

Phonological characteristics of So (Thavung), a Vietic language of Thailand¹

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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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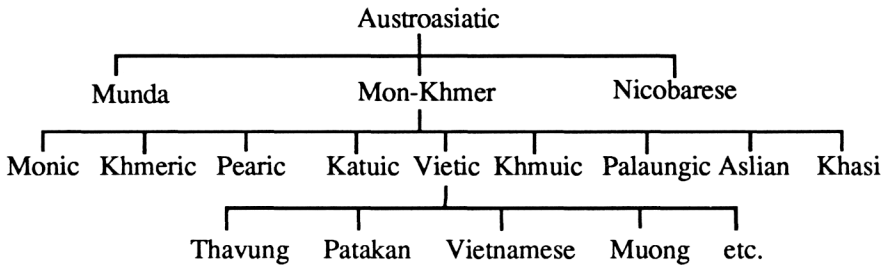


Chart 1. The relationship between Thavung and other languages

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 sô: pen khà:² pen thaviŋ/. She does not know what the word /thaviŋ/ 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 reinforce 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 khà: 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 *takɔ̃j* ‘animal with horns such as ox and buffalo’, *kavɔ̃ŋ* ‘peacock’, and *kavɔ̃n* ‘village’. The word *takɔ̃j* is now used to refer only to ‘horn’. However, there are words that all people use, such as *phanû:* ‘breast, milk’, *ʔɔ̃ŋ* ‘father’, and *bɔ̃:* ‘mother’, but in many situations outside the family they tend to use the Nyoh words *phó?* ‘father’ and *bé?* ‘mother’ instead. Apart from these lexical variations there are also variations in pronunciation. Some of the consonant sounds are pronounced differently, e.g. as *mɔ̃:* ‘mother’ becomes *bɔ̃:*, and *ʔafû:* ‘to sneeze’ becomes *ʔasû:*. Moreover, most young people have lost the creaky voice found in the speech of many elderly people.

transliteration of the vocabulary used by 3 young So (T) speakers

	1	2	3	4	5
forehead	kəli:m	ná:pə̀k	ná:pə̀k	ná:pə̀k	ná:pə̀k
cheek	pə̀m	pə̀m	kə̀m	kə̀m	kə̀m
shoulder	ʔapɿŋ	ʔapɿŋ	hualáɰ	láj	baláj
navel	pasɿm	subɿ:	subɿ:	subɿ:	subɿ:
skin	khalót	náj	náj	náj	náj
breast, milk	phanú:	phanú:	phanú:	phanú:	phanú:
buffalo	takɿj	khúaj	khúaj	khúaj	khúaj
mosquito	thaváŋ	thaváŋ	thaváŋ	juŋ	juŋ
house lizard	pi:ti:an	pi:ti:an	ci:kiam	ci:kiam	ci:kiam
red ant	kiŋkajú:	kiŋkajú:	ki:kajú:	mó:deŋ	mó:deŋ
peacock	kavɿŋ	nókjuŋ	nókjuŋ	nókjuŋ	nókjuŋ
to fan	ʔavá:	ʔavá:	ʔavá:	vá:	vá:
to sew	ʔajúç	ʔajúç	ʔajúç	jé:p	jé:p
to choke water	kə̀m (dák)	samák d.	thalák d.	samák nám	ke:m nám
to sneeze	ʔajú:	ʔasú:	cam	cam	cam
to grip, to take up with pincers	taŋɿp	khúip	khúip	khúip	núip
village	kavəm	kám	mu:bám	mu:bám	mu:bám
carriage	kathé?	kathé?	kathé?	kian	kian
winnowing basket	ʔabú:	ʔabú:	kadəŋ	kadəŋ	kadəŋ
fan	tapíh	phát	phát	majwi:	phát
a swing	sulu:	salu:	salu:	singsá:	singsá:
daughter-in-law	(kəm) kamén	kamén	kamén	sapháj	kamén
grandchild	cô:	cô:	cô:	lám	cô:
father's	kúa	kúa	kúa	ʔa:	ʔa:
younger sister	náj	náj	náj	pá:	pá:
parents' elder sister	ʔəmí:	mé: tú:	já:	me: tú:	me: tháv
grandmother	ʔəŋ	ʔəŋ	ʔəŋ	ʔəŋ	ʔəŋ
father	bé:	bé:	bé:	bé:	bé:
mother					

