Phonological characteristics of So (Thavung), a Vietic language of Thailand

SUWILAI Prembsrirat
Mahidol University

O. Background Information

In upper Northeast Thailand there are several Mon-Khmer speaking groups known by the name So-Bru. Their language belongs to the Katuic branch of the Mon-Khmer language family. They live in several villages in various provinces of Thailand. In Songdao district of Sakonnakorn Province a group of people call themselves “So” and live at Ban Nongwaeng and in two smaller adjacent villages, Ban Nongjaroen and Ban Nongmuang. The people here are aware that their language is not intelligible with the other “So” groups. However, up to now they have been mistaken as “So” (Katuic), which are numerous in the nearby area. John and Carolyn Miller came across this village during their survey of So-Bru speaking villages in 1993. According to Miller and Miller (1995) only 24% to 27% of the vocabulary in this language is related to other So-Bru vocabulary, whereas between 66% to 94% of the vocabulary of other So-Bru languages is related. Judging from some characteristics of the language and the information given about the speakers’ origin, the Millers believed that this language should represent the Thavung language and that it belongs within the Vietic branch of the Mon-Khmer language family. This idea was supported by Michel Ferlus (personal correspondence) who used to work on the Thavung language in Laos.

The chart given below is adapted from Ferlus (1979). It shows the relationship between Thavung and other languages in the Mon-Khmer branch of the Austroasiatic language family. Thavung belongs to the Vietic subbranch of Mon-Khmer.

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1 I would like to thank Carolyn Miller for introducing me to this language and for helpful discussions during the early stages of this paper, Julie Green for help in using a computer for handling linguistic data, Robert Bauer and Christopher Court for helpful comments and English editing, and David Thomas for inspiration throughout my field-linguistics career.
Chart 1. The relationship between Thavung and other languages

I had a chance to get acquainted with this language during my field survey for the Language Map of Thailand research project in October 1994. I then studied this language and used it for teaching a Field Methods course in linguistics to the M.A. students in linguistics at Mahidol University from November 1994 to February 1995. During that time the language was studied and about half of the data were collected. The data were then rechecked and more data were collected in the “So” villages during a field trip in March 1995. The voice quality and pitch were rechecked on many occasions from June to July. This paper attempts to present a preliminary study of the phonological structure of this language. The data used for analysis include 2,105 words collected through direct elicitation, my observations of daily life communication, and from various text materials.

1. History, name, and sociolinguistic information

In Thailand there are about 1,000 “So” speakers in Ban Nongwaeng and the adjacent villages. The people call their language So Nongwaeng which is the only name they know and they use it to distinguish themselves from other groups. However in this paper the language and speakers of this language will be called So (Thavung) or So (T), to show the connection between this language in Thailand and Thavung in Laos. According to the elderly people in these villages, their original home was Khamkert-Khammuan in Laos. Their ancestors migrated from various villages in that area such as Napet, Nasau, Nakay, Ponglang, Khanglek, etc. and settled in Thailand about 100 years ago. They also mentioned that on the way to the present villages, the So (T) also settled in various villages in Kalasin such as Ban Nongmajtaj, Ban Dongbang etc. However I have found from my recent field trip there that the So (T) speakers in those villages have already lost their language proficiency. They are more fluent in Lao and speak Lao in their homes. It is therefore interesting to see that the So (T) which has been away from its original home for more than 100 years has been able to survive with quite a number of people still speaking the language in Ban Nongwaeng and the adjacent villages. How it has been maintained, in what condition, and in what direction it will develop, are questions of interest in this paper.

In these villages no one seems to know about the name Thavung. However, during my fieldtrip in Ban Nongwaeng I came across this name from an elderly lady who, while telling me about how the So (T) were once looked down
and kept apart from the Tai speaking groups in the area, mentioned that they were called "the So, the Kha, the Thavung" /pen sòː pen khàː/2 pen thavìːŋ/. She does not know what the word /thavìːŋ/ means and no one knows. This information and the phonological characteristics which will be described in this paper help to confirm that this language is the same language as the Thavung in Laos, although there certainly are differences.

The area where the So (T) are living was once a restricted area. It was marked as a terrorist area during the communist invasions in 1965-1980. Therefore there was very little contact between the villagers and outsiders. Moreover, the So (T) were also considered to be a stigmatized group by the surrounding Tai-speaking peoples such as the Lao, Phuthai, and the Nyoh. The young people were not allowed to marry the So (T) speakers because they are poor and primitive. They are also linguistically and culturally different from other groups. This shows that there was not much contact between the So (T) and their neighbours either. These are some of the main reasons why the So (T) have been able to maintain their language though they are unavoidably influenced by the Tai languages, especially by the Nyoh who also moved from the same area in Laos and have settled in the same area as the So (T) here. About a quarter of the population of Ban Nongwaeng are Nyoh speakers. Apart from that in the present time the school system, mass media of radio and television, the needs for more economic contact with the outside world, and exogamy have also heavily influenced the language and culture of this ethnic group. In general, most of the people are bilingual or multilingual. They can speak both So (T) and Lao and/or Nyoh. The younger generation So (T) can also speak central Thai very well.

2. The language situation in So (T) villages

The So (T) are now in the crucial situation of language shift which may eventually lead to language loss. The six-year compulsory education system with three more years of the opportunity in an extension program prevent the children from speaking So (T) among themselves in school because only central Thai is allowed. This forced shift in the use of So (T) normally continues with the job opportunities outside the village which keep them away from home and from using the So (T) language. Many of them end up with exogamy which is the main cause for the shift of So (T) in the home. If a So (T) woman marries an outsider she normally uses the husband’s language. If the husband is a So (T) speaker, So (T) normally is still spoken in the home and to the children. Of all of the social factors mentioned above, the people's feeling of inferiority, of being a small primitive ethnic minority, and having low social status reenforce the shift from So (T) to the Thai-Lao language which is more prestigious.

