo:tR1/ [lʊ:t] ‘penis’
/lo:R1/ [lɔi] ‘to beg’
/paːlR1/ ['pā:l] 'to sell'
/thɔːlR1/ ['tʰɔː: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/ ['kɪw] 'mole'
/ja:wR2/ ['jæːw] 'shirt'
/hæ:wR1/ ['hæːw] '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

/jelR1/ ['jɛːl] 'small'
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

/pɔːkR3/  ‘to tie’
/mupRl/  ‘to cover up’
/toːŋRl/  ‘silver’
/hɔːtRl/  ‘bowels’
/kʰiːR3/  ‘stone’
/teːkR3/  ‘to be deaf’
/ʔiːkRl/  ‘rat’
/beʔRl/  ‘goat’
/seːkRl/  ‘to tear’
/kusR3/  ‘fire’
/ho:IR2/ 'blaze'
/suhR1/ 'lung'
/ma:ŋR2/ 'elder sister-in-law'
/tʰoːmR1/ 'flash light'
/nəmR3/ 'to sleep'
/peːnR1/ 'floor'
/ŋə:IR2/ 'cold'
/cəŋR3/ 'to hate'
/leːR1/ 'blue'
/kuːlR2/ 'pig'
/jomR1/ 'to put in'
/saijR3/ '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 /pʰ, b, tʰ, d, c, kʰ, v, n/.

Examples:
/pʰɔːŋR1/ 'to brittle'
/boːlR2/ 'lance'
/tʰɔːkR1/ 'to shrink'
/doːmR1/ 'to ride'
/caiʃR2/ 'yellow'
/kʰʌːtR3/  ‘a rake’
/voːtR3/  ‘to come’
/niːmR2/  ‘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
/caːwR2/  ‘rice’

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.

<table>
<thead>
<tr>
<th>Consonant phonemes</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>/p/- /b/</td>
<td>/paːjR2/</td>
</tr>
<tr>
<td></td>
<td>/baːjR2/</td>
</tr>
<tr>
<td>/t/- /d/</td>
<td>/tɔːhR1/</td>
</tr>
<tr>
<td></td>
<td>/dɔːhR1/</td>
</tr>
<tr>
<td>/p/- /pʰ/</td>
<td>/poːnR2/</td>
</tr>
<tr>
<td></td>
<td>/pʰoːnR2/</td>
</tr>
</tbody>
</table>
/t/- /tʰ/
/toːR1/ 'clf of animal'
/tʰoːR1/ 'yam'

/k/- /kʰ/
/kaːR1/ 'chicken'
/kʰaːR1/ 'galanga'

/b/- /m/
/bitR3/ 'to recover from illness'
/mitR1/ 'one'

/d/- /n/
/daːtR2/ 'to swallow'
/naːtR2/ 'neck'

/d/- /l/
/damR1/ 'five'
/lamR1/ 'stem of the tree'

/t/- /R/
/tihR3/ 'worm'
/rʔihR3/ 'big'

/t/- /s/
/tikR1/ 'to be torn'
/sikR1/ 'rattan'

/d/- /s/
/daːR1/ 'final particle'
/səːR1/ 'to put on'
\( /\hat{n}/ - /\hat{h}/ \)  
\( /\hat{h}:mR2/ \)  
'to bathe'

\( /\hat{h}:o:mR1/ \)  
'narrow'

\( /t/ - /c/ \)  
\( /\hat{u}:R1/ \)  
'to pain'

\( /\hat{c}:u:R3/ \)  
'sour taste'

\( /c/ - /k/ \)  
\( /\hat{c}a:sR3/ \)  
'to comb the hair'

\( /\hat{k}a:sR3/ \)  
'vegetable'

\( /k/ - /\hat{\ell}/ \)  
\( /\hat{k}\ell:hR1/ \)  
'grass'

\( /\ell:hR1/ \)  
'not(negative mk)'

d\( /\hat{n}/ - /\hat{m}/ \)  
\( /\hat{n}:u:mR1/ \)  
'to take'

\( /\hat{m}:u:mR1/ \)  
'black'

d\( /\hat{n}/ - /\hat{y}/ \)  
\( /n:a:jR1/ \)  
'aunt'

\( /n:a:jR1/ \)  
'morning'

\( /\hat{n}/ - /\hat{y}/ \)  
\( /\hat{\eta}:o:tR2/ \)  
'tree top'

\( /\hat{\eta}:o:tR2/ \)  
'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 generally be made to two variables, the first of which is easily describable, the second much less so (a) the position of the lips—whether rounded, spread, or neutral, (b) the part of the tongue raised, and the height to which it moves. (Crystal 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, iː, e, eː, eː, i, ə, øː, aː, aː, u, ʊ, oː, oː, oː, ia, ia, ua/. The vowel system can be grouped as shown in the chart below.

3.4.1 The Vowel Chart

<table>
<thead>
<tr>
<th>Tongue position</th>
<th>Front</th>
<th>Central</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Short</td>
<td>Long</td>
<td>Short</td>
</tr>
<tr>
<td>Tongue height</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>i</td>
<td>iː</td>
<td>i</td>
</tr>
<tr>
<td>Mid</td>
<td>e</td>
<td>eː</td>
<td>ø</td>
</tr>
<tr>
<td>Lower-mid</td>
<td>ø</td>
<td>øː</td>
<td>øː</td>
</tr>
<tr>
<td>Low</td>
<td>ø</td>
<td>øː</td>
<td>øː</td>
</tr>
<tr>
<td>Diphthong</td>
<td>ia</td>
<td>ia</td>
<td>ia</td>
</tr>
</tbody>
</table>

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/ ['pιn] ‘to turn’
/ti:hR1/ ['ti:h] ‘worm’
/ciŋR1/ ['ciŋ] ‘ripe’
/kiwR1/ ['kιw] ‘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’
/i:R1/ ['ti:] ‘to go’
/ciːnR2/  ['cjːn]  'nine'
/mitR1/  ['mɪt]  '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, ?, h, n, ŋ/.

Examples:
/pehR1/  ['pɛh]  'to break'
/tehR3/  ['tɛh]  'leech'
/kehR3/  ['kɛh]  'to be swollen'

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

[eː] a long mid front unrounded vowel. It occurs before /t, m, n, ŋ, l, w/.

Examples
/keːR1/  ['kɛː]  'a weave'
/ʔeːtR1/  ['ʔɛːt]  'little'
/heːŋR1/  ['hɛːŋ]  'strong'
/meːlR3/  ['mɛːl]  'gizzard'

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

[e] a short lower-mid front unrounded vowel. It occurs before /p, t, ?, h, m, n, l/.

Examples
/bɛnR1/  ['bɛn]  'how many'
/tɛtR1/ [ˈtɛt] ‘cheap, right’
/ʔetR1/ [ˈʔɛt] ‘to raise’
/lemR1/ [ˈlɛm] ‘clf. of tooth’

/eː/ is a long lower-mid front unrounded vowel phoneme. It is realised as [eː] a long lower-mid front unrounded vowel. It occurs before /p, t, k, m, n, η, l, w/.

Examples:
/kɛːlR1/ [ˈkɛːl] ‘cucumber’
/heːR3/ [ˈhɛː] ‘placenta’
/mɛːR2/ [ˈmɛː] ‘to do’
/tʰɛːR3/ [tʰɛː] ‘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, η/.

Examples:
/tiŋR1/ [ˈtiŋ] ‘to stand’
/minR1/ [ˈmɪn] ‘numb’
/ŋitR1/ [ˈŋɪt] ‘to puzzle’
/lɪmR1/ [ˈlɪm] ‘clf. of thing’

/iː/ is a long high central unrounded vowel phoneme. It is realised as [iː] a long high central unrounded vowel. It occurs before /t, k, m, n, η/.
Examples.

/ʔi:nR2/  [ʔiːn]  ‘to pull’
/bi:tR1/  [biːt]  ‘cigarette’
/miːR1/  [miː]  ‘the day’
/liːŋR2/  [liːŋ]  ‘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/  [bən]  ‘to full’
/təwR3/  [təw]  ‘moss’
/cəlR1/  [cəl]  ‘net’
/ʔoʔR1/  [ʔoʔ]  ‘that (conj)’

/ɔ:/ is a long mid central unrounded vowel phoneme. It is realised as [ɔ:] a long mid central unrounded vowel. It occurs before /p,k,m,n,j/.

Examples:

/kə:R1/  [kəː]  ‘near’
/sə:R1/  [səː]  ‘to put on’
/mə:R2/  [məː]  ‘mother’
/lə:R2/  [ləː]  ‘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/ ['pʌn] ‘thousand’
/tʌmR3/ ['tʌm] ‘right’
/tʰʌkR3/ ['tʰʌk] ‘to be shallow’
/ʔʌnR3/ ['ʔʌn] ‘short’

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

[ʌː] a long lower-mid central unrounded vowel. It occurs before
/p,t,k,m,n,ŋ,l,j,w/.

Examples
/tʰʌːŋR3/ ['tʰʌːŋ] ‘wood’
/cːtR2/ ['cːt] ‘to die’
/kʌːŋR3/ ['kʌːŋ] ‘mouth’
/ʃːlR3/ ['ʃːl] ‘to slacken’

/ɑ/ 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:
/tɑmR1/ ['tɑm] ‘to weave’
/cɑlR1/ ['cɑl] ‘to be burned’
/matR1/ [ˈmát] ‘eyes’
/casR3/ [câːç] ‘to sow’

/aː/ is a long low central unrounded vowel phoneme. It is realised as [aː] a long low central unrounded vowel. It occurs before /p,t,k,m,n,ŋ,l,w,j/.

Examples:
/daːkR2/ [ˈdâːk] ‘water’
/caːkR2/ [ˈcâːk] ‘to buy’
/haːlR1/ [ˈhāːl] ‘two’
/laːtR1/ [ˈlāːt] ‘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/ [ˈcʊŋ] ‘to sit’
/numR1/ [ˈnʊm] ‘to take’
/numR1/ [ˈnʊm] ‘black’
/hulR1/ [ˈhʊl] ‘to fly’

/uː/ is a long high back rounded vowel phoneme. It is realised as [uː] a long high back rounded vowel. It occurs before /p,t,k,m, n,l,j/. 
Examples

/tu:nR3/  ['tʊːn]  ‘blind’
/ʔuːR3/  ['ʔʊː]  ‘to suck the milk’
/su:mR3/  ['sʊːm]  ‘wet’
/muːtR1/  ['múːt]  ‘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/  ['kók]  ‘wound’
/koʔR1/  ['kóʔ]  ‘clf for a mouthful’
/sɔwR1/  ['sɔw]  ‘I (polite word)’
/monR1/  ['mɔn]  ‘round’

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

[ɔː]  a long mid back rounded vowel. It occurs before /p,t,k,m,
n,ŋ,l,w,j/.

Examples.

/toːjR3/  ['tɔːj]  ‘tail’
/coːR1/  ['kɔː]  ‘tart taste’
/koːnR2/  ['kɔːn]  ‘mortar’
/hoːjR1/  ['hɔːj]  ‘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,r,s,h,m,n,ŋ,l/.

Examples:
/kɔtR1/  ['kɔt]  ‘umbrella’
/kɔŋR1/  ['kɔŋ]  ‘father’
/hoŋR1/  ['hɔŋ]  ‘dry’
/lokR1/  ['lɔk]  ‘to extract the tooth’

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

[ɔː] a long lower-mid back rounded vowel It occurs before
/p,t,k,m,n,ŋ,l,j/.

Examples:
/hɔːtR1/  ['hɔːt]  ‘mushroom’
/cɔːmR1/  ['cɔːm]  ‘the whorl of hair on top of the head’
/hoːjR1/  ['hɔːj]  ‘whistle’
/łoːnR2/  ['lɔːn]  ‘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/ [ʰhiaŋ] ‘chopping block’

/ʔiawR1/ [ʔiaw] ‘thin’

/viaŋR2/ [vjaŋ] ‘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.

