

THE KAM-SUI-MAK AND NORTHERN TAI LANGUAGES

BEATRICE T. OSHIKA

I. INTRODUCTION

The hypothesis that a genetic relationship exists between the Kam-Sui-Mak languages of southern China and the Tai languages was first advanced by Li 1948b:

The Kam-Sui group has a close relationship to the Tai group, but it does not belong to the Tai group in a narrow sense. It has the same origin with the Tai group, but they split before the Ancient Tai group evolved into the modern languages.

In subsequent articles (1948a, 1951, 1965) Li continued to suggest that there was evidence of systematic sound correspondences, particularly with respect to consonant initials and tones, to support the view that the Kam-Sui-Mak languages were related to the Tai languages, yet were sufficiently different to comprise a distinct language group.

Other scholars have suggested a Kam-Sui-Mak and Tai relationship, such as Haudricourt 1959 and Nishida 1954, 1955. However, the supporting evidence for this hypothesis of relationship was incomplete because comparative studies included data only from the languages of Mak, T'en, and Sui, but not from Kam. Now that Chinese materials on Kam and related languages have been made available (Chinese Academy of Sciences 1959a, 1959b; Liang 1965; Pei 1963; Wei 1965), the comparative relationships can be more completely described.

II. DATA

Sets of cognates from fifteen Kam-Sui-Mak and Tai languages and dialects were compiled for this study.

The Kam data are from the Kam-Chinese dictionary (Chinese Academy of Sciences 1959b) with additions from Liang 1965 and Pei 1963. The

dictionary forms are based on the Kam (called T'ung in Chinese) dialect spoken in the Jung-Chiang area of Kweichow province. The Liang forms are from the Che-Chiang Commune in the same area, while Pei apparently includes forms from several dialects.

The Sui data come primarily from Li 1948a, 1949, 1951, 1965 and include forms from dialects of Li-Ngam, Jung-Chiang, and Pyo, in southern Kweichow province. The Nishida 1954, 1955 and Rai 1955 citations for Sui appear to be based on Li's data.

The Mak data are from Li 1948b, 1965. Additional forms from Rai 1955 appear to belong to a similar dialect and exhibit similar tonal structure. The forms for T'en (called Yang-Huang in Chinese) come from Li 1965, 1966a, 1967, 1968. Both Mak and T'en are found in Kweichow province.

Languages representing the Northern branch of Tai are Saek, Po-Ai, Wu-Ming, and Yay. The Saek forms show evidence of early consonant clusters. This language is described by Gedney 1970 and Haudricourt 1963.

The Po-Ai data are from Li 1944, 1957, 1965 and represent dialects spoken in Kwangsi and Kwei-chow. Data for Wu-Ming, also spoken in those provinces, are from Li 1947b, 1956.

The Yay data represent a dialects of extreme northern North Vietnam. Gedney 1965 has shown this language to be identical with the Glay language cited by Haudricourt 1960, and to be related to, but not identical with, the Dloi language of the Esquirol-Williate dictionary published in 1908.

Languages representing Central Tai are Lung-Chow (Li 1965) and Lung-Ming (Gedney field notes). Both languages are spoken in southwestern Kwangsi.

Representing Southwestern Tai are Siamese and White Tai. Siamese forms are common knowledge. The White Tai data are from Gedney field notes and from Gedney 1964.

The results presented in this paper are based on over 375 distinct lexical items with cognate forms in all or most of the languages mentioned.

III. FRAMEWORK

It may be useful to review briefly the situation in the Tai languages with respect to the correlation of tones and initial consonants which is the basis of much of the comparative/historical study of Sino-Tibetan languages. It is generally assumed that the parent Tai language had a system of three distinctive tones (here termed A, B and C) on open syllables, and no tone, or a neutral tone (here called D), on checked

syllables. After the major break from the parent language, each daughter language underwent tonal splits conditioned by phonetic features of the initial consonants. In checked syllables there appears to have been an additional conditioning factor of vowel length.

A primary phonetic feature of initial consonants which appears to have influenced tonal development is that of voicing. That is, if the three tonal categories A, B and C are bisected along a voiced v. voiceless distinction, a maximal six-way tonal system would result, as in Wu-Ming, Lung-Chow, and White Tai in the table of tonal correspondences given below.

