

Proto-Miao Initials

Kun Chang

University of California, Berkeley

and

Academia Sinica

The three million speakers of Miao-Yao languages live in southern China and the northern regions of Vietnam, Laos, and Thailand. The Miao and Yao subgroups are characterized by the marked degree to which they preserve either initials or finals, but not both: the Yao dialects have the six endings which may be reconstructed for proto-Miao-Yao (-p, -t, -k; -m, -n, -ŋ), but it is the Miao dialects with their highly complicated initial system to which we must first turn in reconstructing proto-Miao-Yao initials. Initials and finals are, of course, interdependent, and the solution of problems in the proto-Yao final system, such as the roles played by the medials *r, *l, *j, and *w, may suggest modifications in the reconstructions of initials I present here.

In the Miao dialects, as in many other Asian languages, there is an intimate relation between initials and tones: distinctions of voiceless and voiced initials, aspirated and unaspirated initials, and plain and prenasalized initials all contribute to tonal diversification. (For details, see Chang 1972.) It is, however, the voicing distinction which is the conditioning factor for the major split of the four basic tones (A, B, C, D) into two subsets A1, B1, C1, D1 among words with proto-Miao

voiceless or glottalized initials; A2, B2, C2, D2 among words with proto-Miao voiced initials. Chart 1 shows the tonal reflexes of these categories in the ten dialects most often cited below.)

The features of voicing and aspiration yield a three-way contrast of proto-Miao voiceless unaspirated, voiceless aspirated, and voiced stops and affricates. The apparent four-way contrast of the Shih-men-k'an dialect is in reality a three-way contrast since the voiced unaspirated and voiced aspirated initials are variants whose appearance is conditioned by tonal and grammatical distinctions. If a word has an A2 or D2 tone its initial is aspirated; with the C2 tone, the initial is unaspirated. Among words with the B2 tone, aspiration characterizes the initials of verbs, its absence those of nouns. (See Chart 2, 'to wait' and 'to be lazy', as opposed to 'fish' and 'fire'. In this chart, following Li, Ch'en, and Ch'en 1959 I give a narrow phonetic transcription of voiced aspirated and voiced unaspirated initials; in citing Shih-men-k'an forms I thereafter use just one form of transcription for both types of voiced initials.)

Shih-men-k'an is the only Miao dialect recorded which consistently has voiced stop and affricate reflexes for proto-Miao voiced stops and affricates. Such voiced initials have been devoiced in almost all Miao dialects, yielding voiceless unaspirated reflexes. There are, however, occasional exceptions, as in the dialects of Yung-an, Huang-li, and Chou-hsi, which have voiceless aspirated reflexes for words with proto-Miao voiced stop and affricate initials and the D2 tone. For example:

Chart 1

The Tonal Reflexes of Ten Miao Dialects

	A1	A2	B1	B2	C1	C2	D1	D2
Ma-chia-t'un	54	21	51	11	55	33	44	13
Hsien-chin	43	32	54	21	44	13	33	24
Thailand Miao	55	53	34	11	33	21	11	?11
Kao-p'o	34	55	13	21	54	33	54	55
Ke-cheng	34,44	55	45	31	33	22	33	21
Yao-lu	22	44	34	42	33	11	44	31
Hsi-shan-chieh	34	33	22	11	55	44	54	31
Ch'ien-tung	A1	A2	B1	B2	C1	C2	D1	D2
Shih-tung-k'ou	44	51	55	22	45	33	13	11
Kao-t'ung	44	51	55	21	34	33	13	11

Note: For the Ch'ien-tung dialect, the Academy of Sciences (1958a) indicates tonal distinctions alphabetically, but gives no phonetic descriptions. These distinctions can, however, be correlated with the proto-Miao categories. For example: -b at the end of a syllable = A1, -x = A2.

Chart 2

Evidence for Proto-Miao Voiced Stop and Affricate Initials

Tone	Initial	Shih-men-k'an	Shui-wei	Hsien-chin	Chi-wei
A2	*dr-	'door'	dl̥hau 35	toŋ 32	tu 21
A2	*g(j)-	'nine'	đžh̥a 35	t̥sɔ 32	t̥sɔ 21
A2	*ndž-	'mouth'	ndžh̥au 35	nt̥sɔu 31	ħɔ 21
A2	*mbr-	'ear'	m̥h̥e 35	nt̥sre 32	mru 21
B2	*mbr-	'fish'	m̥b̥e 33	ndžhe 21	m̥hu 22
B2	*d-	'fire'	dey 33	d̥heu 21	t̥hy 22
B2	*d-	'to wait'	d̥ho 13	d̥h̥au 21	t̥h̥au 22
B2	*ŋg-	'to be lazy'	ŋgh̥u 13	ŋgh̥eŋ 21	ħhe 22
C2	*d-	'to die'	đa 31	d̥ha 13	t̥h̥a 42
C2	*nd-	'hemp'	nda 53	nd̥ha 13	nh̥o 42
C2	*b-	'to embrace'	b̥a 53	b̥ha 13	p̥hu 42
D2	*g(j)-	'ten'	gh̥au 31	keu 24	k̥hu 22
D2	*d-	'to bite'	d̥ho 31	to 24	t̥ho 22
D2	*NG-	'narrow'	NGh̥ae 31	Nqai 24	ŋh̥a 22
D2	*mbl-	'tongue'	nd̥lh̥ae 31	m̥lai 24	m̥h̥a 22

	'to see' (D2)	'ten' (D2)
Shih-men-k'an	bo 31	gau 31
Yung-an	phu 21	tšhu 21
Huang-li	phu 21	tšhu 21
Chou-hsi	pheŋ 53	tšhau 53

In the Tsung-ti dialect, words with B2 or C2 tones have aspirated initials.

For example:

	'fire' (B2)	'to die' (C2)	'fish' (B2)	'hemp' (C2)
Shih-men-k'an	dey 33	dâ 31	mbɛ 33	ndâ 53
Tsung-ti	thɿ 11	thâ 13	mpɾhe 11	nthâ 13

(The voiced aspiration of Tsung-ti prenasalized initials does not appear to derive from the voiced element of proto-Miao voiced initials; reflexes of prenasalized voiceless aspirated stops show the same voiced aspiration.)

In three Miao dialects there is partial retention of voicing. The Shui-wei dialect devoices prenasalized stops, but not plain stops, before which there has developed a homorganic fricative onset: *mb- → mp-, *nd- → nt-, *ndž- → ntš-, *ŋg- → ŋk-, postvelar *NG- → Nq-, *b- → vb-, *d- → ɔd-, *dr- → zɖ-, *g- → hg, *gj- → ždž-. (See Chart 2 for examples. Though the four dialects cited here suggest a proto-Miao palatal initial for 'nine', other Miao dialects, e.g. Hsi-shan-chieh with ko 33, show that the initial must have been a velar stop, and that there was a doublet with a velar stop followed by *-j-. And though these same four dialects have simple velar initials for 'ten', Hsien-chin has an alternate with a palatal affricate initial and still

other dialects have only palatal affricate initials for this word [e.g. Ke-cheng t̚su 21, Yung-an and Huang-li t̚shu 21], again implying a proto-Miao doublet with a velar stop followed by *-j-.) The Hsien-chin dialect has voiced aspirated reflexes with the B2 and C2 tones. (In citing Hsien-chin forms after Chart 2 I follow the Academy of Sciences [1958a], which does not record predictable differences of voice and aspiration; [dh] is thus transcribed t.) In the Chi-wei dialect, as in Tsung-ti, reflexes of proto-Miao prenasalized voiced stops have voiced aspiration with certain tones. In Chi-wei this is also true of plain voiced stops. The reflexes of proto-Miao voiced dental-stop initials in these two dialects are, then, in summary:

*d- Tsung-ti t- (A2, D2) th- (B2, C2)

Chi-wei t- (A2) th- (B2, C2, D2)

For example: 'fire', proto-Miao *d- (B2), Tsung-ti thv 11

Chi-wei thv 22

*nd- Tsung-ti nt- (A2, D2) nth- (B2, C2)

Chi-wei n- (A2) nh- (B2, C2, D2)

For example: 'hemp', proto-Miao *nd- (C2), Tsung-ti nth_a 13

Chi-wei nho 42

Aspiration in Chi-wei is never, however, automatically voiced as it is in the Tsung-ti prenasalized stops; restricted to words with proto-Miao voiced initials and B2, C2, D2 tones, it forms part of the evidence for the reconstruction of voicing in these initials.

Stop Initials

In manner of articulation, there are three types of proto-Miao stop initials: voiceless unaspirated, voiceless aspirated, and voiced. Dialects which retain voiced initials also show a correlation of voicing and tone. For voiced initials reconstructed on this basis we find in some dialects voiceless initials but tones which contrast with those of other voiceless initials for which we reconstruct proto-Miao voiceless initials. We may extrapolate, then, and, where data from dialects with voiced initials is lacking, reconstruct voiced initials on the basis of tone alone.

