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Preliminary Study on a Black Miao
Dialect : Phonology

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Preliminary Study on a Black Miao¹⁾ Dialect : Phonology

Shôji Oshima

0. The Miao language is spoken over the area extending from 貴州 and the eastern part of 湖南, China to the mountainous regions of North Vietnam, Laos, and northern Thailand. The Miao tribe, the speakers of the Miao language, is generally divided into five main groups depending on the colours of their costumes : namely, Red, Black, White, Green and Flowery Miao.

1. The Miao language with which we deal in this paper is one of the Black Miao dialects spoken at 施同口, 台拱県 of 貴州 province. As these Black Miao people, the speakers of this dialect, differ from the other mountainous Black Miao, and make their living through fishing or trading along the river 清水江, we name this dialect "清江 Miao dialect" after the name of river.

1.1. The material for this study is taken entirely from the data,²⁾ gathered by Professor Li Fang-Kuei in 1941, from the speech of Mr. Yang Lao-Sheng. We have no particulars on the informant except that he was about fifty years old at the time when his speech was recorded, and that he spoke with clarity and also could understand Chinese.

1) *Eng. Miao, Fr. Miao, Ger. Meau, Chin. miao*² 苗

2) The data consist of more than 1400 vocabularies, with many phrases, and three stories. The glosses in the field notes are all in Chinese.

2. Phonemes³⁾

The dialect has the following consonant and vowel phonemes:

Consonant phonemes:

Plosives	: /p,t,k,q : ph,th,kh,qh/ ⁴⁾
Affricates	: /č : čh/
Fricatives	: /f,s,ʃ,š : fh,sh,ʃh,šh ⁵⁾ : x,h : ɣ : v/
Nasals	: /m,n,ŋ : mh,nh,ŋh : ɲ/
Others	: /l : ʹ : N : y/
Vowel phonemes	: /i,e,ɛ,a,o,u/

3) In this paper, the author makes a description of the phonological system of 清江 Miao dialect following Prof. Roman Jakobson's "distinctive feature theory" or "binary opposition theory". See, R. JAKOBSON, C. GUNNAR M. FANT and M. HALLE, *Preliminaries to Speech Analysis, The distinctive Features and their Correlates*, Acoustics Laboratory, Massachusetts Institutes of Technology, 1952. R. JAKOBSON and M. HALLE, *Fundamentals of Language*, Mouton and Co., The Hague, 1956.

4) Phoneme symbols are in / /, and phonetic symbols for which the Broad Transcription is used in this paper are in [].

5) The author assumes the aspirated and unaspirated fricative consonants as separated phonemes respectively for 清江 Miao dialect, but changes may be made in the future when the further work proceeds. cf. In disagreement with Prof. H. MASPERO's negative opinion on the opposition of aspirated and unaspirated fricatives in T'ang Chinese, Prof. B. KARLGREN advocates again the possibility of these opposition : " M. MASPERO (Phonét. Ann. p. 39) semble être d'avis que la différence entre fei f : fouf 'était plutôt théorique que réelle : Le chinois ancien [c. -à-d. ce que nous appelons ici chinois moyen] possédait deux spirantes labiales, sourde et sonore, f et v, dont la première

2.1. Consonant phonemes

2.1.1. Plosives

2.1.1.1. Plosive phonemes are /p, t, k, q : ph, th, kh, qh/ ; .
/p, ph /are bilabials, /t, th/are dentals, /k, kh/are velars
and /q, qh/are uvulars.

The features which these have in common are interruptedness and mellowness. /p, t, k, q/are opposed to /ph, th, kh, qh/ by the distinctive feature, lax vs. tense, /p, t : ph, th/are to /k, q : kh, qh/ by diffuse vs. compact, and /p, q : ph, qh/are to /t, k : th, kh/ by grave vs. acute.

2.1.1.2. The sounds which fall under /p, t, k, q/ are unaspirated voiceless [p, t, k, q].

Ex. /pa⁵/ [pa] <pig>
/ta⁵/ [ta] <to kill>
/ka⁵/ [ka] <green>
/qa⁵/ [qa] <cock-crow>

est, dans les tableaux phonétiques, répartie en deux classes suivant l'origine *p* ou *p'* de l'initiale." Cette vue n'est peut-être pas inadmissible, mais je n'en vois pas la nécessité. Il serait parfaitement naturel que *p'* produise un *f* plus fort que celui né de *p*. Les fan ts'ie des divers dictionnaires distinguent scrupuleusement entre *f* et *f'*. Cela est vrai même pour le Tcheng yun, qui est très indépendant des anciennes traditions philologiques, et même quand ce dictionnaire a choisi d'autres ts'ie initiaux que les autres lexiques, il ne confond pas *f* et *f'*." (*Etudes sur la phonologie chinoise*, Archives d'études orientales publiées par J.-A. Lundell, vol.15, 1915-1926, reprinted in Pekin. 1931. p.553)

6) Raised numerals after the forms denote tones, see below.