Chart 2 Lexical variation among young So (T) speakers

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:

	S		
monosyllabic word	(CV(C) :	v̄i:n	'come'
		ʔɔ:k	'head'
		c̄ɔ:	'dog'
	S		
disyllabic word	CV(C)(CV(C) :	ʔa'jâm	'to wait'
		ka'c̄â:t	'to kill'
		pa'nâŋ	'areca nut'
		ba'lâ:t	'flat taste'
		təm'ʔək	'breast'
		kiŋ'kɔŋ	'back'
	S		
trisyllabic word	CV(C)CV'(CV(C) :	ʔafu'fâ:j	'ear'
		kiŋka'jû:	'red ant'

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 *təm'ʔək* 'breast' and *kiŋkɔŋ* 'back'. Some of the presyllables are found to be prefixes, e.g. *ka-* in *ka'c̄â:t* 'to kill' is a causative prefix. It is prefixed to the word *c̄â: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.

ʔapê:n	~	pê:n	‘to fly’
kadê:n	~	dê:n	‘to splash’
ʔapâ:t	~	pâ:t	‘to snatch by force’
ʔapât:	~	pât:	‘to slice, cut a piece off’
phalôŋ	~	lôŋ	‘to forget’
kalôŋ	~	lôŋ	‘coffin’
ʔakhô:t	~	khô:t	‘to smooth, trim’
ʔadâ:ŋ	~	dâ:ŋ	‘to barbecue, hold over the flame’
ʔahâ:n	~	hâ:n	‘to ask’
ʔalô:j	~	lô:j	‘to float, swim’
khamúp	~	múp	‘to cover’

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.

khabô:t	~	ʔabô:t	~	‘to die’	
kapéh	~	ʔapéh	~	péh	‘to break (by hand)’
kahîŋ	~	ʔahîŋ	~	hîŋ	‘to roar’
kavân	~	ʔavân	~	vân	‘to embrace, to hug’
khabiãŋ	~	kabiãŋ	~	ʔabiãŋ	‘side (one of a pair)’
khafiãk	~	kafiãk	~	ʔakiãk	‘to be rolling in something’
ʔavô:k	~	ʔavôk	~	vôk	‘to reach, to grab’

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.

Gloss	Thai-Lao	So (N)
‘to wash’	lã:ŋ	--> ʔalã:ŋ
‘to select’	fiãk	--> ʔafiãk
‘to stroke, pat’	lû:p	--> ʔalû:p
‘to grope, to probe, to fumble’	kh(l)am	--> ʔakhâm
‘to hold, carry by hanging down from the hand’	hîw	--> ʔahîw

'to drag along the ground'	lâ:k	-->	?alâ:k
'to entrust for delivery'	fâ:k	-->	?aphâ:k
'to take a picture'	thâ:j (lû:p)	-->	?athâ:j (lû:p)
'to move slightly, to adjust'	ɲáp	-->	?aɲáp

In some cases the presyllable *ka-* is added to a noun such as *loɲ* 'coffin' in Thai-Lao become *kalɔɲ* 'coffin' in So (T). In other cases *-?al-* is infixes as in the following words:

'male animal'	(to) phû:	-->	(to) phalû:
'to be ready'	ph (l) ô:m	-->	phalô:m
'to chat'	khuj	-->	khalû:j

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).

	So (T)	Thavung (Laos)
'back'	kin̄kɔ̄:n	kɔ̄ŋ ¹
'shrimp'	kɔ̄ŋkɔ̄ŋ	kɔ̄ŋ ¹
'to wash'	?alâ:ŋ	laŋ ²
'flat taste'	balât	plât ¹
'to shift'	?aja:j	ja:j ¹
'ear'	?aɲuɲâ:j	sa:j ¹

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.

		bilabial	alveolar	palatal	velar	glottal
stops	vl unaspirated	p	t	c[ɕ]	k	ʔ
	vl aspirated	ph	th		kh	
fricatives	vd unaspirated	b	d			
	voiced fricative	(f)	s [s, ʃ]			h
nasals	lateral	m	n	ɲ	ŋ	
	semivowels	(w)	l	j		