The contrasting points of articulation of proto-Miao stops are labial, dental, velar, and postvelar. (Charts 3, 4, and 5 show the reflexes of the proto-Miao stop initials in the ten dialects for which I have adequate material.) Most Miao dialects show a velar *k-*, *kh-* : postvelar *q-*, *qh-* contrast. In the Pu-nu dialect of Tu-an in the Yao territory and the adjoining area in the southwestern corner of Kweichow (i.e. Yao-lu, Hsi-shan-chieh, and San-tu) there appears to be no post-velar initial. The Academy of Sciences (1972) alleges that the Chiao-t'uo dialect of Ma-shan lacks a postvelar initial, but presents no data of any sort on this dialect. The only dialect I know well which lacks the *k-*, *kh-* : *q-*, *qh-* contrast is that of Yao-lu, which I personally studied in 1940-41. In this dialect, traces of the earlier contrast are found in some instances where **k-* has yielded *kj-*. More often, however, both **k-* and **q-* have merged in *k-*.

Chart 3

Proto-Miao *p-, *b-, *ph-

	*p- (B1)	*b- (A2)	*ph- (B1)
	'to be full'	'flower'	'to burn'
Ma-chia-t'un	po 51	pa 21	phe 51
Hsien-chin	po 54	paŋ 32	phe 54
Thailand Miao	pu 34	pa 53	
Kao-p'o	pɣŋ 13	poŋ 55	phæ 13
Ke-cheng	pu 45	poŋ 55	pha 45
Yao-lu	puŋ 34	pan 44	pha 34
Hsi-shan-chieh	pã 22	pai 33	pho 22
Ch'ien-tung	pai B1	paŋ A2	phi B1
Shih-tung-k'ou	pa 55	paŋ 51	phje 55
Kao-t'ung	pa 55	pɣŋ 51	phai 55

Chart 4

Proto-Miao *t-, *d-, *th

	*t- (A1)	*d- (C2)	*th- (C1)
	'son'	'to die'	'hoop'
Ma-chia-t'un	to 54	tâ 33	thi 55
Hsien-chin	to 43	tua 13	thi 44
Thailand Miao	tu 55	tua 21	thi 33
Kao-p'o	tvŋ 34	tu 33	thi 54
Ke-cheng	tw 44	to 22	thai 33
Yao-lu	tuŋ 22	tau 11	
Hsi-shan-chieh	tã 34	tɛ 44	
Ch'ien-tung	tai A1	ta C2	tha C1
Shih-tung-k'ou	ta 44	ta 33	tha 45
Kao-t'ung	ta 44	ta 33	thɛ 34

Chart 5

Proto-Miao *k-, *q-, *g-, *kh-, *qh-

	*k- (A1)	*q- (A1)	*g- (A2)	*G- (A2)	*kh- (C1)	*qh- (B1)
	'insect'	'sweet'	'locust'	'garlic'	'centipede'	'hole'
Ma-chia-t'un	kaŋ 54	qaŋ 54	koŋ 21	qeŋ 21		qhau 51
Hsien-chin	kaŋ 43	qaŋ 43	koŋ 32	qen 32		qhao 54
Thailand Miao	ka 55	qa 55	koŋ 53	qe 53		qho 34
Kao-p'o	koŋ 34	qoŋ 34	koŋ 55	qa 55	khu 54	qhoŋ 13
Ke-cheng	koŋ 44	qoŋ 44	kâm 55	qe 55	ŋkhu 33	qhoŋ 45
Yao-lu	kjan 22	kan 22	kjou 44	kou 33 C1	khju 33	khai 34
Hsi-shan-chieh		kai 34				khō 22
Ch'ien-tung	kaŋ A1	qaŋ A1	ku A2	qa A2	khu D1	qhaŋ B1
Shih-tung-k'ou	kaŋ 44				kheu 45	qhaŋ 55
Kao-t'ung	kxŋ 44	qxŋ 44	ku 51	qa 51	khu 34	qhaŋ 55

The aspirated postvelar stop, *qh-, has fricative reflexes (xh-, xh-, hh-) in some modern Miao dialects (Chart 6). For the labialized postvelar stop initials *qw- and *Gw- there is a dentilabial fricative reflex (f-, fh-) among the Miao dialects of Kweichow (e.g. Shih-men-k'an); this is particularly common in eastern Kweichow (Chart 7, Ch'ien-tung, Shih-tung-k'ou, and Kao-t'ung; also all of the dialects discussed in Ma and T'ai 1956). Eastern Kweichow dialects which have fh- where other dialects of the same region have f- also have sh- for s- (← *dz-); Ma and T'ai (1956) cite the following examples, all of which have the A2 tone:

	T'ai-kung-chai	Chen-yüan	Wu-ch'a	Shih-tung
'to hang'	fi 53	fhe 53	fhi 53	fhi 53
'bright'	faŋ 53	fhaŋ 53	fhõ 53	fhaŋ 53
'to know how to do something'	sou 53	shu 53	shou 53	shou 53
'money'	sei 53	she 53	shêi 53	shêi 53

Stop Initials Followed by *l or *r

Only after labial stops is there a proto-Miao contrast of *l and *r: *pl- versus *pr-, *plh- versus *prh-, *bl- versus *br-. *tr-, *trh-, *dr- clusters can be reconstructed, but not *tl-, *tlh-, or *dl-: modern dental clusters with l are the result of secondary developments. There is evidence for *ql- and *Gl-, but not *qr-, *Gr- or *kl-, *gl-, *kr-, *gr-. In Chart 8 I give an overview of the reflexes of clusters of voiceless

Chart 6

Fricative Reflexes of Proto-Miao *qh-

	'ginger' (B1)	'hole' (B1)
Pai-suo	xheŋ 24	xhoŋ 24
Luo-k'wan	xhai 44	xhoŋ 44
Yiu-chien	xheŋ 15	xhõ 15
Hsin-ch'ang	xhei 14	xhoŋ 14
Tsung-ti	hhan 243	hhoŋ 243
Szu-ta-chai	hhei 34	hhoŋ 34

Chart 7

Fricative Reflexes of Proto-Miao *qw-, *Gw-

	*qw-/*q1- (B1)	*Gw-/*G1- (A2)
	'wide'	'yellow'
Ma-chia-t'un	klaŋ 51	klaŋ 21
Hsien-chin	tlaŋ 54	tlaŋ 32
Thailand Miao	tla 34	tla 53
Kao-p'o		koŋ 55
Ke-cheng	koŋ 45	koŋ 55
Yao-lu	kpan 34	kpan 44
Hsi-shan-chieh	kwai 22	
Ch'ien-tung	faŋ B1	faŋ A2
Shih-tung-k'ou	faŋ 55	fhaŋ 51
Kao-t'ung	fxŋ 55	fxŋ 51
Shih-men-k'an	faw 55	vaw 35

unaspirated stops and *l or *r in a number of Miao dialects; for illustrative examples, see Charts 9-11.

The *pl- : *pr- contrast is retained in the dialects of Ke-cheng and Tsung-ti. Development away from the original clusters has gone farthest in certain dialects of eastern Kweichow, where the stop element of *pl- (and *ql-) clusters has been lost (*pl-, *ql- → lh-) and *pr- clusters have yielded affricates or fricatives: *pr- → Chen-yüan, Wu-ch'a, and Shih-tung s-. (Ma and T'ai 1956 give no examples of *pl-, *ql-, or *tr- from these three dialects.)

The reconstruction of *pl- : *ql- is based on such dialects as Ke-cheng, which have a pl- : ql- contrast. In other dialects, e.g. Mo-shih-ts'un, *pl- and *ql- have differing reflexes (pl- : tl-), but the *ql- reflex does not contrast with that for *tr-: both are tl-. In yet other dialects, the *pl- and *ql- series have merged. Both *pl- and *ql- yield, for example, Shih-men-k'an tl-, Hsiao-miao-chai tš-, and Shih-tung-k'ou lh-.

Reflexes for the *tr- series are generally distinct from those of the other clusters. Mo-shih-ts'un and Shih-men-k'an are exceptions, with tl- for both *ql- and *tr-.