/liaŋR1/ [liaŋ] ‘gold’

/pʰaliaŋR1/ [pʰa.iiaŋ] ‘rubbish’

/ʔahianR1/ [ʔa.hian] ‘to learn’

/uə/ 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/ [buaŋ] ‘spoon’

/tuaŋR1/ [tuaŋ] ‘shrimp paste’

/suaŋR1/ [suaŋ] ‘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:

- /kʰiːR3/ [kʰiː] 'fin'
- /beːR1/ [bêː] 'clf of money'
- /ŋeːR1/ [ŋeː] 'sharp'
- /miːR1/ [miː] 'day'
- /sɔːR1/ [sɔː] 'to put on'
- /kʰəːR1/ [kʰəː] 'bee'
- /paːR1/ [pəː] 'three'
- /kuːR3/ [kʊː] 'couple'
- /tʰoːR2/ [tʰɔː] 'yam'
- /hɔːR3/ [hɔː] 'tortoise'
- /ciaR1/ [cia] ‘paper’
- /pʰiaR1/ [pʰia] ‘to accompany side by side’
- /kʰaluaR2/ [kʰa .lʊa] ‘to slice (with horizontal motion)’
- Vowel in open presyllable

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

Examples:

/sinuaR1/ [si npa] 'gable'
/mekeŋR1/ [me keŋ] 'single'
/nihianR1/ [ni hian] 'lizard'
/lalaiR1/ [la lai] 'empty'
/pakeŋR2/ [pa keŋ] 'wife'
/?uca:jR1/ [u ca:j] 'a little small green frog'
/nonoR1/ [no nɔ:] '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/ ['kın] 'liquor'
/ciŋR3/ ['ciŋ] 'foot'
/tehR3/ ['teh] 'leech'
/?e:tR1/ ['ʔe:t] 'small'
/?enR3/ ['ʔan] 'sinew'
/peːnR1/ [ˈpɛːn] ‘floor’
/lipR1/ [ˈlɪp] ‘to rub’
/pʰi:mR1/ [ˈpʰi:m] ‘an equipment for a weave’
/bənR1/ [ˈbən] ‘to full’
/kə:pR1/ [ˈkəːp] ‘shoes’
/tʰʌwR3/ [ˈtʰʌw] ‘you (normal word)’
/kʰʌwR3/ [ˈkʰʌw] ‘to be fishy (in smell)’
/manR1/ [ˈmān] ‘diligent’
/tʰaːŋR2/ [ˈtʰaːŋ] ‘month’
/ʔumR1/ [ʔʊm] ‘to embrace’
/suːnR1/ [ˈsuːn] ‘dark red’

kohR1/ [ˈkoh] ‘to rise’
/
ToːR1/ [ʔoː] ‘the cradle’
/
ʔonR1/ [ʔoːn] ‘large bamboo rat’
/
ŋɔːR2/ [ˈŋɔː] ‘sweet’
/kiawR1/ [ˈkɪaw] ‘to carry (something) at both ends of a pole placed on one’s shoulder’
/
ʔaliakR1/ [ʔaːˌliak] ‘to select’
/
nuajR1/ [ˈnuːaj] ‘clf of fruit’

- Vowel in closed presyllable

This sub-class functions in the closed presyllable and consists of /i, ə, u, o/
Examples

/dinda:kR1/ [ˈdɪn .ˈdæk] 'clay'
/canji:R1/ [ˈcaŋ .ˈjiː] 'how'
/tʰuŋkʰʌŋR3/ [ˈtuŋ .kʰʌŋ] 'chin'
/poŋ?iamR1/ [ˈpoŋ .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:

<table>
<thead>
<tr>
<th>Vowel phonemes</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>/i/ - /i:/</td>
<td>/piŋR1/</td>
</tr>
<tr>
<td></td>
<td>‘to shoot’</td>
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<tr>
<td></td>
<td>/piŋR1/</td>
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<tr>
<td></td>
<td>‘to roast’</td>
</tr>
<tr>
<td>/e/ - /ɛ:/</td>
<td>/lemR1/</td>
</tr>
<tr>
<td></td>
<td>‘clfl. of tooth’</td>
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<tr>
<td></td>
<td>/le:mR2/</td>
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<tr>
<td></td>
<td>‘clfl. of knife’</td>
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<tr>
<td>/ʌ/ - /ʌ:/</td>
<td>/nʌŋR3/</td>
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<tr>
<td></td>
<td>‘heavy’</td>
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<tr>
<td></td>
<td>/nʌŋR1/</td>
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<tr>
<td></td>
<td>‘to lean’</td>
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<tr>
<td>/a/ - /əː/</td>
<td>/ʔahŋR1/</td>
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<tr>
<td></td>
<td>‘loud’</td>
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<tr>
<td></td>
<td>/ʔabəŋR1/</td>
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<tr>
<td></td>
<td>‘to drag’</td>
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<td>/iːR1/</td>
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<td>/enR1/</td>
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<td>/uː/</td>
<td>/luːR1/</td>
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<tr>
<td></td>
<td>/loːR1/</td>
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</table>
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 [^] 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/         [jɔp]         ‘to catch’
Register 2 (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 (Hayes 1983:94).

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 ⟨⟩ under the vowel in my phonetic transcription.

Examples

/coːR2/  ['cɔː]  ‘grandchild’
/nʌːtR2/  ['nʌːt]  ‘neck’
/caːkR2/  ['cəːk]  ‘to buy’
/samR2/ ['sʌm] 'eight'
/pɔ:nR2/ ['pɔ:n] 'four'
/liːŋR2/ ['liːŋ] '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 murmure. (Crystal 1991:43)

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
/hoːR3/ ['lɪːt] 'turtle'
/viːtR3/ ['vɪːt] 'to throw away'
/teːkR3/ ['tɛːk] 'to be deaf'
/pɔːmR3/ ['pɔːm] 'cheek'
/tʰaːŋR3/ ['tʰaːŋ] 'wood'
/ŋaːmR3/ ['ŋaːm] '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 (CEE) are shown below with some examples
<table>
<thead>
<tr>
<th>Registers</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>/R₁/ - /R₂/</td>
<td></td>
</tr>
<tr>
<td>/kəːR₁/</td>
<td>‘near’</td>
</tr>
<tr>
<td>/kəːR₂/</td>
<td>‘girl’</td>
</tr>
<tr>
<td>/kəːR₁/</td>
<td>‘bee’</td>
</tr>
<tr>
<td>/kəːR₂/</td>
<td>‘louse’</td>
</tr>
<tr>
<td>/kaːR₁/</td>
<td>‘chicken’</td>
</tr>
<tr>
<td>/kaːR₂/</td>
<td>‘fish’</td>
</tr>
<tr>
<td>/bɔːtR₁/</td>
<td>‘mushroom’</td>
</tr>
<tr>
<td>/bɔːtR₂/</td>
<td>‘loin cloth for men’</td>
</tr>
<tr>
<td>/saːmR₁/</td>
<td>‘younger brother or sister’</td>
</tr>
<tr>
<td>/saːmR₂/</td>
<td>‘eight’</td>
</tr>
<tr>
<td>/loːmR₁/</td>
<td>‘liver’</td>
</tr>
<tr>
<td>/loːmR₂/</td>
<td>‘to steal’</td>
</tr>
<tr>
<td>/padoːR₁/</td>
<td>‘shadow’</td>
</tr>
<tr>
<td>/padoːR₂/</td>
<td>‘a chess’</td>
</tr>
<tr>
<td>/pʰaːjoːlR₁/</td>
<td>‘to wake (someone) up’</td>
</tr>
<tr>
<td>/pʰaːjoːlR₂/</td>
<td>‘navel’</td>
</tr>
</tbody>
</table>
/tʰaːloːkR1/  ‘rough’
/tʰaːloːkR2/  ‘a kind of bird’
/kʰaːloːtR1/  ‘to gnaw’
/kʰaːloːtR2/  ‘skin’
/hakoːR1/  ‘to be blurred’
/hakoːR2/  ‘unhusked rice’

/R1/ - /R3/  /pihR1/  ‘seven’
/pihR3/  ‘to split’
/tʌmR1/  ‘to put on’
/tʌmR3/  ‘right side’
/tuhR1/  ‘to snatch’
/tuhR3/  ‘bean’
/tʰanuːR1/  ‘fever’
/tʰanuːR3/  ‘fart’
/kaduhR1/  ‘to patch’
/kaduhR3/  ‘chameleon’
/R2/ - /R3/

/tʰuːR2/  ‘to rub’
/tʰuːR3/  ‘deep’

/doːR2/  ‘monkey’
/doːR3/  ‘many’

/keːnR2/  ‘waist’
/keːnR3/  ‘ant’

/palːŋR2/  ‘to open the palm of the hand’
/palːŋR3/  ‘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 1: 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

/pe:R2/ [pɔ:] ‘to carry on the shoulder’

/bɔ:R3/ ['bɔ:] ‘owl’

/tu:R1/ ['tu:] ‘to pain’

/co:R2/ ['cɔ:] ‘dog’

/kʰɔ:R2/ ['kʰɔ:] ‘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’

/coŋR3/ ['cɔŋ] ‘boy’

/somR1/ ['som] ‘harpoon’

/mɔkR1/ ['mɔk] ‘lap’

/naŋR1/ ['naŋ] ‘aunt’

/le:nR1/ ['le:n] ‘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 1: 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^a�ηR1/ [p^a .'dη] ‘hot’
/tama:R1/ [tə .'ma:] ‘new’
/calexηR1/ [ca .'lɛː] ‘to glance side ways’
/?akuhR1/ [ʔa .'kʰuː] ‘the day’
/mahɛ:R1/ [ma .'heː] ‘two days after tomorrow’
/kʰuli:R1/ [kʰu .'liː] ‘today’
/mohokR1/ [mo .'hɔk] ‘today’
/sili:R1/ [si .'liː] ‘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

/piŋpo:tR1/ [piŋ .pɔt] ‘butterfly’
/tʰawle:R1/ [tʰaw .lɛ:] ‘why’
/kʰawho:R1/ [kʰaw .hɔ:] ‘climber with bitter principle’
/saŋka:R1/ [saŋ .ka:] ‘monk’s robes’
/jaŋje:R1/ [jaŋ .je:] ‘tip-toe’
Table 1: The co-occurrences of vowels and final consonants in the closed major syllable.

<table>
<thead>
<tr>
<th></th>
<th>p</th>
<th>t</th>
<th>k</th>
<th>?</th>
<th>s</th>
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<tbody>
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</table>

+ = occurrence  
= non occurrence
The co-occurrences of vowels and final consonants in the closed major syllable as shown in the Table 1 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, ?, h, m, η/ 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.
Table 2: The co-occurrences of initial consonants and vowels in the closed major syllable.

| p  | pʰ | b  | t  | tʰ | d  | c  | k  | kʰ | ?  | v  | s  | h  | m  | n  | p  | η  | l  | j  |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| +  | -  | +  | +  | -  | +  | +  | -  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  |
| +  | +  | -  | +  | -  | -  | +  | +  | +  | -  | -  | +  | +  | -  | -  | +  | -  | -  | -  | -  | +  |
| +  | -  | +  | +  | -  | -  | -  | -  | +  | -  | +  | -  | -  | +  | -  | -  | -  | -  | -  | -  | -  |
| -  | +  | -  | +  | -  | -  | -  | -  | -  | +  | -  | +  | -  | -  | -  | -  | -  | -  | -  | -  | -  |
| +  | -  | +  | +  | +  | -  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  |
| +  | +  | -  | +  | -  | -  | -  | -  | -  | +  | -  | +  | -  | -  | -  | -  | -  | -  | -  | -  | -  |
| +  | -  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  |
| +  | +  | -  | +  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  |
| -  | -  | +  | -  | -  | -  | -  | -  | -  | +  | -  | +  | -  | -  | -  | -  | -  | -  | -  | -  | -  |
| -  | +  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  |

+ = 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 /tʰ,kʰ/ have the narrowest distribution in the closed major syllable.

5. The vowel phoneme /oː/ has the widest distribution in the closed major syllable.
Table 3: The co-occurrences of initial consonants and vowels in the open major syllable.

