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Preliminary Study on a Black Miao Dialect : Phonology

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Preliminary Study on a Black Miao[1] 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.

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1) *Eng.* Miao, *Fr.* Méo, *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. Phonemes[3]

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,ɬ, š : fh, sh,ɬh, šh[5] : x, h : ɣ : v/
Nasals	:	/m, n, ň : mh, nh, ňh : ŋ/
Others	:	/l : ˀ :N :y/
Vowel phonemes	:	/i, e, ɛ, a, ɔ, o, u/

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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* : fou*f* 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. /pa^{5}/[6] [pa] 《pig》
/ta^{5}/ [ta] 《to kill》
/ka^{5}/ [ka] 《green》
/qa^{5}/ [qa] 《cock-crow》

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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 scrupulesement 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 orientals 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. /pha ^{5}/ [p'a] 《to split (firewood)》
/tha ^{5}/ [t'a] 《to disperse》
/kha ^{5} lya ^{2}/ [k'a lja] 《magpie》
/qha ^{5}/ [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 [tɕ].

Ex. /ča ^{1}/ [tɕa] 《poison》
/čhoN ^{2}/ [tɕong] 《root (of a tree)》

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

Ex. /čhu ^{1}/ [tɕ'u] 《stomach》
/čhi ^{3} tu ^{8}/ [tɕ'i tu] 《to kindle a fire》

2.1.3. Fricatives

2.1.3.1. Fricative phonemes are /f, s, ɬ, š : fh, sh, ɬh, šh : x, h, v/; /f, fh, v/ are labio-dentals, /s, sh/ are dentals /ɬ, ɬh/ are laterals, /š, šh/ are palatals, /x/ is velar and /h/ is uvular.

The features which these have in common are continuant and stridency. /fh, sh, ɬh, šh/, /f, s, ɬ, š/ and /v/ are opposed to one another by the distinctive feature, tense vs. tense-lax, vs. lax, /f, fh, s, sh, v/, /š, šh, ɬ, ɬh/ 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, ɬ, ɬh,x/by grave vs. acute.

2.1.3.2. The sounds which fall under /f, s,ɬ, š, x, h/ are unaspirated voiceless [f, s,ɬ, ɕ, x, χ].

Ex. /fa ^{5}/ [fa] 《very》
/sa ^{5}/ [sa] 《firewood knife》
/ɬa ^{5}/ [ɬa] 《to cut off, sever》
/šaN ^{6}/ [ɕang] 《shaman》
/xa ^{3}/ [xa] 《to attend a funeral》
/ha ^{3}/ [χa] 《to pity》

2.1.3.3. The sounds which fall under /fh, sh,ɬh, šh/ are aspirated voiceless [f', s', ɬ', ɕ'].

Ex. /fhaN ^{1}/ [f'aŋ] 《desert rice field》
/sha ^{5}/ [s'a] 《sand》
/ɬha ^{5}/ [ɬ'a] 《thread》
/šha ^{6}/ [ɕ'a] 《to shift a sieve》

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

Ex. /va ^{4}/ [va] 《I, me》
/ɣa ^{5}/ [ɣa] 《to be late》

2.1.4. Nasals

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

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

2.1.4.2. The sounds which fall under /m, n, ň, ŋ/are unaspi-

rated voiced, [m, n, ɳ, ŋ]

Ex. /ma^{6}/ [ma] 《eyes》

/na^{6}/ [na] 《bamboo shoot》

/ňa^{7}/ [ɳa] 《husband of the younger sister》

/ŋa^{6}/ [ŋa] 《dry》

2.1.4.3. The sounds which fall under /mh, nh, ňh/ are aspirated voiceless [m̥', n̥', ɳ̊']

Ex. /mha^{5}/ [m̥'a] 《to talk》

/nha^{6}/ [n̥'a] 《sky》

/ňhu^{5}/ [ɳ̊'u] 《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. /phiN^{1}/ [p'in] 《dust》