Affricate Initials

Not all Miao affricate initials go back to proto-Miao affricates. Some, as we have seen, are the reflexes of stops followed by *r or *l. Others have their source in velar stops followed by *j. There are,

Chart 8

Reflexes of Proto-Miao *pl-, *pr-, *ql-, *tr-

Dialects	*pl-	*pr-	*ql-	*tr-
Ke-cheng	pl-	pr-	ql-	t̚-
Tsung-ti	pl-	pr-	lh-	ʃ-
Kao-p'o	pl-	pl-	tl-	t̚-
Szu-ta-chai	pl-	pl-, pj-	tl-	s-
Shui-wei	pl-	p-	ql-	t-
Ma-chia-t'un	pl-	tʃ-	kl-	t̚-
Mo-shih-ts'un	pl-	tʃ-	tl-	tl-
Hsien-chin, Ta-nan-shan, Thailand Miao	pl-	tʃ-	tl-	t̚-
Hsin-ch'ang	pr-	pr-	tl-	tʃ-
La-yi-p'ing	pr-	pr-	qw-	t̚-
Feng-huang	p-	p-	qw-	tʃ-
Hsi-shan-chieh	p-	p-	kw-, lj-	tʃ-
Shih-men-k'an	tl-	p-	tl-	tl-
Yao-lu	tl-	pj-	tl-	tj-
Ch'ien-tung	tl-	ts-	tl-	tj-
Tu-an	tl-	ts-	tl-	t̚-
Kao-t'ung, Shih-tung-k'ou	lh-	ts-	lh-	tj-
T'ai-kung-chai, Yang-hao, T'ai-yung	lh-	ts-	lh-	t̚-
Chiu-chou	lh-	tʃ-	lh-	t̚-
Hsiao-miao-chai	tʃ-	p-	tʃ-	t-

Chart 9

Examples of Proto-Miao *pl-, *pr-, *ql-, *tr-

	*pl- (A1)	*pr- (A1)	*ql- (A1)	*tr- (D1)
	'four'	'five'	'white'	'to laugh'
Ma-chia-t'un	pləu 54	tɕwi 54	kleu 54	ɬo 44
Hsien-chin	plou 43	tɕi 43	tleu 43	ɬo 33
Thailand Miao	plau 55	tɕi 55	tlaw 55	ɬo 11
Kao-p'o	plo 34	pla 34	tlɤ 34	ɬɤ 54
Ke-cheng	plo 44	prâi 44	qlaw 44	ɬau 33
Yao-lu	tləu 22	pja 22	tluo 22	tjâu 44
Hsi-shan-chieh	pi 34	pjæ 34	kuo 34	tɕæ 54
Ch'ien-tung	tlo A1	tso A1	tlu A1	tje D1
Shih-tung-k'ou	lho 44	sai 44	lho 44	tjo 13
Kao-t'ung	lho 44	tsi 44	lho 44	tjo 13

Chart 10

Examples of Proto-Miao *bl-, *br-, *Gl-, *dr-

	*bl- (C2)	*br- (B2)	*Gl- (A2)	*dr- (A2)
	'soul'	'a noose'	'a double arm's length'	'door'
Ma-chia-t'un	pli 33	tɕwi 11	klaŋ 21	ɬoŋ 21
Hsien-chin	pli 13	tɕi 21	tlaŋ 32	ɬoŋ 32
Thailand Miao		tɕi 21 C2	tla 53	ɬoŋ 53
Kao-p'o	pla 33	pli 21	tloŋ 33 C2	ɬoŋ 55
Ke-cheng	ple 33 C1	pri 31	qlon 55	ɬaw 55
Yao-lu		pi 42	tljan 22 A1	tjou 44
Hsi-shan-chieh				tšã 33
Ch'ien-tung			tljan A2	tju A2
Shih-tung-k'ou			lhjaŋ 51	tju 51
Kao-t'ung	lhjo 51 A2		lhjɤŋ 51	tju 51

Chart 11

Examples of Proto-Miao *plh-, *prh-, *trh-

	*plh- (A1)	*prh- (A1)	*trh- (C1)
	'shell'	'to blow'	'to pull out'
Ma-chia-t'un	plhou 54	tshwâ 54	tho 55
Hsien-chin	plhou 43	tshua 43	tho 44
Thailand Miao	plhau 55	tshua 55	tho 33
Kao-p'o	plho 13 B1	plhu 34	thv 54
Ke-cheng	plhâu 44	prho 44	thau 33
Yao-lu		phju 33 C1	thjâu 33
Hsi-shan-chieh			tsho 55
Ch'ien-tung		tsho A1	thje C1
Shih-tung-k'ou			
Kao-t'ung	lho 44	tshau 44	

however, some forms for which proto-Miao affricates must be reconstructed. I reconstruct palatal affricates where the modern reflexes are characteristically palatal affricates (cf. Chart 12), dentals where the modern reflexes are, for the most part, dental affricates (Chart 13). One example suggests that dental affricates followed by *j could be a source of palatal affricates: 'wine' (B1) has simple dental initials in Wu-chia-chai tsw 33 and Szu-ta-chai sa 44 and a dental affricate followed by *j in Archaic Chinese *tsjag, but palatal affricates in most Miao dialects. For example: Ma-chia-t'un tšeu 51, Hsien-chin tšeu 54, Thailand Miao tšaw 34, Kao-p'o tšv 13, Ke-cheng tšaw 45, Yao-lu t'a 34, Hsi-shan-chieh tšv 22, Ch'ien-tung tšu B1, Shih-tung-k'ou tšu 55, Kao-t'ung tšo 55.

In some instances, one group of dialects has simple velar stops where another has palatal affricates (Chart 14). (The group with affricates is usually larger where the proto-Miao stop was voiced.) For such affricates I posit a proto-Miao velar stop followed by *j, but only with doublet status; it is likely that, in at least some cases, we are dealing with the epenthetic *j commonly found in Sino-Tibetan languages, such as Gyarong and Chinese.

Fricative Initials

Proto-Miao appears to have had velar, palatal, and dental fricative initials (Charts 15 and 16). Though for forms with such initials some dialects have affricate reflexes, deaffrication as a

Chart 12

Proto-Miao Palatal Affricates

	*tš- (C1)	*dž- (B2)	*tšh- (A1)
	'wind'	'mortar'	'to sweep'
Ma-chia-t'un	tšâ 55		tšhe 54
Hsien-chin	tšua 44	tšo 21	tšhe 43
Thailand Miao	tšua 33	tšo 11	tšho 55
Kao-p'o	tša 54	tšv 21	tšhæ 44
Ke-cheng		tšau 55 A2	tšha 44
Yao-lu	tí 22	tâu 42	tâi 22
Hsi-shan-chieh	tši 55		
Ch'ien-tung	tšen C1	tše B2	tšhi A1
Shih-tung-k'ou	tši 45	tšo 22	tšhe 44
Kao-t'ung	tši 34	tšo 21	tšhe 44

Chart 13

Proto-Miao Dental Affricates

	*ts(h)- (D1)	*dz- (A2)	*tsh- (B1)
	'to connect'	'money'	'a kind of grain'
Ma-chia-t'un	tsai 44	tsæ 21	tsho 51
Hsien-chin	tsai 33	tse 32	tsho 54
Thailand Miao	tsai 11	tsia 53	tshu 34
Kao-p'o	se 54	tsẽ 55	tshvŋ 13
Ke-cheng	ṣai 33	tsai 55	ṣɤ 45
Yao-lu	sai 44	tsai 22 A1	suŋ 34
Hsi-shan-chieh			
Ch'ien-tung	sei D1	sei A2	shai B1
Shih-tung-k'ou	shai 13		sha 55
Kao-t'ung	si 13	sɤŋ 51	sa 55

Note: For 'to connect', the Ke-cheng, Yao-lu, and Shih-tung-k'ou initial reflexes imply a proto-Miao aspirated affricate initial, the reflexes of the other dialects a doublet with the corresponding unaspirated initial.

Chart 14

Velar Stops Followed by *j as a Source of Modern Miao Affricates

	*k(j)- (A1)	*g(j)- (A2)	*kh(j)- (C1)	*kh(j)- (D1)
	'needle'	'nine'	'shoe'	'itchy'
Ma-chia-t'un	koŋ 54	tšâ 21	khâu 55	khôu 44
Hsien-chin	koŋ 43	tšua 32	khou 44	khou 33
Thailand Miao	koŋ 55	tšua 53	khau 33	khau 11
Kao-p'o	koŋ 34	tšəu 55	kha 54	khɿ 54
Ke-cheng	kaw 34	tšo 55	khâu 33	khu 44 A1
Yao-lu	t'ou 22	t'w 44	t'hy 33	t'hu 44
Hsi-shan-chieh		ko 33		
Ch'ien-tung	tšü A1	tše A2		tšhu C1
Shih-tung-k'ou	tšü 44	tšo 51		tšhu 45 C1
Kao-t'ung	tšü 44	tšo 51	tšhu 34	

Note: Hsien-chin 'nine' is given as tšo 32 by Li, Ch'en, and Ch'en 1959,
as tšua 32 by Academy of Sciences 1958a.

source of fricatives seems limited to dental affricates (cf. Charts 12 and 13), and even then is not characteristic of the Ma-chia-t'un, Hsien-chin, or Thailand Miao dialects, in which we find fricative reflexes for the posited proto-Miao fricatives, both palatal and dental. My tentative conclusion is that there must have been secondary affrication in some dialects (e.g. Hsi-shan-chieh, with tša 44 'seven', and Chi-wei, with tšu 53 'year' [Chart 15]).

Reconstruction of an *sr- initial for 'ripe, cooked' (Chart 16) is supported by the parallels in phonetic changes with proto-Miao *tr-, *dr-, and *trh- (Charts 9, 10, and 11): corresponding to a proto-Miao sequence of dental followed by *r, the Ma-chia-t'un, Hsien-chin, Thailand Miao, and Ke-cheng dialects have retroflex initials (*tr- → ɬ-, *sr- → ʂ-); in the Yao-lu, Ch'ien-tung, Shih-tung-k'ou, and Kao-t'ung dialects, the *r changes to (*)j (*tr- → tj, *sr- → *sj- → ʃ-).