As for the use of So (T) language itself, because of the heavy social pressures mentioned above it is not unnatural for the So (T) to undergo drastic changes. However, since language change does not happen to all people in the same way and at the same time, there exists a lot of variations in So (T) at the present time. In general the speech of the younger generation of So (T) speakers

2 khàː is a generic name for some Mon-Khmer speaking groups. It has a negative meaning to some groups.
has undergone change faster than that of the elderly people. The So (T) language spoken in these villages can actually be divided into two types: the “traditional So” or “big So” and the “small So” or the mixed So-Nyoh language. The “big So” is spoken mainly by the elderly people and some of the middle-aged and young people. The couples who are both So (T) or whose husband is a So (T) normally speak the language in the family with the children. The non-So wife has to learn to speak and understand So (T). Therefore the young people whose parents speak So (T) at home can speak “big So” and understand it very well. On the other hand, the “small So” is generally spoken by the young So (T) generation and also by some middle-aged and elderly people when they speak with the young children who do not understand “big So”. It is noticeable that the competence of the “big So” varies in different degrees among the So (T) speakers. The use of the “big So” and “small So” is a continuum which depends on the person and situation. The “big So” and “small So” are in fact the terms used by the young So (T) speakers to distinguish the variety of language they use among themselves and that of the elderly people. I have found that among the corpus of 2,105 words I have collected my young informants can understand more than 95% whereas the words they would use themselves are about 50%. This study of So (T) phonology focuses on the “big So”. Since So (T) is a language in transition, a number of variations used by different speakers will also be provided for better understanding of this language.

3. Lexical differences

One of the most outstanding differences between the language of the old and the young is in the use of the lexicon. The investigation of the lexical variation between So (T) words and Thai-Lao words in the speech of young So (T) speakers illustrates that the on-going change does not happen in the same way for all people. Each of the five young So (T) speakers has different knowledge and different use of each word in the basic wordlist. Examples of some of the lexical variations are shown in Chart 2.

The use of basic vocabulary among young So (T) speakers shows variation influenced by the Thai-Lao language. All of the young So (T) speakers do not know or use all of the traditional So (T) words. Speakers no.1 and no. 2 use more So (T) words, whereas speakers no. 4 and no. 5 use more Thai-Lao words. There are some So (T) words that the young do not know and do not use any more, such as takšj ‘animal with horns such as ox and buffalo’, kavšn ‘peacock’, and kavšm ‘village’. The word takšj is now used to refer only to ‘horn’. However, there are words that all people use, such as phanšu ‘breast, milk’, zšg ‘father’, and bšš: ‘mother’, but in many situations outside the family they tend to use the Nyoh words phôś ‘father’ and bëš ‘mother’ instead. Apart from these lexical variations there are also variations in pronunciation. Some of the consonant sounds are pronounced differently, e.g. as mšś ‘mother’ becomes bšš, and ?afų: ‘to sneeze’ becomes ?asųt. Moreover, most young people have lost the creaky voice found in the speech of many elderly people.
<table>
<thead>
<tr>
<th>Body Parts</th>
<th>Traditional</th>
<th>The Vocabulary used by 3 young So (T) speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>forehead</td>
<td>kålím</td>
<td>ná: phák</td>
</tr>
<tr>
<td>cheek</td>
<td>póm</td>
<td>kóm</td>
</tr>
<tr>
<td>shoulder</td>
<td>?apiŋŋ</td>
<td>hualaj</td>
</tr>
<tr>
<td>navel</td>
<td>pasún</td>
<td>subí</td>
</tr>
<tr>
<td>skin</td>
<td>khalót</td>
<td>nán</td>
</tr>
<tr>
<td>breast, milk</td>
<td>phanúñ</td>
<td>phanúñ</td>
</tr>
<tr>
<td>buffalo</td>
<td>takô-j</td>
<td>khúaj</td>
</tr>
<tr>
<td>mosquito</td>
<td>thavînj</td>
<td>thavînj</td>
</tr>
<tr>
<td>animals</td>
<td>niihian</td>
<td>cikiam</td>
</tr>
<tr>
<td>house lizard</td>
<td>kinkajú:</td>
<td>kinkajú</td>
</tr>
<tr>
<td>red ant</td>
<td>kinkajú:</td>
<td>kinkajú</td>
</tr>
<tr>
<td>peacock</td>
<td>kavön̄</td>
<td>nokjun̄</td>
</tr>
<tr>
<td>actions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>to fan</td>
<td>?aví:</td>
<td>ví:</td>
</tr>
<tr>
<td>to sew</td>
<td>?ajúč:</td>
<td>jep pha:</td>
</tr>
<tr>
<td>to choke water</td>
<td>kêm (dák)</td>
<td>thalák d.</td>
</tr>
<tr>
<td>to sneeze</td>
<td>?ajú:</td>
<td>thalák d.</td>
</tr>
<tr>
<td>to grip, to take up with pincers</td>
<td>?asú:</td>
<td>cam</td>
</tr>
<tr>
<td>village</td>
<td>kavön̄</td>
<td>mubán</td>
</tr>
<tr>
<td>carriage</td>
<td>kathé?</td>
<td>kathé?</td>
</tr>
<tr>
<td>things</td>
<td></td>
<td></td>
</tr>
<tr>
<td>winnowing basket</td>
<td>?abú:</td>
<td>kadōŋ</td>
</tr>
<tr>
<td>fan</td>
<td>taphí:</td>
<td>phát</td>
</tr>
<tr>
<td>a swing</td>
<td>salú:</td>
<td>salsá:</td>
</tr>
<tr>
<td>daughter-in-law</td>
<td>(kóm) kamén</td>
<td>kamén</td>
</tr>
<tr>
<td>grandchild</td>
<td>có:</td>
<td>lán</td>
</tr>
<tr>
<td>father's</td>
<td>kúa</td>
<td>kúa</td>
</tr>
<tr>
<td>younger sister</td>
<td>náij</td>
<td>náij</td>
</tr>
<tr>
<td>parents' elder sister</td>
<td>náij</td>
<td>náij</td>
</tr>
<tr>
<td>grandmother</td>
<td>?s: mën̄:</td>
<td>mën̄: tû:</td>
</tr>
<tr>
<td>father</td>
<td>?s: nj</td>
<td>?s: nj</td>
</tr>
<tr>
<td>mother</td>
<td>bô:</td>
<td>bô:</td>
</tr>
</tbody>
</table>
4. So (T) phonological structure