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+ = occurrence
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The co-occurrences of initial consonants and vowels in the open major syllable as shown in the Table 3 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 /pʰ,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,d,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.

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+ = 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, ɔ, ɔ/. 
Table 5: The co-occurrences of initial consonants and vowels in the closed presyllable.

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+ = 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, e, a, u, o/. 
Table 6: The co-occurrences of initial consonants and vowels in the open presyllable.

<p>| p | pʰ | b | t | tʰ | d | c | k | kʰ | ? | v | s | h | m | n | ŋ | j | l | ə | a | o | ʊ |
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</table>

+ = 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 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

/cɑːkʰR2/ ['cɑːkʰ] ‘to buy’

/hoːŋR1/ ['hʊŋ] ‘to smell’

/kaloːŋR1/ [kɑːˈloŋ] ‘iron bucket’

/saŋiːapR1/ [saːŋiːap] ‘sash of monk’

4.3.2 Peripheral Syllable

The syllable function as the periphery in the phonological word 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

/tamuŋR1/ [tɑːˈmuŋ] ‘palm civit’

/cakuːR3/ [caːˈkʊ] ‘bear’

/dokmeːtR1/ [dɒk̚eːt̚] ‘collar bone’

/kapkɐːR2/ [kæp̚kɐː] ‘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

[bɔːj]  ‘salt’
[luˈkɔːt]  ‘milled rice’
[kɔŋˈkɔŋ]  ‘prawn’
[leŋˌkaˌjoːRI]  ‘yesterday’

The syllable breaks is not normally marked in phonemic transcription.

Examples

/bɔjR2/  ‘salt’
/lukoːR2/  ‘milled rice’
/kɔŋkɔŋR1/  ‘prawn’
/leŋkajoːR1/  ‘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

\[ ['tôp'] \]  
‘to clap the hands’

\[ ['rò:'] \]  
‘the cradle’

\[ ['lîh'] \]  
‘to exit’

\[ [ca .'lôk'] \]  
‘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

\[\text{kin. } \text{tbin} \]
\[\text{horse-tamarind'}\]

\[\text{kaw } \text{hord} \]
\[\text{climber with bitter princlc'}\]

\[\text{saŋ } \text{ka} : \]
\[\text{monk's robes'}\]

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

\[\text{ta } \text{kɔ̃} : \]
\[\text{thorn'}\]

\[\text{ca } \text{bɔŋ} \]
\[\text{roof'}\]

\[\text{ka } \text{cuh} \]
\[\text{shell'}\]

\[\text{kba } \text{mɔːj} \]
\[\text{woman'}\]

\[\text{ʔa } \text{jirw} \]
\[\text{tomorrow'}\]

\[\text{ma } \text{lɔːj} \]
\[\text{sky'}\]

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 member 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

[ 'dɔː' ]
'many'

[ 'cʊŋ' ]
'to sit'

[ 'lɔːk' ]
'white'

[ 'ŋɔːl' ]
'cold'

[ 'hāːn' ]
'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.'tɔː:j] ‘to tell’
[ka.'pɔːli] ‘bran’
[kʰa.'liːŋ]'to be hard’
[sa.'nɔːː] ‘crossbow’
[ma.'lɒːt] ‘to be tasteless’
[cu.'ʔeʔ] ‘brain’
[su.'qːt] ‘button’

5.3.2.2 A disyllabic word of type B 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

[.'duː.'dʊ] ‘often’
[.'dɔk .'dɔk] ‘adam’s apple’
[.'kɪn '.tʰɛin] ‘horse-tamarind’
[.'kaŋ .'kɛː] ‘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

[ ,kinọ .ka .'jō: ]  
‘red ant’

[ ,?am .ma .'lii: ]  
‘last night’

[ ,leŋ .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 .'kò:k ]  [ 'kò:k ]  ‘bone’

[ ta .'dēn ]  [ 'dēn ]  ‘to put out the tongue’


[ ta .'ŋǒ:n ]  [‘ŋǒ:n ]  ‘delicious’

[ ka .'sām ]  [‘sām ]  ‘nail’

[ tam .'ʔāk ]  [‘ʔāk ]  ‘chest’

[ kinj .'kōŋ ]  [‘kōŋ ]  ‘back’

[ kōŋ .'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 /ʔahʌːːR2/ ‘what’, /tʰawːleːR1/ ‘why’, /noonoːR1/ ‘who’ which can occur at the initial position of the sentence.
Examples

[ th₃:w ᵇan câ:w tû? ah₃:]  
you eat rice with what  
'What do you have for your meal?'

[ mâ: nō:j ?ajō:]  
mother stay where  
'Where is your mother?'

[ ?adō: kâ: mē: cañfi:]  
curry chicken do how  
'How do you cook a chicken curry?'

father want oil how much  
'How much oil does your father want?'

you that is who  
'Who is that?'

[ ah₃: nō:j kafî: yû:j ]  
what stay below table  
'What is under the table?'
[ tʰawlēː lāʔ salā:n samā:]  
why fear ghost  
‘Why did (you) fear the ghost?’

[ nonōː ?ōŋ māː tʰāw ]  
who father mother you  
‘Who is your parent?’

- Affirmative statement

Examples

[ salāː tʰāŋ palō:j ]  
leaf wood fall  
‘The leaves fall down’

[ cōː lāʔ ?alē:m malūː ]  
dog lick leg  
‘A dog licks my leg’

[ māː ?adēːŋ ?ā:w tamāː ]  
mother wear shirt new  
‘A mother wears a new shirt’

[ sōw ?apōː nāh samāː ]  
I dream see ghost  
‘I dreamed that I saw ghost.’
Negative statement

The negative marker /ʔɔhR/ ‘not’ occurs before verb of the affirmative sentence.

Examples:

[ʔɔŋ ʔɔh dɔːp hjːt]
father not smoke cigarette
‘The father does not smoke cigarette’

[kɔːn ʔɔh ʔuː pʰaŋŋː]
child not suck milk
‘The child does not drink milk’

[sɔw ʔɔh tìn nŭm paŋŋː]
I not have husband
‘I am not got married’

[kʰulːiː ʔɔh ʔɔːm dǎːk]
today not bath water
‘I have not taken a bath today’
- Request statement

Examples

[kapāw pʰasaː tʰaviːŋ ?ōːt kān nēː ]
speak language Thavung give I F.P
'Speak the Thavung language for me.'

[cąːk tʰoŋçiːŋ ?ōːt kān nēː ]
buy socks give I F.P
'Please buy a pair of socks'

[bōh ?abūh ?ōːt kān nēː ]
open door give I F.P
'Please open the door'

[kadʒːt ?abūh ?ōːt dēː ]
close door give F P
'Close the door, please'

[ ?ahǐw tʰoŋ ?ōːt dēː ]
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

[ mǐː ?aŋûh nâm bòː ]
you sleep FP
‘Are you asleep?’

[ mahn ēːw bòː ]
hungry rice FP
‘Are you hungry?’

[ tʰaw maʔul bòː ]
you bore FP
‘Are you bored?’

[ ?aŋît kʰamâːj bòː ]
miss woman FP
‘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 /maːR1/ which always occurs at the initial position in the sentence.

Examples.

- [māː kaŋːw hēːŋ dōːː ]
  don't speak  loud  FP
  'Don't speak loudly'

- [māː  tīː dōːː ]
  don't go  FP
  'Don't go'

- [māː paŋː kāːn dōːː ]
  don't  fēː  I  FP
  'Don't leave me'

- [ʔān caːw ʔōːː t hīt ]
  eat  rice  give whole
  'Eat it all'

- [tīŋ kōː ]
  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 Samhung Thavung language.

The phonological study of the Samhung Thavung can be summarized below:

7.1.1 Phoneme

Consonants

The consonant system in Samhung Thavung consists of twenty phonemes: /p, pʰ, b, t, tʰ, d, c, k, kʰ, ?, v, s, h, m, n, n̄, η, l, w, j/. All of them except /w/ can occur initially in a syllable. The consonant phonemes: /p, t, k, ?, s, h, m, n, η, 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, iː, e, eː, eː, i, iː, ə, əː, a, aː, u, uː, o, oː, oː/ 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 Samhung 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, ph, b, t, th, d, c, k, kʰ, ?, v, s, h, m, n, n̄, l, w, j/
K T  : /p, ph, b, t, th, d, c, k, kʰ, ?, v, s, h, m, n, n̄, l, w, j, y, yh /
N T  : /p, ph, b, t, th, d, c, k, kʰ, ?, f, v, s, h, m, n, n̄, 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 /i/ 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, n/ whereas the K T still keep them. And the S T is still keep /l/ sound. However, the Mon-Khmer final /t/ 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, iː, e, eː, e, eː, i, iː, ə, əː, a, aː, u, uː, o, oː, ɔ, ɔː /

K T / i, iː, e, eː, e, eː, i, iː, ə, əː, ʌ, ʌː, a, aː, u, uː, o, oː, ɔ, ɔː, E, A, O /

N T / i, iː, e, eː, e, eː, i, iː, ə, əː, ʌ, ʌː, a, aː, u, uː, o, oː, ɔ, ɔː /

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.

<table>
<thead>
<tr>
<th>S. T</th>
<th>K T</th>
<th>N T</th>
</tr>
</thead>
<tbody>
<tr>
<td>pi:lR1</td>
<td>pi:l</td>
<td>pi:n</td>
</tr>
<tr>
<td>calR1</td>
<td>cal</td>
<td>cân</td>
</tr>
<tr>
<td>ku:lR2</td>
<td>ku:l</td>
<td>kǔ:n</td>
</tr>
<tr>
<td>ha:lR1</td>
<td>ha:l</td>
<td>hά:n</td>
</tr>
<tr>
<td>bo:lR2</td>
<td>bo:l</td>
<td>bό:n</td>
</tr>
<tr>
<td>jo:lR1</td>
<td>jo:l</td>
<td>jό:n</td>
</tr>
<tr>
<td>tahu:lR2</td>
<td>tahu:l</td>
<td>tahu:n</td>
</tr>
<tr>
<td>?atalR1</td>
<td>?atal</td>
<td>?atan</td>
</tr>
<tr>
<td>kʰamo:lR2</td>
<td>kʰamo:l</td>
<td>kʰamό:n</td>
</tr>
<tr>
<td>mane:lR3</td>
<td>mane:l</td>
<td>mang:n</td>
</tr>
</tbody>
</table>

The /t/ final consonant of S. T corresponds to /c/ in the final position of the K T and /t/ in N T.
<table>
<thead>
<tr>
<th>S T</th>
<th>K T</th>
<th>N T</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>?amos:R1</td>
<td>?amu:e</td>
<td>?amû:t</td>
<td>'the day after tomorrow’</td>
</tr>
<tr>
<td>kʰala:tR1</td>
<td>kʰala:e</td>
<td>kʰalâ:t</td>
<td>'to scratch’</td>
</tr>
<tr>
<td>bot:R1</td>
<td>bo:e</td>
<td>bô:t</td>
<td>'mushroom’</td>
</tr>
<tr>
<td>hot:R1</td>
<td>ho:e</td>
<td>hô:t</td>
<td>'intestine’</td>
</tr>
<tr>
<td>lot:R1</td>
<td>lo:e</td>
<td>lô:t</td>
<td>'penis’</td>
</tr>
</tbody>
</table>

7.2.2.2 Variation of vowels

- The /oː/ phoneme in S T is /oː/ in K T and /iː/ in N T as in the examples below.