/siN^{6}/ [sin] 《to ask》

/teN^{6}/ [ten] 《cup》

/neN^{6}/ [nen] 《flour》

/paN^{2}/ [paŋ] 《flower》

/qaN^{3}/ [qaŋ] 《frog》

/tyoN^{4}/ [tjoŋ] 《valley》

/shoN^{3}/ [s'oŋ] 《bone》

2.1.6. Lateral /l/

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

Ex. /la^{5}/ [la] 《to snap fingers》

/liN^{1}/ [lin] 《to be crowded》

2.1.7. Glottal／ʾ／

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

Ex. ／ʾa^{5}／ [ʔa] 《to make, weave》
／ʾo^{5}／ [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, ɬ, š : ph, th, čh, ɬh, šh : l／can be combined with／y／.

Ex. ／ya^{1}／ [ja] 《young rice plants》
／pye^{1}／ [pje] 《three》
／phye^{3}／ [p'je] 《to burn》
／tya^{8}／ [tja] 《elder brother》
／thyo^{5}／ [t'jo] 《rope》
／čyu^{6}／ [tɕju] 《needle》
／čhyu^{1}／ [tɕ'ju] 《belly》
／ɬye^{7}／ [ɬje] 《tadpole》
／ɬhyu^{5}／ [ɬ'ju] 《to blow (one's nose)》
／lyu^{8}／ [lju] 《tomato》
／šyɔ^{7}／ [ɕjɔ] 《red》
／šhye^{3}／ [ɕ'je] 《to see》

2.2. Vowel phonemes

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

	plain	flat
diffuse	i	u
compact	e	o
diffuse		
compact	ɛ a	ɔ

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. /phi^{7}/ [p'i] 《girl》

/yi^{4}/ [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 [eĭ].

Ex. /ke^{3}/ [ke] 《road, street》

/xe^{3}/ [xe] 《to count》

/nei^{2}/ [neĭ] 《he, him: she, her》

/lei^{1}/ [leĭ] 《monkey》

2.2.3. /ɛ/

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

Ex. /nɛ^{2}/ [nɛ] 《ear》

/ɬɛ^{4}/ [ɬɛ] 《to run》

2.2.4. /a/

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

Ex. /pa^{5}/ [pa] 《swine》

／sha^{3}／ [s'a] 《uncooked rice》

／tai^{1}／ [taĭ] 《cucumber》

／sai^{1}／ [saĭ] 《good, fine》

／tau^{5}／ [taŭ] 《tree》

／ʾau^{1}／ [ʔaŭ] 《water》

2.2.5. ／ɔ／

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

Ex. ／qɔ^{5}／ [qɔ] 《old, worn out》

／kɔ^{6}／ [kɔ] 《to fall down》

2.2.6. ／o／

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

Ex. ／so^{7}／ [so] 《to escape, flee》

／ko^{7}／ [ko] 《hard, tough》

2.2.7. ／u／

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

Ex. ／pu^{7}／ [pu] 《to open (door)》

／su^{5}／ [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, ɬ, š, ph, th, čh, ɬh, 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	ɛ	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	—
ɬ-	x	—	x	x	—	x	x	—	x	—	—	—	x	x
ɬh-	—	—	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	—	—	—	—	—
ň-	x	x	—	x	x	—	x	—	—	—	x	—	x	x
ňh-	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	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	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	—
ɣ-	—	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
ʼ-	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 (˧44)

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 /pa [1]/ 《to send》, /pa [2]/ 《to fall》, /pa [3]/ 《to fill (water)》, /han [3]pa [4]/ 《net》, /pa [5]/ 《pig, swine》, /pa [6]/ 《style (of hair)》, /pa [7]/ 《father》, /kaN [1]ɣaN [6]pa [8]/ 《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	—
ph-,phy-	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	

