

Chapter II

Review of the Classification of Tai Languages

Proto-Tai

Tai languages are spoken by indigenous populations in Vietnam, Laos, Thailand, Myanmar, the Assam state of India and Yunnan, Kweichow and Kwangsi provinces of China. These languages form a family of languages the individual languages of which are proposed to be descendants of a hypothetical common parent language: Proto-Tai (PT). Many aspects of the hypothetical PT language have been reconstructed from comparisons of the modern Tai languages' lexicons. Concerning the reconstruction of PT Gedney writes:

Proto-Tai, the assumed single prehistoric original language of which all modern Tai languages and dialects are divergent continuations, has been pretty well reconstructed. We are certain of the tone system, and pretty much all of the consonant system (Gedney 1991: 194).

Li has probably contributed most to the reconstruction of PT, and Li's Handbook of Comparative Tai remains the basic text on comparative Tai linguistics. In this handbook Li compares cognate sets from the three

proposed branches of the Tai family of languages. Li's results are a reconstruction of PT tones, consonants and vowels as well as reconstructions of these for the three main branches of the family namely Northern (NT), Central (CT) and Southwestern Tai (SWT).

1. The Proto-Tai Tone System

All modern Tai languages are tonal languages. The existence of tone in all of the modern languages supports the idea of tone in PT. Li writes:

One of the most important characteristics of the modern Tai languages is that every syllable has a tone. It is reasonable therefore to assume that each syllable of the proto-language must also have had a tone. Since the tones of the Tai languages show regular correspondence it is possible to reconstruct the tone system of the proto-language, although it is difficult to reconstruct the phonetic character of the tones ... It is not known how the tone system originated in the proto-language, although it has been suggested that the system might have evolved, for instance, from the dropping of certain final consonants

(Li 1977: 24).

By comparing the lexicons of Tai languages a clear correspondence of tones appears for various sets of words. From these correspondences it is possible to reconstruct a tone system for PT. Words which share a tone in one language and which correspond with a cognate set of words in another language which also share a single tone are proposed as having had the same tone in the proto language. The correspondences between the tones of modern Tai languages indicate that

PT had four tone categories. Syllables which ended with a nasal or a vowel (hereafter LIVE syllables) had one of three tones: A, B and C. Syllables ending with a stop consonant, (hereafter DEAD syllables) are considered separately and marked D. D syllables are hypothesized as having been tonally unmarked as they were already distinguished from LIVE syllables by their final stop consonant (Gedney 1973).

Interlanguage comparison results in a system of three tones on LIVE syllables in PT yet an explanation for why all modern Tai languages have more than three tones on LIVE syllables is still needed. To account for this discrepancy, tonal development has been linked to the loss of contrasts between syllable initial consonant phonemes. European linguists have been aware of tonal development based on the loss of initial consonant contrasts since at least 1931 when Jakobson is reported[†] to have made the following comments regarding Chinese.

In certain Chinese dialects voiced and voiceless consonants have merged. The phonemic feature of voicing which distinguished one series of consonants from another series is replaced by the phonemic distinction of pitch level in the following vowels

(Haudricourt 1972: 59).

Haudricourt proposes this type of tonal development for Tai languages specifying the loss of the initial consonant phonemic contrasts: aspiration, glottalisation and voicing, as the "prerequisites" for the increase in the number of tonal contrasts in Tai languages.

[†] Haudricourt (1961) cites Jakobson from the German original of "*Principles of Historic Phonology*" (Jakobson 1931: 262).

The phonetic features which Haudricourt proposes as underlying Tai tonal development are all laryngeal features. Pitch is also a laryngeal feature and this similarity adds to the credibility for linking the loss of these initial consonant distinctions with tonal development. That is to say the loss of the consonant laryngeal features, voicing, aspiration and glottalisation, were compensated for by a development of pitch distinctions. The accepted theory is that the four original PT tone categories, A, B, C, and D, split to compensate for a loss of distinction between certain classes of initial consonants.

Based on the correspondence of Tai language tones in cognate sets, Li posits four initial consonant classes in PT. These four classes are based on the same three criteria of aspiration, voicing (voiced vs. voiceless sounds) and glottalisation proposed by Haudricourt (1961). Gedney (1973) describes these four classes of initial consonants as voiceless friction sounds, voiceless unaspirated sounds, glottal sounds, and voiced sounds. These initial consonant classes which are proposed as underlying the tonal development in Tai languages are listed in Table 2.

Table 2 PT Initial Consonant Classes

Class 1	Voiceless friction sounds i.e. *s, *hm, *ph, etc.
Class 2	Voiceless unaspirated stops i.e. *p, *t, etc.
Class 3	Glottal sounds i.e. *ʔ, *ʔb, etc.
Class 4	Voiced sounds i.e. *b, *m, *l, *z, etc.

(adapted from Gedney 1973: 202).

A comparative study of modern Tai languages shows that the voiced/voiceless opposition for initial consonants in PT has influenced the development of tones in nearly all Tai dialects (Li 1977: 25). Voicelessness being associated with the initial consonant classes 1, 2, and 3 and voicing associated with class 4 initial consonants. Li proposes a scenario where class 4 initial consonants in PT devoiced in the early stages of the daughter languages. The loss of the voicing distinction for initial consonants was compensated for by the development of a new tone distinction. From each PT tone category, A, B, C, and D, words with class 1, 2, and 3 initial consonants and words with class 4 initial consonants came to have different tones. Table 3 illustrates this development.