<table>
<thead>
<tr>
<th>S T</th>
<th>K T</th>
<th>N T</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>to:o:jR3</td>
<td>to:o:j</td>
<td>tî:j</td>
<td>'tail’</td>
</tr>
<tr>
<td>ho:o:nR1</td>
<td>ho:o:n</td>
<td>bî:o:n</td>
<td>'to smell’</td>
</tr>
<tr>
<td>wo:o:lR3</td>
<td>vo:o:l</td>
<td>vî:n</td>
<td>'to come’</td>
</tr>
<tr>
<td>no:o:jR2</td>
<td>-no:o:j</td>
<td>rî:o:j</td>
<td>'to stay’</td>
</tr>
<tr>
<td>tʰalo:o:jR3</td>
<td>tʰalo:o:j</td>
<td>tʰalî:o:j</td>
<td>'to fall’</td>
</tr>
<tr>
<td>tʰavo:o:nR3</td>
<td>tʰavo:o:n</td>
<td>tʰavî:o:n</td>
<td>'mosquito’</td>
</tr>
<tr>
<td>malo:o:jR3</td>
<td>malo:o:j</td>
<td>malî:o:j</td>
<td>'rain’</td>
</tr>
</tbody>
</table>

In some cases the /oː/ phoneme in S T corresponds to /oː/ in K T and /ɔː/ in N T as in the examples below.
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 Vietic branch or even with other branches of 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, pʰ, b, t, tʰ, d, c, k, kʰ, ?, v, s, h, m, n, ɳ, l, j

- Final consonants are ordered as follows
  p, t, k, ?, 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, iː, e, eː, ɛ, ɛː, i, ɔ, ɔː, ʌ, ɑː, u, uː, o, oː, ɔ, ɔː, ia, iaː, ua

3 The registers are ordered as follows:
R1, R2 and R3
/p/  

/pitpitR1/  
/pihiR1/  
/pihiR3/  
/pinR1/  
/pinR1 ko:ηR1/  
/pinR1 maηR1/  
/piηR1/  
/piηpɔ:tR1/  
/pi:noR1/  
/pi:noR3/  
/pi:noR7/  
/pi:noR1/  
/pi:noR3/  
/pi:mR2/  
/patiηR1/  
/pato:jR1/  
/pato:jR2/  
/padukR1/  
/pado:R1/  
/pado:R2/  
/pacηhR3/  
/pacu:R7/  
/pacoqR3/  
/pakəηR3/  
/pakəηR2/?iθR3/  
/pakəηR2/?e:θR1/  
/pako:R1/  
/pasi:R1/  
/pasƏtR1/  
/pasƏmR2/  
/pasƏR2/  
/pasa?R1/  
/pasanR1/  
/pasanR2/  
/pasa:jR1/  

‘use with /numR1/ means very’  
‘seven’  
‘to split’  
‘to turn’  
‘to turn one’s back’  
‘to turn one’s face’  
‘to shoot’  
‘butterfly’  
‘to grow’  
‘to roast’  
‘arm’  
‘to break’  
‘to love’  
‘raft’  
‘floor’  
‘to chop’  
‘thousand’  
‘he’  
‘warm’  
‘to tell (normal word)’  
‘a kind of bee’  
‘to hide’  
‘shadow’  
‘a chess’  
‘to feed (to the mouth)’  
‘house post’  
‘husband’  
‘wife’  
‘principal wife’  
‘minor wife’  
‘dove’  
‘to be full (from eating)’  
‘to turn off the light’  
‘to exhale’  
‘otter’  
‘a mat’  
‘to be thin’  
‘to plait’  
‘battery (for flashlight)’
/pahicR1/  
/panicR2/  
/palenR1/  
/palekR1/  
/palokR1/  
/palokR2/  
/palokR3/  
/palukR1/  
/palukR3/  
/palukR1/  
/paloR1/  
/paloR2/  
/paloR3/  
/paloR2/  
/paloR3/  
/palumR2/  
/palumR3/  
/palumR1/  
/palumR2/  
/palumR3/  
/palumR1/  
/palumR2/  
/palumR3/  
/palumR1/  
/palumR2/  
/palumR3/

/to flee'  
'areca-nut'  
'to turn over'  
'to mend'  
'to put'  
'landleech'  
'to open the palm of the hand'  
'to be lonely'  
'brown'  
'betel'  
'grey'  
'to emerge'  
'clf of bamboo'  
'to duck in order to escape from danger'  
'to be sluggish'  
'three'  
'to slice'  
'to sell'  
'cogon grass'  
'moon'  
'crescent moon'  
'nauseous'  
'to sweep'  
'to blow'  
'hair done in a knot'  
'to carry on the shoulder'  
'to tie'  
'four'  
'flower'  
'a kind of flower'  
'a kind of flower'  
'sun flower'  
'farm,field'  
'to hit'  
'to mix'  
'window'  
'cone shaped woven bamboo'  
'cheek'
/pʰ/  

'please'  
'an equipment for a weave'  
noodle'  
'to sift'  
'to brush the teeth'  
'to bury'  
'to throw off'  
'to be pregnant'  
'wall'  
'hot'  
'breasts'  
'to look up'  
'to be drunken'  
'fish-hook'  
'fruit'  
'jack fruit'  
'sandorica'  
'gourd'  
'fig'  
'orange'  
'pamelo'  
'cavilla fruit'  
'egg-plant'  
'rambeh'  
'to prophesy'  
'six'  
'to blow the nasal secretion'  
'to fall'  
'to fall off'  
'to wither and drop off'  
(of flower parts)'  
rubbish'  
'to wake (someone) up'  
navel'  
'man'  
'curtain'  
'the torn cloth'  
rags'  
'blanket'  
'lid'
/pʰa:kR1/  ‘to put (something) in the care of’
/pʰo:nR2/  ‘to dance (in Thai fashion)’
/pʰɔːŋR1/  ‘to be brittle’
/pʰiaR1/  ‘to accompany side by side’
/pʰiakR1/  ‘ankle bone’
/pʰiŋR1/  ‘straw’
halɔːR2/
/b/  ‘to recover from illness’
/bitR3/  ‘to dip up’
/bi:kR1/  ‘clf of money’
/beːR1/  ‘goat’
/beʔR1/  ‘how many’
/benR1/  ‘to full’
/bonR1/  ‘bamboo shoot’
/baŋR1/  ‘bamboo for blow the feather tipped darts’
/baŋR1 pʰuʔR1/  ‘electric light’
/baŋR1 soŋR1/  ‘to dive’
/baŋR1 sɔŋR1/  ‘to spit out from the mouth’
/baliːpR1/  ‘to wound’
/baŋR1/  ‘to chip off the sides’
/balaːR1/  ‘village’
/baːR1/  ‘shamed’
/baːkR1/  ‘use with /lɔːkR2/ means very’
/baːnR1/  ‘to keep in the mouth’
/baŋR1/  ‘ashes’
/baŋR1/  ‘to open’
/baːR1/  ‘owl’
/baːR1/  ‘lance’
/baːR1/  ‘here’
/baːR1/  ‘there’
/baːR1/  ‘over there’
/baːR1/  ‘particle’
/baːR1/  ‘mushroom’
/baːR1 pʰiaŋR1/  ‘a kind of mushroom’
/baːR1 kəŋənR1/  ‘a kind of mushroom’
/baːR1 lɔːkR2/  ‘a kind of mushroom’
/baːR2/  ‘loin cloth for man’
/baːjR2/  ‘salt’
/buaŋR1/  ‘spoon’
/buaŋR1 ?iːR3/  ‘ladle’
/t/

/tipR1 ca:wR2/ ‘vessel for put on the glutinous rice’
/titR1/ ‘to weigh’
/tikR1/ ‘to be torn’
/tihR3/ ‘worm’
/tihR3 lo:kR2/ ‘a kind of worm’
/tiR1/ ‘to go’
/tehR3/ ‘leech’
/tetR1/ ‘cheap, right’
/te?R1/ ‘to kick’
/tehR3 ko:nR1/ ‘to give birth’
/teikR3/ ‘to be deaf’
/te:mR2/ ‘to draw’
/tiŋR1/ ‘to stand’
/tawR3/ ‘moss’
/tamR1/ ‘to put on’
/tamR3/ ‘right side’
/tatR1/ ‘to cut’
/tamR1/ ‘to weave’
/təŋR1/ ‘chair’
/təŋR2/ ‘bitter’
/tapəR1/ ‘to blow’
/tapahR1/ ‘to slap’
/tapusR3/ ‘to wipe’
/tapəŋR1/ ‘to hang’
/tapəŋR1 sa:ŋR3/ ‘external ear’
/tabəlR1/ ‘to roll up’
/tabətR1 ku:sR3/ ‘a composition of resin and rotten wood used as tinder’
/tabu:kR3/ ‘mud’
/tadenR1/ ‘to put out the tongue’
/takeIR1/ ‘to crow’
/take:pR1/ ‘to take up (with forceps, chopsticks, etc)’
/taka:R2/ ‘thorn’
/takokR1 ka:R2/ ‘fish bone’
/takokR1 koŋR1/ ‘back bone’
/takokR1 mane:IR3/ ‘calf’ bone’
/takokR1 lamitʰA:ŋR3/ ‘stump of a tree’
/tako:kR2/ ‘bone’
/tako:IR1/ ‘to prop up’
/tako:tR2/  ‘monitor’
/tako:jR2/  ‘horn’
/tako:jR2 tohR1/  ‘ox’
/tako:jR2 numR1/  ‘buffalo’
/tak¹:νR2/  ‘eye-brows’
/tahR1/  ‘to establish’
/ta?umR1/  ‘to be rotten’
/tahu:R2/  ‘ax’
/tahotR2/  ‘to steam’
/tahomR1/  ‘to be greedy’
/tahopR2/  ‘to yawn’
/tamikR1/  ‘flea’
/tama:kR3/  ‘to look up’
/tamanR3/  ‘to listen’
/tama:R1/  ‘new’
/tamunR1/  ‘palm civit’
/tamu:R2/  ‘blood’
/tamu:R2 musR3/  ‘blood from a nosebleed’
/tanɔ:R2/  ‘a kind of monkey’
/tapɔ:nR2/  ‘delicious’
/talukR1/  ‘fog’
/talo:R2/  ‘egg’
/talɔ:ŋR1/  ‘clear’
/tar1/  ‘uncle’
/tu?R1/  ‘with’
/tuhR1/  ‘to snatch’
/τuhR3/  ‘bean’
/τuhR3 pʰuŋR1/  ‘short bean’
/τuhR3 ca:jR1/  ‘soy bean’
/τuhR3 ?anR3/  ‘short bean’
/τuhR3 salawR2/  ‘green bean’
/τuhR3 na:kR1/  ‘bean sprout’
/τuhR3 jo:IR2/  ‘long-podded cowpea’
/tumR1/  ‘jar’
/tumR3/  ‘to stap’
/tukusR3/  ‘a stove’
/tu:R1/  ‘to pain’
/tu:R1 pi:R1/  ‘armache’
/tu:R1 kɔ:ŋR1/  ‘backache’
/tu:R1 kanaŋR1/  ‘toothache’
/tu:R1 kʰa?alR1/  ‘stomachache’
/tu:R1 ?ɔ:kR2/  ‘headache’
/tu:R1 malu:R2/
/nu:R1 na:tR2/  ‘legache’
/nu:R1 kusR3/  ‘sore throat’
/nu:nR3/  ‘to set a fire’
/nu:nR3 da:kR2/  ‘blind’
/to:R1/  ‘to drown’
/to:jR1/  ‘elf of animal’
/to:jR3/  ‘silver’
/to:jR3/  ‘bowl’
/topR1/  ‘tail’
/tohR1/  ‘to clap the hands’
/tomR1/  ‘red’
/to:R1/  ‘to boiled’
/to:R1/  ‘earring’
/to:jR1/  ‘to tap (on finger)’
/ta:kR1/  ‘shrimp paste’
/ta:nR1/  ‘to growl’