	A	B	C	D short	D long
<i>Voiceless</i>					
Kam	1,2	7,8,9	4,5	1,2,3,4	4
Sui (Li-Ngam)	1	5	3	5	5
Sui (Jung-Chiang)	1	5	3	5	5
Sui (Pyo)	1	5	3	5	5
Mak	1,6	5	3	5	3
T'en	1,5	3	2,6	5	6
Saek	1,2	6	3	4	3
Po-Ai	1,6	5	3	2,3	5
Wu-Ming	1	5	3	5	5
Yay	1	2	3,6	3	2
Lung-Chow	1	5	3	5	5
Lung-Ming	1,4	2	3	3	2
Siamese	1,5	2	3	2	2
White Tai	1	2	3	2	2
<i>Voiced</i>					
Kam	3	9	6	3,6	6
Sui (Li-Ngam)	2	6	4	4	4
Sui (Jung-Chiang)	2	6	4	4	4
Sui (Pyo)	2	6	4	2	2
Mak	2	6	4	2	2
T'en	5	4	2	2	2
Saek	4	5	6	6	5
Po-Ai	2	6	4	3	6
Wu-Ming	2	6	4	6	6
Yay	4	5	6	1	5

continued overleaf

	A	B	C	D short	D long
<i>Voiced (cont.)</i>					
Lung-Chow	2	6	4	2	2
Lung-Ming	4	5	6	4	5
Siamese	1	3	4	4	3
White Tai	4	5	6	4	4

(The numbers indicate tonal contours described in the Appendix.)

Additional phonetic characteristics, such as friction and glottalisation, have also been posited as conditioning factors in the tonal development of Tai languages, and account for the multiple correspondences within the voiceless series. For example, in tonal category A, Siamese has tone 5 in words reflecting original friction initials, and tone 1 elsewhere. A checklist for determining tones in Tai dialects is found in Gedney 1973.

IV. KAM-SUI-MAK AND NORTHERN TAI

Li 1957 suggested general characteristics of Northern Tai to distinguish that group from the Central and Southwestern branches. Some of these characteristics are discussed here with special reference to the role of Saek in the Northern Tai classification, and to the relationship of Kam-Sui-Mak to Northern Tai.

1. INITIAL CONSONANTS

One of the characteristics of Northern Tai mentioned by Li was the lack of distinction in the modern languages between original aspirated and unaspirated initial consonants. Using Po-Ai and Wu-Ming examples Li showed that Northern Tai languages have only unaspirated consonants, "although Po-Ai begins to reintroduce aspirated consonants through the influence of Chinese" (Li 1957:316).

An examination of the data shows that Saek preserves the original aspirated-unaspirated distinction, while the situation is less clear in the Kam-Sui-Mak languages.

In both Tai and Kam-Sui-Mak, original unaspirated consonants are reflected by modern unaspirated consonants. Examples of Proto-Tai *k- are

	<i>'Brassica'</i> <i>plant</i>	<i>'chicken'</i>
K	ʔaat ⁴	ʔaay ⁷
Sui (LN)	qaat ⁵	qaay ⁵
Sui (JC)	qaat ⁵	qaay ⁵
Sui (P)	qaat ⁵	qaay ⁵
Sui (ST)	-	-
M	kaat ³	kaay ⁵
T	kaat ⁶	kaay ³
Sk	kɛk ⁴	kay ⁶
PA	kaat ⁵	kay ⁵
WM	-	kay ⁵
Y	-	kay ²
LC	laa ² kaat ⁵	kay ⁵
LM	kaat ²	kay ²
Si	kaat ²	kay ²
WT	kaat ²	kay ²

which have Kam ʔ-, Sui q-, Mak k-, T'en k-, Saek k-, Po-Ai k-, Wu-Ming k-, Lung-Chow k-, Lung-Ming k-, Siamese k-, and White Tai k-. There are also reflexes with Sui k-, but the distinction between Sui q- and k- is considered secondary and the main point is that the initial is unaspirated.