A problem yet to be solved is that posed by apparent reflexes of proto-Miao fricative initials in one group of dialects countered by reflexes in another group which imply some sort of labial or labialized initial (Chart 17). For 'light (in weight)', for instance, some dialects suggest a reconstruction of *sr- (cf. Chart 16); others suggest *qwh- (cf. Chart 7). The possibility of there being in each case two different and unrelated vocabulary items is negated by the number of examples of this sort. Complex clusters, perhaps with different prefixes, may have been at the root of these diverse developments, but I would not, at this point, hazard proto-Miao reconstructions for any of these forms.

Chart 15

Palatal Fricatives

	*š-/*ž- (C1/C2)	*š- (A1)	*š- (C1)
	'seven'	'bamboo'	'year (of age)'
Ma-chia-t'un	šaŋ 55 C1	šoŋ 54	šoŋ 55
Hsien-chin	šaŋ 44 C1	šoŋ 43	šoŋ 44
Thailand Miao	ša 33 C1	šoŋ 55	šoŋ 33
Kao-p'o	saŋ 33 C2		
Ke-cheng	saŋ 33 C1		
Yao-lu	šoŋ 11 C2		
Hsi-shan-chieh	tša 44 C2		
Ch'ien-tung	šoŋ C2	(lho B1)	(ńhu C1)
Shih-tung-k'ou	šoŋ 33 C2		(ńhu 45)
Kao-t'ung	šoŋ 33 C2		(ńhu 34)
Feng-huang	t'ioŋ 55	(lho 53)	t'io 35
Chi-wei			tšu 53
Tung-t'ou-chai			tso 33

Chart 16

Nonpalatal Fricatives

	*h- (D1)	*s- (A1)	*sr- (B1)
	'to ladle out'	'coir raincoat'	'ripe, cooked'
Ma-chia-t'un	hæ 44	si 54	ʂæ 51
Hsien-chin	hai 33	si 43	ʂa 54
Thailand Miao	hai 11	si 55	ʂia 34
Kao-p'ŋ	hw 54	tshi 34	tshẽ 13
Ke-cheng	hai 33	ʂi 34	ʂai 45
Yao-lu	ha 44	səu 22	ʂi 34
Hsi-shan-chieh		sei 34	
Ch'ien-tung	hei D1	sho A1	ʂhaŋ C1
Shih-tung-k'ou	hai 13	sho 44	ʂhaŋ 55
Kao-t'ung	he 13	so 44	ʂvŋ 55

Chart 17

The Fricative-Labial Connection

	'thunder' (A1)	'thread' (B1)	'light (in weight)' (A1)	'bran' (C1)
Ma-chia-t'un	so 54		ṣwe 54	
Hsien-chin	so 43	so 54	ṣi 43	sua 44
Thailand Miao	so 55	so 34	ṣi 55	sua 33
Kao-p'o	tshɿ 34	tshɿ 13	tshi 34	ṣa 54
Ke-cheng	ṣau 44	ṣau 45	ṣi 44	ṣo 33
Yao-lu	phâu 22	phâu 34	kphai 22	phai 33
Hsi-shan-chieh				
Ch'ien-tung	ho A1	fhe B1	fha A1	fha C1
Shih-tung-k'ou	hɔ 44	hɔ 55	fha 44	fha 45
Kao-t'ung	hau 44	hau 55	fɛ 44	fɛ 34

*ʔ-, *r-, *j-, *w-, and the Nasal, Lateral Initials

The glottal stop occurs both by itself as an initial and, preceding *r-, *j-, *w-, and the nasal, lateral initials, as part of a complex initial (Charts 18-25). In both cases, the tonal reflexes are those indicating proto-Miao voiceless initials (i.e. the A1, B1, C1, D1 tones). Among the nasals and laterals there is a three-way proto-Miao contrast of voiced, voiceless, and preglottalized initials. *ʔr-, similarly, contrasts with both *r- and *rh-, but *ʔj- and *ʔw- contrast only with *j- and *w-.

The dialects of Shui-wei and Yeh-chi-p'o maintain voiced, voiceless, and preglottalized reflexes for these three proto-Miao series. In most Miao dialects, however, the preglottalized series has voiced initials but tones indicating a voiceless origin. These dialects retain a contrast in voicing, with voiced reflexes for proto-Miao voiced and preglottalized initials and voiceless reflexes for proto-Miao voiceless initials. Examples are Ma-chia-t'un, Hsien-chin, Thailand Miao, Kao-p'o, Ke-cheng, Yao-lu, Hsi-shan-chieh, Ch'ien-tung, and Shih-tung-k'ou. Other dialects have the two-way contrast in tones but just one, voiced, reflex for all three proto-Miao nasal initials. Dialects of this sort are, for example, Kao-t'ung, Chin-chung, Ma-chiang, T'ai-yung, Ts'ung-chiang, P'ai-t'ing, San-sui, Chin-p'ing, San-tu, and Ching-hsien.

There are two major types of reflexes corresponding to the proto-Miao

*r-, *ʔr-, *rh- series (Chart 19): retroflex (as in the dialects of Ma-chia-t'un, Hsien-chin, Thailand Miao, Kao-p'o, and Ke-cheng) and velar (as in the dialects of Yao-lu, Hsi-shan-chieh, Ch'ien-tung, Shih-tung-k'ou, and Kao-t'ung). Alternating with the velar reflexes of both *r- and *ʔr- we find w-, v-, and j-; the Shui-wei dialect has wj- as the sole reflex of *r- and wj- preceded by a glottal stop as the reflex of *ʔr-.

The dialects of Shih-tung-k'ou, T'ai-kung-chai, and Chiu-chou have both aspirated and unaspirated voiceless laterals, with the aspirated variety corresponding to the voiceless laterals of other Miao dialects (cf. Chart 25: Shih-tung-k'ou ʈhai 45 'month'). In the dialects of Kao-t'ung, Ma-chiang, San-tu, San-sui, and Ching-hsien, proto-Miao voiceless laterals have voiced reflexes; in the dialects of Ts'ung-chiang, Chin-p'ing, T'ai-yung, and P'ai-t'ing, some instances of *lh- are voiceless, while others are voiced. In the dialect of Huang-li, all proto-Miao voiceless nasals have changed to h-; for the voiceless lateral, Huang-li has a voiceless aspirated ʈh-.

There are two examples of a proto-Miao *mr- cluster: 'to hear' (C2), Ke-cheng mrâw 22, Kao-p'o mloŋ 33, Thailand Miao mloŋ 21, but Ma-chia-t'un noŋ 33 and Hsien-chin noŋ 13; 'to have intercourse (said of a man)' (C2), Ke-cheng mro 22, Kao-p'o mlaŋ 33. 'soft' (C2) may be an example of *ml-: Kao-p'o mlɿŋ 33, but Ke-cheng maw 22, Hsien-chin mua 13, Thailand Miao mua 21, and Ch'ien-tung mai C2.

Chart 18

The Proto-Miao Glottal-Stop Initial

	*ʔ- (A1)	*ʔ- (A1)
	'bitter'	'two'
Ma-chia-t'un	ʔæ 54	ʔau 54
Hsien-chin	ʔa 43	ʔao 43
Thailand Miao	ʔia 55	ʔo 55
Kao-p'o	ʔẽ 34	ʔa 34
Ke-cheng	ʔâi 44	ʔâu 44
Yao-lu	ʔai 22	ʔɔi 22
Hsi-shan-chieh	ʔĩ 34	ʔa 34
Ch'ien-tung	ʔi A1	ʔo A1
Shih-tung-k'ou	ʔei 44	ʔɔ 44
Kao-t'ung	ʔe 44	ʔɔ 44

Chart 19

Proto-Miao *r-, *ʔr-, *rh-

	*r- (A2)	*r- (B2)	*ʔr- (A1)	*rh- (A1)
	'dragon'	'urine'	'vegetable'	'high'
Shui-wei	wjoŋ 31	wjâ 55	ʔwju 31	seŋ 31
Ma-chia-t'un	zwaŋ 21	zwi 11	zɔu 54	ʂwæ 54
Hsien-chin	zaŋ 32	zi 21	zou 43	ʂa 43
Thailand Miao	za 53	zi 11	zau 55	ʂia 55
Kao-p'o	zaŋ 55	za 21	zo 34	ʂẽ 34
Ke-cheng	zaŋ 55	zẽ 31	zâu 44	zhâi 44
Yao-lu	hɔŋ 44	ja 42	heu 22	xi 22
Hsi-shan-chieh	jõ 33	ve 11	vi 34	
Ch'ien-tung	voŋ A2	wa B2	vo A1	hi A1
Shih-tung-k'ou	hoŋ 51	vâi 22		xei 44
Kao-t'ung	hoŋ 51		hɔ 44	xɛ 44