/tʰ/

/tʰi:nR1/  ‘bat’
/tʰe:hR1/  ‘sand’
/tʰe:R3/  ‘to shave’
/tʰ:R3/  ‘to be shallow’
/tʰAnR1 t:amR3/  ‘right side’
/tʰAnR1 k:ɔ:nR1/  ‘behind’
/tʰAnR1 matR1/  ‘in front of’
/tʰAnR1 v̩e:lR1/  ‘left side’
/tʰAwR3/  ‘you (normal)’
/tʰA:nR3/  ‘wood’
/tʰawR1/  ‘old’
/tʰawl:e:R1/  ‘why’
/tʰave:lR1/  ‘whirlpool’
/tʰavi:nR3/  ‘Thavung people’
/tʰava:kR2/  ‘armpit’
/tʰavo:nR3/  ‘mosquito’
/tʰama:R1/  ‘flat pillow for the monk sit while he is sermoning’
/tʰaneshR3/  ‘lighter’
/tʰanu:nR1/  ‘fever’
/tʰanu:nR3/  ‘fart’
/tʰala:kR2/  ‘to wake (of oneself)’
/tʰalo:R2/  ‘grave’
/th`;a;wódjR1/  
/th`;a;wódjR3/  
/th`;a;wódjR3 ni;R1/  
/th`;a;wódɁR1/  
/th`;a;wódkR1/  
/th`;a;wódkR2/  
/th`;a;wódɁR2/  
/th`;a;wódɁR2 ?enR1/  
/th`;a;wódɁR2 li:R1/  
/th`;a;wódkɁR3/  
/th`;u;R2/  
/th`;u;R3/  
/th`;o;R1/  
/th`;o;R2/  
/th`;o;R3/  
/th`;o;R1/  
/th`;o;R1/  
/th`;o;R1/  
/th`;o;R1/  
/th`;o;R1  ci:R3/  
/th`;o;R1  se:R2/  
/th`;o;R1  ?a:wR2/  
/th`;o;R1  haɁ:R2/  

‘to threaten, intimidate’  
‘to fall down’  
‘to get frighten’  
‘clf. of soap’  
‘rough’  
‘a kind of bird’  
‘month’  
‘next month’  
‘this month’  
‘chin’  
‘to rub’  
‘deep’  
‘poor’  
‘yam’  
‘flash light’  
‘to blow’  
‘to cure’  
‘to shrink’  
‘bag’  
‘socks’  
‘gloves’  
‘pocket of the shirt’  
‘gunny bag’  

/d/  
/di:R1/  
/di:R1/  
/di:R1/  
/di:R1/  
/di:R1/  
/di:R1/  
/di:R1  tao:R1/  
/di:R1  tao:R1/  
/di:R1  cu:R3/  
/di:R1  ka:R2/  
/di:R1  ?aku:R3/  
/di:R1  ?ah:R1/  
/di:R1  tao:R3/  
/di:R1  matR1/  
/di:R1  ni:R1/  
/di:R1  ni:R1/  

‘clay’  
‘good’  
‘dawn’  
‘particle’  
‘to swallow’  
‘clear water’  
‘mercuriochrome’  
‘vinegar’  
‘fish soy’  
‘unclear water’  
‘perfume’  
‘waterfall’  
‘tear’  
‘nasal secretion’  
‘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’
/da:pR1/  ‘to fold’
/do:kdo:kR1/  ‘adam’s apple’
/do:kR1 me:tR1/  ‘collar bone’
/do:hR1/  ‘chopsticks’
/do:nR2/  ‘hat’
/duanR1/  ‘to stab’

/c/

/ci:nR2/  ‘nine’
/ci:nR1/  ‘ripe’
/ci:nR3/  ‘foot’
/ci:nR3 le:nR1/  ‘hill foot’
/ce:mR2/  ‘a Siamese lower garment comprising a wide strip of cloth with one end twisted and hitched between the legs’
/ci:nR1/  ‘to be bright’
/ca:lR1/  ‘net’
/ca:nR3/  ‘to hate’
/ca:nR2/  ‘to die’
/ca:nR3/  ‘hawk’
/cakR1/  ‘I(normal word)’
/ca:nji:jR1/  ‘how’
/ca:lR1/  ‘to be burned’
/casR3/  ‘to comb the hair’
/capi:lR1/  ‘a kind of gourd’
/capai:jR2/  ‘to wear over the shoulder’
/cabo:nR1/  ‘roof’
/cadanR1/  ‘straight’
/cado:jR2/  ‘to point’
/cake:nR1/  ‘to tilt’
/cake:nR2/  ‘ugly’
/caktuR2/  ‘bear’
/cako:nR3/  ‘ginger’
/cahuəR1/  ‘monk’
/caihiR3/  ‘gum’
/calihR3/  ‘to tired’
/calenəR1/  ‘to glance side ways’
/calunəR3/  ‘fat’
/calo:tR3/  ‘to be slippery’
/calomR1/  ‘to bump into’
/calo:nR3/  ‘to be raw’
/calokR1  nə:tR2/  ‘windpipe’
/calonR1 kasa:nR1/  ‘have a feeling of darting pain of the teeth’
/calokR2/  ‘brook’
/ca:kR2/  ‘to buy’
/ca:wR2/  ‘rice’
/ca:wR2 pʰədɯʔR1/  ‘popped rice’
/ca:wR2 to:tR1/  ‘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 kʰaŋuːR2/  ‘roasted rice’
/ca:wR2 majR1/  ‘a kind of rice’
/ca:wR2 jumR1/  ‘black sticky rice’
/ca:wR2 jə:kR2/  ‘white sticky rice’
/ca:wR2 ja:nR1/  ‘glutinous rice’
/ca:jR2/  ‘yellow’
/cuʔR1/  ‘to kiss’
/cuʔeʔR1/  ‘brain’
/cuŋR1/  ‘to sit’
/cuŋR1 tʰamɔːpR1/  ‘to sit with the both legs folded back to one side’
/cuŋR1 kʰaʔtʰamɔːtR1/  ‘to sit cross-legged’
/cuŋR1 jəŋjəːR1/  ‘to sit on one’s heels’
/cuːR3/  ‘sour taste’
/cuːmR1/  ‘trap for a rat’
/co:kR1/  ‘wound’
/coŋR3/  ‘boy’
/co:R1/  ‘tart taste’
/co:R2/  ‘grandchild’
/coŋR3/  ‘spade’
/co:kR1/  ‘to pick out an ear’
/csʔR1/  ‘to make a hole’
/comR1/  
/comm1 ?enR1/  
/comm1 li:R1/  
/co:R2/  
/co:R2 kolo:nR2/  
/co:kR1/  
/co:mR1/  
/ciaR1/  

/kihR3/  
/kinR1/  
/kinR1 lad:kR2/  
/kint’hinR1/  
/kinjajo:R1/  
/kinjku:R2/  
/kirR1/  
/kimR1/  
/kirwR1/  
/kehR3/  
/ke:R1/  
/ke:nR1/  
/ke:nR1 sco:kR1/  
/ke:nR2/  
/ke:nR3/  

/ke:nR3 kha:a:R1/  
/ke:nR3 kha:a:R1/  
/ke:nR3 sunR1/  
/ke:nR3 hoo:nR1/  
/ke:nR3 numR1/  
/ke:IR1/  
/ke:R1/  
/ko:R1/  
/ka:pR1/  
/ko:kR1/  
/ka:R1/  
/ka:R2/  
/ka:R3/  
/kapke:iR2/  
/kanR1/  

'year, to complain'  
'next year'  
'this year'  
'dog'  
'fox'  
'glass'  
'the whorl of hair on top of the head'  
'paper'  

/stone'  
'liquor'  
'white liquor'  
'horse-tamarind'  
'red ant'  
'spider'  
'mole'  
'needle'  
'cramps'  
'to be swollen'  
'a weave'  
'short trousers'  
'elbow'  
'waist'  
'ant'  