2.1.1.3. The sounds which fall under /ph, th, kh, qh/ are aspirated voiceless [p', t', k', q'] .

Ex. /pha⁵/ [p'a] 《to split (firewood)》

/tha⁵/ [t'a] 《to disperse》

/kha⁵lya²/ [k'a lja] 《magpie》

/qha⁵/ [q'a] 《guest》

2.1.2. Affricates

2.1.2.1. Affricate phonemes are /č, čh/; Both of them are palatals.

The features which these have in common are interruptedness and stridency. /č/ is opposed to /čh/ by the distinctive feature, lax vs. tense.

2.1.2.2. The sound which falls under /č/ is unaspirated voiceless [tʃ].

Ex. /ča¹/ [tʃa] 《poison》

/čhoN²/ [tʃoŋ] 《root (of a tree)》

2.1.2.3. The sound which falls under /čh/ is aspirated voiceless [tʃʰ].

Ex. /čhu¹/ [tʃʰu] 《stomach》

/čhi³tu⁸/ [tʃʰi tu] 《to kindle a fire》

2.1.3. Fricatives

2.1.3.1. Fricative phonemes are /f, s, ɸ, ʃ : fh, sh, ɸh, ʃh : x, h, v/; /f, fh, v/ are labio-dentals, /s, sh/ are dentals /ɸ, ɸh/ are laterals, /ʃ, ʃh/ are palatals, /x/ is velar and /h/ is uvular.

The features which these have in common are continuant and stridency. /fh, sh, ɸh, ʃh/, /f, s, ɸ, ʃ/ and /v/ are opposed to one another by the distinctive feature, tense vs. tense-lax, vs. lax, /f, fh, s, sh, v/, /ʃ, ʃh, ɸ, ɸh/ and /x, h/ are opposed

to one another by diffuse vs. diffuse - compact vs. compact,
/f, fh, v, h/ are to /s, sh, š, šh, ʈ, ʈh, x/ by grave vs. acute.

2.1.3.2. The sounds which fall under /f, s, ʈ, š, x, h/ are un-
aspirated voiceless [f, s, ʈ, ʂ, x, χ].

- Ex. /fa⁵/ [fa] 《very》
/sa⁵/ [sa] 《firewood knife》
/ʈa⁵/ [ʈa] 《to cut off, sever》
/ša⁶N⁶/ [ʂang] 《shaman》
/xa³/ [xa] 《to attend a funeral》
/ha³/ [χa] 《to pity》

2.1.3.3. The sounds which fall under /fh, sh, ʈh, šh/ are aspi-
rated voiceless [f', s', ʈ', ʂ'].

- Ex. /fha¹N¹/ [f'aj] 《desert rice field》
/sha⁵/ [s'a] 《sand》
/ʈha⁵/ [ʈ'a] 《thread》
/šha⁶/ [ʂ'a] 《to shift a sieve》

2.1.3.4. The sounds which fall under /v, v̥/ is unaspirated
voiced [v, v̥].

- Ex. /va⁴/ [va] 《I, me》
/v̥a⁵/ [v̥a] 《to be late》

2.1.4. Nasals

2.1.4.1. Nasal phonemes are /m, n, ŋ : mh, nh, ŋh : ɲ/; /m,
mh/ are bilabials, /n, nh/ are dentals, /ŋ, ŋh/ are palatals, /ɲ/
is velar.

The feature which these have in common is nasality. /mh,
nh, ŋh/ are opposed to /m, n, ŋ/ by the distinctive feature, tense
vs. lax, /m, mh, n, nh, ŋ, ŋh/ are to /ɲ/ by diffuse vs. compact,
/m, mh/ to /n, nh, ŋ, ŋh/ by grave vs. acute.

2.1.4.2. The sounds which fall under /m, n, ŋ, ɲ/ are unasp-

rated voiced, [m, n, ŋ, ɲ]

- Ex. /ma⁶/ [ma] <eyes>
 /na⁶/ [na] <bamboo shoot>
 /ña⁷/ [ɲa] <husband of the younger sister>
 /ɲa⁶/ [ɲa] <dry>

2.1.4.3. The sounds which fall under /mh, nh, ñh/ are aspirated voiceless [m^h, n^h, ñ^h]

- Ex. /mha⁵/ [m^ha] <to talk>
 /nha⁶/ [n^ha] <sky>
 /ñhu⁵/ [ñ^hu] <year>

2.1.5. /N/

/N/ is the only one phoneme which can not occur except in final position of a syllable.