Table 3 Initial Consonant Voiceless vs. Voiced Tone Split

	Proto Tai Tones			
	A	B	C	D
Voiceless Friction Sounds				
Voiceless Unaspirated Stops	A	B	C	D
Glottal Sounds				
Voiced Sounds merge with Voiceless Sounds	A'	B'	C'	D'

The application of this tone split can be seen in the following example. PT is proposed as having the words *hma:, 'dog' and *ma:, 'to come'. These words had different initial consonants in PT; *hm and *m but the same A tone. In standard Thai these words have developed into

/ma: A/, 'dog' and /ma: A'/, 'to come' where both words have the same initial consonant /m/ but are differentiated by tone; A verses A'. (In Thai referred to as tone *chattawa* and *saaman* respectively.) Table 4 contains other examples of this tone split between class 1, 2 and 3 and class 4 initial consonants.

Table 4 Tone Split in Standard Thai

	'dog'	'to come'
Proto-Tai	*hma A	*ma A
Std. Thai	/ma: A/	/ma: A'/
Std. Thai	/ma: 15/	/ma: 33/
	'bamboo'	'card'
Proto-Tai	*phɛi B	*bɛi B
Std. Thai	/phai B/	/phai B'/
Std. Thai	/phai 21/	/phai 42/
	'step'	'to squeeze'
Proto-Tai	*khən C	*gən C
Std. Thai	/khan C/	/khan C'/
Std. Thai	/khan 42/	/khan 45/
	'tattoo'	'to launder'
Proto-Tai	*sək D	*zək D
Std. Thai	/sak D/	/sak D'/
Std. Thai	/sak 21/	/sak 45/

Brown (1965) refers to this division of PT tones based on the voicing of the initial consonant as the "Great Tone Split" affecting nearly

all Tai languages. Gedney (1991) comments that this loss of initial consonant contrasts was not a language specific phenomena in Tai but was an areal phenomena where a similar splitting of vowels occurred in non-tonal languages. In non-tonal Mon and Khmer languages of the region initial consonant contrasts were shifted to the vowel system - an increase in phonemic vowel qualities, rather than tones, resulted from the loss of initial consonant distinctions.

For Tai languages the other two laryngeal features of initial consonants, aspiration and glottalisation, do not appear to have had the same widespread effect on tonal development. Their influence is limited to the development of tones in smaller groups of languages, individual languages or dialect groups.

In addition to tonal development based on initial consonant features, DEAD syllables underwent tone development corresponding to the vowel length of the syllable. Based on tone correspondences for long and short vowels in DEAD syllables, Li divides the D tone category into DS and DL categories. DS contains DEAD syllables with short vowels and DL contains DEAD syllables with long vowels or diphthongs.

2. Proto-Tai Initial Consonants

The initial consonant system of PT can be reconstructed by the comparison of cognate sets from the various modern Tai languages. In addition to these comparisons the patterning of tones is used to postulate contrasts in the proto consonant system. The writing systems of the various Tai languages have also provided some insights into the historic forms of those languages. Table 5 lists the initial consonants which Li has proposed for PT.

Table 5 PT Initial Consonants

	Labials	Dentals	Palatals	Velars	Laryn.
Stops					
Unaspirated	*p	*t	*c	*k	
Aspirated	*ph	*th	*ch	*kh	
Glottalized	*ʔb	*ʔd			*ʔ
Voiced	*b	*d	*j	*g	
Nasals					
Voiceless	*hm	*hn	*hɲ	*hŋ	
Voiced	*m	*n	*ɲ	*ŋ	
Fricatives					
Voiceless	*f		*s	*x	*h
Voiced	*v		*z	*ɣ	
Liquids					
Voiceless		*hr	*hl		
Voiced		*r	*l		
Semi-vowels					
Voiceless	*hw				
Glottalized			*ʔy		
Voiced	*w		*y		

(adapted from Li 1977).

Some modern Tai languages have initial consonant clusters in Tai cognate words. In Thai there are initial clusters in words such as 'fish', /pla: 33/ and 'cage', /kroŋ 33/. From these modern language initial clusters as well as from other differences in sound correspondences such as we will see in Chapter IV, it is possible to propose a limited set of consonant clusters for PT. These clusters have the form of a labial, dental or velar consonant followed by *l, *r, or *w. Table 6 lists Li's proposed consonant clusters in PT.

Table 6 PT Initial Consonant Clusters

Cluster	Initial	Second	Element	
	Labials	*l	*r	*w
	*p	*pl	*pr	
	*ph		*phl/r	
	*b	*bl	*br	
	*ʔb		*ʔbl/r	
	*m		*ml/r	
	*f		*fr	
	*v	*vl	*vr	
	Dentals			
	*t	*tl	*tr	
	*th	*thl	*thr	
	*d	*dl	*dr	
	*ʔd		*ʔdl/r	
	*n		*nl/r	
	Velars			
	*k	*kl	*kr	*kw
	*kh	*khl	*khr	*khw
	*g	*gl	*gr	*gw
	*ŋ		*ŋl/r	*ŋw
	*x		*xr	*xw
	*ɣ			*ɣw

(adapted from Li 1977).