Chart 20

Proto-Miao *j- and *ʔj-

	*j- (D2)	*ʔj- (C1)
	'eight'	'to fly'
Shui-wei	ʒa 31	ʔjen 35
Ma-chia-t'un	ji 13	jaŋ 55
Hsien-chin	ji 24	jaŋ 44
Thailand Miao	jiʔ 11	jia 33
Kao-p'o	ja 55	joŋ 54
Ke-cheng	ji 21	joŋ 33
Yao-lu	ja 31	jan 33
Hsi-shan-chieh	ji 31	jɛ 55
Ch'ien-tung	ja D2	jaŋ C1
Shih-tung-k'ou	ji 11	jaŋ 45
Kao-t'ung	ji 11	jɿŋ 34

Chart 21

Proto-Miao *w- and *ʔw-

	*w- (A2)	*ʔw- (A1)
	'a garden'	'a seive'
Ma-chia-t'un	vaŋ 21	vaŋ 54
Hsien-chin	vaŋ 32	vaŋ 43
Thailand Miao	va 53	va 55
Kao-p'o	vuŋ 33 C2	voŋ 34
Ke-cheng	voŋ 55	voŋ 44
Yao-lu	van 44	van 22
Hsi-shan-chieh		vai 34
Ch'ien-tung	waŋ A2	waŋ A1
Shih-tung-k'ou		
Kao-t'ung		vaŋ 44

Chart 22

Proto-Miao Labial Nasal Initials

	*m- (C2)	*ʔm- (A1)	*mh- (C1)
	'eye'	'pain'	'night'
Shui-wei	mâ 35	ʔmoŋ 31	mhoŋ 35
Ma-chia-t'un	mâ 33	mau 54	mhau 55
Hsien-chin	mua 13	mao 43	mhao 44
Thailand Miao	mua 21	mo 55	mho 33
Kao-p'o	mɤŋ 33	moŋ 34	mhoŋ 54
Ke-cheng	mɤŋ 22	mau 44	mhau 33
Yao-lu	mɔŋ 11	muŋ 22	mhai 33
Hsi-shan-chieh	me 44	ma 34	
Ch'ien-tung	mai C2	moŋ A1	mhaŋ C1
Shih-tung-k'ou	ma 33	mo 44	mhaŋ 45
Kao-t'ung	ma 33	mu 44	maŋ 34

Chart 23

Proto-Miao Dental Nasal Initials

	*n- (A2)	*ʔn- (B1)	*nh- (A1)
	'to eat'	'this'	'sun'
Shui-wei	noŋ 31	ʔnoŋ 55	nhā [^] 31
Ma-chia-t'un	nau 21	nā [^] 51	nho(ŋ) 54
Hsien-chin	nao 32	na 54	nho 43
Thailand Miao	no 53		nhu 55
Kao-p'o	noŋ 55	naŋ 13	nhɣŋ 34
Ke-cheng	nau 55	no 45	nhɣŋ 44
Yao-lu	nɔu 44	nāi [^] 34	nhɔŋ 22
Hsi-shan-chieh	nā 33		nhe 34
Ch'ien-tung	naŋ A2	nen B1	nhai A1
Shih-tung-k'ou	nau 51		nha 44
Kao-t'ung	nu 51	no 55	na 44

Chart 24

Proto-Miao Palatal Nasal Initials

	*ń- (A2)	*ʔń- (A1)	*ńh- (B1)
	'silver'	'to be at'	'intestine'
Shui-wei	ńeŋ 31	ʔńoŋ 31	ńheŋ 55
Ma-chia-t'un	ńæ 21	ńau 54	ńho 51
Hsien-chin	ńa 32	ńao 43	ńho 54
Thailand Miao	ńia 53	ńo 55	ńhu 34
Kao-p'o	ŋẽ 55	ńoŋ 34	ńhɿŋ 13
Ke-cheng	ńai 55	ńau 44	ńhɿŋ 45
Yao-lu	ńi 44	ńau 34 B1	ńhuŋ 34
Hsi-shan-chieh			
Ch'ien-tung	ńi A2	ńaŋ A1	
Shih-tung-k'ou	ńe 51		
Kao-t'ung		ńaŋ 44	

Chart 25

Proto-Miao Lateral Initials

	*l- (B2)	*ʔl- (B1)	*lh- (C1)
	'old'	'short'	'month'
Shui-wei	lu 55	ʔlân 55	lhâ 35
Ma-chia-t'un	lou 11	lo 51	lhi 55
Hsien-chin	lou 21	lo 44 C1	lhi 44
Thailand Miao	lau 11	lu 34	lhi 33
Kao-p'o	lâu 21	lʋŋ 13	lha 54
Ke-cheng	lau 31	lw 45	lhe 33
Yao-lu	luo 42	luŋ 34	luo 33
Hsi-shan-chieh		lã 22	lha 55
Ch'ien-tung	lu B2	lai B1	lha C1
Shih-tung-k'ou	lo 22	la 55	ʔhai 45
Kao-t'ung	lo 21	la 55	li 34

Prenasalized Stops and Affricates

For almost every series of stops and affricates, both simple and in clusters with *-l- and *-r-, there is a corresponding series with a preceding nasal. (See Chart 37, which gives an overview of the proto-Miao initials.) Excepted are only labialized postvelar stops and the glottal stop initial. There is, moreover, a series of prenasalized dental affricates followed by *-r-.

In Chart 26 I summarize the reflexes of proto-Miao prenasalized dental stops and affricates in a number of Miao dialects. (Parentheses in this chart indicate variant pronunciations. In the Shui-wei dialect, for example, the initial of a word with proto-Miao *nt- is sometimes n?t-, sometimes ?t-.) Two features of particular note here are the Shui-wei development of secondary glottalization in the prenasalized voiceless stops and affricates and the frequent appearance, in a number of dialects, of different reflexes for the prenasalized voiced dental stops and affricates depending on the tone. In the Shih-men-k'an dialect, syntactic usage also plays a part in the differentiation of reflexes for these initials: a noun with *nd- or *ndz- and the B tone has the initials nd-, ndz-; a verb with the same proto-Miao initials and tone has ndh-, ndzh-.

In Charts 27-36 I give examples of the various prenasalized series:

(1) Prenasalized labial stops, both simple and followed by *-l- and *-r- (Charts 27-29). Note here the absence of prenasalized voiceless aspirated

stops followed by *-l- or *-r-. (2) Prenasalized dental stops, both simple and followed by *-r- (Charts 30-31). There are no proto-Miao dental stops followed by *-l-, either plain or prenasalized. (3) Prenasalized velar stops, voiced and voiceless unaspirated, but not voiceless aspirated (Chart 32). There are no proto-Miao velar stops followed by *-r- or *-l-, either plain or prenasalized. (4) Prenasalized postvelar stops (Chart 33). There are no clusters of a proto-Miao postvelar stop followed by *-r-. Instances of prenasalized postvelar stops followed by *-l- are hard to come by, and even harder to document in a wide range of dialects. The following examples, however, point to the existence of such initials:

		Ke-cheng	Ma-chia-t'un	Kao-p'o	Yao-lu
*Nql-	A1 'to sleep'	Nqlɿ 44	ŋklo 54		ntlun 22
*Nqlh-	C1 'to put over and around something'		ŋklhau 55		
*NGl-	C2 'broken'	Nqlaw 22	ŋklâ 33	ntlu 33	ntlup 31 D2

(5) Prenasalized simple palatal affricates and prenasalized dental affricates, both simple and followed by *-r- (Charts 34-36). (Missing are examples of *nts̥- and *ndzr-.) Plain affricates are not followed by *-l- or *-r-. It would be premature to say whether this asymmetric distribution of initials was an original characteristic of proto-Miao or whether, for example, the *-r- of *ntsr-, *ntsrh- was a secondary development.

Chart 26

Reflexes of Proto-Miao Prenasalized Dental Stops and Affricates

Dialects	*nt-	*nts-	*nth-	*ntsh-	*nd-	*ndz-
Shih-men-k'an	nt-	nts-	nth-	ntsh-	nd-	ndz- (C/B ^[nouns]), ndh- ndzh- (A/D/B ^[verbs])
Hsien-chin	nt-	nts-	nth-	ntsh-	nt-	nts- (A/D) ndh- ndzh- (B/C)
Pai-chin	nt-	nts-	nth-	ntsh-	nt-	nts- (A/D) nth- ntsh- (B/C)
Tsung-ti	nt-	nts-	nth-	ntsh-	nt-	nts- (A/D) nth- ntsh- (B/C)
T'uan-p'o	nt-	nts-	(n)th-	(n)tsh-	nt-	nts- (A/D) nth- ntsh- (B/C)
Shui-wei	(n)?t-	(n)?ts-	(n)?th-	(n)?tsh-	nt-	nts-
Chi-wei	nt-	ntsh-	nth-	ntsh-	n-	(A) nh- (B/C/D)
Tung-t'ou-chai	nd-	ndz-	(n)th-	(n)tsh-	n-	
Hsiao-chang	d-	dz-	(n)th-	(n)tsh-	n-	
Yang-hao	t-	ts-	th-	(t)sh-	n-	(A/D) nh- (B/C)
Hsi-shan-chieh	n-		nh-		n-	