2.1.5.1. The sound which falls under /N/ is divided into two, dental [n] and velar [ŋ] : that is, [n] falls under /N/ after /i/ and /e/, and [ŋ] does after /a/ and /o/.

- Ex. /phiN¹/ [p'in] <dust>
 /siN⁶/ [sin] <to ask>
 /teN⁶/ [ten] <cup>
 /neN⁶/ [nen] <flour>
 /paN²/ [paŋ] <flower>
 /qaN³/ [qaŋ] <frog>
 /tyoN⁴/ [tjoŋ] <valley>
 /shoN³/ [s'og] <bone>

2.1.6. Lateral /l/

2.1.6.1. The sound which falls under /l/ is voiced lateral [l].

- Ex. /la⁵/ [la] <to snap fingers>
 /liN¹/ [lin] <to be crowded>

2.1.7. Glottal / ʔ /

2.1.7.1. The sound which falls under / ʔ / is glottal plosive [ʔ].

- Ex. / a⁵ / [ʔa] 《to make, weave》
 / o⁵ / [ʔo] 《younger brother》

2.1.8. Semi-vowel phoneme / y /

2.1.8.1. The sound which falls under / y / is the glide [j], the friction is very weak.

This phoneme occurs only before a vowel, never after a vowel, and among initial consonant phonemes, only / p, t, č, ʧ, š : ph, th, čh, ʧh, šh : l / can be combined with / y /.

- Ex. / ya¹ / [ja] 《young rice plants》
 / pye¹ / [pje] 《three》
 / phye³ / [p'je] 《to burn》
 / tya⁸ / [tja] 《elder brother》
 / thyo⁵ / [t'jo] 《rope》
 / čyu⁶ / [tɕju] 《needle》
 / čhyu¹ / [tɕ'ju] 《belly》
 / ʧye⁷ / [ʧje] 《tadpole》
 / ʧhyu⁵ / [ʧ'ju] 《to blow (one's nose)》
 / lyu⁸ / [lju] 《tomato》
 / šyo⁷ / [ɕjo] 《red》
 / šhye³ / [ɕ'je] 《to see》

2.2. Vowel phonemes

Vowel phonemes are / i, e, ε, a, o, u /, and these are phonologically opposed as follows :

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	plain	flat
diffuse	i	u
{compact		
{diffuse	e	o
compact	ε	a
		o

Among these vowels, /e/ can be combined with /i/: /a/ can be combined with /i/ and /u/.

2.2.1. /i/

The sound which falls under /i/ is a close, front vowel [i].

Ex. /phi⁷/ [p'i] 《girl》

/yi⁴/ [ji] 《eight》

2.2.2. /e/

The sound which falls under /e/ is a half-close, front vowel [e]. When this is combined with /i/, the sound which falls under /ei/ is a rising diphthong [eĩ].

Ex. /ke³/ [ke] 《road, street》

/xe³/ [xe] 《to count》

/nei²/ [neĩ] 《he, him: she, her》

/lei¹/ [leĩ] 《monkey》

2.2.3. /ε/

The sound which falls under /ε/ is a half-open, front vowel [ε].

Ex. /nε²/ [nε] 《ear》

/tε⁴/ [tε] 《to run》

2.2.4. /a/

The sound which falls under /a/ is an open, back vowel [a]. When this is combined with /i/ and /u/, the sound of /ai/, /au/ is a rising diphthong [aĩ], [aũ] respectively.

Ex. /pa⁵/ [pa] 《swine》.

/sha³/ [s'a] 《uncooked rice》

/tai¹/ [tai] 《cucumber》

/sai¹/ [sai] 《good, fine》

/tau⁵/ [tau] 《tree》

/,au¹/ [ʔau] 《water》

2.2.5. /o/

The sound which falls under /o/ is a half-open, back vowel [o].

Ex. /qo⁵/ [qo] 《old, worn out》

/ko⁶/ [ko] 《to fall down》

2.2.6. /o/

The sound which falls under /o/ is a half-close, back vowel [o].

Ex. /so⁷/ [so] 《to escape, flee》

/ko⁷/ [ko] 《hard, tough》

2.2.7. /u/

The sound which falls under /u/ is a close, back vowel [u].

Ex. /pu⁷/ [pu] 《to open (door)》

/su⁵/ [su] 《small, little》

3. Syllables

3.1. When we consider all possibilities of occurrences, the syllable of the dialect can be formulated as $CyVN/T$ (C indicates an initial consonant, y a semi-vowel, N a final consonant, and T a tone).