Initial clusters with *w as the second element only occur with velar initials. Given that in PT the *w patterns as the second element of an initial cluster only after velars, it would seem that these clusters could be considered labialized velar phonemes in PT. This point will be raised again in the description of PG languages.

3. Additional PT Initial Consonants

Gedney (1979) suggested that another class of voiced initial consonants could be added to Li's PT inventory. The hypothetical consonants to be added are six obstruents, three stops and three fricatives. Gedney uses the symbols B, D, *G, *V, *Z and *Y to represent the reconstruction of these hypothetical units.

Gedney proposed these consonants to solve a discrepancy between the patterning of sets of cognate words which in NT languages have tones corresponding to proto voiced sounds (class 4 initial consonants) but in SWT and CT languages correspond to voiceless friction sounds (class 1 initial consonants). Table 7 shows several of the words which Gedney uses to support his hypothesis. For NT languages the tone of words in Table 7 correspond with the tone of class 4 initial consonants but in SWT and CT the tones of these words correspond with the tone on class 1 initial consonant words.

Table 7 A Fifth Initial PT Consonant Class

	Po-ai (NT)	Thai (SWT)	Lungchow (CT)
'person; male'	pu: C4	phu: C1	ph/pu: C1
'hold, carry'	tu: A4	thu: A1	thu: A1
'bean'	tu: B4	thua B1	thu: B1
'ditch'	kum A4	khum A1	khom A1
'ripe'	šuk DS4	suk DS1	ʃuk DS1
'bitter'	ham A4	khom A1	khum A1
'rice'	hau C4	kha:u C1	khau C1

(adapted from Gedney 1979).

Gedney's proposed additional proto consonant class is conceptually pleasing because it provides a link between PT class 1 and class 4 initial consonants. The four PT initial consonant classes are not random but form a continuum. The existence of the continuum is evident from the patterning of tones in the modern languages. In modern Tai languages words from adjacent tone boxes are often found to have the same phonemic tone but words from non-adjacent tone boxes are not found to have the same phonemic tone unless the intermediate tone box also has the same phonemic tone. That is to say, A1 and A2, A2 and A3 or A3 and A4 tone boxes may have the same phonemic tone but A1 and A3 will never share a phonemic tone unless A2 also has that same tone. The conceptually pleasing aspect of Gedney's fifth class of initial consonants is that it forms the bridge between class 1 and class 4 initial consonants which completes the continuum: 1-2, 2-3, 3-4, 4-5, 5-1. If we accept Gedney's hypothesis then for NT languages A4 and "A5" initial consonants share the same phonemic tone whereas for ST[†] languages "A5" and A1 initial consonants share the same tone. Although this appears to be a neat solution to the NT - ST tone discrepancies there remain several unanswered questions.

Perhaps the most significant question regards whether the tone discrepancy can be attributed to Chinese influence. Chamberlain (1984) claims of Gedney's examples that, "at least eighty percent, do occur in Chinese. Furthermore, the Chinese items are almost all voiced and occur with the correct tone category, that is they agree with the Northern branch of Tai" (Chamberlain 1984: 86). If tone discrepancies between NT and ST languages can be attributed to a Chinese influence then there is no

[†] Referring to Southern Tai languages that is the grouping of SWT with CT languages.

need to propose a fifth class of PT initial consonants in order to explain the tone discrepancies.

In either case, Gedney's proposed addition to the inventory of PT sounds does not affect the proposed consonant inventory of SWT. It is a distinction realized between NT and ST languages and as such will not be considered further in our analysis of SWT languages.

4. Proto-Tai Monophthongs

Li (1977) proposes a simple nine vowel system without phonemic length distinction for PT. Li's PT monophthong system is summarized in Table 8

Table 8 PT Monophthongs

i	ɯ	u
e	ə	o
ɛ	a	ɔ

Li explains distinctive vowel length as a secondary development in Tai languages. Li uses standard Thai, which in the modern language has phonemic length contrast for all nine vowels, as an illustrative example to explain the development of vowel length in Tai languages.

In Thai, the low vowel [a] is clearly contrastive for length containing many minimal pair examples but there are very few minimal contrastive pairs for the low vowels [ɛ] and [ɔ]. Li concludes that the length distinction for [ɛ] and [ɔ] appears to have been introduced secondarily. The long vowels /ɛ:/ and /ɔ:/ show regular correspondence

in other dialects and therefore can be reconstructed for PT but the short vowels /ɛ/ and /ɔ/ rarely show correspondence with other dialects.

Standard Thai /ə/ also has few correspondences in other Tai languages. Li postulates that Standard Thai /a/, /a:/, /ɛ:/, and /ɔ:/ can be reconstructed as the PT vowels *ə, *a, *ɛ, and *ɔ, respectively. Phonetic length in Standard Thai is attributed to a rule which lengthened all low vowels: *a > a:, *ɛ > ɛ: and *ɔ > ɔ:. Following the development of length in the low vowel series, the vowel quality of *ə lowered to [a] yielding the length contrast between /a/ and /a:/ exhibited in Thai and most other modern Tai languages.

In Thai the long mid vowels, /e:/ and /o:/, like the short low vowels /ɛ/ and /ɔ/, rarely show correspondence in other Tai languages. While the short mid vowels /e/ and /o/ do show correspondence with other Tai dialects. Li concludes that Standard Thai short mid vowels /e/ and /o/ can be reconstructed as the PT vowels *e, and *o respectively whereas the long mid vowels /e:/ and /o:/ appear to be borrowings or secondary developments.