Chart 27

Proto-Miao *mp-, *mb-, *mph-

	*mp- (C1)	*mb- (C2)	*mph- (C1)
	'pig'	'to cover'	'to sprinkle'
Ma-chia-t'un	mp ^a 55	mpo 33	mphoŋ 55
Hsien-chin	mpua 44	mpo 13	mphoŋ 44
Thailand Miao	mpua 33	mpo 21	mphoŋ 33
Kao-p'o	mpa 54	mpɤ 33	mphoŋ 54
Ke-cheng	mpo 33	mpau 22	
Yao-lu	mpa 33	mp ^a au 11	
Hsi-shan-chieh	mɛ 55		
Ch'ien-tung	pa C1	me C2	
Shih-tung-k'ou	pa 45		phu 45
Kao-t'ung	pɛ 34	mo 33	
Hsiao-chang	bei 13		

Chart 28

Proto-Miao *mpl-, *mb1-

	*mpl- (C1)	*mb1- (A2)
	'wet, moist'	'leaf'
Ma-chia-t'un		mplon 21
Hsien-chin		mplon 32
Thailand Miao		mplon 53
Kao-p'o	mplv 54	mplon 55
Ke-cheng		mplau 55
Yao-lu		ntlou 44
Hsi-shan-chieh		mã 33
Ch'ien-tung	ne C1	ne A2
Shih-tung-k'ou	nau 45	nau 51
Kao-t'ung	nu 34	nu 51

Chart 29

Proto-Miao *mpr-, *mbr-

	*mpr- (A1)	*mbr- (A2)
	'green'	'ear'
Ma-chia-t'un	ntṣwâ 54	ntṣe 21
Hsien-chin	ntṣua 43	ntṣe 32
Thailand Miao	ntṣua 55	ntṣe 53
Kao-p'o	mplu 34	mplæ 55
Ke-cheng	mpro 44	mpra 55
Yao-lu	mpjw 22	mpjâi 44
Hsi-shan-chieh		mjo 33
Ch'ien-tung	no A2	nai A2
Shih-tung-k'ou		ne 51
Kao-t'ung	nau 51 A2	nai 51

Note: The tones of Ch'ien-tung no (A2) and Kao-t'ung nau 51 (A2) imply
 proto-Miao *mbr- for 'green'.

Chart 30

Proto-Miao *nt-, *nd-, *nth-

	*nt- (D1)	*nd- (C2)	*nth- (B1)
	'to weave'	'hemp'	'to untie'
Ma-chia-t'un	nto 44	ntâ 33	nthâ 51
Hsien-chin	nto 33	ntua 13	nthua 54
Thailand Miao	nto 11	ntua 21	nthua 34
Kao-p'ô		ntu 33	
Ke-cheng	ntau 33	nto 22	
Yao-lu	ntau 44	ntw 11	nthau 34
Hsi-shan-chieh	nx 54	no 44	
Ch'ien-tung	to D1	no C2	tha B1
Shih-tung-k'ou		no 33	tha 55
Kao-t'ung	tau 13	nau 33	tha 55

Chart 31

Proto-Miao *ntr-, *ndr-, *ntrh-

	*ntr- (A1)	*ndr- (B2)	*ntrh- (A1)
	'middle'	'drum'	'leggings'
Ma-chia-t'un	n̄aŋ 54	n̄wâ 11	n̄hoŋ 54
Hsien-chin	n̄aŋ 43	n̄tua 21	n̄hoŋ 43
Thailand Miao	n̄tua 55	n̄tua 11	n̄hoŋ 55
Kao-p'o	n̄aŋ 34	n̄tu 21	n̄hoŋ 34
Ke-cheng	n̄aŋ 44	n̄to 31	n̄haw 44
Yao-lu	ntjɔŋ 22	ntjɔŋ 22 A1	ntjɔu 22
Hsi-shan-chieh			
Ch'ien-tung	tjɔŋ A1	ńe B2	thju A1
Shih-tung-k'ou		ńo 22	thju 44
Kao-t'ung	tjɔŋ 44	ńo 21	thju 44

Chart 32

Proto-Miao *ŋk-, *ŋg-

	*ŋk(j)- (A1)	*ŋg- (A2)
	'mushroom'	'boat'
Ma-chia-t'un	ntš̥e 54	ŋkaŋ 21
Hsien-chin	ntš̥e 43	ŋkao 32
Thailand Miao	ntš̥e 55	ŋko 53
Kao-p'o	ntš̥æ 34	ŋkoŋ 55
Ke-cheng	ntš̥a 44	ŋkoŋ 55
Yao-lu	nt'ai 22	nt'e 44
Hsi-shan-chieh		ŋo 33
Ch'ien-tung	tš̥i A1	ńaŋ A2
Shih-tung-k'ou	tš̥e 44	ńaŋ 51
Kao-t'ung	tš̥e 44	ńaŋ 51
Hsiao-chang	gew 21	

Chart 33

Proto-Miao *Nq-, *NG-, *Nqh-

	*Nq- (A1)	*NG- (A2)	*Nqh- (A1)
	'thatch'	'meat'	'dry'
Ma-chia-t'un	Nqen 54	Nqæ 21	Nqhwâ 54
Hsien-chin	Nqen 43	Nqai 32	Nqhua 43
Thailand Miao	Nqen 55	Nqai 53	Nqhua 53
Kao-p'o	Nqẽ 34		Nqha 34
Ke-cheng	Nqe 44	Nqai 55	Nqho 44
Yao-lu	ŋkəu 22	ŋka 44	ŋkhaî 22
Hsi-shan-chieh	ŋai 34	ŋæ 33	khẽ 22 B1
Ch'ien-tung		ŋa A2	qha A1
Shih-tung-k'ou	qa 44	ŋe 51	qha 55 B1
Kao-t'ung	qa 44	ŋe 51	qhe 44
Hsiao-chang	Gu 21		

Chart 34

Proto-Miao *ndž-, *ntšh-

	*ndž- (A2)	*ntšh- (B1)
	'mouth'	'to pour'
Ma-chia-t'un	ntšou 21	
Hsien-chin	ntšou 32	ntšhua 54
Thailand Miao	ntšau 53	ntšhua 34
Kao-p'o	ntšw 55	ntšhu 13
Ke-cheng	ntšu 55	ntšho 45
Yao-lu	nty 44	ntshu 34
Hsi-shan-chieh		
Ch'ien-tung	nu A2	tšhe B1
Shih-tung-k'ou		tšho 55
Kao-t'ung	nu 51	tšho 55

Chart 35

Proto-Miao *nts-, *ndz-, *ntsh-

	*nts- (B1)	*ndz- (C2)	*ntsh- (C1)
	'to wash (hands)'	'lean' (adj.)	'to wash (clothes)'
Ma-chia-t'un	ntsâ 51	ntsou 33	ntshâ 55
Hsien-chin	ntsua 54	ntsou 13	ntshua 44
Thailand Miao	ntsua 34	tsau 21	ntshua 33
Kao-p'o	ntsø 13		ntshu 54
Ke-cheng	ntso 45	ntsâu 22	ntsho 33
Yao-lu	ntsai 34	ntsəu 11	
Hsi-shan-chieh			
Ch'ien-tung	sa B1		sho C1
Shih-tung-k'ou	sa 55		sho 45
Kao-t'ung			

Note: For 'lean', Chi-wei ntsei 53, Tung-t'ou-chai ndži 22, Hsiao-chang zen 13, San-sui tsau 35, Chin-p'ing tsau 35, and T'ai-kung-chai so 35 all indicate a proto-Miao voiceless initial *nts- (C1).

Chart 36

Proto-Miao *ntsr-, *ntsrh-

	*ntsr- (B1)	*ntsrh- (B1)
	'salt'	'blood'
Ma-chia-t'un	ntɕe 51	ntɕhaŋ 51
Hsien-chin	ntɕe 54	ntɕhaŋ 54
Thailand Miao	ntɕe 34	ntɕha 34
Kao-p'o°	ntsæ 13	ntshoŋ 13
Ke-cheng	ntɕa 45	ntshoŋ 45
Yao-lu	ntsjaɪ 34	ntshjan 34
Hsi-shan-chieh		ŋhe 34
Ch'ien-tung	ɕi B1	ɕhaŋ B1
Shih-tung-k'ou	ɕe 55	ɕhaŋ 55
Kao-t'ung	ɕe 55	ɕɤŋ 55

The Proto-Miao Initials

[illegible]

List of Miao Dialects

[For bibliographical details, see Bibliography under the names bracketed here.]