This sequence actually occurs according to the existence or non-existence of y and N as follows :

- 1) CV/T
- 2) CyV/T
- 3) CVN/T

4) *CyVN/T*

Note: 1) Every initial consonant can occur in the place of *C-*.

2) The consonants which can occur in the position of *Cy-* are /p, t, č, †, š, ph, th, čh, †h, šh, l/.

3) Every vowel can occur in the position of *-V*.

4) The vowels which can occur in the position of *-VN* are /i, e, a, o/

3.2. The following table shows the *CV, CyV, CVN* and *CyVN* combinations found in our material. The symbol *x* indicates that there are examples of such combinations:— indicates that the examples are not found.

	i	e	ε	a	u	o	ɔ	ei	ai	au	iN	eN	aN	oN
p-	x	x	—	x	x	x	x	—	x	—	—	—	x	x
ph-	x	x	—	x	x	x	x	—	—	—	x	—	x	—
m-	x	x	—	x	x	x	x	—	x	—	x	—	x	x
mh-	—	x	—	x	—	x	x	—	—	—	—	—	x	—
f-	x	—	—	x	x	—	—	—	x	—	—	—	x	—
fh-	—	—	—	x	—	—	—	—	x	—	—	—	x	—
v-	x	x	—	x	x	—	x	—	x	—	—	x	x	—
t-	—	x	x	x	x	x	x	—	x	x	x	x	x	x
th-	—	—	x	x	—	x	x	—	—	—	—	—	x	—
n-	—	x	x	x	x	x	x	x	x	x	—	x	x	x
nh-	—	x	x	x	—	—	—	—	—	x	—	—	x	—
†-	x	—	x	x	—	x	x	—	x	—	—	—	x	x
†h-	—	—	x	x	—	—	x	x	x	x	—	—	x	—
l-	x	—	x	x	—	x	x	x	—	—	x	—	—	x
s-	—	x	x	x	x	x	x	x	x	x	x	—	—	—
sh-	—	x	x	x	x	x	x	x	x	x	—	—	x	x
py-	—	x	—	—	—	—	—	—	—	—	—	—	—	—

phy-	—	x	—	—	—	—	—	—	—	—	—	—	—	—
ty-	x	x	—	x	x	x	x	—	—	—	—	—	x	x
thy-	—	—	—	x	—	x	x	—	x	—	—	—	—	—
ñ-	x	x	—	x	x	—	x	—	—	—	—	x	—	x
ñh-	x	—	—	—	x	—	x	—	—	—	—	—	x	x
ɬy-	—	x	—	x	x	x	x	—	—	—	—	—	x	x
ɬhy-	—	—	—	—	x	x	—	—	—	—	—	—	—	—
ly-	x	x	—	—	x	x	x	—	—	—	—	—	x	x
č-	x	x	—	x	x	x	x	—	—	—	—	x	—	x
čh-	x	x	—	—	x	—	—	—	—	—	—	—	x	—
čy-	—	—	—	—	—	x	—	—	—	—	—	—	x	—
čhy-	—	—	—	—	—	x	—	—	—	—	—	—	—	—
š-	x	x	—	—	x	x	x	—	—	—	—	x	—	x
šh-	x	x	—	x	x	x	—	—	—	—	—	x	x	x
šy-	—	x	—	—	x	x	x	—	—	—	—	—	x	—
šhy-	—	x	—	x	x	x	—	x	—	—	—	—	x	—
y-	x	x	—	x	x	x	x	—	—	—	—	x	x	x
k-	x	x	—	x	x	x	x	x	—	x	—	—	x	—
kh-	—	x	—	x	—	—	—	—	—	x	x	—	—	x
x-	x	x	x	x	x	x	x	x	x	x	x	—	x	—
ŋ-	—	x	—	x	—	x	x	—	—	—	—	—	x	—
ʎ-	—	x	—	x	x	x	x	—	—	x	—	—	x	x
q-	—	—	x	x	—	x	x	—	x	x	—	—	x	x
qh-	—	—	x	x	—	x	x	—	x	x	—	—	x	x
h-	—	—	x	—	—	x	x	—	x	x	—	—	x	x
ʰ-	x	x	x	x	—	x	x	x	—	x	—	—	x	x

4. Tones

4.1. There are eight tones in the dialect.

1. Mid-high level (˥˥)

2. Falling from high to low (↘51)
3. High level (⌈55)
4. Mid-low level (—|22)
5. Rising from mid to high (↗35)
6. Mid level (—33)
7. Rising from low to mid (↗13)
8. Low level (⌊11)

* The tone will here be designated by raised numerals to the right of the word, as in /pa¹/ 《to send》, /pa²/ 《to fall》, /pa³/ 《to fill(water)》, /han³pa⁴/ 《net》, /pa⁵/ 《pig,swine》, /pa⁶/ 《style(of hair)》, /pa⁷/ 《father》, /kaN¹γaN⁶pa⁸/ 《spider》.