'a kind of ant'  
a kind of ant'  
a kind of ant'  
a kind of ant'  
'black ant'  
cucumber'  
'near'  
'girl'  
'shoes'  
to be dumb'  
'bee'  
'louse'  
mouth'  
geeko'  
'I (normal word)'
/kanɔke:R2/ 'pigeon'
/kasR3/ 'vegetable'
/kasR3 po:ŋR3/ 'choy sum leaves'
/kasR3 tʰɔ:mR3/ 'sweet basil'
/kasR3 cakehR1/ 'a kind of vegetable'
/kasR3 salatR1/ 'lettuce'
/kasR3 lo:kR2/ 'chinese cabbage'
/kapiŋR1 po:kR1/ 'cone-shaped woven bamboo'
/kapeR1/ 'a crate'
/kapehR3/ 'scale'
/kape:kR1/ 'to be torn'
/kapaŋR1/ 'bri:n'
/kapanŋR1 ciŋR3/ 'sole of the foot'
/kapanŋR1 se:R2/ 'palm of the hand'
/kapasR3/ 'cotton'
/kapa:jR2/ 'cloth'
/kapa:jR2 padoR1/ 'loin cloth'
/kapa:jR2 kʰi:nɔ:mR1/ 'blanket'
/kapa:jR2 ?umR2 da:kR2/ 'towel'
/kapa:jR2 sopR2/ 'a kind of cloth'
/kapu:R2/ 'lime'
/kapu:R2 lasR3/ 'skum'
/kapoʔR1/ 'half coconut shell'
/kapo:R1/ 'caterpillar'
/kapo:R1 kʰado:jR1/ 'a kind of caterpillar'
/kapʰʔR1/ 'smelling salts'
/kapʰo:kR2/ 'hip'
/kabəŋR1/ 'to swell out'
/kaba:kR1/ 'have an abrasion'
/kaba:nR1/ 'a strainer, tray'
/kabuŋR1/ 'a kind of basket'
/kabuR1/ 'thick'
/kabɔ:ŋR1/ 'clf. of wood'
/katiŋR1 ba:nR1/ 'villager'
/katiːR2/ 'below'
/kate:pR2/ 'to be abortive'
/katiːkR1/ 'parasitic worm (in bodies of people, animals'
/kata:jR1/ 'a kind of basket'
/kata:vR1/ 'sticky'
/katamR1/ 'a kind of trap'
/kata:R1/ 'a basket'
/kata:̂tR1/  a kind of basket
/kata:mR2/  ‘crab’
/kata:IR2/  ‘testis’
/kato:jR1/  ‘to trip over’
/kato:tR2/  ‘wart’
/kato:ηR1/  ‘bra’
/katʰi:kR1/  ‘trap for a rat’
/katʰspR1/  ‘to bump against’
/katʰλ:ηR3/  ‘a kind of a caterpillar’
/katʰa:tR1/  ‘ply wood that made of bamboo’
/katʰoR1/  ‘satchel’
/katʰomR1/  ‘to cover with earth’
/kade?=R1/  ‘deer’
/kade:mrR1/  ‘to put on top of’
/kade:IR1/  ‘to be tight’
/kade:kr1/  ‘to deceive’
/kadawR1/  ‘a kind of vegetable’
/kada:R1/  ‘spinach’
/kadanR1/  ‘to roll the tongue’
/kaduhR1/  ‘to patch’
/kaduhR3/  ‘chameleon’
/kadoIR1/  ‘occipital bone’
/kadoIR1 cι:ηR3/  ‘heel’
/kadoIR1/  ‘to close’
/kadoIR1 cι:ηR3/  ‘toe’
/kado:jR2 cι:ηR3 ?iθR3/  ‘great toe’
/kado:jR2 cado:jR2/  ‘index finger’
/kado:jR2 kα:ηR1/  ‘ring finger’
/kado:jR2 ?iθR3/  ‘thumb’
/kado:jR2 ?e:R1/  ‘index toe’
/kado:jR2 ?atʰiθR3/  ‘middle finger’
/kado:jR2 se:R2/  ‘finger’
/kado:jR2 jelR1/  ‘little finger’
/kadiaηR1/  ‘ceiling’
/kace:R2/  ‘vagina’
/kace?=R1 matR1/  ‘eye tip’
/kacΛ:R2/  ‘to kill’
/kacakR1/  ‘mirror’
/kacaŋR1/  ‘charcoal’
/kaca:R2/  ‘hail-stone’
/kaca:kR2/  ‘squirrel’
/kacu:R1/  ‘shell’
/kacuhR1 tanR1/  'a kind of shell'
/kacuhR1 ?Λ:kR1/  'a kind of shell'
/kacɔʔR1/  'a little basket for put of areca-nut set'
/kaveIR1/  'to fry'
/kavahR1/  'toothless'
/kavanR1/  'to embrace'
/kavΛʔR1/  'chipped,nicked'
/kavɔŋR1/  'peacock'
/kasiwR1/  'pimple'
/kasiŋR1/  'centipede'
/kasamR1/  'nail'
/kasajR1/  'tooth'
/kasajR1 kumR1/  'molar tooth'
/kasajR1 meŋR1/  'dental caries'
/kasajR1 neŋR1/  'canine tooth'
/kasamR1/  'chaff'
/kasu:nR2/  'to whistle'
/kaha:lR2/  'tiger'
/kahɔŋR2/  'dust,smoke of the fire'
/kamitR1/  'flea'
/kamenR1/  'chicken lice'
/kamŋR1/  'lymph'
/kamu:itR3/  'cricket'
/kamorR1/  'hammer'
/kamo̞:R2/  'hollow of the palm of the foot and hand'
/kamo:R2 ciŋR3/  'plantarch'
/kamosR1 kusR3/  'fire-wood'
/kane:šR2/  'comb'
/kana:lR2/  'skink'
/kanomR1/  'young'
/kapiŋR1 matR1/  'to close one's eye'
/kapawR1/  'to speak'
/kapawR1 həmR1/  'to stammer'
/kajnuR2/  'wind'
/kajomR1/  'to grasp'
/kalii:miR1/  'clf. of money'
/kalii:ŋR2/  'to roll'
/kale:ŋR1/  '(two or more people) to carry'
/kalehR1/  'to fall in ruins'
/kalenR1/  'odor'
/kale:mr1/ 'food'
/kalרגR1 ?ihR3/ 'forest'
/kalanR2/ 'to be bald'
/kalanR3/ 'to crawl on hands and knees'
/kalanR1/ 'to restrain'
/kalo:ηR1/ 'iron bucket'
/kaloR1/ 'clf. of cigarette'
/kalo:ηR1/ 'ellipse'
/kajilR1/ 'to pinch'
/kajuhR1/ 'to spit the saliva'
/kajogR1/ 'millipede'
/ka:R1/ 'chicken'
/ka:R2/ 'fish'
/ka:R2 calo:nR1/ 'serpent-head'
/ka:R2 kadcitR1/ 'gouramy'
/ka:R2 ?atoηR1/ 'carp'
/ka:R2 salojjR1/ 'wild fowl'
/ka:R2 lajR1/ 'a kind of fish'
/ka:pR1 tʰ :nηR3/ 'shell sea'
/ka:τR1/ 'insect bite'
/ka:ηR1/ 'jar'
/ka:R1/ 'to cremate'
/kumR1/ 'male'
/kunR1 ko:R2/ 'female'
/kusR3/ 'fire'
/kumi:R1/ 'everyday'
/ku:R3/ 'couple'
/ku:R1/ 'small green frog'
/kunR2/ 'male of animal'
/ku:R2/ 'pig'
/ku:R2 kanehR1/ 'wild boar'
/kopR1/ 'to plane wood'
/kokR1 ka:R1/ 'chicken coop'
/ko:R1/ 'clf. for a mouthful'
/kohR1/ 'to rise'
/ko:R1 ci:ηR3/ '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 ?aηa:ηR3/ 'to sneak'
/ko:jR1 tʰʌŋR3/  ‘cavity tree’
/kotR1/  ‘umbrella’
/kohR1/  ‘grass’
/kɔŋkɔŋR1/  ‘prawn’
/kɔŋkR2/  ‘to hook’
/kɔŋR1  tɔəR1/  ‘baby’
/kɔːnR1 tʰanaːR1/  ‘feather tipped darts’
/kɔːnR1 tʰavoŋR3/  ‘mosquito larva’
/kɔːnR1 coR2/  ‘puppy’
/kɔːnR1 kamenR1/  ‘daughter-in-law’
/kɔːnR1 kuncoŋR3/  ‘son’
/kɔːnR1 kunkɔR2/  ‘daughter’
/kɔːnR1 kunʔeːtR1/  ‘child’
/kɔːnR1 kʰaːlːiːR2/  ‘the orphan child’
/kɔːnR1 kʰɔːR1/  ‘son-in-law’
/kɔːnR1ʔaːR2/  ‘twin child’
/kɔːnR1 saŋːiR2/  ‘bullet’
/kɔːŋR1/  ‘back’
/kiaːwR1/  ‘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/  
/kʰiːtR1/  ‘to nudge’
/kʰiŋR1 musR3/  ‘ridge of nose’
/kʰiːR3/  ‘fin’
/kʰeːR2/  ‘crocodile’
/kʰəːR3/  ‘a rake’
/kʰaːwR1/  ‘to be fishy (in smell)’
/kʰanR1 tʰaːwR1/  ‘walking stick’
/kʰaːwɔːR1/  ‘climber with bitter principles’
/kʰaːbuloR2/  ‘boiling water’
/kʰabolR1/  ‘bark of the tree’
/kʰabo:R1/  ‘coir of coconut’
/kʰaboːR2/  ‘to spit out’
/kʰadahR1/  ‘to be irritating in the eye’
/kʰadɔŋɔŋR1 hoːR3/  ‘tortoise shell’
/khəʔeʔR1 ke:nR3/  'excrement of ant'
/khaʔeʔR1 ka:R1/  'excrement of chicken'
/khaʔeʔR1 ku:JR2/  'excrement of pig'
/khaʔeʔR1 sa:jR3/  'ear-wax'
/khaʔeʔR1 maR1/  'eye-wax'
/khaʔeʔR1 mo:sR3/  'freckles'
/khaʔeʔR1 nilR1/  'mucus'
/khaʔeʔR1/  'excrement'
/khaʔeʔR2 kade:ŋR1/  'to be constipated'
/khaʔo:jR1/  'to play'
/khaʔalR1/  'abdomen'
/khaʔalR1 ?ihR3/  'belly'
/khaʔakR1/  'crow'
/khaʔorR2/  'urine'
/khaʔtamR1/  'to belch'
/khaʔame:lR1/  'termallic'
/khaʔamasR3/  'to laugh'
/khaʔama:jR2/  'woman'
/khaʔamo:lR2/  'termite'
/khaʔapomR1/  'to clench the fists'
/khaʔalihR1/  'to be hard'
/khaʔalɔ:R2/  'to be orphan'
/khaʔala:R1/  'to be old'
/khaʔala:R2/  'the way'
/khaʔala:tR1/  'to scratch'
/khaʔala:ŋR1/  'sunlight'
/khaʔaluhR3/  'to bark'
/khaʔalu:tR1/  'to scrape'
/khaʔalo:tR1/  'to gnaw'
/khaʔalo:tR2/  'skin'
/khaʔalo:tR2 maR1/  'eyelid'
/khaʔalɔpR3/  'inside'
/khaʔalɔmR1/  'to brood over'
/khaʔalo:ŋR1/  'seed'
/khaʔalo:ŋR1 maR1/  'eye ball'
/khaʔaluR2/  'to slice (with horizontal motion)'
/khaʔa:R1/  'galangga'
/khaʔu?R1/  'bucket'
/khaʔuli:R1/  'today'
/khaʔokR1 mo:ŋR1/  'mortar for pierce the paddy'
/khaʔomR1/  'rancid'
/khaʔɔ:R2/  'knife'
/kʰɔːR2 pasanŋR1/  ‘light knife’
/kʰɔːR2 seːR2/  ‘knuckle’
/kʰɔːR2 loːnR1/  ‘sharp knife’
/kʰɔːtR1/  ‘to sharpen’
/kʰianR1/  ‘a metal for build the light’

/ʔiːR3/  ‘big’
/ʔiːkR1/  ‘rat’
/ʔiːŋR1/  ‘to lean against’
/ʔeːtR1/  ‘small’
/ʔeːR1/  ‘to raise’
/ʔenR1/  ‘next’
/ʔenŋR1/  ‘sinew’
/ʔeːR1 ʔaːmR2/  ‘to have’
/ʔemR1/  ‘rich’
/ʔeːwR1 kʰokmoːŋR1/  ‘partition’

/ʔiːnR2/  ‘ladle of mortar for pierce the paddy’
/ʔaːŋR1/  ‘to pull’
/ʔaːŋR1 ʔaːŋR1/  ‘that (conj)’
/ʔaːŋR1 dəːŋR1/  ‘elder sister’
/ʔaːŋR1/  ‘chest’
/ʔaːŋpR1/  ‘short’
/ʔaːmmahiːR1/  ‘to stretch out’
/ʔaːnR1/  ‘last night’
/ʔaːŋR1 ʔaːŋR1/  ‘to eat’
/ʔaːŋR1 dəːŋR1/  ‘wedding’
/ʔaːŋR1/  ‘saddle’
/ʔaːŋR1 saːmR1/  ‘elder brother’
/ʔaːŋpR1/  ‘cousins’
/ʔapeːR3/  ‘bracelet’
/ʔapeːŋR3/  ‘shoulder’
/ʔapeːŋ R1/  ‘wing’
/ʔapeːŋR3/  ‘lips’
/ʔapeːŋR1/  ‘to hear’
/ʔapeːŋR3/  ‘farm hut’
/ʔapukR1/  ‘to wash’
/ʔapokR1/  ‘to be dilapidated’
/ʔapoːR1/  ‘dream’
/ʔapoːŋR1/  ‘cavity’
/\ap\'a:nR1/  ['clif. of yam']
/\abilR1/  ['to sharpen']
/\abuhR1/  ['the door']
/\abo:iR2/  ['to swarm around (as an noying flies or insects)']
/\atikR1/  ['to be bold, resolute']
/\atiR1/  ['to sway']
/\atehR1/  ['to sprout']
/\ate;\etaR1/  ['to shout']
/\ata;R3/  ['duck']
/\atakR1/  ['soil']
/\atat\eta kalohR1/  ['throat']
/\atatR1/  ['rope']
/\atatR1 n:\eta tR2/  ['necklace']
/\atasR3/  ['to spread (in the sun)']
/\atatR2 ci\eta n\eta R3/  ['foot prints']
/\atukR1/  ['to push']
/\atumR1/  ['to tease by poking']
/\atun\eta R2/  ['liana']
/\atunR1/  ['oil']
/\atu;R1 ku;\eta R2/  ['lard']
/\atu;R2/  ['lazy']
/\ato;R1/  ['to scold, cruel']
/\ato;\eta R1/  ['to run']
/\ato;\eta R1/  ['rosary']
/\ato;\eta R1/  ['to wrap up']
/\ato;\eta R1 k\beta ale;\eta n\eta R1/  ['a bamboo pole used for carrying loads on the shoulder']
/\at\beta a;kR2/  ['to cut (with diagonal or almost horizontal motion)']
/\at\beta okR1/  ['to pull with jerks']
/\adikR1/  ['to shake the head']
/\adinR1/  ['to press with hand']
/\adi;R1/  ['to tell like an order']
/\ade;\eta R1/  ['to wear']
/\ada;\eta R1/  ['to cook']
/\adalR1/  ['to climb']
/\ada;\eta R1/  ['to bake']
/\ado;R2/  ['curry']
/\ado;R2 ka;R1/  ['chicken curry']
/\ado;R2 ku;\eta R2/  ['pork curry']
/\ado;\eta R1/  ['to ride above the neck']
/ʔadokr1/  ‘to pull up’
/ʔadohR1/  ‘to cough’
/ʔado:R2/  ‘the bridge’
/ʔac:iŋR3/  ‘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)’
/ʔaca:hR1/  ‘to dig’
/ʔacusR3/  ‘to sew’
/ʔacor:pR3  malo:jR3 /  ‘lightning’
/ʔacokR1/  ‘to put one’s hand(s) in one’s pocket(s)’

/ʔacəjR2/  ‘bird’
/ʔacəjR2  kacakR1/  ‘warbler’
/ʔacəjR2  ?akikR1/  ‘wood pecker’
/ʔacəŋR1/  ‘a kind of tree’
/ʔakiR1/  ‘to sway’
/ʔakiR3  malo:jR3/  ‘thunder’
/ʔakemR1/  ‘seashore’
/ʔake:lR1/  ‘to be ticklish’
/ʔake:pR1/  ‘to keep’
/ʔake:R2/  ‘to seek’
/ʔakəlR1/  ‘to squeeze’
/ʔak umR1/  ‘to borrow’
/ʔakəlR1/  ‘clf. of vehicle’
/ʔakənR3/  ‘sensitive condition of denuded teeth’