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	
nh-	x		—		x		—		x		—		x		—	
s-	x		x		x		x		x		x		x		x	
sh-	x		x		x		—		x		x		x		—	
ɬ-,ɬy-	x	x	x	x	x	x	x	x	x	x	x	x	—	x	x	x
ɬh-,ɬhy-	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
č-,čy-	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	
ňh-	x		—		x		—		x		x		x		—	
š-,šy-	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	
k-	x		x		x		x		x		x		x		x	
kh-	x		—		x		—		x		x		x		—	
ŋ-	x		x		—		x		x		x		—		x	
x-	x		—		x		—		x		x		x		—	
ɣ-	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		—	

Ex. ／pa[1]／《to send》,／pa[2]／《to fall》,／pa[3]／《to fill(water)》,／han[3] pa[4]／《net》,／pa[5]／《pig,swine》,／pa[6]／《style (of hair)》,／pa[7]／《father》,／kaN[1] aN[6] pa[8]／《spider》

／pye[1]／《three》,／pye[4]／《slope(of a hill)》, ／pye[5] tɛ[1]／《to

sleep》/tyu [2] pye [6]/《back(gate)》

/phiN [1]/《dust》,/phe [3]/《pumpkin》,/pha [5]/《to split (wood)》,/phi [6]/《broad》,/phi [7]/《girl》

/phye [3]/《to burn》

/mo [1]/《to pain》,/mo [2]/《you》,/kaN [1]mɔ [3]/《a kind of insects》,/mo [4]/《to go》,/miN [5]/《a well》,/ma [6]/《eyes》,/mɔ [7]/《woman》,/me [8]/《thumb》

/kaN [1]mhai [1]/《flea》,/mhe [3]/《teeth》,/mha [5]/《to speak》,/mhoN [7]ɣɔ [1]/《?》

/fai [1]/《cucumber》,/faN [3]/《wide》,/fai [4]/《day》,/fa [5]/《very》,/fai [6]/《?》,/thɛ [1]fai [7]/《riverside》,/fai [8]/《to escape》

/fhaN [1]/《desert rice field》,/fhaN [2]/《bright》,/fha [3] mo [4]/《?》,/qa [6] fha [5] lu [1]/《?》,/fha [6]/《not heavy》,/fhaN [7]/《to lose》

/vaN [1]sha [3]/《dust-pan》,/va [2]/《south》,/ve [3] yu [6]/《husband and wife》,/vi [4]/《pan,pot》,/vaN [5]lɔ [4]/《to cut into two pieces》,/vu [6]/《taro》,/vu [7]/《old woman》,/va [8]/《I, me》

/ta [1]/《nephew》,/ta [2]/《to fall (rain)》,/ta [3]/《to take,use, etc.》,/tɔ [4]/《far》,/ta [5]/《to kill,break》,/ta [6]/《to die》,/tai [7]/《wings》,/ta [8]/《classifier for animals》

/tyu [1]/《pine》,/tyu [2]/《door》,/tyo [3]/《idiot》,/tyoN [4]/《valley》,/tyu [5]/《six》,/tyo [6]/《broom》,/tyu [7]/《knife》,/tyu [8]/《waist》

/thaN [1]/《ladder》,/tha [3]/《to strip》,/tho [5]/《socks》,/thɛ [7]/《to drop》

/thya [1]/《fork(of a tree)》,/thyo [3]/《to change》,/thyo [5]/《rope》,/thyu [7] ka [3]/《to have diarrhoea》

/nɛ [1]/《liver》,/na [2]/《person》,/nɔ [3]/《cool》,/nɛ [4]/《fish》,/nɔ [5]/《many,much》,/na [6]/《bamboo shoot》,/tyaN [7]moN [4] nai [7]/

《to cut into small pieces》,／ta[3] nau[8]／《glutinous rice》

／nha[1]／《day》, ／nhaN[3]／《to listen, hear》, ／nha[5]／《sky》, ／ku[8] nhau[7]／《cough》

／sai[1]／《good,fine》,／sa[2]／《even, smooth》,／sɛ[3]／《house,home》, ／sei[4]／《cold》, ／sa[5]／《firewood knife》,／siN[6]／《to ask》,／so[7]／《to flee》,／so[7]／《to play with》