4.2. The following table shows the distribution of tones according to the initial consonant C- and Cy-. Clusters with /y/ as second number, ex. /py-, ty-, čy-,... /, are listed in the same horizontal line as the initial consonant alone. The symbol x under a given number (representing a tone) and after a given initial indicates that syllables occur with that tone and that initial, and the symbol — does that syllables do not occur with that tone and that initial. Where a consonant and a cluster are listed together, there is a separate x or — for each.

	1	2	3	4	5	6	7	8
p-,py-	x x x	— x —	x x x x	x x x x	x x x x	x x x x	— x —	—
ph-,phy-	x — — —	x x — —	x — — —	x — — —	x — — —	x — — —	x — — —	—
m-	x	x	x	x	x	x	x	x
mh-	x	—	x	—	x	—	x	—
f-	x	—	x	x	x	x	x	x
fh-	x	x	x	—	x	x	x	—
v-	x	x	x	x	x	x	x	x

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t-,ty-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
th-,thy-	x	x	—	—	x	x	—	—	x	x	—	—	x	x	—	—	
n-		x		x	x	x		x	x		x		x		x		
nh-		x		—	x		—	x		—	x		—				
s-		x		x	x	x		x		x		x		x		x	
sh-		x		x	x	—		x		x		x		—			
†-†y-	x	x	x	x	x	x	x	x	x	x	x	x	x	—	x	x	x
†h-,†hy-	x	x	—	—	x	x	—	—	x	x	x	x	x	—	—	—	—
l-,ly-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
č-,čy-	x	—	x	x	x	x	x	—	x	—	x	x	x	x	x	x	—
čh-,čhy-	x	x	—	—	x	x	—	—	x	x	x	—	x	x	—	—	—
ň-		x		x	x	x		x		x		x		x		x	
ňh-		x		—	x		—	x		x		x		—			
š-,šy-	x	x	—	x	x	x	x	—	x	x	x	x	x	x	x	—	x
šh-,šhy-	x	x	x	—	x	x	x	—	x	x	x	x	x	x	—	—	—
y-		x		x	x	x		x		x		x		x		x	
k-		x		x	x	x		x		x		x		x		x	
kh-		x		—	x		—	x		x		x		—			
ǰ-		x		x	—	x		x		x		—		x			
x-		x		—	x		—	x		x		x		—			
ǰ-		x		x	x	x		x		x		x		x		x	
q-		x		x	x	x		x		x		x		—			
qh-		x		—	x		—	x		x		x		—			
h-		x		x	x	x		x		x		x		x		x	
,-		x		—	x		—	x		x		x		—			

Ex. /pa¹/ 《to send》, /pa²/ 《to fall》, /pa³/ 《to fill(water)》, /han³ pa⁴/ 《net》, /pa⁵/ 《pig,swine》, /pa⁶/ 《style (of hair)》, /pa⁷/ 《father》, /kaN¹ aN⁶ pa⁸/ 《spider》