/ʔakə:jR2/  ‘a kind of deer’
/ʔakasR3/  ‘to scratch’
/ʔakapR2/  ‘bamboo’
/ʔakatR1/  ‘to bite’
/ʔaku:hR1/  ‘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  hal:R2/  ‘an ear of corn’
/ʔako:IR3/  ‘to vomit’
/ʔako:IR1/  ‘knee’
/ʔako:jR1/  ‘to scoop together’
/ʔakɔkR1/  
/ʔakɔmR1/  
/ʔakɔŋR1/  
/ʔakɔhR1/  
/ʔakɔR2/  
/ʔakɔIR2 musəŋR1/  
/ʔakɔIR2 ha:wR1/  
/ʔakɔiR2/  
/ʔakʰiːR1/  
/ʔakʰoːR1 makpʰaːR1/  
/ʔaʔeːŋR1/  
/ʔaʔiːnR1/  
/ʔaʔiːkR2/  
/ʔaʔinR3/  
/ʔaʔanR2/  
/ʔaʔoːR1/  
/ʔaʔoːŋR2/  
/ʔaʔiːR1/  
/ʔaʔuːR1  saːjR3/  
/ʔaʔuːR1 musR3/  
/ʔaʔuːR2/  
/ʔaʔokR1/  
/ʔaʔokR1 piːR1/  
/ʔaʔokR1 matR1/  
/ʔaʔokR1 maːlʊ:R2/  
/ʔaʔokR1 musR3/  
/ʔasuːmR1/  
/ʔasuːm1 daːkR2/  
/ʔasuːmR1 nəmR3/  
/ʔaːŋR2/  
/ʔaːhiwR1/  
/ʔaːhiːR1/  
/ʔaːhiːmR2/  
/ʔaːhːiːR2/  
/ʔaːhːiŋR3/  
/ʔaːhawR1/  
/ʔaːhamR1/  
/ʔaːhalR1/  
/ʔaːhɑŋR1/  

'to twisted'  
'bracelet'  
'to be crooked'  
'to knock'  
'star'  
'a kind of star'  
'comet'  
'the end of paddy'  
'to write'  
'coconut cream'  
'to worm at the fire'  
'to lead by the hand'  
'above, the north'  
'sesami'  
'money'  
'to watch carefully'  
'to call'  
'to rub'  
'hole'  
'hole of ears'  
'nostril'  
'to sneeze'  
'hair of human or animal'  
'down (soft under feathers); fuzz (body hair)'  
'eyelashes'  
'down (soft under feathers); fuzz (body hair)'  
'hair in a nose'  
'room'  
'bathroom'  
'bedroom'  
'a kind of louse'  
'to hold by hand'  
'to inhale'  
'to cry'  
'what'  
'to divorced'  
'to whisper'  
'brittle'  
'to mince'  
'loud'
/ʔahə:nR1/ ‘to drag’
/ʔahukR1/ ‘rag’
/ʔahö:R1/ ‘to answer’
/ʔahö:tR2/ ‘to leak’
/ʔahö:mmR2/ ‘dark’
/ʔahö:mmR2 malo:jR3/ ‘dark sky’
/ʔahölR1/ ‘to remove’
/ʔahölR1/ ‘to be fragrant’
/ʔahiaR1/ ‘to lost’
/ʔahianR1/ ‘to learn’
/ʔame:nR1/ ‘soft’
/ʔamahR1/ ‘the night’
/ʔamotR1/ ‘the day after tomorrow’
/ʔamʊŋR1/ ‘meat’
/ʔan:mmR3/ ‘to carry on the shoulder’
/ʔanumR1/ ‘to carry (a child, an animal) in one’s arms’
/ʔanumR1/ ‘to mould’
/ʔanə:R1/ ‘to struggle’
/ʔanə:hR2/ ‘to chew’
/ʔanə:nR3/ ‘to walk’
/ʔano:R1 matR1/ ‘sympathy’
/ʔano:mmR1/ ‘to caress’
/ʔano:nR2/ ‘to flatter’
/ʔanuaR1/ ‘to urge on’
/ʔanuaŋR1/ ‘to persuade’
/ʔaniiR1/ ‘to miss’
/ʔanːaR1/ ‘to irritate’
/ʔanuhR3/ ‘to sleepy’
/ʔanʊmR1/ ‘to dive for’
/ʔali:R1/ ‘this’
/ʔale:mmR2/ ‘to lick’
/ʔalä:mmR1/ ‘to sharpen’
/ʔalä:R1/ ‘that’
/ʔala:nR1/ ‘to wash’
/ʔala:nR2/ ‘twin’
/ʔalukR1/ ‘to push’
/ʔaluːhR1/ ‘to separate’
/ʔaluːpR1/ ‘to stroke’
/ʔaluːtR2/ ‘to miscarry’
/ʔalowR1/ ‘those’
/ʔalʊ:ŋR1/ ‘mountain’
`?aliakR1/  `to select'
`?aji:wR1/  `tomorrow'
`?ajamR1/  `to wait'
`?ajo:R1/  `where'
`?ajo:R1/  `to shake the leg'
`?ajo:kR2/  `to joke'
`?arwR1/  `term of address to younger man
`?arwR2/  or woman'
`?arwR2 pi:lR1 ?anR3/  `shirt'
`?arwR2 pi:lR1 jo:lR1/  `short-sleeved shirt'
`?uhR3/  `long-sleeved shirt'
`?uhR3 tu:lR1/  `house'
`?uhR3 k:A:R1/  `wasp nest'
`?umR1/  `bee-hive'
`?uca:jR1/  `to embrace'
`?uR3/  `a little small green frog'
`?utR1/  `to suck the milk'
`?upR1/  `to burn'
`?utR1/  `to stretch out'
`?otR1/  `the cradle'
`?otR1/  `to give'
`?o:kR1/  `before'
`?o:mR2/  `to bathe'
`?onR1/  `to distribute'
`?onR1/  `elephant'
`?okR1 t^o:R2/  `taro root'
`?okR1 se:nR1/  `lemon grass'
`?okR1 ho:mR1/  `onion'
`?ohR1/  `not (negative marker)'
`?onR1/  `large bamboo rat'
`?onR1/  `father'
`?onR1 ka:R1/  `ridge pole'
`?onR1 kama:jR1/  `widower from his wife is dead'
`?onR1 ?a:jR3/  `widower from divorcement'
`?onR1 t^awR3/  `father-in-law'
`?onR1 majR1/  `step father'
`?onR1 na:R1/  `step father'
`?onR1 ma:R2/  `parent'
`?otR2/  `term of address to an elder
`?otkR2/  woman or man'
`?onR1/  `head'
`?onR1/  `wasp'
/ʔianR1/  ‘eel’
/ʔiaW1/  ‘thin’

/v/
/ʔıtR3/  ‘to throw away’
/ʔıtR3 ʔoːR1/  ‘to rock the cradle’
/ʔiːR1  maR1/  ‘have a dizzy spell’
/ʔeR3/  ‘knife’
/ʔeR1/  ‘left’
/ʔeːR2/  ‘ring’
/ʔaR2/  ‘crazy, mad’
/ʔatR1 .piːR1/  ‘sad’
/ʔaʃR1/  ‘fast’
/ʔasR3/  ‘to sow’
/ʔoːR1/  ‘to poke (one’s head) out’
/ʔoːR3/  ‘to come’
/ʔoːŋR2/  ‘pot;’
/ʔoːŋR2 taʔoːR2/  ‘rice pot’
/ʔoːŋR2 haːŋR1/  ‘pan’
/ʔiakR2/  ‘work’

/s/
/ʔiʃR1/  ‘rattan’
/ʔiːliːR1/  ‘nomadic’
/ʔiʃuR1/  ‘gable’
/ʔiːwR1/  ‘blue green’
/ʔeːR2/  ‘hand’
/ʔeːkR1/  ‘to tear’
/ʔolɔːkR1/  ‘basin’
/ʔaːR1/  ‘to put on’
/ʔaːnR3/  ‘to plait’
/ʔaŋkaːR1/  ‘monk’s robes’
/ʔaŋpR1/  ‘zip’
/ʔa♭hR3/  ‘mastache’
/ʔa♭aR3/  ‘corn’
/ʔa♭oŋR1/  ‘monk’s loin cloth’
/ʔa respectfulR1/  ‘a dip-net’
/ʔaŋR1/  ‘to thrust’
/ʔaŋR1/  ‘to jump’
/ʔa respectful?kR1/  ‘to hiccups’
/saʔɔnR1/ 'jealous'
/samaʔR1/ 'cemetery'
/saʔɔnR3/ 'ghost'
/saʔɔnR3 ʔeːR1/ 'an evil-doer'
/saʔɔnR3 pʰaːyR3/ 'spirit that the sorcerers entertain in their houses'
/saʔɔnR3 ʔuːR1/ 'soul'
/samakR1/ 'to choke'
/samuʔR1/ 'colic'
/sanuʔR2/ 'gun'
/sanaʔR1/ 'triangle pillow'
/sanaʔR2/ 'crossbow'
/sanaʔR2 tʰanuʔR1/ 'the sack tree'
/saʔɔnR1/ 'ill'
/saʔɔnR1/ 'far'
/saʔɔnR2/ 'to snore'
/saʔɔnR2/ 'sash of monk'
/saʔɔnR2/ 'underwear'
/saʔɔnR2/ 'to prune'
/salitR1/ 'green'
/salitR1/ 'light green'
/salitR1/ 'dark green'
/salitR1/ 'fear'
/salanR2/ 'to shake'
/salanR1/ 'cool'
/salanR1/ 'leaf'
/salanR1/ 'to flow'
/salaʔR2/ 'younger brother or sister'
/salaʔR2/ 'eight'
/salaʔR2/ 'sister-in-law'
/salaʔR2/ 'younger brother'
/salaʔR2/ 'younger sister'
/salaʔR2/ 'ear'
/salaʔR2/ 'dumb'
/saʔiR3 kʰiːR3/ 'eaves'
/saʔiR3 ʔeːR1/ 'belt'
/saʔiR3 ʔoːR / 'rabbit'
/saʔiR3 ʔoːnR1/ 'earlobe'
/sutR1/ 'mosquito net'
/sukR1 ?aʔɔːjR2/ 'bird nest'
/suʔR1/ 'a kind of fish-hook'
/suumR1/ 'lung'
/suhR1/
/suti:tR2/  'bottom'
/suti:tR2 loŋR1 tamR3/  'right bottom'
/suti:tR2 loŋR1 velR1/  'left bottom'
/sumR1/  'dark red'
/sumR3/  'wet'
/somR1/  'harpoon'
/sowR1/  'I (polite word)'
/sotR1/  'to box'
/soŋR1/  'trousers'
/soŋjR1/  'to help'
/sŏkR1/  'hair'
/sŏkR1 palu:kR1/  'grey hair'
/sŏkR1 cadaŋR1/  'straight hair'
/sŏkR1 kottR1/  'curly hair'
/sŏkR1 ?nŋR3/  'short hair'
/sŏkR1 lʊmR2/  'sideburn'
/sŏkR1 jo:tR1 /  'long hair'
/suaŋR1/  'to forget'