The high vowels, [i], [ɯ], and [u], in CT and NT languages pattern so that they are normally short in syllables with a final consonant and long otherwise. In Standard Thai and some other SWT languages there are also some long high vowels in closed syllables. Li proposes that these long high vowels in closed syllables have developed from proto-SWT vowel diphthongs.

Li's conclusion is that contrastive vowel length is a secondary development in Tai languages and has resulted from the introduction of borrowings and the development of PT vowel diphthongs.

Sarawit (1973 quoted in Li 1977) differs with Li in her analysis of PT vowels. Sarawit proposes that vowel length was contrastive in PT. Sarawit's result is six or seven vowels each distinctive for length. Table 9 shows Sarawit's reconstruction of monophthongs for PT.

Table 9 Sarawit's PT Monophthongs

i, i:	ɯ, ɯ:	u, u:
e, e:	(ə, ə:)	o, o:
	a, a:	

(Li 1977: 297).

5. Proto-Tai Diphthongs and Triphthongs

The vowel system of PT is the portion of the proto language which is least well reconstructed. The major difficulty is in the reconciliation of the proto vowel systems of the ST languages with those of the NT languages. Li writes concerning this problem, "The complications involved seem to frustrate any attempt to assume a reasonable number of vowels in Proto-Tai" (Li 1977: 254). The unreasonable amount of vowels Li is referring to is the postulating of various PT diphthongs to account for sound correspondence sets which differ from the sound correspondence sets which allow for the reconstruction of the monophthongs. Perhaps Li has exaggerated a bit. Strecker points out that the number of proto vowels is not so unreasonable as to exceed the number of vowels actually found in "certain living languages such as Khmer and vocally conservative dialects of English" (Strecker 1988: 109).

An alternate solution to the positing of a large diphthong and triphthong vowel inventory in PT is the positing of bisyllabic or

polysyllabic words in the proto language. Those suggesting a bisyllabic solution to vowel correspondence anomalies among Tai languages include Paul Benedict and André Haudricourt. The modern language cognates for the Tai first person singular pronoun 'I' provide an example. Some languages have a form of 'I' which could be reconstructed as *ku, whereas in other languages it would be *kau. It has been proposed that a bisyllabic proto word *əku or *aku could explain the difference. In this scenario an unstressed form *əku dropped its initial umlaut leaving *ku whereas a stressed form *aku produced the diphthong *kau. The bisyllabic solution for PT vowels is not widely accepted and as Strecker points out, a bisyllabic solution for PT based on internal Tai language evidence alone is "purely hypothetical" (Strecker 1988: 108).

Because our topic here is limited to SWT languages, the vowel correspondences will also be limited to SWT languages and will not go beyond the vowels posited by Li (1977). Li's vowel inventory is summarized in Table 10. It contains 14 monophthongs, 11 diphthongs and 2 triphthongs. For SWT Li divides the vowel diphthongs into two groups: a high vowel followed by a low central vowel, e.g. *ia, *ua, etc. and diphthongs with the high accented vowel as the second element, e.g. *au, *ai, *a:i, *au, *a:u, *ɔ:i, *ɛ:i, *iu, *əi. The combination of these diphthongs yields two triphthongs *iau, and *uai. By considering final /i/ and /u/ as consonants instead of vowels the inventory changes to 14 monophthongs and 4 diphthongs as is shown in Table 11.

Table 10 Li's SWT Vowels

monophthongs	i, i: e ε, ε:	ɯ, ɯ: ə a, a:	u, u: o ɔ, ɔ:
diphthongs	ia ai, a:i	ɯa aɯ	ua au, a:u
triphthongs		ε:u əi iau	ɔ:i uai

(Li 1977: 300).

Table 11 SWT Vowels without Final Semivowels

monophthongs	i, i: e ε, ε:	ɯ, ɯ: ə a, a:	u, u: o ɔ, ɔ:
diphthongs	ia	ɯa aɯ	ua

6. Proto-Tai Final Consonants

PT final consonants show very consistent correspondence in Tai languages. The PT final consonants according to Li (1977) are three stops, *-p, *-t, and *-k and three nasals *-m, *-n and *-ŋ. In addition the proto language included two final semivowels *-w and *-y. Li considers these word final semivowels within the system of proto vowels. To my knowledge, Li does not offer an explanation for choosing to consider final *-w and *-y as the final element of a vowel diphthong or triphthong rather than as a final consonant. It appears in fact that he gives the argument against such a decision when he points out that vowel diphthongs and triphthongs which end with a high vowel as their final

element cannot occur with a final consonant (Li 1977: 267). In this study the high vowels which Li considers to be the final element of a vowel cluster, such as *ai, or *iau, will be considered to be monophthongs or diphthongs respectively plus the final consonants *-y and *-w.

Classification of Tai Languages

It is generally accepted that the modern Tai languages originated from the costal border area between what is now northeastern Vietnam and Kwangsi Province, China. Through the centuries and for various reasons segments of the Tai population migrated west and north. As contact between these groups lessened and as each group experienced differing linguistic and extra-linguistic influences on their societies, variations of speech developed. These variations eventually developed into the dialect and language differences which exist among the Tai languages today.