／sha[1]／《the day after tomorrow》,／shei[2]／《money》,／sha[3]／《uncooked rice》,／sha[5]／《umbrella》, ／sheN[6]／《the 9th of the cyclic terms》,／sho[7]／《to close》

／ɬɛ[1]／《to run》,／ɬoN[2]／《?》,／ɬɛ[3]／《dog》,／ɬai[4]／《to enter》, ／ɬa[5]／《to cut off》,／ɬai[6]／《to coax,beguile》,／ɬaN[8]／《horn》

／ɬyo[1]／《squirrel》,／ɬyoN[2]／《ring》,／ɬyu[3]／《heart》,／ɬyaN[4] qoN[3]／《?》,／ɬyoN[5]／《nightingale》,／ɬyu[6]／《hair》,／ɬyu[7]／《to save》,／ɬyo[8]／《to pull》

／ɬhɔ[1]／《salamander》, ／ɬhɔ[3]／《bamboo》, ／ɬha[5]／《thread》, ／ɬhaN[6]／《grandchild》,／ɬhai[7] ŋe[2]／《to cut the meat》

／ɬhya[1]／《to miss(a person)》, ／ɬhyɔ[3]／《?》, ／ɬhyu[5]／《to blow (one's nose)》,／ɬhyo[6]／《?》

／la[1]／《general classifier》,／la[2]／《to mow》,／la[3]／《short》, ／la[4]／《to move away》, ／la[5]／《to play (string instrument)》, ／la[6]／《cave,den》,／lɔ[7]／《rabbit,hare》, ／la[8]／《candle; smooth, polished》

／lyu[1]／《tomato》,／qa[5] lya[2]／《magpie》,／lyɔ[3]／《ox,cow》, ／lyaN[4]／《to bury》,／lyu[5]／《cheek》,／qo[6] lyu[6] še[1]／《elbow》, ／lyi[7]／《skin》,／lyoN[8]／《green》

／ča[1]／《poison》, ／čo[2]／《nine》,／či[3]／《son-in-law》, ／čo[4]／《camellia》,／či[5]／《wind》,／čo[6]／《west》,／či[7]／《noble》,／ču[8]／《ten》

／čyu[2]／《bridge》,／čyu[3]／《alcoholic drink》,／čyu[6]／《needle》, ／čyu[7]／《?》

/čhu [1]/《stomach》, /čho [3]/《harrow》, /čhyu [5] čhi [5]/《?》, /čhe [6] tɛ [1]/《to sweep the ground》, /tyaN [1] čhi [7]/《fine-toothed comb》

/čhyu [1]/《belly》, / nɛ [4] čhyu [3]/《a kind of fish》, /čhyu [5] čhi [5]/《?》, /čhyu [7] qa [1] po [1]/《?》

/ňi [1]/《to spin》, /ňe [2]/《silver》, /ňoN [3]/《?》, /ňɔ [4]/《flower》, /ňu [6]/《thick,dense》, /ňa [7]/《husband of younger sister》, /ňe [8]/《tongue》

/ňhɔ [1]/《beautiful》, /ňhoN [3]/《?》, /ňhu [5]/《year》, /ňhi [6] ma [6]/《eyes》, /'au [1] ňhaN [7]/《sweat》

/še [1]/《to bark》, /qau [5] šo [3]/《tiger》, /šuN [4]/《seven》, /ši [5]/《to starve》, /šaN [6]/《shaman》, /ši [7] tu [4]/《wedge》

/šyo [1]/《tiger》, /tyo [5] šyaN [2]/《?》, /šyaN [3]/《four-footed》, /šuN [5]/《spear》, /šyaN [6]/《to teach》, /šyɔ [7]/《red》, /šyu [8]/《warm》