Examples of Proto-Tai *t- are

	<i>'foot'</i>	<i>'grandfather</i> <i>(maternal)'</i>
K	tin ¹	taa ¹
Sui (LN)	tin ¹	taa ¹
Sui (JC)	tin ¹	taa ¹
Sui (P)	tin ¹	taa ¹
Sui (ST)	-	-
M	tin ⁶	taa ⁶
T	tien ¹	taa ¹
Sk	tiin ¹	taa ¹
PA	tin ¹	taa ¹
WM	tin ¹	taa ¹
Y	tin ¹	ta ¹
LC	-	taa ¹
LM	tin ¹	taa ²
Si	tiin ¹	taa ¹
WT	tin ¹	taa ¹

with Kam t-, Sui t-, Mak t-, T'en t-, Saek t-, Po-Ai t-, Wu-Ming t-,

Yay t-, Lung-Chow t-, Lung-Ming t-, Siamese t-, and White Tai t-.

Examples of Proto-Tai *p- are

	'to go'	'mouth'
K	paay ¹	paak ⁴
Sui (LN)	paay ¹	paak ⁵
Sui (JC)	paay ¹	paak ⁵
Sui (P)	paay ¹	paak ⁵
Sui (ST)	-	-
M	paay ⁶	-
T	paay ¹	-
Sk	pay ¹	paak ³
PA	pay ¹	paak ⁵
WM	poy ¹	paak ⁵
Y	pay ¹	paak ²
LC	pay ¹	paak ⁵
LM	pey ¹	paak ²
Si	pay ¹	paak ²
WT	pay ¹	paa? ²

with Kam p-, Sui p-, Mak p-, T'en p-, Saek p-, Po-Ai p-, Wu-Ming p-, Yay p-, Lung-Chow p-, Lung-Ming p-, Siamese p-, and White Tai p-.

The situation with the original aspirated consonants is much more complex. There is evidence that original aspirated consonants and clusters, and probably unaspirated clusters, are often reflected in Kam-Sui-Mak by palatals and affricates such as c-, ch-, č-, ts-, tš-, and tšh-. Within the Kam-Sui-Mak languages it is possible to distinguish sets of correspondences such as:

	I	II	III	IV	V
K	č	c	?	ch	c
SLN	s	t(y)	ts	s	tš
SJC	s	t(y)	tš	s	tš
SP	s	t(y)	tš	s	tš
M	s	t	s	s	t
T	s(y)	t(y)	ky	tsh	k

Examples of set I are:

	'to ask'	'ginger'	'master'
K	šaay ⁴	šiŋ ²	šu ⁴
Sui (LN)	saay ³	siŋ ¹	saw ³
Sui (JC)	saay ³	siŋ ¹	saw ³
Sui (P)	saay ³	siŋ ¹	saw ³
Sui (ST)	-	-	-

Examples of set I (cont.)

	'to ask'	'ginger'	'master'
M	saay ³	siŋ ¹	saw ³
T	syee ⁶	siŋ ¹	sew ⁶
Sk	(thaam ²)	hiŋ ²	caw ³
PA	(šaam ¹)	hiŋ ¹	tuu ³
WM	(šaam ¹)	-	-
Y	(saam ¹)	hiŋ ¹	θu ³
LC	(thaam ¹)	khiŋ ¹	caw ³
LM	(thaam ¹)	khiŋ ¹	caw ³
Si	(thaam ⁵)	khiŋ ⁵	caaw ³
WT	(thaam ¹)	xiŋ ¹	caw ³

Examples of II are:

	'long' (time)	'satisfied'	'to sew'	'stone'	'withered, wrinkled'
K	caŋ ¹	caŋ ⁷	cip ⁴	cin ¹	ciw ⁴ ,ñiw ⁴
Sui (LN)	tyaaŋ ¹	tyaŋ ⁵	tip ⁵	tin ²	tiw ³
Sui (JC)	tyaaŋ ¹	tyaŋ ⁵	tip ⁵	tin ²	tiw ³
Sui (P)	tyaaŋ ¹	tyaŋ ⁵	tip ⁵	tin ²	tiw ³
Sui (ST)	-	-	-	-	-
M	gan ¹	taŋ ⁵	tip ⁵	tuy ²	tyəw ³
T	-	tyaŋ ³	tiep ⁶	tin ¹	niw ⁶
Sk	ñta ⁴	(?im ⁶)	ŋip ⁶	riin ¹ ,riil ¹	hɛɛw ³
PA	naan ²	(?im ⁵)	yip ³	hin ¹	leew ⁵
WM	naan ²	(?im ⁵)	ñip ⁶	rin ¹	rew ⁵
Y	naan ⁴	(?im ²)	ñip ¹	rin ¹	rew ²
LC	-	(?im ⁵)	yap ²	hin ¹	heew ⁵
LM	naan ⁴	(?im ²)	yap ⁴	thin ¹	heew ²
Si	naan ¹	(?im ²)	yep ⁴	hin ⁵	hiaw ²
WT	naan ⁴	(?im ²)	ŋip ⁴	hin ¹	hɛw ²

Examples of III are:

	'to ride astraddle'	'to untie'
K	?aay ⁶	-
Sui (LN)	tsi ⁶	tsi ⁵
Sui (JC)	tʂi ⁶	tʂi ⁵
Sui (P)	tʂi ⁶	tʂi ⁵
Sui (ST)	-	-
M	see ⁶	-
T	kyii ⁵	kyii ³
Sk	khooy ⁵	kee ³

Examples of III (cont.)

	<i>'to ride astraddle'</i>	<i>'to untie'</i>
PA	kɪy ⁶	cee ³
WM	kɪy ⁵	ke ³
Y	kɪay ⁵	hi ⁵
LC	khwi ⁵	kee ³
LM	khwey ²	kee ³
Si	khii ²	kɛɛ ³
WT	khi ² , khwi ²	kɛ ³

Forms for set IV are:

	<i>'to ascend'</i>	<i>'needle'</i>
K	chaa ⁸	chem ²
Sui (LN)	saa ⁵	sum ¹
Sui (JC)	saa ⁵	sum ¹
Sui (P)	saa ⁵	sum ¹
Sui (ST)	-	-
M	saa ⁵	sum ¹
T	tshaa ³	tshem ¹
Sk	(hin ³)	kim ¹
PA	(hin ³)	cim ¹
WM	(hin ³)	šim ¹
Y	(hin ³)	cim ¹
LC	(khən ³)	khim ¹
LM	(khən ³)	khim ¹
Si	(khin ³)	khem ⁵
WT	(xin ³)	xim ¹

Forms for set V are:

	<i>'to ask for'</i>	<i>'gold'</i>	<i>'to kneel'</i>	<i>'nine'</i>
K	cow ³	cəm ¹	cok ³	cu ⁴
Sui (LN)	-	-	tšok ⁴	tšu ³
Sui (JC)	-	-	tšok ⁴	tšu ³
Sui (P)	-	-	tšok ²	tšu ³
Sui (ST)	tšhaw ⁴	tšum ¹	-	-
M	ɬəu ²	ɬim ²	(khuy ⁶)	ɬəw ³
T	kyiw ⁵	kyim ¹	kok ²	kuu ⁶
Sk	throo ²	gam ⁴	thuk ⁴	kuu ³
PA	-	-	(kuy ⁶)	kuu ³
WM	-	kim ¹	-	kaw ³
Y	te ⁶	cim ¹	(kuy ⁵)	ku ³
LC	hoo ¹	-	-	kaw ³

Forms for set V (cont.)

	'to ask for'	'gold'	'to kneel'	'nine'
LM	hoo ¹	-	kok ⁴	kaw ³
Si	khoo ⁵	kham ¹	khuk ⁴	kaaw ³
WT	cho ¹	xam ⁴	-	kaw ³

However, there is insufficient evidence to relate these forms in any systematic way to Tai forms with reflexes of Proto-Tai *kh- or other original aspirated initials or unaspirated clusters. The only generalisation that can be drawn is that Kam-Sui-Mak languages appear to have palatalised original velar initials. Another possibility is that Chinese loan words are involved, and that the data include a mixture of Cantonese forms which preserve an original k- and Mandarin forms which have palatalised that initial.

The treatment of Proto-Tai *th- is somewhat more clear. There are four sets of correspondences which have modern Siamese th- or Saek th-.