Since So (T) is a language in transition, as described above, it is more appropriate not to describe the phonological system based on the speech of one particular person. The data have been collected from and rechecked with So (T) speakers from various age groups: the elderly, middle-aged and young. The system is not very symmetrical, but it is what this language is at the moment. The basic structure is presented along with the variations. The phonological system is described in terms of word and syllable structures, segmental phonemes of consonants and vowels, and suprasegmental phonemes of registers and tones.

4.1 Word and syllable structures

4.1.1 Basic structure

The phonological word in So (T) may consist of one, two, or three syllables. Disyllabic words are most frequent and trisyllabic words are rare. Like other Mon-Khmer languages, the stress is always on the main syllable which is the last syllable of the word. The presyllable always gets the reduced stress and transitional vowel. The formulaic structures of the phonological word are as follow:

\[
\begin{align*}
S & \\
\text{monosyllabic word '}(CV(C) : & \text{ vi:n }\quad \text{ 'come'} \\
& \text{ ?5:}k \quad \text{ 'head'} \\
& \text{ 'c5: }\quad \text{ 'dog'}
\end{align*}
\]

\[
\begin{align*}
S & \\
\text{disyllabic word CV(C)'}(CV(C) : & \text{ a'j'am }\quad \text{ 'to wait'} \\
& \text{ ka'c6:t }\quad \text{ 'to kill'} \\
& \text{ pa'n6: }\quad \text{ 'areca nut'} \\
& \text{ ba'l6:t }\quad \text{ 'flat taste'} \\
& \text{ t6:m'?5:}k \quad \text{ 'breast'} \\
& \text{ ki'j'k5: }\quad \text{ 'back'}
\end{align*}
\]

\[
\begin{align*}
S & \\
\text{trisyllabic word CV(C)'CV(C) : & \text{ a'f6'u'f6:}j \quad \text{ 'ear'} \\
& \text{ ki'j'ka'j'ju'} \quad \text{ 'red ant'}
\end{align*}
\]

A syllable in So (T) consists of an obligatory initial consonant phoneme which is normally a single consonant C, an obligatory vowel phoneme V, an optional final consonant phoneme (C) and a suprasegmental phoneme S. The main syllable can be either open or closed, whereas most of the presyllables are open syllables. There are only a few words whose presyllables are closed such as the words t6:m'?5: 'breast' and ki'j'k5: 'back'. Some of the presyllables are found to be prefixes, e.g. ka- in kac6:t 'to kill' is a causative prefix. It is prefixed to the word c6:t 'to die' to make it a causative verb. However, there are many presyllables that are semantically unanalyzable.
4.1.2 Variations in Word and Syllable Structures

The stressed main syllable has the full vowel quality, whereas the unstressed presyllable has the reduced vowel. There are variations in the So (T) word structure due to the collapse of the presyllable. The presyllable may be deleted either partially or entirely. The variations can occur among various speakers of the same dialect and even in the same speaker. Examples below show the variations between disyllabic and monosyllabic words due to the deletion of the presyllable.

\[
\begin{align*}
?apên & \quad - \quad pên \quad \text{‘to fly’} \\
kadên & \quad - \quad dên \quad \text{‘to splash’} \\
?apât & \quad - \quad nât \quad \text{‘to snatch by force’} \\
?apât & \quad - \quad pât \quad \text{‘to slice, cut a piece off’} \\
phaîn & \quad - \quad lên \quad \text{‘to forget’} \\
kaloîn & \quad - \quad lôn \quad \text{‘coffin’} \\
?akhôîn & \quad - \quad khôîn \quad \text{‘to smooth, trim’} \\
?adâm & \quad - \quad dâm \quad \text{‘to barbecue, hold over the flame’} \\
?ahâm & \quad - \quad hâm \quad \text{‘to ask’} \\
?alôî & \quad - \quad lôî \quad \text{‘to float, swim’} \\
khamûp & \quad - \quad mûp \quad \text{‘to cover’}
\end{align*}
\]

The variations of some words show various forms of presyllable change and reduction. Examples below show that in most cases the velar stop initials \(k, kh\) are changed to glottal stop \(ʔ\) or are totally deleted.

\[
\begin{align*}
khabôîn & \quad - \quad ?abôîn \quad \text{‘to die’} \\
kapêh & \quad - \quad ?apêh \quad - \quad pêh \quad \text{‘to break (by hand)’} \\
kahîn & \quad - \quad ?ahîn \quad - \quad hîn \quad \text{‘to roar’} \\
kavân & \quad - \quad ?avân \quad - \quad vân \quad \text{‘to embrace, to hug’} \\
khabîn & \quad - \quad ?abîn \quad - \quad ?abîn \quad \text{‘side (one of a pair)’} \\
khaîk & \quad - \quad kâîk \quad - \quad ?kâîk \quad \text{‘to be rolling in something’} \\
?avôîk & \quad - \quad ?avôîk \quad - \quad vôîk \quad \text{‘to reach, to grab’}
\end{align*}
\]