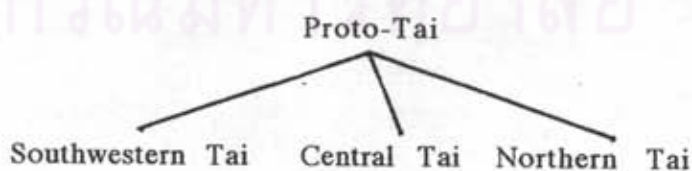
1. Li's Classification of Tai Languages

Li (1960) uses a comparison of the lexicons of some 20 Tai dialects as the basis for classification of Tai languages. Li classifies the Tai languages as having a tripartite division namely a Southwestern Branch, a Central Branch and a Northern Branch. Concerning his classification of Tai languages, Li writes:

This classification is based on three types of evidence: the distribution of vocabulary, the distribution of certain special phonological features in the vocabulary and specific phonological development characteristic of a certain group (Li 1960: 953).

In comparing the distribution of vocabulary, Li found that the Tai languages could be broken into three groups based on the fact that some sets of cognate words are present in all languages, other cognate word sets are unique to a single group of languages and still other cognate word sets are consistently missing from one group of languages while present in the other two groups of languages. Li uses this third type of distribution, where each of Li's three groups of Tai languages is missing a set of lexical items which is present in the other two groups of languages, as the defense for his hypothesis for a tripartite division of the Tai languages. Namely that the three branches of the Tai family of languages are collateral as diagramed in Figure 1 rather than any one of three possible two level bipartite divisions.

Figure 1 PT Tripartite Division



(Li 1960: 958).

Li writes that the missing vocabulary from any one group of languages does not allow us to consider that group as a transitional stage between the other two groups of languages. Table 12 shows a portion of the distribution of vocabulary which Li gives as defending his hypothesis.

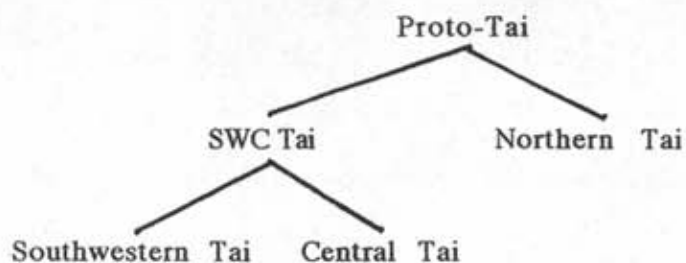
Table 12 Distribution of Tai Vocabulary

	PT	SWT	CT	NT
'sky'	*v C2	X	X	-
'blind'	*ʔb DL1	X	X	-
'below'	*t C1	X	X	-
'beard'	*m B2	-	X	X
'to fear'	*xl A1	-	X	X
'to hunt'	*pr B1	-	X	X
'knife'	*m DL2	X	-	X
'road'	*xr A1	X	-	X
'to warn'	*t A1	X	-	X

(adapted from Li 1960).

Following Li's argument the bipartite division of PT as diagramed in Figure 2 would not be possible. In actuality the missing vocabulary items from each column in Table 12 only indicate that there are potentially three unique groups of languages.

Figure 2 A PT Bipartite Division



Considering Figure 2: A PT Bipartite Division, a loss of vocabulary among CT, (e.g. 'knife', 'road' and 'to warn'), could as easily have occurred after its branching from Proto-SWC Tai (Figure 2) as when it branched from PT (Figure 1). In either case SWT and NT languages would have the potential for maintaining those vocabulary items which were previously common to all of the Tai dialects but which were lost in CT. This scenario is presented in Table 13. Li's evidence for a collateral tripartite division is of itself not conclusive.

Table 13 Bipartite Evolution of Vocabulary Distribution

Proto-Tai		
sky, blind, below, beard, to fear, to hunt, knife, road, to warn		
SWC Tai		NT
'sky'		-
'blind'		-
'below'		-
'beard'		'beard'
'to fear'		'to fear'
'to hunt'		'to hunt'
'knife'		'knife'
'road'		'road'
'to warn'		'to warn'
Southwestern Tai	Central Tai	Northern Tai
'sky'	'sky'	-
'blind'	'blind'	-
'below'	'below'	-
-	'beard'	'beard'
-	'to fear'	'to fear'
-	'to hunt'	'to hunt'
'knife'	-	'knife'
'road'	-	'road'
'to warn'	-	'to warn'

2. Southern Tai Languages

Several authors have proposed that Li's classification of Tai languages should be modified into a bipartite division where Li's SWT and CT are combined. Haudricourt posits a bipartite division of PT languages noting that with only a few exceptions, which can be traced back to PT, the initial consonants of CT languages (Haudricourt's "Tày-Nùng") and the SWT languages (Haudricourt's "Thai") "permit the reconstruction of a common language" Haudricourt (1974, 1975 quoted in Lévy-Ward 1988: 37).

Gedney (1979), "for the sake of convenience", proposes a bipartite division of the Tai languages. Here Gedney groups Li's SWT and CT together under the title "Southern Tai" (ST) which then is in a bipartite opposition to Li's NT. Gedney points out that there are some significant differences between NT and ST languages which support a bipartite division of PT languages. He writes:

Northern Tai languages, as scholars have long recognized, exhibit many striking differences from Southern Tai, some lexical and some phonological. Lexical differences involve quite a large number of items for which the Northern Tai languages all use one word, but the Southern Tai languages another. Phonological differences are many, involving especially vowels and tones

(Gedney 1979: 231).