/pye¹/ 《three》, /pye⁴/ 《slope (of a hill)》, /pye⁵ tɛ¹/ 《to

- sleep) /tyu² pye⁶ / 《back(gate)》
 /phiN¹ / 《dust》, /phe³ / 《pumpkin》, /pha⁵ / 《to split (wood)》,
 /phi⁶ / 《broad》, /phi⁷ / 《girl》
 /phye³ / 《to burn》
 /mo¹ / 《to pain》, /mo² / 《you》, /kaN¹mo³ / 《a kind of in-
 sects》, /mo⁴ / 《to go》, /miN⁵ / 《a well》, /ma⁶ / 《eyes》,
 /mo⁷ / 《woman》, /me⁸ / 《thumb》
 /kaN¹mhai¹ / 《flea》, /mhe³ / 《teeth》, /mha⁵ / 《to speak》,
 /mhoN⁷yo¹ / 《 ? 》
 /fai¹ / 《cucumber》, /faN³ / 《wide》, /fai⁴ / 《day》, /fa⁵ / 《ver-
 y》, /fai⁶ / 《?》, /the¹fai⁷ / 《riverside》, /fai⁸ / 《to escape》
 /fhaN¹ / 《desert rice field》, /fhaN² / 《bright》, /fha³mo⁴ /
 《?》, /qa⁶fha⁵lu¹ / 《?》, /fha⁶ / 《not heavy》, /fhaN⁷ / 《to
 lose》
 /vaN¹sha³ / 《dust-pan》, /va² / 《south》, /ve³yu⁶ / 《hus-
 band and wife》, /vi⁴ / 《pan,pot》, /vaN⁵lo⁴ / 《to cut into two
 pieces》, /vu⁶ / 《taro》, /vu⁷ / 《old woman》, /va⁸ / 《I, me》
 /ta¹ / 《nephew》, /ta² / 《to fall (rain)》, /ta³ / 《to take,use,
 etc.》, /to⁴ / 《far》, /ta⁵ / 《to kill,break》, /ta⁶ / 《to die》, /tai⁷ /
 《wings》, /ta⁸ / 《classifier for animals》
 /tyu¹ / 《pine》, /tyu² / 《door》, /tyo³ / 《idiot》, /tyoN⁴ / 《val-
 ley》, /tyu⁵ / 《six》, /tyo⁶ / 《broom》, /tyu⁷ / 《knife》, /tyu⁸ /
 《waist》
 /thaN¹ / 《ladder》, /tha³ / 《to strip》, /tho⁵ / 《socks》, /the⁷ /
 《to drop》
 /thya¹ / 《fork (of a tree)》, /thyo³ / 《to change》, /thyo⁵ /
 《rope》, /thyu⁷ka³ / 《to have diarrhoea》
 /ne¹ / 《liver》, /na² / 《person》, /no³ / 《cool》, /ne⁴ / 《fish》,
 /no⁵ / 《many,much》, /na⁶ / 《bamboo shoot》, /tyaN⁷moN⁴nai⁷ /

《to cut into small pieces》, /ta³ nau⁸ / 《glutinous rice》
 /nha¹ / 《day》, /nhaN³ / 《to listen, hear》, /nha⁵ / 《sky》,
 /ku⁸ nhau⁷ / 《cough》
 /sai¹ / 《good, fine》, /sa² / 《even, smooth》, /se³ / 《house, home》,
 /sei⁴ / 《cold》, /sa⁵ / 《firewood knife》, /siN⁶ / 《to ask》, /so⁷
 / 《to flee》, /so⁷ / 《to play with》
 /sha¹ / 《the day after tomorrow》, /shei² / 《money》, /sha³ /
 《uncooked rice》, /sha⁵ / 《umbrella》, /sheN⁶ / 《the 9th of the
 cyclic terms》, /sho⁷ / 《to close》
 /ʃε¹ / 《to run》, /ʃoN² / 《?》, /ʃε³ / 《dog》, /ʃai⁴ / 《to enter》,
 /ʃa⁵ / 《to cut off》, /ʃai⁶ / 《to coax, beguile》, /ʃaN⁸ / 《horn》
 /ʃyo¹ / 《squirrel》, /ʃyoN² / 《ring》, /ʃyu³ / 《heart》, /ʃyaN⁴
 qoN³ / 《?》, /ʃyoN⁵ / 《nightingale》, /ʃyu⁶ / 《hair》, /ʃyu⁷ / 《to
 save》, /ʃyo⁸ / 《to pull》
 /ʃho¹ / 《salamander》, /ʃho³ / 《bamboo》, /ʃha⁵ / 《thread》,
 /ʃhaN⁶ / 《grandchild》, /ʃhai⁷ ɲe² / 《to cut the meat》
 /ʃhya¹ / 《to miss (a person)》, /ʃhyo³ / 《?》, /ʃhyu⁵ / 《to
 blow (one's nose)》, /ʃhyo⁶ / 《?》
 /la¹ / 《general classifier》, /la² / 《to mow》, /la³ / 《short》,
 /la⁴ / 《to move away》, /la⁵ / 《to play (string instrument)》,
 /la⁶ / 《cave, den》, /lo⁷ / 《rabbit, hare》, /la⁸ / 《candle; smooth,
 polished》
 /lyu¹ / 《tomato》, /qa⁵ lya² / 《magpie》, /lyo³ / 《ox, cow》,
 /lyaN⁴ / 《to bury》, /lyu⁵ / 《cheek》, /qo⁶ lyu⁶ še¹ / 《elbow》,
 /lyi⁷ / 《skin》, /lyoN⁸ / 《green》
 /ča¹ / 《poison》, /čo² / 《nine》, /či³ / 《son-in-law》, /čo⁴ /
 《camellia》, /či⁵ / 《wind》, /čo⁶ / 《west》, /či⁷ / 《noble》, /ču⁸ / 《ten》
 /čyu² / 《bridge》, /čyu³ / 《alcoholic drink》, /čyu⁶ / 《needle》,
 /čyu⁷ / 《?》