4.1.3 The Structure of Thai-Lao Loan Words in So (T)

While the process of presyllable reduction is going on, the process of affixing and making the word disyllabic is still retained in a productive way in the use of Thai-Lao loan words. There are a number of Thai-Lao loan words in So (T). They are originally monosyllabic words. However when they are used in So (T) they are adapted to the disyllabic word structure which is the most popular So (T) phonological word structure by adding presyllables to them. The most productive presyllable is the prefix \(ʔa\)- which is added to the Thai-Lao monosyllabic verbs to become disyllabic verbs in So (T). Examples are provided below.

\[
\begin{align*}
\text{Gloss} & \quad & \text{Thai-Lao} & \quad & \text{So (N)} \\
\text{‘to wash’} & \quad & \text{lân} & \quad & \Rightarrow \quad \text{ʔalân} \\
\text{‘to select’} & \quad & \text{fiak} & \quad & \Rightarrow \quad \text{ʔaliak} \\
\text{‘to stroke, pat’} & \quad & \text{lû:p} & \quad & \Rightarrow \quad \text{ʔalû:p} \\
\text{‘to grope, to probe, to fumble’} & \quad & \text{kh(l)am} & \quad & \Rightarrow \quad \text{ʔakhâm} \\
\text{‘to hold, carry by hanging down from the hand’} & \quad & \text{hiw} & \quad & \Rightarrow \quad \text{ʔahîw}
\end{align*}
\]
Phonological characteristics of So (Thavung)

‘to drag along the ground’ láːk --> ?alâːk
‘to entrust for delivery’ fàːk --> ?aphâːk
‘to take a picture’ thâːj (lûːp) --> ?athâːj (lûːp)
‘to move slightly, to adjust’ náp --> ?añáp

In some cases the presyllable ka- is added to a noun such as lōmŋ ‘coffin’ in Thai-Lao become kalōmŋ ‘coffin’ in So (T). In other cases -?al- is infixed as in the following words:

‘male animal’ (to) phûː --> (to) phalûː
‘to be ready’ ph (l) ˢlm --> phalûːm
‘to chat’ khuj --> khalûːj

It is interesting to see that So (T) still keeps the disyllabic and trisyllabic word structures, whereas the Thavung dialect in Laos has become more monosyllabic. Examples of Thavung used for comparison below are taken from Ferlus (1979:82-94).

<table>
<thead>
<tr>
<th>So (T)</th>
<th>Thavung (Laos)</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘back’</td>
<td>kʰǐŋkɔːn</td>
</tr>
<tr>
<td>‘shrimp’</td>
<td>kɔŋkɔŋ¹</td>
</tr>
<tr>
<td>‘to wash’</td>
<td>?alâŋ¹</td>
</tr>
<tr>
<td>‘flat taste’</td>
<td>balâːt</td>
</tr>
<tr>
<td>‘to shift’</td>
<td>?ajaj⁠¹</td>
</tr>
<tr>
<td>‘ear’</td>
<td>?aʃuʃâj</td>
</tr>
</tbody>
</table>

4.2 Segmental phonemes

The consonants and vowels of So (T) are described along with the variation in the use of some phonemes.

4.2.1 Consonants

There are altogether 20 consonants in So (T). All of them can occur as initial consonants but only 12 consonants can occur as the final consonants. No consonant clusters have been found in the system although some people pronounce them on some occasions when they are not aware of it. The chart below shows the initial consonants and final consonants and is followed by the description of each consonant phoneme.

<table>
<thead>
<tr>
<th>Stops</th>
<th>Bilabial</th>
<th>Alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>vl unaspirated</td>
<td>p</td>
<td>t</td>
<td>c[tɕ]</td>
<td>k</td>
<td>?</td>
</tr>
<tr>
<td>vl aspirated</td>
<td>ph</td>
<td>th</td>
<td>kh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>vd unaspirated</td>
<td>b</td>
<td>d</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>voiced fricative</td>
<td>f</td>
<td>s</td>
<td>[s, ʃ]</td>
<td>h</td>
<td></td>
</tr>
<tr>
<td>nasals</td>
<td>m</td>
<td>n</td>
<td>p</td>
<td>n</td>
<td>j</td>
</tr>
<tr>
<td>lateral</td>
<td>ʰl</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>semivowels</td>
<td>(w)</td>
<td></td>
<td></td>
<td></td>
<td>j</td>
</tr>
</tbody>
</table>

Chart 3 Initial consonant phonemes in So (T)
Chart 4 Final consonant phonemes in So (T)

Description of the consonantal phonemes

/p/ [p] is a voiceless unaspirated bilabial stop. It can occur initially as in pâm ‘he, she, they’, and finally as in ?akâp ‘a kind of thorny bamboo tree’

/t/ [t] is an unaspirated alveolar stop. It can occur initially as in tiê ‘tail’ and finally as in cuét ‘to burn, to start a fire’

/c/ [c, ʨ] is either an unaspirated palatal or an alveo-palatal stop. It can occur only initially as in cân ‘to be burnt’

/k/ [k] is an unaspirated velar stop. It can occur initially as in kêm ‘ant’ and finally as in ɕik ‘rat’

/l/ [ʔ] is a glottal stop. It can occur initially as in ŝâm ‘to dip up (water)’ and finally in katš? ‘a small basket’

/b/ [b] is a voiced bilabial stop. It can only occur initially as in bûaj ‘spoon’

/d/ [d] is a voiced alveolar stop. It can only occur initially as in dâk ‘water’

/v/ [v] is a voiced bilabial fricative. It only occurs initially as in võn ‘to come’.

Some young So (T) speakers may pronounce it as [w].