/nau [6] šha [1] 'au [1]/《kingfisher》, /šheN [2]/《the 5th of the cyclic terms》, /šhaN [3]/《blood》, /šheN [4]/《the 11th of the cyclic terms》, /šhiN [5]/《rust》, /šha [6]/《to sift,sieve》, /šha [7]/《basket》

/šhya [1]/《to write》, /šhye [3]/《to see》, /šhya [5]/《to worry》, /šhyu [6] poN [5] hɔ [3]/《acid》, /šhyaN [7]/《?》

/ya [1]/《younger rice plants》, /yeN [2]/《the 9th of ten Celestial Stems》, /kaN [1] yu [3]/《fly》, /yi [4]/《eight》, /yo [5]/《under》, /ya [6]/《?》, /yo [7]/《musk》, /ye [8]/《taste》

/ka [1]/《to parch》, /kei [2]/《to cry》, /ka [3]/《meal》, /ke [4]/《mantis》, /ka [5]/《green》, /kɔ [6]/《to fall down》, /ki [7]/《scissors》, /kei [8]/《low》

/khoN [1]/《shrimp,prawn》, /kha [3]/《?》, /khiN [5]/《basket》, /kha [6]/《duck》, /khei [7]/《harrow》

/ta [4] mɔ [7] ŋɛ [1]/《cat》, /ŋoN [2]/《to look for》, /ŋaN [4]/《goose》,

／ŋe ^{5}／《？》,／ŋa ^{6}／《dry》,／ŋe ^{8}／《narrow》

／xaN ^{1}／《to walk》,／xa ^{3}／《to attend a funeral》,／xoN ^{5}／《to go away》,／xe ^{6}／《tall,hight》,／xei ^{7} nei ^{2} no ^{2}／《not to let him eat》

／ɣe ^{1}／《stone》,／ɣa ^{2}／《pear》,／ɣau ^{3}／《wild ox》,／ši ^{5}ɣe ^{4}／《to quarrel, fight》, ／ɣa ^{5}／《to be late》, ／ɣaN ^{6}／《to search for》, ／ɣo ^{7} kɛ ^{1}／《to go down》, ／ ɣaN ^{8}／《fort》

／qaN ^{1}／《delicious》,／qaN ^{2}／《jaws》,／qaN ^{3}／《frog》,／qoN ^{4}／《to curve》, ／qa ^{5}／《cock-crow》, ／qa ^{6}／《star》, ／qai ^{7} tu ^{4}／《？》

／qho ^{1}／《hush》, ／qhɛ ^{3}／《to wrap (things)》, ／qha ^{5}／《outside》,／čho ^{5} qho ^{7}／《？》

／ho ^{1}／《fog,mist》,／hɛ ^{2} čyu ^{2}／《？》,／ho ^{3}／《very》, ／hɛ ^{4}／《toscare,frighten》,／ha ^{5}／《to have compassion》,／hau ^{6}／《pot, jug》,／hau ^{7} yiN ^{1}／《to smoke (tabacco)》

／ʻau ^{1}／《water》,／ʻaN ^{3}／《pond》, ／ʻau ^{5}／《cloud》, ／ʻi ^{6}／《one》 ,／ʻiN ^{7}／《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 ／ʻ／), the unaspirated voiceless affricate ／č／, the unaspirated voiced nasals ／m, n, ň, ŋ／, the unaspirated voiceless fricatives ／f, s, ɬ, š, 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, ňh／,

the aspirated voiceless fricatives /fh, sh, ɬh, šh /, the glottal / ' /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

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7) *cf.* " Il y a même en Indochine un curieux parallélism 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 developped in syllables with voiceless initials, and the tones 2,4, (6) and 8, which are considered to be low tone register, as developped in syllables with voiced initials. These

MASPERO, *Contribution à l'étude du système phonétique des langues thai*, 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 factors [9] 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.*)