/h/  

/hilR1/  'to be hot and spicy (of food)'
/heŋR1/  'strong'
/heŋR2/  'to pour off'
/hehR3/  'root of the tree'
/he:R3/  'placenta'
/he:mR2/  'salty'
/hit:tR1/  'cigarette'
/hit:tR1 mala:tR2/  'a kind of food that eat with areca-nut and betel vine leaves of the old people'
/hit:tR1 jaːŋR1/  'opium'
/haːR1 kəŋR2/  'to open one’s mouth'
/hapu:R1/  'rash'
/habohR1/  'the bird ’s mouth tip’
/hadəmR1/  'knife handle'
/hako:R1/  'to be blurred'
/hako:R2/  'unhusked rice'
/hako:R2 tabaŋR1/  'fermented rice'
/hapɔkR1/  'to drop'
/halemR1/  'to trim'
/hala:kR1/  'to peel'
/hala:jR2/  ‘medicine’
/hala:jR2 k¹alR1/  ‘pill’
/hala:jR2 dakR2/  ‘potion’
/hala:jR2 ma?uR2/  ‘strychnine’
/halo:R2/  ‘paddy’
/halo:R2 pëp³anR1/  ‘the paddy that has yellow and round seed’
/halo:R2 pɔːmR3/  ‘the paddy that has black stripe and round seed’
/halo:R2 p³adu?R1/  ‘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 kʰo:nR1/  ‘the paddy that has white seed and longer than /halo:R2 he:nR1/’
/halo:R2 vɔlR3/  ‘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:pʰo:nR1/  ‘the paddy that has yellow and long seed’
/halo:R2 liahR1 ko:nR1/  ‘the paddy that has yellow, round and short seed’
/hatR1/  ‘a kind of tree’
/hawR1/  ‘trap’
/hanR1/  ‘to ask’
/halR1/  ‘two’
/hajR1/  ‘to put some drops on’
/bulR1/  ‘to fly’
/hutR1/  ‘to sip’
/howR1/  ‘to cheer’
/homR1/  ‘narrow’
/honR1/  ‘to smell’
/horR1/  ‘blaze’
/hojR1/  ‘bad smell’
/hotR1/  ‘to shrink’
/howR1/  ‘dry’
/haːR3/  ‘tortoise’
/haːR3 paːsR3/  ‘a kind of tortoise’
/haːR3 daːkR2/  ‘a kind of tortoise’
/haːtR1/  ‘intestine’
/haːtR1 ?iːR3/  ‘large intestine’
/haːtR1 ʃeːR1/  ‘small intestine’
/haːŋR1/  ‘whistle’
/haːkR1 kaːR1/  ‘chicken nest’
/haːŋR1/  ‘chopping block’

/mitR1/  ‘one’
/mitR3/  ‘gall’
/mikR1/  ‘pencil’
/miːR1/  ‘you (polite word)’
/meŋR1/  ‘single’
/meŋR1 ʃiːR1/  ‘gizzard’
/meŋR1 ʃiː ʃeːR1/  ‘to do’
/meŋR1/  ‘verb to be’
/meŋR1/  ‘to hem’
/meŋR1 tʰaːŋR1 ʔoːŋR1/  ‘dragon fly’
/meŋR1 koŋkoŋR1/  ‘a kind of insect like cicada’
/meŋR1 kasaːpR1/  ‘cockroach’
/meŋR1 kʰaːmdeːtR1/  ‘grub’
/meŋR1 məŋuːR2/  ‘a kind of insect’
/meŋR1 maːsR3/  ‘fly’
/meŋR1 ʃoːtR2/  ‘scorpion’
/meŋR1 liːmR1/  ‘beetle’
/minR1/  ‘numb’
/miːR1/  ‘day’
/miːjoːR1/  ‘when’
/moːR2/  ‘mother’
/moːR2 tʰaːR1/  ‘mother-in-law’
/moːR2 daːkR2/  ‘river’
/moːR2 kʰaːŋkoːmR1/  ‘mother who has just get the baby’
/moːR2 kʰaːmR1/  ‘widow from her husband is dead’
/moːR2 kaːR1/  ‘cicada’
/moːR2 ?aːŋŋR3/  ‘widow from divorcement’
/moːR2 maŋR1/  ‘step-mother’
/moːR2 ʰəːŋR1/  ‘step-mother’
/ma:mmR3/ ‘spleen’
/matR1/ ‘eyes, face’
/matR1 talo:lR1/ ‘corneal ulcer’
/matR1 tu:nR3/ ‘blind’
/matR1 tɔrR1/ ‘conjunctivities’
/matR1 tonR1/ ‘a kind of disease about eyes’
/matR1 cale:ŋR1/ ‘cross-eyed’
/matR1 kusR3/ ‘fire-work’
/matR1 ᵇala:ŋR1/ ‘sun’
/matR1 ᵇɔmR1/ ‘to have an angry face’
/matR1 numR1/ ‘pupil’
/matR1 lo:kR2/ ‘white eyes’
/makR1 phetR1/ ‘chilli’
/makR1 phetR1 ?ihr3/ ‘spur pepper’
/makR1 phetR1 ?etatR1/ ‘bird chilli’
/makR1 tiŋR1/ ‘button’
/makR1 te:kR3/ ‘to burst’
/makR1 kadiŋR1/ ‘bell’
/makR1 kalənR1/ ‘tomato’
/makR1 suanŋR1/ ‘forgettable’
/mapinR1/ ‘to spin’
/matŋR1/ ‘five days after tomorrow’
/matŋR1/ ‘six days after tomorrow’
/maʔudR2/ ‘to be bored’
/mahiŋR1/ ‘rainbow’
/mahinR1/ ‘beautiful’
/mahiŋR1/ ‘four days after tomorrow’
/mahiŋR1/ ‘two days after tomorrow’
/maher:R1/ ‘thunderbolt’
/maher:R1 pihR3/ ‘three days after tomorrow’
/mahu:R1/ ‘to be angry’
/mahor:R1/ ‘sweat’
/mahor:R1/ ‘steam’
/mahor:R1/ ‘to be hungry’
/mane:R3/ ‘calf’
/mapapR1 matR1/ ‘to have one’s eyes half closed with drowsiness’
/malŋR3 matR1/ ‘to open an eye’
/malaŋR1/ ‘dead person’
/mal˘R3/ ‘leg’
/malalR1/ ‘to cross’
/malata:R2/ ‘to be tasteless’
/malə:jR3/ 'rain'
/malə:jR3 tʰala:jR3/ 'raining'
/malə:jR3/ 'sky'
/mamR1 malu:R2/ 'the leg above knee'
/manR1 capʰa:wR1/ 'yam bean'
/manR1 damR1/ 'yam bean'
/manR1/ 'to be diligent'
/ma:R1/ 'don’t'
/maːŋR2/ 'elder sister-in-law'
/majR1 pʰʌ:jR3/ 'paddle'
/majR1 ?e:xR1/ 'wood for beat paddy'
/mupR1/ 'to cover up'
/musR3/ 'nose'
/mutR1/ 'one'
/monR1/ 'round'
/mohokR1/ 'hell'
/moːR1/ 'female of animal'
/mokR1/ 'grey'
/mokR1/ 'lap'
/mɔːR1 pʰʌ:jR3/ 'hunter'
/muənR1/ 'amused'

/n/

/nəhR3/ 'to see'
/namR3/ 'to sleep'
/namR1 pʰaŋa?R1/ 'to lie flat on the back'
/namR1 cake:ŋR1/ 'to lie on one’s side'
/namR1 kʰalumR1/ 'to lie flat on the face'
/namR1 ?ːpR1/ 'to lie down at full length'
/najR3/ 'heavy'
/natR3/ 'field'
/natR2/ 'neck'
/natŋR1/ 'to lean'
/natpʰaːkR3/ 'forehead'
/natjR1/ 'aunt'
/numR1/ 'to take'
/noono:R1/ 'who'
/noːkR3/ 'outside'
/nojR2/ 'to stay'
/noŋjo:R1/ 'how much'
/nu:aR1/  
/nu:aR1 makpʰa:waR1/  
/nuajR1/  

'well'  
'oar'  
'clf. of fruit'

/ju:/  
/ju:R1/  
/ju:mR1/  
/ju:mR1 pʰa:dnəR1/  
/ju:mR1 jo:lR2/  
/ju:mR2/  
/jumeR1/  
/jumhianR1/  
/jumR2/  
/jumR1/  
/juR1/  
/juakR1/  
/juaqR1/  
/jumR1 pʰa:dnəR1/  
/jumR1 malo:tR3/  
/jumR1 ə:IR2/  
/jumR1/  
/jumR2/  
/jumR1/  
/jumR1/  
/jumR3/  
/jumR2/  
/jumR1/  

'porcupine'  
'mind'  
'to be hasty'  
'to be good-natured'  
'sugar cane'  
'to smile'  
'lizard'  
'to struggle to take'  
'to move slightly'  
'clf. of being'  
'thread'  
'summer'  
'rainy season'  
'winter'  
'black'  
'to drink'  
'gibbon'  
'to pound rice(paddy) in a mortar (in order to remove husks and to polish it for cooking use)'  
'to throw'  
'grasshopper'  
'tree top'  
'clf. of flat thing'

/ŋ/  
/ŋenR1/  
/ŋe:R1/  
/ŋiR1/  
/ŋiR3/  
/ŋəmR3/  
/ŋəwR3/  
/ŋawR1 peŋR3/  
/ŋəR1 ʔoŋR1/  
/ŋəjR1/  

'to be light (in weight)'  
'sharp'  
'to be dazed'  
'branch of the tree'  
'clean'  
'sword'  
'tip of the shoulder'  
'tusk'  
'morning'
/ŋupR1 ?ɔ:kr2/
/ŋu:JR1/
/ŋɔtR2/
/ŋo:R2/
/ŋɔ:nR1 makpʰa:wR1/
/ŋuaŋR1/

/to nod onr’s head/
/table’
/sweet’
/cold’
/tree top of coconut tree’
/trunk’

/ʌ/

/λi:kR1/
/λi:lR3/
/λe:hr3/
/λemR1/
/λenkajɔ:R1/
/λe:R1/
/λemnR2/
/λenR1/
/λenR1/
/λe:ŋR1/
/λe:wR1/
/λipR1/
/λimR1/
/λiːnR2/
/λɔ:R2/
/λʌ:R1/
/λatR1/
/λamR1/
/λamR1 tʰʌ:ŋR3/
/λamR1 pɔːŋR1/
/λamR1 tawenR1/
/λamR1 ci:kR1/
/λamR1 kɔkR1/
/λamR1 ʔakaːpR2/
/λasR3/
/λamo:R1/
/λa:R1/
/λaːR1/
/λaːŋR1 dɔːkR1 tawR1/
/λaːŋR1 dɔːkR1 kaːpR1/
/λaːŋR1 dɔːkR1 ʔeːwR1/
/λukR3/

/to pick out’
/to carve’
/verb to be’
/clf. of tooth’
/yesterday’
/blue’
/clf. of knife’
/cliff’
/evening’
/already’
/to rub’
/clf. of thing’
/to be habituated’
/to speak or act while asleep’
/empty’
/to block’
/stem of the tree’
/tree’
/a kind of tree’
/a kind of tree’
/a kind of tree’
/stump of the tree’
/bamboo tree’
/tongue’
/mulberry leaf’
/use with /tɔhR1/ means very’
/to hammer’
/striped of loincloth for woman’
/striped of loincloth for woman’
/striped of loincloth for woman’
/snake’
/ləkR3.taheːR1/ 'a kind of snake'
/ləkR3.talənR1/ 'boa'
/ləkR3.kusR3/ 'a kind of snake'
/ləkR3.kʷənR3/ 'earth worm'
/luhR3/ 'to exit'
/lukɔːR2/ 'milled rice'
/luːjR1/ 'to wear out'
/lomR1/ 'to talk'
/loːmR1/ 'liver'
/loːmR2/ 'to steal'
/loːnR1/ 'use with the tip of the
knife means sharp'
/loːtR1/ 'penis'
/loːpR1 voːIR3/ 'to return'
/loːkR1/ 'to extract the tooth'
/loːR1/ 'to beg'
/loːtR2/ 'loose'
/loːkR2/ 'white'
/loːnR2/ 'to enter'
/loːjR2/ 'to swim'
/liamR1/ 'gold'
/luakR1/ 'to scald'

/j/ 'small'
/jeːlR1/ 'to slacken'
/jaːlR3/ 'tip-toe'
/jaŋeːR1/ 'a kind of tree'
/jaːninR1/ 'want'
/jaːkR1 tinR1/ 'difficult'
/jaːkR2/ 'gluttonous'
/jaːŋR1/ 'plant in the crude form'
/jaːŋR1 boŋR1/ 'to shift'
/jaːjR1/ 'broom'
/jupusR3/ 'interrogative marker'
/joːR1/ 'long, high'
/joːR1/ 'to catch'
/joːpR1/ 'to put in'
/joːmR1/
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)