This same conclusion is also implied in Li's own comments on the differences in the development of PT vowel diphthongs in NT languages versus SWT and CT languages (Li 1977: 298-9).

At this point there is not a single definitive opinion on the division between NT, CT and SWT languages. Although if any two groups of

languages are to be joined together it is Li's SWT and CT languages. Since this thesis will be considering the lower level classification of languages which fall within Li's SWT, whether the SWT languages are a subgroup of the ST languages or an immediate independent branch of PT proper will not affect our analysis.

3. P / PH Subdivision of SWT Languages

Maspero (1911, quoted in Li 1960: 951) suggested two additional phonological criteria for the classification of Tai dialects. The first was the development of PT voiced stops: *b, *d, *g and pre-glottalised consonants: *ʔb, *ʔd. The second was the development of PT initial consonant clusters. The development of the proto voiced stop series resulting in either aspirated or unaspirated voiceless stops has been proposed by Chamberlain (1972, 1975, 1991) as a criteria for the classification of SWT and CT languages.

Chamberlain (1972) proposes that the SWT languages can be divided into two groups based on whether the PT voiced consonants *b, *d, *g have become voiceless aspirated stops /ph/, /th/ and /kh/ or voiceless unaspirated stops /p/, /t/ and /k/ in the modern languages. The former were labeled PH languages, the latter P languages. A language's merging of the voiced stops with the unaspirated vs. aspirated stops was also reflected in the tone distribution of the languages. It was noticed that PH languages had a tone split of *1-23-4 for all tones or a split of A1-23-4 tone and BCD123-4. From this observation Chamberlain postulated that a *1-2 tone split never occurs with P languages and that a *12-34 split does not occur for PH languages.

These observations proved not to be without exception and Chamberlain (1975) himself points this out. Chamberlain's second article outlines the criteria contained in Table 14 for the classification of SWT languages:

Table 14 SWT Classification Hierarchy

1. P / PH
2. *A column
3. *BCD columns
4. B-DL coalescence

Through application of the SWT classification hierarchy to CT languages and supported by Tai migration patterns as conceived from historical references to Tai peoples, Chamberlain suggests that these two groups of languages may have evolved from a single proto language: South-Central Tai (ST).[†] The geographical distribution of the P versus PH languages also supports Chamberlain's hypothesis. Figure 3 depicts the isogloss which can be drawn separating the P dialects from the PH dialects. The conclusion drawn from this isogloss and the historical references is that the Proto-PH Group language broke off from the Proto-ST language(s) and migrated south and west. Groups from the Proto-P Group languages similarly separated and migrated west.

[†] Hereafter Southern Tai (ST) in keeping with Gedney's (1979) use of the term for the combination of Li's SWT and CT.

Figure 3 P / PH Isogloss

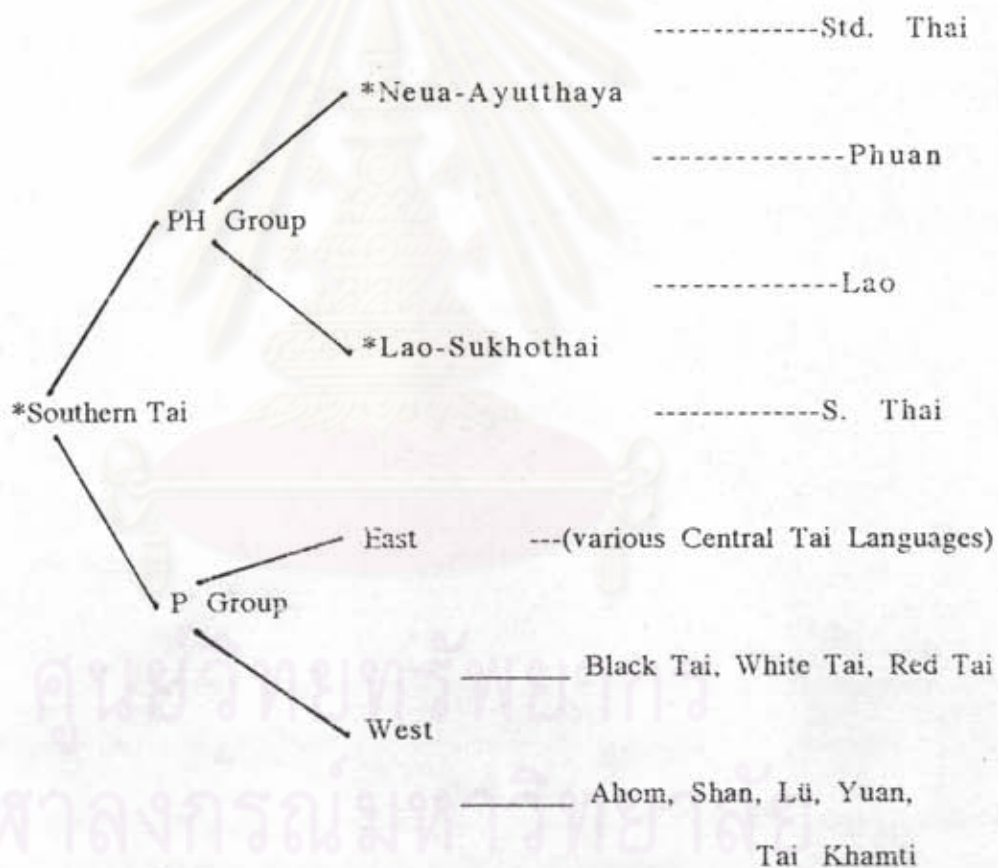


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(adapted from Chamberlain 1972: 235).