/čhu¹/《stomach》, /čho³/《harrow》, /čhyu⁵ čhi⁵/《?》,
/čhe⁶te¹/《to sweep the ground》, /tyaN¹ čhi⁷/《fine-toothed
comb》

/čhyu¹/《belly》, /ne⁴ čhyu³/《a kind of fish》, /čhyu⁵čhi⁵/
《?》, /čhyu⁷ qa¹ po¹/《?》

/ni¹/《to spin》, /ne²/《silver》, /noN³/《?》, /no⁴/《flow-
er》, /nu⁶/《thick, dense》, /na⁷/《husband of younger sister》,
/ne⁸/《tongue》

/ňho¹/《beautiful》, /ňhoN³/《?》, /ňhu⁵/《year》, /ňhi⁶
ma⁶/《eyes》, /'au¹ nhaN⁷/《sweat》

/še¹/《to bark》, /qau⁵ šo³/《tiger》, /šuN⁴/《seven》, /ši⁵/
《to starve》, /šaN⁶/《shaman》, /ši⁷ tu⁴/《wedge》

/šyo¹/《tiger》, /tyo⁵ šyaN²/《?》, /šyaN³/《four-footed》,
/šun⁵/《spear》, /šyaN⁶/《to teach》, /šyo⁷/《red》, /šyu⁸/
《warm》

/nau⁶šha¹ 'au¹/《kingfisher》, /šheN²/《the 5th of the cyclic
terms》, /šhaN³/《blood》, /šheN⁴/《the 11th of the cyclic
terms》, /šhiN⁵/《rust》, /šha⁶/《to sift, sieve》, /šha⁷/《basket》
/šhya¹/《to write》, /šhye³/《to see》, /šhya⁵/《to worry》,
/šhyu⁶ poN⁵ ho³/《acid》, /šhyaN⁷/《?》

/ya¹/《younger rice plants》, /yeN²/《the 9th of ten Celestial
Stems》, /kaN¹ yu³/《fly》, /yi⁴/《eight》, /yo⁵/《under》,
/ya⁶/《?》, /yo⁷/《musk》, /ye⁸/《taste》

/ka¹/《to parch》, /kei²/《to cry》, /ka³/《meal》, /ke⁴/《man-
tis》, /ka⁵/《green》, /ko⁶/《to fall down》, /ki⁷/《scissors》,
/kei⁸/《low》

/khoN¹/《shrimp, prawn》, /kha³/《?》, /khiN⁵/《basket》,
/kha⁶/《duck》, /khei⁷/《harrow》

/ta⁴ mo⁷ ŋe¹/《cat》, /ŋoN²/《to look for》, /ŋaN⁴/《goose》,

/ɣe⁵/《?》, /ŋa⁶/《dry》, /ɣe⁸/《narrow》
 /xaN¹/《to walk》, /xa³/《to attend a funeral》, /xoN⁵/《to go
 away》, /xe⁶/《tall, high》, /xei⁷ nei² nɔ²/《not to let him eat》
 /ɣe¹/《stone》, /ɣa²/《pear》, /ɣau³/《wild ox》, /ʃi⁵ɣe⁴/《to
 quarrel, fight》, /ɣa⁵/《to be late》, /ɣaN⁶/《to search for》,
 /ɣo⁷ kɛ¹/《to go down》, /ɣaN⁸/《fort》
 /qaN¹/《delicious》, /qaN²/《jaws》, /qaN³/《frog》, /qoN⁴/
 《to curve》, /qa⁵/《cock-crow》, /qa⁶/《star》, /qai⁷ tu⁴/
 《?》
 /qho¹/《hush》, /qhe³/《to wrap (things)》, /qha⁵/《out-
 side》, /čho⁵ qho⁷/《?》
 /ho¹/《fog, mist》, /he² čyu²/《?》, /ho³/《very》, /he⁴/
 《to scare, frighten》, /ha⁵/《to have compassion》, /hau⁶/《pot,
 jug》, /hau⁷ yiN¹/《to smoke (tobacco)》
 /'au¹/《water》, /'aN³/《pond》, /'au⁵/《cloud》, /'i⁶/
 《one》, /'iN⁷/《to crowd》

5. On the basis of the preceding table, it is possible to group the tones into two types. One type consists of tones 1, 3, 5, (6) and 7, which appear in syllables with almost any initials; the other type consists of tones 2, 4, (6) and 8, which have a rather restricted occurrence.