I. Yünnan (雲南)

Mo-shih-ts'un (莫石村) in the district of Eh-shan
(峨山) [Kao]

II. Szechuan (四川)

Ma-chia-t'un (馬家屯) in the district of Hsü-yung
(叙永) [Ruey and Kuan]

III. Kweichow (貴州)

1. Shih-men-k'an (石門坎) in the district of Wei-ning
(咸寧) [Li, Ch'en, Ch'en; Wang, December, 1957;
Institute, 1962; Ying]

2. Hsien-chin (先進) in the district of Pi-chieh
(畢節) [Li, Ch'en, Ch'en; Academy, 1958b]

3. Ta-nan-shan (大南山) in the dsistrict of Pi-chieh
(畢節) [Institute, 1962; Ying]

4. Cheng-feng (貞豐) [Esquirol]

5. Lo-k'uan (樂寬) in the district of Wang-mo (望謨)
[Li, Ch'en, Ch'en]

6. Chiao-thuo (交垞) in the district of Tzu-yün
(紫雲) [Institute, 1962; Ying]

7. Tsung-ti (宗地) in the district of Tzu-yün (紫雲)
[Li, Ch'en, Ch'en]
8. Szu-ta-chai (四大寨) in the district of Tzu-yün
(紫雲) [Li, Ch'en, Ch'en]
9. T'uan-p'o (團坡) in the district of Tzu-yün (紫雲)
[Li, Ch'en, Ch'en]
10. Ke-cheng-chai (格正寨) in the district of Kwang-shun
(廣順) (now Ch'ang-shun 長順) [Chang Kun: field
notes]
11. Pai-suo (擺梭) in the district of Ch'ang-shun
(長順) [Li, Ch'en, Ch'en]
12. Hsin-ch'ang (新場) in the district of Lo-tien (羅甸)
[Li, Ch'en, Ch'en]
13. Hsiao-miao-chai (小苗寨) in the district of Lo-tien
(羅甸) [Li, Ch'en, Ch'en]
14. Yiu-chien (油尖) in the district of Lo-tien (羅甸)
[Li, Ch'en, Ch'en]
15. P'ing-yai (平岩) in the district of Lo-tien (羅甸)
[Li, Ch'en, Ch'en]
16. Hsi-kuan (西關) in the district of P'ing-t'ang (平塘)
[Li, Ch'en, Ch'en]
17. Pai-chin (擺金) in the district of Hui-shui (惠水)
[Li, Ch'en, Ch'en]

18. Chia-ting (甲定) in the district of Hui-shui (惠水)
[Institute, 1962; Ying]
19. Pai-t'o (擺托) in Ch'ing-yai (青岩) in the city
of Kwei-yang (貴陽) [Ying]
20. Kao-p'o (高坡) in the district of Kwei-chu (貴筑)
[Chang Kun: field notes]
21. Shui-wei (水尾) in the district of Lung-li (龍里)
[Li, Ch'en, Ch'en]
22. Yeh-chi-p'o (野鷄坡) in the district of Fu-ch'üan
(福泉) [Institute, 1962; Ying]
23. Lao-chün-chai (老君寨) in the district of K'ai-li
(凱里) [Institute, 1962]
24. Chiu-chou (舊州) in the district of Huang-p'ing
(黃平) [Ma, T'ai]
25. Chia-pa (加巴) in the district of Huang-p'ing (黃平)
[Ma, T'ai]
26. Feng-hsiang (楓香) in the district of Huang-p'ing
(黃平) [Ying]
27. Chou-hsi (舟溪) in the district of Lu-shan (鎮山)
(now K'ai-li 凱里) [Ma, T'ai]
28. Yang-hao (養高) in the district of Lu-shan (鎮山)
(now K'ai-li) [Ma, T'ai; Li, Ch'en, Ch'en; Institute, 1962;
Ying]

29. K'ai-t'ang (凱棠) in the district of Lu-shan (鑪山)
(now K'ai-li) [Ma, T'ai; Li, Ch'en, Ch'en; P'an, Ts'ao; Ts'ao]
30. Hsüan-wei-chen (宣威鎮) in the district of Ma-chiang
(麻江) [Ma, T'ai]
31. Shih-tung-k'ou (施洞) in the district of T'ai-chiang
(台江) [Li Fang-kuei: field notes; Kwan; Oshima]
32. T'ai-kung-chai (台拱寨) in the district of T'ai-chiang
(台江) [Ma, T'ai]
33. Yung-an (永安) in the district of T'ai-chiang (台江)
[Ma, T'ai]
34. Chin-chung (金鐘) in the district of Shih-ping
(施秉) [Ma, T'ai]
35. Hsin-ch'iao (新橋) in the district of Shih-ping
(施秉) [Ma, T'ai]
36. The district of Chen-yüan (鎮遠) [Ma, T'ai]
37. T'ai-yung (太雅) in the district of Chien-ho (劍河)
[Ma, T'ai]
38. Wu-ch'a (五岔) in the district of Chien-ho (劍河)
[Ma, T'ai]
39. Huang-li (黃里) in the district of Lei-shan (雷山)
[Ma, T'ai]
40. Wu-lo (烏洛) in the district of Tan-chai (丹寨)
[Ma, T'ai]

41. P'ai-t'ing (排庭) in the district of Tan-chai
(丹寨) [Ma, T'ai]
42. The district of San-sui (三穗) [Ma, T'ai]
43. The district of San-tu (三都) [Ma, T'ai]
44. Kao-t'ung-chai (高同寨) in the district of Jung-chiang
(榕江) [Chang Kun: field notes]
45. Hsi-shan-chieh' (西山街) in the district of Yung-ts'ung
(永從) [Chang Kun: field notes]
46. The district of Ts'ung-chiang (從江) [Ma, T'ai]
47. The district of Chin-p'ing (錦屏) [Ma, T'ai]
48. Yao-lu (懷麓) in the district of Li-po (荔波)
[Chang Kun: field notes]
49. Ch'ien-tung (黔東) [Academy, 1958a]

IV. Kwangsi (廣西)

The district of Tu-an (都安) [Mao, Chou]

V. Hunan (湖南)

1. The district of Ching-hsien (靖縣) [Ma, T'ai]
2. The district of Feng-huang (鳳凰) [Ling, Ruey]
3. Chi-wei (吉偉) in the district of Hua-yüan (花垣)
[Li, Ch'en, Ch'en; I]
4. La-yi-p'ing (臘乙坪) in the district of Hua-yüan
(花垣) [Institute, 1962; Ying]
5. Tung-t'ou-chai (洞頭寨) in the district of Lu-hsi
(瀘溪) [Li, Ch'en, Ch'en]

6. Hsiao-chang (小章) in the district of Lu-hsi
(瀘溪) [Li, Ch'en, Ch'en]
7. Wu-chia-chai (吳家寨) in the district of Lung-shan
(龍山) [Li, Ch'en, Ch'en]

VI. Thailand and Laos

1. Petchabun, northern Thailand [Heimbach; Downer, 1967;
Barney, Smalley]
2. Tak [Rulison, Barney, Smalley]
3. Sam Neua and Xieng-khouang [Bertrais-Charrier]

VII. Vietnam

1. Yên-bay [Savina, 1916]
2. Tran Ninh [Moréchand]

Bibliography

Items marked [C] are in Chinese.

- Academy of Sciences and Research Center of the Steering Committee
on National Languages in Kweichow. 1958a. A Concise Miao-Chinese
Dictionary [based on the Miao dialect of eastern Kweichow]. [C]
Academy of Sciences. 1958b. A Concise Miao-Chinese Dictionary [based
on the Miao dialects of Szechuan, western Kweichow, and Yünnan]. [C]
Ai-ch'ing. May, 1957. A Note on the Secret Language of the Women in
the Miao Community in Chien-chu Hsiang, in the District of Ku-ling
in Szechuan. Chungkuo Yüwen 59.15. [C] (English transl.: Purnell,
1972, 235-6)
Barney, G. Linwood. 1950-4. Hmong Njua Materials. Xieng Khouang, Laos.
Barney, G. Linwood, and William A. Smalley. 1952. Report of Second
Conference on Problems in Meo (Miao): Phonemic Structure and Ortho-
graphy. [mimeographed]
_____. 1953. Third Report on Meo (Miao): Orthography and Grammar.
[mimeographed]
Bertrais-Charrier, Yves. 1964. Dictionnaire Hmong (Mèo Blanc)-Français.
Vientiane, Laos: Mission Catholique.
Bonifacy. 1905. Étude sur les langues parlées par les populations de la
haute rivière claire. Bulletin de l'École Française d'Extrême-Orient
5.306-27.

- Chang, Kun. 1947. On the Miao-Yao Tones. Bulletin of the Institute of History and Philology, Academia Sinica 16.93-110. [C]
- _____. 1953. On the Tone System of the Miao and Yao Languages. Language 29.374-8.
- _____. 1957. The Phonemic System of the Yi Miao Dialect. Bulletin of the Institute of History and Philology, Academia Sinica 29.11-19. [Data gathered in 1942]
- _____. 1966. A Comparative Study of the Yao Tone System. Language 42.303-10.
- _____. 1972. The Reconstruction of Proto-Miao-Yao Tones, Bulletin of the Institute of History and Philology, Academia Sinica 44.541-628.
- Chao, Yuen-ren. 1930. Yao Songs from Kwangsi. The Institute of History and Philology, Academia Sinica: Monograph Series A, No. 1. [C]
- Chu-t'ing. August, 1957. A Comment on Ai-ch'ing's Note. Chungkuo Yüwen 62.36. (English transl.: Purnell, 1972, 237-8)
- Denlinger, Paul B. 1972. Miao-Yao Manuscript. Journal of the Tunghai University 13.1-66.
- Downer, Gordon B. 1961. Phonology of the Word in Highland Yao. Bulletin of the School of Oriental and African Studies 24.431-41. [Data gathered in 1959-60]
- _____. 1963. Chinese, Thai, and Miao-Yao. Linguistic Comparison in South East Asia and the Pacific (ed. by H. L. Shorto) 133-39. University of London: School of Oriental and African Studies.