Chart 3 Initial consonant phonemes in So (T)

	bilabial	alveolar	palatal	velar	glottal
vl unaspirated stops	p	t		k	ʔ
fricatives		s [-ç]			h
nasals	m	n		ŋ	
semivowels	w		j		

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 *ʔakâp* ‘a kind of thorny bamboo tree’
- /t/ [t] is an unaspirated alveolar stop. It can occur initially as in *tij* ‘tail’ and finally as in *cûn* ‘to burn, to start a fire’
- /c/ [c, tç] 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 *tik* ‘rat’
- /ʔ/ [ʔ] is a glottal stop. It can occur initially as in *tim* ‘to dip up (water)’ and finally in *katʔ* ‘a small basket’
- /b/ [b] is a voiced bilabial stop. It can only occur initially as in *bûaŋ* ‘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 *vîn* ‘to come’. Some young So (T) speakers may pronounce it as [w].
- /s/ [s-, ʃ-, -ç] is either an alveolar fricative [s] or an alveo-palatal fricative [ʃ] when it occurs initially as in *kasâm* ~ *kafâm* ‘nail’. [ʃ-] 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 [-ç] as in *kúç* ‘fire, firewood’
- /h/ [h] is a glottal fricative. It can occur initially as in *hâm* ‘two, ask’ and finally as in *kîh* ‘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 *nîj* ‘to live’ and finally as in *manem* ‘arm’
- /ŋ/ [ŋ] is a velar nasal. It can occur initially as in *ŋim* ‘sugar cane’ and finally as in *thàng* ‘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’
- /j/ [j] is a palatal semivowel. It can occur initially as in *jo:n* ‘high, long’ and finally as in *ʔalâj* ‘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 *-l*, *-r*, and *-c* have also been lost, although they still keep both final fricatives *h* and *s* [ç]. 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

Gloss	So (T)	Thavung (in Laos)
'belly'	kha ʔân	kha ʔal ¹
'ax'	tahû:n	tahu:l ¹
'tiger'	kahâm	kaha:l ¹
'to come'	vâm	vo:l ²
'to be bald'	kalâ:n	kalai:l ²
'arm'	manê:n	mane:l ²
'to crash, to small pieces'	mû:n	mu:l ¹
'to vomit'	ʔakô:n	ʔakool ²
'bulb in plant'	kî:n / kî:n	ki:l ²
'burnt'	cân	ca:l ¹
'testicle'	katâ:n	ktai:l ³
'to cut down'	pê:n	pe:l ¹

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

'male'	kû:n	ku:ŋ ³
'ash'	(katû:n) bû:n	bu:ŋ ¹ / bu:n ¹

The final *-ŋ* in So (T) corresponds to *-ŋ* or *-ŋ* in Thavung as spoken in Laos

'to shoot'	pi:ŋ	pi:ŋ ¹ / pi:ŋ ¹
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The final *-t* in So (T) corresponds to *-c* or *-t* in Thavung in Laos

'intestine'	hô:t	ho:c ¹
'penis'	lô:t	lo:c ¹
'a strip of bamboo'	lâ:t	la:c ¹ / la:t ¹
'to scratch'	khalât	khalai:c ¹ / khalat ¹
'the day after tomorrow'	ʔamû:t	ʔamu:c ¹ / ʔamut ¹
'to roll up, to coil (a rope, snake)'	khô:t	khoc ¹
'mushroom'	(hét) bót	bo:c ¹

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	
fà:k	~	phà:k, ?aphà:k	'to ask to take something for someone'
fǎŋ	~	phǎŋ	'to bury'
falaŋ	~	phalaŋ	'Westerner'
fajfǎ:	~	phaj phǎ:	'electric light'
khon la fà:k fǎ:	~	khon la phǎ:k phǎ:	'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)
sufit~ tufit	~	tuçit	'buttock' (s ~ t ~ c)
sabéh	~	khabéh	'moustache' (s ~ kh)
sadûŋ	~	kadûŋ	'a kind of fish trap' (s ~ k)
saphâw	~	japhâw	'Chinese potato' (s ~ j)
khabiŋ	~	kabiŋ	'a side of a pair' (kh ~ ka)
thabçit	~	khabçit	'very itchy' (th ~ kh)
taboŋ	~	kaboŋ	'torch light' (t ~ k)
kapéh	~	katéh	'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.

	front	central	back
close	i	ɨ	u
half close	e	ə	o
half open		ʌ	
open	ɛ	a	ɔ
	ia		ua

Chart 5 Vowel Phonemes in So (T)

Description of Vowel Phonemes

- /i/ [i] is a close front vowel as in *mî:* 'you', *bîŋ* 'firm muscle; young'
- /e/ [e] is a half-close front vowel as in *keŋ* 'throw away'
- /ɛ/ [ɛ] is an open front vowel as in *léh* 'to be', *kamêŋ* 'the bell around an animal's neck'
- /ɨ/ [ɨ] is a close mid vowel as in *maŋi:* 'rain'
- /ə/ [ə] is a half-close mid vowel as in *səŋ* 'to dry something over the fire'

/ʌ/ [ʌ] is a half-open mid vowel as in *cʌt* ‘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’, *kabian* ‘ceiling’

/ua/ [ua] is a diphthong from close back vowel to open mid vowel as in *buan* ‘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.

ʔɔŋ	‘father’	ʔɔŋ	‘a kind of wasp’
câw	‘we’	câ:w	‘cooked rice’
katên	‘postpartum fluid from the uterus’	katê:n	‘to mend, patch’

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

vɔŋ	~	vɔŋ	‘pot’
kafɔŋ	~	katɔŋ	‘villager, a group of people’
?akɔŋ	~	?akɔŋ	‘crab pincer’
?atɔŋ	~	?atɔŋ	‘carrying wood’
katɔt	~	katɔt	‘wart’
kapàŋ	~	kapàŋ	‘palm’
kapê:n	~	kapê:n	‘to mend, patch’
?əŋ	~	?əŋ	‘not yet’
joŋjeŋ	~	joŋjeŋ	‘bicycle’
?avɔ:k	~	?avɔk / vɔk	‘to grab into’
khɔʔɔ:	~	khɔʔɔ?	‘to pass urine’
kheʔê:	~	kheʔê?	‘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	~	sanát (ə ~ a)
‘to wash’	?aləŋ	~	?alâŋ (ə ~ a)
‘swollen’	kéh	~	kéh (e ~ ε)
‘bicycle’	joŋjeŋ	~	joŋjeŋ (e ~ ε)

'to see'	ʔanéh	~	ʔanáh (ɛ ~ a)
'he, they'	pî:m ~ pâl:m	~	pô:m (i ~ ʌ ~ ɔ)
'sacred words'	ʔapɔɲ	~	ʔɔpɔɲ (a ~ ɔ)

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***clear (non-creaky)**

thanû:	'fever'
mân	'to have'
sâ:m	'younger sibling'
thali:j	'tail'
sôm	'build the fire place'

ka:im	'forehead'
?â:j	'vapour'
?akû:	'winner'
?â:w	'father's younger sibling'
bij	'firm muscles, young and pretty'
mâ:ŋ	'to tear down'
kâ:	'chicken'
kô:n	'a hole in the wood'

tense/creaky

thanû:	'to fart'
mân	'to borrow'
sâ:m	'eight'
thali:j	'to fall down'
sôm	'a kind of sharp, pointed weapon'
ka:im	'a quarter'
?â:j	'elder brother'
?akû:	'to keep in the mouth'
?â:w	'blouse, shirt'
bij	'bat'
mâ:ŋ	'sister-in-law'
kâ:	'fish'
kô:n	'mortar'

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 *?* is rare.

b) *Clear vs lax/breathy***clear (non-breathy)**

téh	'to give birth'
túh	'bean, pea'
tân	'to be in the way of'
kîn	'wine, alcoholic drink'
pô:ŋ	'a piece of wood used like a drum for calling people'
kapâ:j	'a long piece of cloth such as a towel etc.'
dô:	'monkey'
mô:	'doctor'
nâm	'to sleep'
sû:n	'angry'
mî:n	'slippery, a measure'
ŋùm	'to put the hand over the head'
vát	'to throw away'
kê:n	'ant'
etc.	

lax/breathy

tèh	'leech'
tùh	'to peck, bite'
tân	'to be in time'
kîn	'bulb of the plant'
pô:ŋ	'flower'
capâ:j	'to carry on the shoulder'
dô:	'many'
mô:	'to be left'
nâm	'with'
sû:n	'wet'
mî:n	'a kind of skin disease'
ŋùm	'to cover'
vát	'Buddhist temple'
ma:kkê:n	'cucumber'
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.