	I	II	III	IV
K	th	t	t	t
SLN		t	t	t
SJC	San-Tung th	t	t	t
SP		t	t	t
M	th	th	t	th
T	th	t	t	t
Sk	th	th	th	th
PA	t	t	t	t
WM	t	t	t	t
Y	th	t	t	t
LC	th	th	th	t
LM	th	th	th	t
Si	th	th	th	th
WT	th	th	t, th	t

An example of I is:

'charcoal'

K	thaan ⁸	Sk	thaan ⁶
Sui (LN)	-	PA	taan ⁵
Sui (JC)	-	WM	taan ⁵
Sui (P)	-	Y	thaan ²
Sui (ST)	thaan ⁵	LC	thaan ⁵
M	thaan ⁵	LM	thaan ²
T	thaan ³	Si	thaan ²
		WT	thaan ²

Examples of II are:

	<i>'bean'</i>	<i>'closely spaced, tightly packed'</i>	<i>'cup, bowl'</i>
K	to ⁹	-	tuy ⁶
Sui (LN)	to ⁶	tay ⁶	tuy ⁴
Sui (JC)	to ⁶	tay ⁶	tuy ⁴
Sui (P)	to ⁶	tay ⁶	tuy ⁴
Sui (ST)	-	-	-
M	thaw ⁶	they ⁶	-
T	taw ⁴	-	tuey ²
Sk	thua ⁵	thii ⁵	thooy ⁶
PA	tuu ⁶	tii ⁶	tuy ⁴
WM	tu ⁶	toy ⁶	-
Y	tua ⁵	ti ⁵	tay ⁶
LC	thuu ⁵	thii ⁵	thuuy ³
LM	thuu ²	thay ²	thuuy ³
Si	thua ²	thii ²	thuay ³
WT	tho ²	thi ²	thoy ³

The forms for *'cup'* may belong to either set II or III, as the distinguishing Mak form is missing.

Examples of correspondence set III are:

	<i>'to arrive'</i>	<i>'to carry, to wear'</i>	<i>'young male animal'</i>
K	-	təy ³	tak ³
Sui (LN)	taŋ ¹	tay ²	tak ⁴
Sui (JC)	taŋ ¹	tay ²	tak ⁴
Sui (P)	taŋ ¹	tay ²	-
Sui (ST)	-	-	-
M	taŋ ⁶	tay ²	tak ²
T	taŋ ¹	tey ⁵	tak ²
Sk	thaŋ ⁴	thii ⁴	thak ⁶
PA	taŋ ²	tii ²	tak ³
WM	taŋ ²	tay ²	tak ⁶
Y	taŋ ⁴	ti ⁴	tak ¹
LC	thəŋ ¹	thii ¹	tək ²
LM	thəŋ ¹	they ¹	tək ³
Si	thiŋ ⁵	thii	thik ²
WT	thiŋ ¹	ti ⁴	thək ²

Examples of set IV are:

	<i>'landing, to cross'</i>	<i>'place'</i>	<i>'stomach'</i>
K	taa ⁹	tii ⁹ , toy ⁷	loŋ ³
Sui (LN)	taa ⁶	ti ¹ , ti ⁶	loŋ ²
Sui (JC)	taa ⁶	-	loŋ ²
Sui (P)	taa ⁶	-	loŋ ²
Sui (ST)	-	-	-
M	thaa ⁶	-	loŋ ²
T	taa ⁴	taa ⁵	loŋ ⁵
Sk	thaa ⁵	thii ⁶	thuŋ ⁶
PA	taa ⁶	tii ⁵ , tii ⁶	tun ⁴
WM	taa ⁶	ti ⁵ , toy ⁶	tun ⁴
Y	ta ⁵	ti ⁵	tun ⁶
LC	taa ⁶	tii ⁶	toon ⁴
LM	taa ⁵	təy ⁵	toon ⁶
Si	thaa ³	thii ³	thooŋ ⁴
WT	taa ⁵	ti ⁵	ton ⁶

Correspondence set IV represents the reflexes of Proto-Tai *d- and will not be discussed here. Set I can be taken as an example of Proto-Tai *th-, with the Kam-Sui-Mak and Tai languages having modern th- except for Po-Ai and Wu-Ming. This would agree with Li's evidence that at least Po-Ai and Wu-Ming in the Northern group do not preserve the aspirated-unaspirated distinction, and would also show that Kam-Sui-Mak differs from Northern Tai in that respect.