Using his SWT Classification Hierarchy in combination with historical and geographical evidence Chamberlain proposes a subclassification of ST languages. Figure 4 is an abbreviation of the figures which Chamberlain uses to summarize the subclassification of ST languages.

Figure 4 Chamberlain's Division of Southern Tai



(adapted from Chamberlain 1975).

Not everyone has accepted Chamberlain's P / PH language classification and notable among his critics is Gedney. Gedney's (1991)

criticism of Chamberlain's P / PH criteria for the genetic subdivision of ST languages lies primarily with the fact that Gedney considers the development of the PT voiced stops as either unaspirated or aspirated voiceless stops to be a typological distinction rather than a genetic one, and a rather recent typological change as well.

Many Tai languages covering a large area have changed initial *r* to *h*, as in Lao. It would make as much sense to speak of R languages and H languages as P and PH languages. The changes in both cases are recent, though one must admit that the *r* to *h* change is even more recent than the change of *b* to *p* or *ph*. Both were areal rather than genetic phenomena
(Gedney 1991: 209).

In my reading of Gedney's criticism of Chamberlain's P / PH language proposal (Gedney 1991:208-209) there is a great deal of heat but there seems to be very little light. Certainly Gedney does not support his rejection of Chamberlain's P / PH language classification with linguistic evidence. Unfortunately, Gedney seems satisfied to simply proclaim that the distinction is a "recent areal phenomena".

Vickery (1991) agrees that Gedney's arguments on this point lack substance and mounts a fine defense of Chamberlain's P / PH criterion. Central to Vickery's defense is that Chamberlain's criterion of classification is not "new" in the radical sense as this same criteria has appeared, although not specified as such, in the work of all linguists who have attempted classifications of Tai languages vis-à-vis the voiced versus voiceless distinction lost in PT tonal development. Gedney himself acknowledges that the development of tone in Tai languages is related to

the devoicing of the PT languages' voiced stops which no one considers to be a recent phonological development.

If all of this (i.e. the devoicing of *b, *d and *g) occurred very late, it implies that several branches of Thai remained identical as to tone and initial consonant system, preserving PT features, long after the groups of people speaking them separated and became isolated from one another. ... we would then expect ... entirely separate groups of P and PH languages, as the different sub-groups devoiced independently. Instead all evidence suggests that the division now represented by P/PH was the first split between the ancestor (languages). The entire logic of Thai language grouping undertaken to date depends on changes in consonants affecting tones having begun before the major dispersion of Thai peoples out of their earlier area of close intra-Thai proximity

(Vickery 1991: 378).

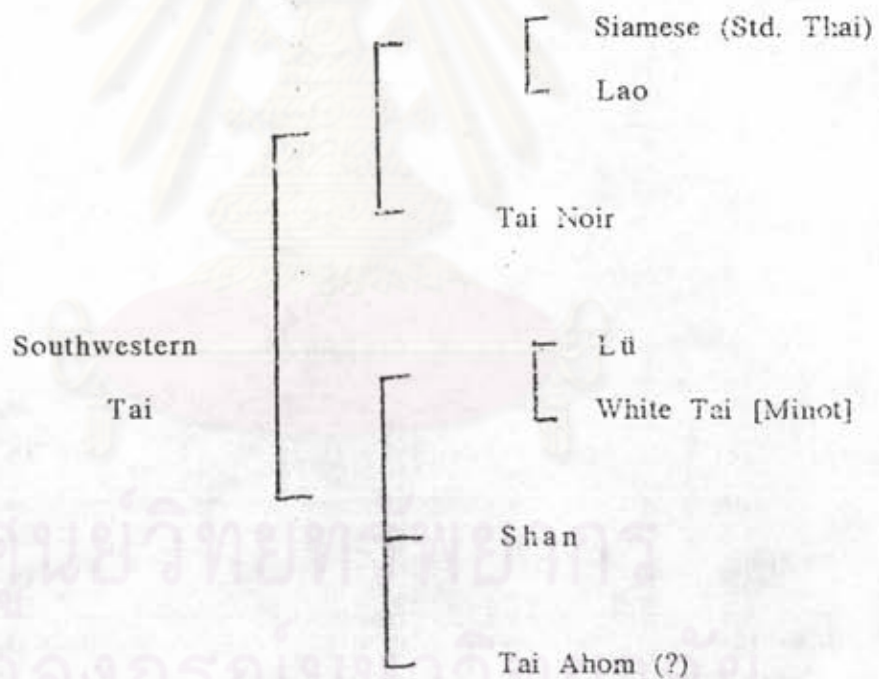
Vickery points out that the whole of Tai language classification rests on the early devoicing of voiced consonants and the resulting development of tone. The fact that the devoicing of *b > p versus *b > ph can be used as a criteria for classifying Tai languages is soundly within the established principles of comparative analysis.