The initials also seem to group themselves into two main types. The unaspirated voiceless plosives /p, t, k, q/ (but not /' /), the unaspirated voiceless affricate /č/, the unaspirated voiced nasals /m, n, ŋ/, the unaspirated voiceless fricatives /f, s, ʃ, h, v, ɣ/, the lateral /l/, and the semi-vowel /y/ apparently occur with all eight tones. The aspirated voiceless plosives /ph, th, kh, qh/, the aspirated voiceless affricates /čh/, the aspirated voiceless nasals /mh, nh, ŋh/,

the aspirated voiceless fricatives /fh, sh, ɬh, ʃh /, the glottal / ʔ / and / x / seem to permit only tones 1, 3, 5, (6) and 7, although there are a few exceptions.

6. That the tones have a definite relation to the initials in the tone languages is a well-known phenomenon.⁷⁾ As for the tone system of the Chinese and Tai languages, there were

7) cf. " Il y a même en Indochine un curieux parallélisme entre langues variotoniques et langues monotoniques quant à l' influence sur la syllabe de la qualité sourde ou sonore de l' initiale : alors que dans toutes les langues variotoniques d' Extrême-Orient, et singulièrement en chinois et t'ai, une initiale sourde commande un ton plus élevé qu' une initiale originellement sonore, dans une langue monotonique comme le cambodgien, où les sonores se sont assourdies, une initiale originellement sourde commande un timbre de la voyelle plus ouvert qu' une initiale originellement sonore." (G. COEDES, *Les langues de l' Indochine*, Conférences de l' Institut de Linguistique de l' Université de Paris, 8. Années 1940-1948. Paris, 1949, p.67)

For the development of tones as influenced by the different initials, see : LI F-K., *The influence of the primitive Tai glottal stop and pre-glottalized consonants on the tone system of Po-ai*, *Bulletin of Chinese Studies* 4, 59-67, 1944, *The hypothesis of a pre-glottalized series of consonants in primitive Tai*, *Acad. Sin.* 11. 177-188, 1947, *The distribution of initials and tones and tones in the Sui language*, *Language* 24-2, 160-167, 1948, *Consonant clusters in Tai*, *Language* 30, 369-371, 1954, *The Jui dialect of Po-ai and the northern Tai*, *Acad. Sin.* 29, 315-322, 1957, *Initials and tonal development in Tai dialects*, *Acad. Sin.* 34, 31-36, 1962, *The relationship between tones and initials in Tai*, *Studies in Comparative Austroasiatic Linguistics*, 82-88, 1966; H.

originally, as far as we can trace them back, four tones in both of them. These four tones, then, under the influence of different initials, later develop into eight (six in syllables without a final stop, plus two in syllables with a final stop), chiefly according to the voiced or voiceless nature of the initials.⁸⁾ On the basis of the foregoing statement, it seems possible to assume that the original voiceless initial takes a high tone register, and the original voiced initial takes a low tone register as the result of its historical development.

We may tentatively consider that in 清江 Miao dialect, the tones 1, 3, 5, (6) and 7, which are considered to be high tone register, as developed in syllables with voiceless initials, and the tones 2, 4, (6) and 8, which are considered to be low tone register, as developed in syllables with voiced initials. These

MASPERO, *Contribution à l'étude du système phonétique des langues tai*, BEFEO 11, 153-169, 1911, *Etudes sur la phonétique historique de la langue annamite*, BEFEO 12, 88-103, 1912; K. WULFF, *Chinesisch und Tai. Sprachvergleichende Untersuchungen*, Danske Videnskabernes Selskab, Hist.-filol. Meddelelser 20-3, 1-260, 1934, CHANG KUN, *Comparative study of the tone system of the Miao-Yao dialects*, Acad. Sin. 16, 93-110, 1947, T. NISHIDA, *Tonematica Historica*, 西田龍雄, トネームによるタイ諸語比較言語学的研究, 言語研究 25, 19-46, 1954, A. G. HAUDRICOURT, *De l'origine des tons en vietnamien*, JA 242, 69-82, 1954, *Bipartition et tripartition des tons dans quelques d' Extrême Orient*, BSL 56, 163-180, 1961, etc.

(8) cf. LI, *The distribution of initials and tones in the Sui language*, op. cit. 165-166

admittedly broad statements are to be tested, and may certainly be modified by more detailed comparative studies in the future, as other undetermined factors⁹⁾ may play a part in the development of the tones.

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(9) The author tentatively assumes the pre-glottalized consonants as the source for the voiced consonants which permit 1, 3, 5, (6) and 7, but this should be examined by the future study. (cf. LI, *The hypothesis of a preglottalized series of consonants in primitive Tai*, *op.cit.*)