It is significant to note that the lexical items for sets II and III are precisely those which show tonal variation across the voiced-voiceless series. That is, *'bean'*, *'closely spaced'*, *'to carry'*, *'young (male animal)'*, have Northern and Kam-Sui-Mak tones corresponding to the voiced series and Central and Southwestern tones corresponding to the voiceless series.

It may be the case that, if Mak th- and t- can be considered secondary developments, then II and III can be taken together to represent an early voiced initial, before Proto-Tai and Proto-Kam-Sui-Mak, which remains voiced and becomes the source of original voiced initials in the proto-language common to both Northern Tai and Kam-Sui-Mak, but became devoiced and the source of original voiceless initials in Central and Southwestern languages. This process of devoicing is common in the Tai languages, cf. modern Siamese voiceless aspirates from Proto-Tai voiced consonants.

If this were actually the case, then it would be evidence that the relationship among the Southwestern, Central, and Northern branches is

not coordinate, but is skewed such that Saek and other Northern Tai languages break off before Central and Southwestern Tai.

With respect to Proto-Tai *ph-, there is one clear example of Po-Ai and Yay (Wu-Ming is missing) collapsing the distinction between aspirated and unaspirated initials while all other languages preserve ph-. The instance is '*to split*', with Kam ph-, Sui ph-, Mak ph-, T'en ph-, Said ph-, Po-Ai p-, Yay p-, Lung-Chow missing, Lung-Ming ph-, Siamese ph-, and White Tai ph-.

'to split'

K	phaa ⁸	Sk	phaa ⁶
Sui (LN)	phaa ⁵	PA	paa ⁵
Sui (JC)	phaa ⁵	WM	-
Sui (P)	phaa ⁵	Y	pa ²
Sui (ST)	-	LC	-
M	phaa ⁵	LM	phaa ²
T	phaa ³	Si	phaa ²
		WT	phaa ²

This example is similar to '*charcoal*', in which Kam-Sui-Mak languages preserve aspiration in agreement with Saek and the Central and Southwestern Tai languages, while Po-Ai and Wu-Ming have unaspirated initials. It is not clear why Yay has th- in '*charcoal*' but p- in '*to split*'.

2. TONAL ALTERNATIONS

The question of tonal alternations across the voiced-voiceless series is cited by Li as a feature distinguishing Northern Tai from the other Tai branches.

An examination of cases in which Northern Tai and Kam-Sui-Mak forms agree in tonal correspondences and are different from Central and Southwestern correspondences shows that, in almost all cases, Northern and Kam-Sui-Mak voiced-series tones correspond to Central and Southwestern voiceless-series tones.

If the Central and Southwestern languages have the correspondences representative of voiceless initials,

	A	B	C
LC	1	5	3
LM	1,4	2	3
Si	1,5	2	3
WT	1	2	3

then the Northern Tai languages would be expected to have:

	A	B	C
Sk	1,2	6	3
PA	1,6	5	3
WM	1	5	3
Y	1	2	3,6

The Kam-Sui-Mak languages would be expected to have:

	A	B	C
K	1,2	7,8	4,5
SLN	1	5	3
SJC	1	5	3
SP	1	5	3
M	1,6	5	3
T	1,5	3	2,6

However, there are many instances of Central and Southwestern forms which reflect tonal development related to voiceless initials, yet correspond to Northern Tai and Kam-Sui-Mak forms reflecting tonal development related to voiced initials. Examples are:

	<i>'body, class- sifter for animals'</i>	<i>'to sharpen'</i>	<i>'excrement'</i>	<i>'rice'</i>
K	tu ³	pan ³	ʔee ⁶	ʔow ⁶
Sui (LN)	-	pan ²	qe ⁴	ʔaw ⁴
Sui (JC)	-	pan ²	qe ⁴	ʔaw ⁴
Sui (P)	-	pan ²	tʂe ⁴	ʔaw ²
Sui (ST)	to ²	-	-	-
M	to ²	pyan ²	ʔee ³	həw ³
T	too ⁵	pan ⁵	ʔee ²	xaw ²
Sk	thua ⁴	-	gay ⁶	gaw ⁶
PA	tuu ²	-	hay ⁴	haw ⁴
WM	tu ²	-	xay ⁴	xaw ⁴
Y	tua ⁴	pan ⁴ , pyaan ⁴	hay ⁶	haw ⁶
LC	tuu ¹	phən ¹	khii ³	khaw ³
LM	tuu ¹	phən ¹	khii ³	khaw ³
Si	tua ¹	fon ⁵	khii ³	khaaw ³
WT	to ¹	-	khi ³	khaw ³

Other examples cited previously which exhibit the same tonal alternation are *'to carry'*, *'bean'*, *'closely spaced'*, and *'cup'*.

Such examples support the hypothesis suggested in the preceding section that a new voiced series should be posited in the source language common to Tai and Kam-Sui-Mak. That is, there are three initials

in the source language, X_1 (traditional voiced), X_2 (traditional voiceless), and X_3 (hypothetical new voiced). The initial X_3 remained voiced and fell together with X_1 in the Northern and Kam-Sui-Mak languages, and the devoiced version fell together with X_2 in the Central and South-western languages. The examples of variation across the voiced-voiceless series would then be reflexes of original X_3 initials.

3. LEXICAL ITEMS

A third characteristic of Northern Tai as defined by Li 1957, 1960 is based on the distribution of lexical items. An examination of the data shows that there are few cases of Kam-Sui-Mak and Northern Tai sharing lexical items not found in the other Tai languages. Clear examples are

	'bamboo shoot'	'fragrant'	'girl'	'lazy'
K	naaŋ ³	taaŋ ¹	myeek ⁴	khwet ²
Sui (LN)	-	daaŋ ¹	?byaak ⁵	khət ⁵
Sui (JC)	-	daaŋ ¹	byaak ⁵	haat ⁶
Sui (P)	-	daaŋ ¹	?biək ⁵	hət ⁵
Sui (ST)	naaŋ ¹	-	-	-
M	naaŋ ¹	daaŋ ¹	?biik ³	lut ⁵
	'bamboo shoot'	'fragrant'	'girl'	'lazy'
T	-	-	myaak ⁶	let ⁵
Sk	naaŋ ⁴	praan ¹	(saaw ²)	triik ³ , tliik ³
PA	-	(hoom ¹)	mɨk ³ , (ɬaaw ¹)	cik ²
WM	raaŋ ²	-	(θaaw ¹)	klik ⁵
Y	raaŋ ⁴	(hom ¹)	(θaaw ¹)	cik ³
LC	-	(hoom ¹)	(ɬaaw ¹)	(kyaan ⁴)
LM	-	(hoom ¹)	(saaw ¹)	(laan ⁶)
Si	-	(hoom ⁵)	(saaw ⁵)	(kiat ² khraan ⁴)
WT	-	(hoom ¹)	(saaw ¹)	(caan ⁶)

On the other hand, there are many instances of the Tai languages, including Northern Tai, sharing lexical items distinct from those in Kam-Sui-Mak. Examples previously cited are 'to ascend', 'to ask', and 'satisfied'.

Other examples are

	'heavy'	'to incubate'	'fish scale'	'bran'
K	chan ²	pyam ¹	kwən ⁷	faa ⁹
Sui (LN)	zan ¹	pyam ¹	kən ⁵	pyaa ⁶
Sui (JC)	zan ¹	pyam ¹	dyən ⁵	faa ⁶
Sui (P)	zan ¹	pyam ¹	?dyən ⁵	fua ⁶ , puə ⁶
Sui (ST)	-	-	-	-