- Downer, Gordon B. 1967. Tone-change and Tone-shift in White Miao. Bulletin of the School of Oriental and African Studies 30.589-99.
- _____. 1970. Chinese Loanwords in the Mien Dialect of Yao. [ms. presented to the Third Conference on Sino-Tibetan Reconstruction, Cornell University]
- _____. 1971. The Further Relationships of the Miao-Yao Languages. [ms. presented to the Fourth Conference on Sino-Tibetan Languages and Linguistic Studies, Indiana University]
- Esquirol, Joseph. 1931. Dictionnaire 'Ka nao_Λ-Français et Français-'Ka nao_Λ. Hong Kong.
- Graham, David Crockett. 1937. The Customs of the Ch'uan Miao. Journal of the West China Border Research Society 9.13-70.
- _____. 1937. The Ceremonies of the Ch'uan Miao. *ibid.* 9.71-119.
- _____. 1938. Vocabulary of the Ch'uan Miao. *ibid.* 10.55-143.
- _____. 1954. Songs and Stories of the Ch'uan Miao. Washington, D.C.
- Haudricourt, André-G. 1954. Introduction à la phonologie historique des langues Miao-Yao. Bulletin de l'École Française d'Extrême-Orient 44.555-76.
- _____. 1961. Bipartition et tripartition des systèmes de tone dans quelques langues d'Extrême-Orient. Bulletin de la Société de Linguistique de Paris 56.163-80.
- _____. 1964. Notes sur les dialectes de la région de Moncay. Bulletin de l'École Française d'Extrême Orient 50.161-71.

- Haudricourt, André-G. 1971. Les langues Miao-Yao. Asie du sud-est et monde insulindien: où en est l'atlas ethnolinguistique? Fascicul 1, 31-51. Bulletin du Centre de Documentation et de Recherche 2:4.
- Heimbach, Ernest E. 1969. White Meo-English Dictionary. Cornell University: Southeast Asia Program, Data Paper No. 75.
- Hu, Ch'i-wang. July, 1957. A Secret Language of the Pao-Yao People. Chungkuo Yüwen 61.44. [C]
- I, Hsien-p'ei. March, 1961. Noun Categories in the Miao dialect of Chi-wei, in the District of Hua-yüan in Western Hunan. Chungkuo Yüwen 102.40-7. [C]
- Institute of National Languages, Academy of Sciences. September, 1959. A Sketch of the Miao-Yao Languages. [C]
- _____. October and November, 1961. The Role of the Chinese Language in Enriching the Languages of the Yao People. Chungkuo Yüwen 109.62-71. [C] (English transl.: Purnell, 1972, 257-82)
- _____. January, 1962. A Brief Description of the Miao Languages. ibid. 111.28-37. [C] (English transl.: Purnell, 1972, 1-25)
- Kao, Hua-nien. 1947. An Outline of Ch'ing Miao Phonetics. Pien-chiang Jen-wen 4.70-81.
- Kwan, Julia Chin. 1971. Ch'ing Chiang Miao Phonology. Tsing-hua Journal of Chinese Studies, New Series 9.289-305.
- Li, Fang-kuei. 1930. A Yao Dialect in Ling Yün, Kwangsi. Bulletin of the Institute of History and Philology, Academia Sinica 1.419-26. [C]

- Li, Yung-sui, Ch'en K'e-chiung, and Ch'en Ch'i-kuang. September, 1959. Problems in the Interrelationship of Tones and Initials in Twenty Miao Dialects. Yüyen Yenchiu 4.65-80. [Data gathered June, 1956, to March, 1957] [C] (English transl.: Purnell 1972, 83-110)
- Ling, Shun-sheng, and Ruey Yih-fu. 1947. The Miao Tribe of Western Hunan. The Institute of History and Philology, Academia Sinica: Monograph Series A, No. 18. [Data gathered in 1933]
- Lo, Chi-kuang. March, 1953. The Yao Language in Kwangsi. Chungkuo Yüwen 9.33. [C]
- Lombard, Sylvia J., and Herbert C. Purnell, Jr. 1968. Yao-English Dictionary. Cornell University: Southeast Asia Program, Data Paper No. 69.
- Ma, Hsüeh-liang, and T'ai Ch'ang-hou. December, 1956. A Preliminary Comparative Study of the Twenty-one Miao Dialects in Southeastern Kweichow. Yüyen Yenchiu 1.265-82. [Data gathered in the fall of 1952] [C] (English transl.: Purnell, 1972, 27-54)
- Mao, Tsung-wu, and Chou Tsu-yao. March, 1962. A Brief Description of the Languages of the Yao People. Chungkuo Yüwen 113.141-8. [C] (English transl.: Purnell 1972, 239-55)
- Moréchand, Guy. 1968. Le chamanisme de hmong. Bulletin de l'École Française d'Extrême-Orient 54.53-294.
- Naichan, Rangsiyananda, and Luang Bamrung Nauvakarana. 1925. The Yao of Siam. Journal of Siam Society (Thailand Research Society) 19.113-28

- Oshima, Shōji. 1971. Preliminary Study on a Black Miao Dialect:
Phonology. The Annual Report on Cultural Science 28.27-48.
- P'an, Yüan-en, and Ts'ao Ts'ui-yün. June, 1958. Four-syllable
Coordinative Constructions in the Miao Dialect of Lu-shan in
Eastern Kweichow. Shaoshu Mintsu Yüwen Lunchi 1.91-109. [Data
gathered in 1952] [C] (English transl.: Purnell, 1972, 211-34)
- Purnell, Herbert C., Jr. 1965. Phonology of a Yao Dialect. Hartford
Studies in Linguistics, No. 15. [Data gathered from April, 1963,
to May, 1964]
- _____. 1970. Toward a Reconstruction of Proto-Miao-Yao. Cornell
University: Ph.D. dissertation.
- _____. [editor] 1972. Miao and Yao Linguistic Studies: Selected
Articles in Chinese. Translated by Chang Yu-hung and Chu Kwo-ray.
Cornell University: Southeast Asia Program, Data Paper No. 88.
- Ruey, Yih-fu, and Kuan Tung-kuei. 1962. Marriage and Mortuary Customs
of the Magpie Miao, Southern Szechuan, China. The Institute of
History and Philology, Academia Sinica: Monograph Series A, No. 23. [C]
- Rulison, Donald. Blue (Green) Meo Language Lessons. Chiangmai, Thailand:
Overseas Missionary Fellowship. [mimeographed]
- Savina, F. M. 1916. Dictionnaire Miao-Tseu-Français; Vocabulaire
Français-Miao-Tseu. Bulletin de l'École Française d'Extrême-Orient
16:2.xxii, 1-246.
- _____. 1926. Dictionnaire Français-Man. *ibid.* 26.11-255.

- Shafer, Robert. 1964. Miao-Yao. Monumenta Serica 23.398-411.
- Ts'ao, Ts'ui-yun. April, 1961. A Preliminary Study of Adverbs in the Miao Dialect of K'ai-t'ang, in the District of K'ai-li, in Eastern Kweichow. Chungkuo Yüwen 103.36-42, 8. [C] (English transl.: Purnell, 1972, 187-210)
- Vial, Paul. 1908. Lexique Français-Miao-Tseu. Shanghai.
- Wang, Fu-shih. December, 1962. Problems in Reforming the Writing Systems for the Miao Language. Chungkuo Yüwen 6.12-3. [C]
- _____. June, 1956. How to Analyze and Record Tones in Sino-Tibetan Languages. Chungkuo Yüwen 48.19-27. [C]
- _____. May, 1957. Problems in Spelling Chinese Loanwords in the Miao Dialects. Chungkuo Yüwen 59.42-4. [C]
- _____. December, 1957. Auxiliary Nouns in the Miao Dialect of Shih-men-k'an in the District of Wei-ning in Kweichow. Yüyen Yenchiu 2.75-121. [Data gathered in the fall of 1952] [C] (English transl.: Purnell, 1972, 111-85)
- Whitelock, Doris A. White Meo Language Lessons. Chiangmai, Thailand: Overseas Missionary Fellowship. [mimeographed]
- Wong, Sik-ling. 1939. Phonetics and Phonology of the Yao Language: Description of the Yau-ling Dialect. Ling-nan Science Journal 18.425-55.
- Yen, Hsüeh-chiung. June, 1958. An Illustration of the Linguistic Approach to the Study of the History of Nationalities. Shaoshu Mintsu Yüwen Lunchi 1.41-8. [C]

Ying, Lin, and the Institute of National Languages, Academy of Sciences.

May, 1962. Chinese Loanwords in the Miao Language. Chungkuo Yüwen

115.218-29. [C] (English transl.: Purnell, 1972, 55-81)