/s/ [s-, J-, ɕ] is either an alveolar fricative [s] or an alveo-palatal fricative [J] when it occurs initially as in kasâm – kafâm ‘nail’. [J-] is used by the young So (T) speakers whereas [s-] is used by the elderly So (T) speakers. When it occurs finally, it is a palatal fricative [ɕ] as in kûc ‘fire, firewood’

/h/ [h] is a glottal fricative. It can occur initially as in hâm ‘two, ask’ and finally as in kih ‘stone’.

/m/ [m] is a bilabial nasal. It can occur initially as in mahîr ‘jungle’ and finally as in nâm ‘to sleep’

/n/ [n] is an alveolar nasal. It can occur initially as in núj ‘to live’ and finally as in manten ‘arm’

/ŋ/ [ŋ] is a velar nasal. It can occur initially as in njâm ‘sugar cane’ and finally as in than ‘wood’

/l/ [l] is an alveolar lateral. It can only occur initially as in léh ‘to be’

/w/ [w] is a bilabial semivowel. It normally occurs finally as in salêw ‘green’

/y/ [j] is a palatal semivowel. It can occur initially as in jóm ‘high, long’ and finally as in ?alâj ‘medicine’

We can see that So (T) has totally lost the Mon-Khmer trill r in its consonantal system. Some of the typical Mon-Khmer final consonants such as -I, -ʔ, and -c have also been lost, although they still keep both final fricatives h and s [ɕ]. However, these final consonants are still retained to a certain extent in the Thavung dialect of Laos as shown in the examples below.
The final -\(n\) in So (T) corresponds to -\(l\) in Thavung as spoken in Laos

<table>
<thead>
<tr>
<th>Gloss</th>
<th>So (T)</th>
<th>Thavung (in Laos)</th>
</tr>
</thead>
<tbody>
<tr>
<td>'belly'</td>
<td>kha ?án</td>
<td>kha ?al¹</td>
</tr>
<tr>
<td>'ax'</td>
<td>tahūn</td>
<td>tahul¹</td>
</tr>
<tr>
<td>'tiger'</td>
<td>kahan</td>
<td>kahal¹</td>
</tr>
<tr>
<td>'to come'</td>
<td>vûn</td>
<td>vool²</td>
</tr>
<tr>
<td>'to be bald'</td>
<td>kalâm</td>
<td>kalal²</td>
</tr>
<tr>
<td>'arm'</td>
<td>manên</td>
<td>manël²</td>
</tr>
<tr>
<td>'to crash, to small pieces'</td>
<td>mûn</td>
<td>mud¹</td>
</tr>
<tr>
<td>'to vomit'</td>
<td>?akûn</td>
<td>?akool²</td>
</tr>
<tr>
<td>'bulb in plant'</td>
<td>kûn / kûn</td>
<td>kil²</td>
</tr>
<tr>
<td>'burnt'</td>
<td>cân</td>
<td>cal¹</td>
</tr>
<tr>
<td>'testicle'</td>
<td>katân</td>
<td>ktaal³</td>
</tr>
<tr>
<td>'to cut down'</td>
<td>pên</td>
<td>pêl¹</td>
</tr>
</tbody>
</table>

The final -\(n\) in So (T) corresponds to -\(n\) or -\(n\) in Thavung as spoken in Laos

| 'male'                     | kûn     | kûnp³            |
| 'ash'                      | (katûn) bûn | bujn¹ / bujn¹ |

The final -\(n\) in So (T) corresponds to -\(n\) or -\(n\) in Thavung as spoken in Laos

| 'to shoot'                 | pin     | pin¹ / pin¹     |

The final -\(t\) in So (T) corresponds to -\(c\) or -\(t\) in Thavung in Laos

| 'intestine'                | hêt     | hót¹             |
| 'penis'                    | lôt     | loôt¹            |
| 'a strip of bamboo'        | lätt    | latt¹            |
| 'to scratch'               | khalât  | khalat¹          |
| 'the day after tomorrow'   | ?amût   | ?amutt¹          |
| 'to roll up, to coil (a rope, snake)' | khôt | khot¹ |
| 'mushroom'                 | (hêt) bôt | hot¹         |

In Thai-Lao loanwords with labio-dental fricative \(f\)- the elderly people use the bilabial aspirated stop \(ph\)- instead, because \(f\)- does not occur in So (T) in syllable initial position consonantal system. However, most young people do use \(f\)-. Examples are provided below.
young speakers | elderly speakers
---|---
fâk | phâk, ?aphâk | ‘to ask to take something for someone’
fâñ | phâñ | ‘to bury’
fâlañ | phalañ | ‘Westerner’
fâjïfâ | phaj phât | ‘electric light’
khon la fâk fâ | khon la phâk phâ | ‘the name of a popular television series’

Also noteworthy is the variation in the consonants of some words as shown in the following examples:

sanâ: | thanâ: | ‘bow’ (s ~ th)
sutït ~ tuït | tuçït | ‘buttock’ (s ~ t ~ c)
sabëh | khabëh | ‘moustache’ (s ~ kh)
sadûñ | kadûñ | ‘a kind of fish trap’ (s ~ k)
saphâw | japhâw | ‘Chinese potato (s ~ j)
khabiañ | kabiañ | ‘a side of a pair’ (kh ~ ka)
thabjït | khabjït | ‘very itchy’ (th ~ kh)
taber | kabør | ‘torch light’ (t ~ k)
kapeñ | kateñ | ‘swollen with pus’ (p ~ t)

Normally the above pairs of consonant sounds are contrastive in the So (T) consonant system, but in natural speech the consonants whose places of articulation are the same or similar can occur interchangeably.

4.2.2 Vowels

There are 10 single vowels and two diphthongs in So (T). The vowel inventory is provided below.

<table>
<thead>
<tr>
<th></th>
<th>front</th>
<th>central</th>
<th>back</th>
</tr>
</thead>
</table>
close | i | i | u |
half close | e | ə | o |
half open | a | ə | ə |
open | e | a | ə |
| | ia | | ua |

Chart 5 Vowel Phonemes in So (T)

Description of Vowel Phonemes

/i/ /i/ is a close front vowel as in mït ‘you’, bïŋ ‘firm muscle; young’
/e/ /e/ is a half-close front vowel as in keŋ ‘throw away’
/e/ /e/ is an open front vowel as in léh ‘to be’, kamëŋ ‘the bell around an animal’s neck’
/i/ /i/ is a close mid vowel as in maliŋ ‘rain’
/ə/ /ə/ is a half-close mid vowel as in saŋ ‘to dry something over the fire’
/ʌ/ [ʌ] is a half-open mid vowel as in cāt ‘to die’
/u/ [u] is a close back vowel as in mut ‘one’
/o/ [o] is a half-close back vowel as in kabôm ‘wood tray for cooling sticky rice’
/ɔ/ [ɔ] is an open back vowel as in ?acɔj ‘bird’
/ia/ [ia] is a diphthong from close front vowel to open mid vowel as in phia ‘always
close, always near, like a child and her mother’, kabían ‘ceiling’
/ua/ [ua] is a diphthong from close back vowel to open mid vowel as in bûan
‘spoon’

In general, the vowels in So (T) are very similar in quality to those in
standard Thai. The open central vowel ʌ which is common in the Mon-Khmer
vowel system is still kept in the So (T) vowel system. The diphthong ia does not
exist in So (T) system because of the Lao influence. The length contrast in the So
(T) vowel system is unstable. In the list of 2,105 words the vowel length seems to
be rather fixed when words are pronounced in isolation, but in connected speech and
in the speech of elderly people length can vary. Only a few pairs of words show
contrastive length as follow.

?dŋ ‘father’ ?dŋ ‘a kind of wasp’
câw ‘we’ câw ‘cooked rice’
katên ‘postpartum fluid from the uterus’ katên ‘to mend, patch’

A number of words can occur with either short or long vowels both in
isolation and in connected speech.

vōŋ ~ vōŋ ‘pot’
kaññ ‘villager, a group of people’
?akɔŋ ~ ?akɔŋ ‘crab pincer’
?atoŋ ~ ?atoŋ ‘carrying wood’
katɔt ~ katɔt ‘wart’
kapɔŋ ~ kapɔŋ ‘palm’
kapêŋ ~ kapêŋ ‘to mend, patch’
?əŋ ~ ?əŋ ‘not yet’
jomjëŋ ~ jomjëŋ ‘bicycle’
?avɔk ~ ?avɔk / vɔk ‘to grab into’
 khoʔɔi ~ khoʔɔi ‘to pass urine’
kheʔêi ~ kheʔêi ‘to empty the bowels’

etc.

In this paper the vowels are written as they are most commonly pronounced
in citation form.

In some words, there is variation in the use of the vowels. They normally
vary among those that are close in the height or the position of the tongue as in
some examples below:

‘comb’ sanɔt ~ sanɔt (ə ~ a)
‘to wash’ ?alɔŋ ~ ?alàŋ (ə ~ a)
‘swollen’ kēḥ ~ kēḥ (e ~ e)
‘bicycle’ jomjëŋ ~ jomjëŋ (e ~ e)
'to see'   ?anéh   ~   ?anáh (e ~ a)
'he, they'   pîm ~ pâm   ~   pôm (i ~ a ~ o)
'sacred words'   ?apôm   ~   ?ompô (a ~ o)

4.2.3 Suprasegmental phonemes

The most complex part of the phonological system of So (Thavung) is the suprasegmental phonemes. The data collected shows clearly that the language retains Mon-Khmer phonological characteristics as well as developing some of the Thai-Lao phonological features. There are actually two systems occurring together with the Thai-Lao system overlaying the Mon-Khmer system.

In this analysis of the suprasegmental system in So (T), the idea of register complex is used as a framework. The suprasegmental features are considered as clustering features working together. They normally include voice quality (ranging from breathy to clear to creaky), pitch (ranging from high to mid to low), voicing of initial consonant, vowel height, vowel gliding, and tension. The register complex affects the whole syllable not just the vowel. Normally, one or two features of the register complex will become more prominent in one language. In So (T) voice quality, tension, and pitch are prominent. However, Ferlus (1979) analysed the Thavung dialect spoken in Laos as having two vowel series, high and low and 4 tones.

The suprasegmental features in So (T) will be described in terms of voice qualities found in this language followed by minimal pairs with contrasting voice qualities that are quite obvious. Then the word pitches occurring in this language are described followed by the contrastive tone patterns that are developing in this language.

4.2.3.1 Voice qualities in So (T)

There are three types of voice quality in So (T). They are clear, creaky and breathy. The creaky voice is described by the So (T) speakers as being a “heavy”, “cutting” or “twisting” voice. It always occurs with rising-falling pitch and in this paper is represented by the symbol ♦. It normally varies from tense to creaky voice, depending on the speakers. The breathy voice is described by the So (T) speakers as being a “big” voice. It varies from lax to breathy voice and occur with mid falling or low pitch. It is represented in this paper by the symbol ♦. A number of minimal pairs showing the contrasts between clear and tense/creaky voices and between clear and lax/breathy voices are found. The tense/creaky plus rising-falling pitch contrasts with clear plus rising-falling pitch. Whereas lax/breathy plus mid-falling or low pitch contrasts with clear plus rising-falling or rising pitch depending on the final consonant. Examples are provided below.
### a) Clear vs tense/creaky

<table>
<thead>
<tr>
<th>clear (non-creaky)</th>
<th>tense/creaky</th>
</tr>
</thead>
<tbody>
<tr>
<td>thanû: ‘fever’</td>
<td>thanû: ‘to fart’</td>
</tr>
<tr>
<td>mān: ‘to have’</td>
<td>mān: ‘to borrow’</td>
</tr>
<tr>
<td>săm: ‘younger sibling’</td>
<td>săm: ‘eight’</td>
</tr>
<tr>
<td>thalij: ‘tail’</td>
<td>thalij: ‘to fall down’</td>
</tr>
<tr>
<td>sôm: ‘build the fireplace’</td>
<td>sôm: ‘a kind of sharp, pointed weapon’</td>
</tr>
<tr>
<td>kafim: ‘forehead’</td>
<td>kafim: ‘a quarter’</td>
</tr>
<tr>
<td>bîn: ‘firm muscles, young and pretty’</td>
<td>bîn: ‘bat’</td>
</tr>
<tr>
<td>mân: ‘to tear down’</td>
<td>mân: ‘sister-in-law’</td>
</tr>
<tr>
<td>kâ: ‘chicken’</td>
<td>kâ: ‘fish’</td>
</tr>
<tr>
<td>kôn: ‘a hole in the wood’</td>
<td>kôn: ‘mortar’</td>
</tr>
</tbody>
</table>

Creaky voice among So (T) speakers occurs to different degrees. Some people speak with very obviously creaky voice but some people speak with only a heavy, tense voice. It is also noticeable that creaky voice is a pervasive feature of the speech of some people. Thus for some elderly people creaky voice always occurs in most words they pronounce. Among other speakers and in most of the younger generation of So (T) speakers, the creaky voice does not occur. The phonological distinction is shown by the tenseness of the voice. In general, the creaky voice occurs with all vowels and with most of the final consonants except the final fricatives ç, h and final glottal stop ʔ is rare.

### b) Clear vs lax/breathy

<table>
<thead>
<tr>
<th>clear (non-breathy)</th>
<th>lax/breathy</th>
</tr>
</thead>
<tbody>
<tr>
<td>téh: ‘to give birth’</td>
<td>téh: ‘leech’</td>
</tr>
<tr>
<td>tûh: ‘bean, pea’</td>
<td>tûh: ‘to peck, bite’</td>
</tr>
<tr>
<td>tân: ‘to be in the way of’</td>
<td>tân: ‘to be in time’</td>
</tr>
<tr>
<td>kîn: ‘wine, alcoholic drink’</td>
<td>kîn: ‘bulb of the plant’</td>
</tr>
<tr>
<td>pôñ: ‘a piece of wood used like a drum for calling people’</td>
<td>pôñ: ‘flower’</td>
</tr>
<tr>
<td>kapåj: ‘a long piece of cloth such as a towel etc.’</td>
<td>capåj: ‘to carry on the shoulder’</td>
</tr>
<tr>
<td>dô: ‘monkey’</td>
<td>dô: ‘many’</td>
</tr>
<tr>
<td>mô: ‘doctor’</td>
<td>mô: ‘to be left’</td>
</tr>
<tr>
<td>nâm: ‘to sleep’</td>
<td>nâm: ‘with’</td>
</tr>
<tr>
<td>sûn: ‘angry’</td>
<td>sûn: ‘wet’</td>
</tr>
<tr>
<td>mîn: ‘slippery, a measure’</td>
<td>mîn: ‘a kind of skin disease’</td>
</tr>
<tr>
<td>nûm: ‘to put the hand over the head’</td>
<td>nûm: ‘to cover’</td>
</tr>
<tr>
<td>vât: ‘to throw away’</td>
<td>vât: ‘Buddhist temple’</td>
</tr>
<tr>
<td>kê:n ‘ant’</td>
<td>kê:n ‘cucumber’</td>
</tr>
</tbody>
</table>

etc.
The lax/breathy voice can be heard clearly only in contrastive pairs. It varies between the lax to breathy voice. It is obvious that in many cases when the breathy voice quality occurs with central or back vowels, the vowels are glided or centralized as in the following examples.

\[
\begin{array}{lll}
\text{ʔat̚ː} & [ʔat̚ː] & \text{‘duck’} \\
\text{capəj} & [\text{kapəj}] & \text{‘to carry by the shoulder’} \\
\text{kəŋ} & [\text{kəŋ}] & \text{‘mouth’} \\
\text{θəŋ} & [\text{θəŋ}] & \text{‘wood’} \\
\text{θəw} & [\text{θəw}] & \text{‘you (polite)’} \\
\text{ʋə} & [\text{ʋə}] & \text{‘crazy’}
\end{array}
\]

The lax/breathy voice co-occurs with all vowels and with almost all final consonants.

It is noticeable that in some speakers there are cases where the breathy and the creaky voice can interchange as in the following items:

\[
\begin{array}{lll}
\text{ʔat̚ː} & \sim & \text{ʔat̚ː} & \text{‘duck’} \\
\text{ʋə} & \sim & \text{ʋə} & \text{‘crazy’} \\
\text{capəj} & \sim & \text{capəj} & \text{‘to carry by the shoulder’} \\
\text{kəŋhən} & \sim & \text{kəŋhən} & \text{‘tiger’} \\
\text{ʔap̚həŋ} & \sim & \text{ʔap̚həŋ} & \text{‘the middle part of a hole’} \\
\text{kʰəm} & \sim & \text{kʰəm} & \text{‘drum beater, hammer’}
\end{array}
\]

4.2.3.2 Pitch in So (T)

Apart from the tense/creaky voice which normally occurs with rising-falling pitch and the lax/breathy voice which normally occurs with mid-falling pitch, three pitches are found occurring with clear voice. They are rising, rising-falling and mid level.

1. Rising Pitch

The rising pitch normally occurs in words with short vowels plus final stop or words with final fricatives.

<table>
<thead>
<tr>
<th>Short vowels with final stops</th>
<th>Final fricatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>kasik ‘to gut a fish’</td>
<td>kúc ‘fire, firewood’</td>
</tr>
<tr>
<td>pasát ‘to extinguish’</td>
<td>vēh ‘sharp, pointed’</td>
</tr>
<tr>
<td>?ad̚áp ‘to touch slowly by hand’</td>
<td>?ap̚h ‘to winnow’</td>
</tr>
<tr>
<td>kathê? ‘carriage’</td>
<td>pasáh ‘mat’</td>
</tr>
<tr>
<td>taběk ‘flesh’</td>
<td>t̚h ‘red’</td>
</tr>
<tr>
<td>khamáč ‘to laugh’</td>
<td></td>
</tr>
</tbody>
</table>

2. High-falling and mid-level pitches

The high-falling and mid-level pitches normally occur with open syllables or syllables with long vowels and final stops and syllables with short vowels and final nasals or semivowels.
mid level pitch | rising-falling pitch
---|---
pasi: ‘to be full’ | mahi: ‘forest’
cia ‘to hold with hand’ | ?a_hi ‘to be lost’
?nj ‘to raise’ (one’s head or face) | ?t ‘tail’
?anin ‘to press with hand’ | ?abìn ‘to sharpen’
salan ‘to be shaken’ | vìn ‘to come’
keñ ‘to throw away’ | ?akòp ‘back of foot’
?ahañ ‘to be abandoned’ | ?an_p ‘pincers’
kanoñ ‘heel’ | ?op ‘elephant’
kadɔt ‘pointed tuft of hair’ | pikt ‘to open up’
mut ‘one’ | sùt ‘to sting’

It is noticeable that a number of words with mid-level pitch are Thai-Lao loan words. This seems to be a new development in this language. From my corpus of 2,105 words, the contrast between the words with mid-level and rising-falling pitch are found as shown below.

mid level pitch | rising-falling pitch
---|---
soj ‘to help’ | sòj ‘to cut into small pieces’
tum ‘lumps on the skin’ | tum ‘frog trap’
sañ ‘carpenter’ | sāñ ‘a kind of child disease’
ña: ‘branch of a tree’ | ña: ‘tusk, sesame’
kuñ ‘a kind of animal trap’ | kūñ ‘deer’
khalan ‘polite address term for second persons’ | khalå ‘old’
keñ ‘core or hard part of the wood’ | keñ ‘ant’

It is also quite obvious that when a word does not occur in the final position of the utterance its pitch is neutral. In the case where it has the rising-falling pitch with creaky voice, sometimes only the creaky voice is heard.

dák -> dák sāñ ‘water from the well’
jōk -> jōk mian makhun ‘green papaya salad’
?alñ -> ?alñ samå ‘paddy rice used for planting’
lük -> luk khâm ‘ground worm’
?ök -> ?ök ?akun ‘knee’
cåw -> çåw kasåtj ‘cook non-sticky rice’
kåñ -> kåñ jöm ‘bite tooth’
palñ -> palñ ?ahôm ‘dark moon’
?acñj -> ?acñj kacip ‘a kind of bird’

5. Conclusion

Chart 6 below shows the clear correlation of the syllable structure, final consonant, voice quality and pitch. The creaky voice occurs with vowels in both live syllables and dead syllables. It always occurs with the rising-falling pitch. The breathy voice occurs in both live syllables including syllables with final fricatives and dead syllables. It always occurs with mid falling pitch. The clear voice occurs
with all types of syllables with all final consonants. All live syllables of clear voice have rising-falling, mid-falling or mid-level pitch, whereas syllables with final fricatives and final stops have rising pitch.

<table>
<thead>
<tr>
<th>voice quality</th>
<th>syllable structure</th>
<th>final consonant</th>
<th>pitch</th>
</tr>
</thead>
<tbody>
<tr>
<td>creaky</td>
<td>CVV, CVN, CVVN,</td>
<td>m n η w j</td>
<td>rising-falling</td>
</tr>
<tr>
<td></td>
<td>CVVS</td>
<td>p t c k ?</td>
<td></td>
</tr>
<tr>
<td>breathy</td>
<td>CVV, CVN, CVVN,</td>
<td>m n η w j</td>
<td>mid-falling</td>
</tr>
<tr>
<td></td>
<td>CVF, CVS, CVVS</td>
<td>c h</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>p t c k ?</td>
<td></td>
</tr>
<tr>
<td>clear</td>
<td>CVV, CVN, CVVN,</td>
<td>m n η w j</td>
<td>rising-falling</td>
</tr>
<tr>
<td></td>
<td>CVVS</td>
<td>mid-level</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CVS</td>
<td>mid-falling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CVF</td>
<td>rising</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>c h</td>
<td></td>
</tr>
</tbody>
</table>

*Chart 6. Correlation of syllable structure, final consonant, voice quality, and pitch in So (T)*

This study of So (T) phonology reveals a language in the state of change. The system is not very symmetrical because the changes are not happening all at once. They may have originated within a subgroup of speakers and then spread to more people in the speech community. Certain sounds of certain words may change before the others and then gradually affect other sounds and other words of other speakers (lexical diffusion). Language changes in So (T) are now in progress and not yet completed. As a result there is now much variation. The original Mon-Khmer characteristics co-exist with the influential Tai characteristics in the phonological system of So (T).

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Institute of Language and Culture for Rural Development
Mahidol University at Salaya
Nakhorn Pathom 73170, Thailand
e-mail: lcspm@mahidol.ac.th