ʔatâ:	[ʔatâə:] ~ [ʔatâ:]	‘duck’
capâ:j	[capâəj] ~ [capâ:]	‘to carry by the shoulder’
kâ:ŋ	[kâəŋ] ~ [kâ:]	‘mouth’
thâ:ŋ	[thâəŋ] ~ [thâ:]	‘wood’
tho:w	[thoəw] ~ [thâ:w]	‘you (polite)’
vâ:	[vâ:] ~ [vâ:]	‘crazy’

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:

ʔatâ:	~	ʔatâ:	‘duck’
vâ:	~	vâ:	‘crazy’
capâ:j	~	capâ:j	‘to carry by the shoulder’
kahâ:n	~	kahâ:n	‘tiger’
ʔap̃i:ŋ	~	ʔap̃i:ŋ	‘the middle part of a hole’
kh̃ɔ:n	~	kh̃ɔ:n	‘drum beater, hammer’

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.

short vowels with final stops

kasík	‘to gut a fish’
pasát	‘to extinguish’
ʔadáp	‘to touch slowly by hand’
kathé?	‘carriage’
tabók	‘flesh’

final fricatives

kúç	‘fire, firewood’
véh	‘sharp, pointed’
ʔapíh	‘to winnow’
pasáh	‘mat’
tóh	‘red’
khamác	‘to laugh’

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

pasi:	'to be full'
cia	'to hold with hand'
ɲij	'to raise' (one's head or face)
ʔanin	'to press with hand'
salan	'to be shaken'
keɲ	'to throw away'
ʔahamɲ	'to be abandoned'
kanɔɲ	'heel'
kadɔ:t	'pointed tuft of hair'
murt	'one'

rising-falling pitch

mahī:	'forest'
ʔahfia	'to be lost'
fij	'tail'
ʔabīn	'to sharpen'
vī:n	'to come'
ʔakô:p	'back of foot'
ʔaŋê:p	'pincers'
ʔô:ɲ	'elephant'
pī:t	'to open up'
sû:t	'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

sɔj	'to help'
tum	'lumps on the skin'
samɲ	'carpenter'
ɲa:	'branch of a tree'
kuaɲ	'a kind of animal trap'
khala:	'polite address term for second persons'
ke:n	'core or hard part of the wood'

rising-falling pitch

sô:j	'to cut into small pieces'
tûm	'frog trap'
sâɲ	'a kind of child disease'
ɲâ:	'tusk, sesame'
kûaɲ	'deer'
khalâ:	'old'
kê:n	'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.

dâ:k	-->	dâ:k sâ:ɲ	'water from the well'
jô:k	-->	jô:k miãɲ ma:khuŋ	'green papaya salad'
ʔalɔ:	-->	ʔalɔ: samâ:	'paddy rice used for planting'
lúk	-->	luk khâ:m	'ground worm'
ʔô:k	-->	ʔô:k ʔakû:n	'knee'
câ:w	-->	câ:w kasâ:j	'cook non-sticky rice'
kasâɲ	-->	kasãɲ jôm	'bite tooth'
palɔɲ	-->	palɔɲ ʔahôm:	'dark moon'
ʔacô:j	-->	ʔacô:j kacíp	'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.

voice quality	syllable structure	final consonant	pitch
creaky	CVV, CVN, CVVN, CVVS	m n ŋ w j p t c k ?	rising-falling
breathy	CVV, CVN, CVVN, CVF, CVS, CVVS	m n ŋ w j ç h p t c k ?	mid-falling
clear	CVV, CVN, CVVN, CVVS	m n ŋ w j	rising-falling mid-level mid-falling
	CVS CVF	p t c k ? ç h	rising

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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