	'heavy'	'to incubate'	'fish scale'	'bran'
M	zan ¹	(vak ⁵)	(tat ⁵)	-
T	?zan ⁵	pam ¹	ken ³	xwaa ⁴
Sk	(mal ⁴)	(?up ⁴)	(trek ⁴)	(ram ⁴)
PA	(nak ²)	(fak ³)	(cet ²)	(lam ²)
WM	(nak ⁵)	-	(klip ⁵)	(ram ²)
Y	(nak ³)	(fak ¹)	(cip ³ , cap ³)	(ram ⁴)
LC	(nak ⁵)	(fak ²)	(kit ⁵)	(tam ²)
LM	(nak ³)	(fak ⁴)	-	-
Si	(nak ²)	(fak ⁴)	(klet ²)	(ram ¹)
WT	(nak ²)	(fak ⁴)	(ket ²)	(ham ⁴)

Additional examples cited by Oshika 1973 are glossed as 'firewood', 'full', 'grass', 'inside', 'male person', 'meat', 'middle', 'mushroom', 'name', 'root', 'to sit', 'skin', 'snake', 'son-in-law', 'star', 'tail', 'tiger', 'tongue', 'two', 'vegetable', 'wing', and 'you'. It is possible that some of these reflect Chinese influence.

V. SUMMARY

It is apparent that whatever the relationship between the Kam-Sui-Mak and Tai groups of languages may be, it is not a simple one.

It has been suggested here that, on the basis of initial consonant correspondences and tonal alternations, it is possible that the Northern Tai and Kam-Sui-Mak languages may have shared certain consonant and tonal developments distinct from the Central and Southwestern Tai languages.

However, on the basis of lexical distribution, it is clear that the Tai languages, including the Northern Tai branch, share many more forms with each other than any Tai language shares with Kam-Sui-Mak languages.

It is possible that the key to clarifying these relationships is Saek. Because of its archaic initial consonant clusters it cannot be considered coordinate with the other Northern Tai languages. When the role of Saek in the historical development of the Tai languages is more accurately defined, then perhaps the true relationship between Kam-Sui-Mak languages, Saek, and the various branches of Tai, will become clear.

APPENDIX

The tonal notation for each language is outlined below:

Kam

- 1 high level
- 2 high rising
- 3 low falling rising
- 4 mid falling rising
- 5 low rising
- 6 low falling
- 7 high falling
- 8 high rising falling
- 9 mid level

Sui (Li-Ngam)

- 1 low level
- 2 mid falling
- 3 mid-high level
- 4 high falling
- 5 mid rising
- 6 high level

Sui (Jung-Chiang)

- 1 low rising
- 2 low level
- 3 mid-high level
- 4 mid falling
- 5 mid rising
- 6 high level

Sui (Pyo)

- 1 low rising
- 2 mid falling
- 3 mid-high level
- 4 high falling
- 5 mid rising
- 6 low-mid rising

Mak

- 1 low rising
- 2 mid falling
- 3 mid-high level
- 4 high falling
- 5 high rising
- 6 mid rising
- 7 high level

T'en

- 1 low rising
- 2 mid falling
- 3 mid-high level
- 4 high falling
- 5 high rising
- 6 mid-low level

Saek

- 1 low rising
- 2 mid-low level
- 3 low falling,
glottalised
- 4 high rising falling
- 5 high falling
- 6 mid level,
glottalised

Po-Ai

- 1 low rising
- 2 high level
- 3 mid-high level
- 4 mid level
- 5 mid-low level
- 6 mid falling

Wu-Ming

- 1 mid level
- 2 mid falling
- 3 high level
- 4 high falling
- 5 mid rising
- 6 low rising

Yay

- 1 mid-low level
- 2 low level
- 3 mid rising
- 4 high rising falling
- 5 high falling
- 6 high, slight rise at
end

Lung-Chow

- 1 mid level
- 2 mid falling
- 3 rising
- 4 low falling,
glottalised
- 5 high level
- 6 low level

Lung-Ming

- 1 high level
- 2 high rising
- 3 mid level,
glottalised
- 4 low falling
- 5 low level
- 6 low falling rising,
glottalised

Siamese

- 1 mid level
- 2 mid-low level
- 3 falling
- 4 high, glottalised
- 5 low rising

White Tai

- 1 mid level
- 2 high rising
- 3 low rising, glottalised
- 4 mid level, glottalised
- 5 level with rise and
fall at end
- 6 falling, glottalised