4. Further Subdivision of SWT Languages

Several authors have offered ideas on the sub-classification of SWT languages. Li (1960) provides a final sketch summarizing his ideas on the subdivisions within the SW Branch of Tai languages. In Li's subclassification, White Tai is most closely related to Tai Lü which are separated by one degree from Shan while Standard Thai is most closely related to Lao. Unfortunately Li does not articulate his reasoning for his

tentative subclassification. Concerning the grouping of Tai Lü with White Tai, which is of particular interest to us, Williams says of Li's classification that: "Lue is placed with White Tai because both share such features as monophthongization, nasal umlaut†, and a contrast between *kh* and *x*" (Williams 1986: 43). Figure 5 summarizes Li's thoughts on the genetic relationships in SWT languages as contained in "A Tentative Classification of Tai Dialects".

Figure 5 Li's SWT Language Subdivision



(adapted from Li 1960: 958).

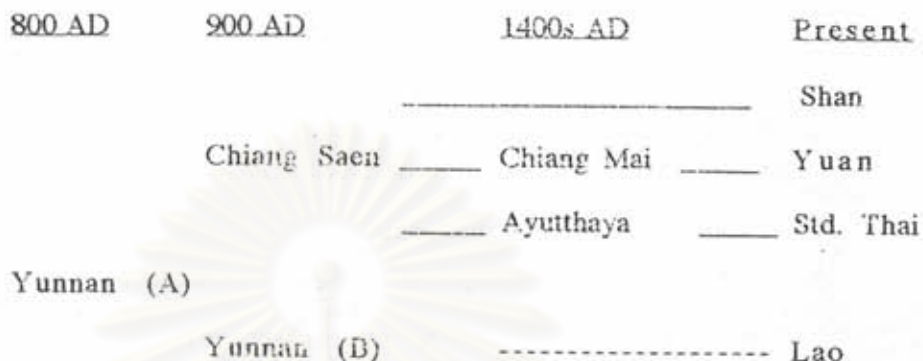
† Nasal umlaut is a vowel umlaut conditioned by a syllable final nasal. In this case specifically referring to the phenomena of mid vowels /e/, /o/ and sometimes /ə/ rising to /i/, /u/, and /ɯ/ respectively when followed by a syllable final nasal consonant e.g. 'to be' /peɪ/ > /piɪ/.

David Solnit and Jerry Edmondson (1994) have similarly proposed that the existence of a distinction between aspirated stops and fricatives in the velar and labial position is a criteria for classifying SWT languages. Specifically Solnit and Edmondson have proposed that isoglosses can be drawn for those languages which maintain a /kh/ versus /x/ distinction and for those which lose a /ph/ versus /f/ distinction (Solnit 1994). Although it appears that two ph = f isoglosses and one kh ≠ x isogloss can be drawn, these distinctions appear to reflect fairly recent developments in SWT languages. Diller (1988) concludes that the phonemic distinction between /kh/ and /x/ existed in Thai during the mid-fourteenth century but had been lost by the fifteenth century (Diller 1988: 48).

Brown (1965) proposes a genetic relationship between Shan, Northern Thai, Phuan and Standard Thai where these languages all descend from a hypothetical Chiang Saen language. Brown diagrams these languages as collateral descendents of Chiang Saen. The implied conclusion is that Yuan, Shan and Central Thai are equally closely related. Brown's analysis is in contrast with Li's where Standard Thai is most closely related to Lao, for Brown, Lao and Thai belong to different sub-branches of the SWT[†]. Figure 6 summarizes in abbreviated form the genetic relationships proposed by Brown between several of the main SWT languages.

[†] Brown also classifies the Tai languages based on their contact relationships. Based on contact or geographical criteria Brown classifies Yuan (Northern Thai) as being more closely related to Lao than it is to Shan.

Figure 6 Brown's Division of SWT Languages



(adapted from Brown 1965: 143).

Hartmann (1980) uses the same three criteria as Chamberlain (1972, 1975), namely tonal development, voiced stop development and geographic location, to subdivide SWT languages into three divisions: Upper, Middle and Lower. Upper SWT languages have a bipartition of proto tones and the development of the voiced stop series into voiceless unaspirated stops in the modern languages. Middle SWT languages also have the development of voiced stops to voiceless unaspirated stops and a bipartition of the PT tone categories but a partition which is different from that in Upper SWT; namely that the split in the A tone occurs between the initial consonant classes 2 and 3 rather than between 3 and 4. Lower SWT languages have a tripartition of the proto tone categories and the development of the proto voiced consonant series into voiceless aspirated stops.

Hartmann's analysis is flawed in that he has failed to account for the tripartition of tone which has been reported for SW dialects by several authors including Harris (1975, 1976) and Gedney (1976).

Chamberlain (1984) points out that this omission would require Hartmann to draw a fourth isogloss above his Upper SWT. This oversight has additional significance as Hartmann explains the emergence of the tripartite split in the Lower SWT languages as having developed in order to avoid lexical homophony between the low class, (class 4) PT initial consonant words and the high class, (class 1) PT initial consonant words. This explanation of the emergence of a tripartite split does not work for the languages which Hartmann has not included in his article because for the languages he has omitted, class 1 and class 4 initial consonants have not merged into a single phoneme and therefore would not have produced homophonous forms.

In Chapter III we will move on to consider some synchronic descriptions of PG languages.

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย