

On the affiliation of Miao-Yao and Kadai: Can we posit the Miao-Dai family?

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1. Introduction

What is the proto-language for a daughter language? What are the relations between sister languages? What should the criteria be like in genetic classification of languages? These seemingly fundamental questions in fact present some very delicate points that need to be fully discussed.

When we talk about genetic affiliation or classification, it is not sufficient to state simply that something is apparently very similar to something else, or that the two things have a number of common features. That is to say, genetic classification is totally different from typological classification in that the former type of classification relies principally on criteria that hardly change over time, while such criteria do not matter in particular in the latter type of classification. For example, a genetic classification of animals is likely to be done based more on the anatomical features such as overall osseous constitution, internal dental structure, etc. than on outward appearances, visible and palpable characteristics, acquired tendency for favorite diet, habits, etc. The small hare- or mongoose-like mammal called "hyrax", for instance, is more akin to the huge elephant than to the hare or mongoose in spite of their visual impressions, and, as well, the almost completely herbivorous and frugivorous "lesser panda" is genetically categorized under the class of carnivores. In the case of languages also, apparently totally different forms sometimes end up being shown to be ultimately derived from the same etymon through a series of "sound laws". The criteria for classification in these cases are ones rather difficult to perceive from appearances but resistant to change over the passage of time. What are required as criteria in any kind of genetic classification should remain essentially the same.

2. Comparison between Miao-Yao and Kadai

2.1 Basic vocabulary

The author basically considers it practically impossible to construct a concrete and universal list of “basic vocabulary” for the purpose of language comparison. Nevertheless, we do have certain screening criteria considered useful, that is, “basic vocabulary” chiefly consisting of; ① nouns for natural existence and phenomena, ② nouns for fauna and flora, ③ body-part nouns, and ④ some fundamental and universal type of verbals (verbs + adjectives). The other criterial categories worth mentioning are probably: ⑤ low numerals like ‘1’ ~ ‘5’ or ‘1’ ~ ‘10’, ⑥ first and second person pronouns (especially singular) and ⑦ a series of lexical items closely related to and deeply rooted in the everyday life of the ethnic group in question (ex. ‘(for two persons) to carry on the shoulder’, ‘bedbug’, ‘rice seedling’, etc.). As for the category of ②, species-nouns such as ‘dog’, ‘pig’, ‘bird’, ‘fish’, etc. are to be considered for the fauna vocabulary, while nouns indicating parts of the constitution such as ‘leaf’, ‘fruit’, ‘root’, ‘flower’, etc. tend to be included in the domain of the flora vocabulary.

It goes without saying that not all the vocabulary falling under these categories will be equally treated as “basic vocabulary”. On the contrary, merely a part of the whole of each category is worth considering in language comparison. It is not true at all, on the other hand, that vocabulary outside these criterial categories may always be neglected. There also exist occasional cases where even lexemes within these categories suffer lexical substitution or innovation as in the examples of Khmer ‘bird’ and ‘fish’, and Vietnamese (northern dialect) ‘flower’ and ‘head’. Lexemes of onomatopoeic or descriptive type should be excluded in language comparison as they naturally tend to present phonetically similar or parallel shapes independent of their linguistic family.

Lexical items in these criterial categories usually do serve well for confirming phonological correspondences, but we should be aware that part of these items, especially those whose appearance in syntactic sequence is rather restricted, sometimes undergo specific and irregular sound changes (ex. ⑤ and ⑥; cf. English *one* [oun] and *two* [twou])

2.2 Miao-Yao and Kadai languages

In the mainland Southeast Asia, which displays an extremely complex linguistic distribution, there still remain some (groups of) languages whose genetic classification has not yet been determined. Among those, the Miao-Yao languages are certainly the most numerous and diversified group.

The Miao-Yao languages have generally been considered a group of languages that are relatively independent in terms of affiliation to the

languages of other families. This seemingly appropriate way of looking at them is probably due to the fact that they have undergone significant and constant lexical influence from various other adjacent minority languages and, of course, from Chinese, the dominant language of the area, over the centuries.

Haudricourt, a historical linguist whose interest always covered the entire Southeast Asian minority languages, irrespective of their family borders, once mentioned the possibility of Miao-Yao forming an intermediary group between Mon-Khmer and Tibeto-Burman (cf. Haudricourt, 1954). Meanwhile, Benedict (1975), in his “Austro-Thai” theory, asserted the existence of genetic relationship between Miao-Yao and Kadai, but failed to show clear large scale phonological correspondences supporting it. In any event, Paul K. Benedict is considered the first scholar to claim genetic relationship between Kadai and Miao-Yao in a comparative perspective.

In the process of his reconstructive work on Proto-Kadai phonology, the author took notice of the fact that the Miao-Yao and Kadai languages could have derived from a common ancestor language based on the existence of a series of phonological correspondences (though quite vestigial) found in the sphere of basic vocabulary. Before proceeding to follow our discussion in detail, a brief and general idea of these languages is first presented.

The Miao-Yao languages are roughly made up of two main groups, namely, the Miao group and the Yao group. The former is distributed from Guizhou through Guangxi, Hunan, Sichuan and Yunnan provinces in China and as far south as the Indochina peninsula, and the latter, from Guangxi through Hunan, Guangdong, Guizhou and Yunnan provinces in China and as far south as the Indochina peninsula as well. The Miao-Yao languages are also referred to as the Hmong-Mien languages.

On the other hand, the Kadai¹ languages comprise languages such as Siamese, Lao, Zhuang, etc. (=Tai group), Kam, Mulam, Sui, Maonan, etc. (=Kam-Sui group), Hlai and Be spoken on Hainan Island, and a series of languages like Lachi, Gelao (=Kelao), Laha, Pupeo, etc. that are found in scant and dispersed numbers around the Sino-Vietnamese border. The Kadai languages are sometimes referred to as the Tai-Kadai (Kra-Dai) languages as well.

2.3 Diachronic sound changes occurred in Proto-Miao

The following fundamentally important and characteristic sound changes occurred in the evolution of the proto-language to Proto-Miao (PM) (hereafter, PM (K)), namely;

¹As for the overall classification of the Kadai languages, refer to Kosaka (2000).
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- (1) Falling or weakening of the final consonant
- (2) Systematic vowel changes characterized by “raising of the vowel” and “diphthongization”
- (3) Disappearance of the phonological distinction of vowel length, and
- (4) Appearance of palatal onset in the originally dental series of finals preceded by **-aa-* like **-aan* > **-aj(N)* and **-aat* > **-aj(?)*.

Systematic vowel changes mentioned in (2) also occurred in the history of English (cf. Great Vowel Shift) as is seen with the examples of “mate (**-a:-* > *-ej-*)”, “meet (**-e:-* > *-i:-*)”, “moon (**-o:-* > *-u:-*)”, “might (**-i:-* > *-aj-*)”, etc.

As to the general pattern of linguistic drift in historical developments, Proto-Miao has undergone a series of remarkable changes in rhymes, while it conserves fairly well the original state of its initials. On the other hand, Proto-Yao seems to have experienced a high degree of simplification in its initials, while its rhymes remain relatively unchanged (though some of the original finals seem to have weakened or dropped out even).² The phonologically important changes of Proto-Yao rhymes worth mentioning for reference here are:

- (5) Labialization of the proto-rhyme **-aa* to **-aw/*-ua* (cf. 3.2), and
- (6) Delabialization of the proto-rhyme **-ua* (~**-uu*) to **-ej* (cf. 3.5).

The outlines of the systematic sound changes from the proto-language to PM (K)³ (via Pre-PM (K)) confirmed so far are enumerated below.

Proto-form	Pre-PM (K)	PM (K)
① <i>*-aa</i> >	<i>*-ua</i> >	<i>*-ia</i> (“diphthongization”)
② <i>*-aj/-aaj</i> >	<i>*-aj</i> >	<i>*-a</i> (“final-consonant falling”)
③ <i>*-e(e)-</i> >	<i>*-e</i> (“final-consonant falling”) >	<i>*-i</i> (“vowel raising”)
④ <i>*-o(o)-, *-ua</i> (~ <i>*-uu</i>) >	<i>*-o</i> (“final-consonant falling”) >	<i>*-u</i> (“vowel raising”)
⑤ <i>*-ia-, *-aan/*-aat</i> >	<i>*-ia, *-aj(N)/*-aj(?)</i> (“final-consonant falling or weakening”) >	<i>*-e</i> (“vowel leveling”)
⑥ <i>*-ua-</i> >	<i>*-ua</i> (“final-consonant falling”) >	<i>*-o</i> (“vowel leveling”)
⑦ <i>*-i(i)ŋ</i> >	<i>*-iN</i> (“final-consonant weakening”) >	<i>*-ajN</i> (“diphthongization”)
⑧ <i>*-aaŋ</i> (, <i>*-aam</i>) >	<i>*-aŋ</i> >	<i>*-aŋ</i>
⑨ <i>*-o(o)ŋ</i> (, <i>*-aŋ</i>) >	<i>*-oŋ</i> >	<i>*-oŋ</i>

²Even in Proto-Yao, there exist some cases where the original nasal finals seem to demonstrate a certain instability concerning their phonetic status (ex. ‘moon’ in 3.6). I would like to discuss them in another separate article.

³In the present article, we mainly refer to Proto-Miao and not Proto-Yao as material for comparison, for the former includes more of the cognate forms taken up here than the latter.

3. Phonological correspondences between Miao and Kadai

3.1 Breakthrough to establishing phonological correspondences

When we examine the PM forms of Purnell's (1970) reconstruction, we promptly take notice of the fact that PM forms for 'fish' and 'ear', and those for 'stone' and 'near' are pairs of homophones (tones aside), that is, **ndʒe* for the former and **ʔe* for the latter. What is more interesting is that the forms for 'fish' and 'stone' appear as exact homophones (including tones) in both Zhuang (Daic branch) and Pupeo (Ke-Peo branch) of the Kadai languages, that is /pjaa¹/ in the former and /pjau³/ in the latter. Moreover, the above-mentioned four words have the rhyme /-au/ in common in the Anshun Wanzi dialect of the Gelao language (Ke-Peo branch). In fact, all of these four lexical items are presumed to be traceable back to the Proto-Kadai rhyme **-aa* (-) by comparative analysis (cf. Kosaka, 2000), and this coincides very well with the fact that the rhymes of these four words are all represented as **-e* in Purnell's PM reconstruction.

Concerning the postulation of original initials **ɹ-* and **ʔ-* (barred *r*) by Purnell, these initials are found in only three cognate examples in all, namely 'nest' for **ɹ-* and 'stone'/'near' for **ʔ-*, both of which are followed by the assumed original vowel **-aa*. These cases will be examined in detail below. On the other hand, among the examples where original initials are set up as **r-* and **ʔ-* by Purnell, there is not a single item considered to have had original **-aa* contrastively. These phonological facts, as a whole, seem to indicate "complementary distribution", in other words, the realization of labio-dental fricative initial (= /v/) in two modern Miao dialects (namely, Chengfeng and Weining dialects) in the above-mentioned three lexemes, on which Purnell bases the reconstruction of a theoretically different proto-initial, can be due to conditional changes in the environment of the original initial preceding the rhyme **-aa*.

In the position of the second element of original cluster initials, Purnell's **-ɹ* follows alveolo-palatal consonants as a principle while his **-r-* is situated in the remaining environments, and they present no phonological contrast. Consequently, Purnell's pairs of **(-)r-* and **(-)ɹ-*, and **ʔ-* and **ʔ-* could be viewed as allophones, thus ending up being reduced to two phonemes (= **(-)r-* and **ʔ-*) instead of four. This initial distinction is not represented in Chang Kun's (1976) reconstruction either.

Having sketched the past work, we turn now to our proposal. The abbreviations to be used in the present work are as follows.

- ◎ PM (P) = Proto-Miao (reconstructed by Purnell, 1970)
- ◎ PM (K) = Proto-Miao (reconstructed by the author)
- ◎ PY = Proto-Yao (reconstructed by Purnell, 1970)

- ◎ PY (T) = Proto-Yao (reconstructed by Theraphan, 1993)⁴
- ◎ PMY = Proto-Miao-Yao (reconstructed by Purnell, 1970)
- ◎ Miao (K) = Green Miao surveyed by the author⁵
- ◎ Yao (BM) = Biaomin dialect of the Yao language (from Zhongyang Minzu Xueyuan Miaoyaoyu Yanjiushi, 1987)
- ◎ Yao (BMa) = Biaoman dialect of the Yao language (from Meng Zhaoji, 1993)
- ◎ PT = Proto-Tai (according to Li Fang Kuei, 1977 for initials)
- ◎ PSWT = Proto-Southwestern-Tai (according to Li Fang Kuei, 1977 for initials)
- ◎ PNT = Proto-Northern-Tai (± Proto-Saek-Chuang reconstructed by the author, 1992)
- ◎ PKS = Proto-Kam-Sui (reconstructed by Thurgood, 1988)
- ◎ PHlai = Proto-Hlai (reconstructed by the author, 1996)
- ◎ PKL = Proto-Gelao-Lachi (reconstructed by the author, 2000)
- ◎ PKadai = Proto-Kadai (± Pre-PKL reconstructed by the author, 2000)
- ◎ PKra = Proto-Kra (reconstructed by Ostapirat, 2000)
- ◎ PLakkja = Proto-Lakkja (reconstructed by Theraphan, 1991)
- ◎ Buyang (EC) = Ecun dialect of the Buyang language (according to Li Jinfang's data from R. Kosaka, Zhou Guoyan and Li Jinfang, 1998)
- ◎ Buyang (BH) = Baha dialect of the Buyang language (from Li Jinfang, 1999)
- ◎ Buyang (YL) = Yalang dialect of the Buyang language (from Li Jinfang, 1999)
- ◎ Buyang (LJ) = Langjia dialect of the Buyang language (from Li Jinfang, 1999)

⁴With respect to the Proto-Yao reconstruction presented in Theraphan (1993), the rhymes almost entirely coincide with those of Purnell (1970) except for a few points — for instance, the contrast between **-a-* and **-aa-* in Purnell is reinterpreted as that between **-ə* and **-a-*, and his **-ʔ* is further traced back to **-k* appearing at an earlier stage etc. —, while in the domain of initials some significant attempts to improvement are introduced in regard to Purnell's reconstruction, especially, concerning initial clusters as is seen in the replacement of Purnell's **tsh-* in 'bone', **k²-* in 'insect', **py¹-* in 'five', etc. with her **sb-*, **kl-*, **pl-*, etc. respectively.

⁵The Miao (K) data are taken from the author's field notes. The survey was conducted in Luang Phrabang, Laos during the project "Linguistic and Anthropological Studies on the Tai Culture Area" organized by Prof. Tadahiko Shintani. Miao (K) has the following tones.

- 55
- 53
- 13
- ʔ̚ (pronounced with a high degree of breathy phonation)
- 33
- 11
- 2̚ (pronounced with a glottal constriction (glottalized phonation) followed by a glottal stop)

The tone 55 is descended from Purnell's **A* tone with an original voiceless initial, with value 53 when from **A* tone with an original voiced initial, 11 from **D* with an original voiceless initial, and 2̚ from **D* with an original voiced initial.

- ◎ PMK = Proto-Mon-Khmer (according to Prof. Gérard Diffloth, by oral communication)
- ◎ PLo = Proto-Loloish (reconstructed by Bradley, 1979)

The notations of PKS tones *1/2, *5/6, *3/4 and *7/8 in Thurgood (1988) is here retranscribed as *0, *1, *2 and no mark respectively.⁶

The underlines added to Purnell's reconstructions mean that the reconstructed phoneme is uncertain.

We shall now begin by examining the correspondences of rhymes deriving from original **-aa*.

3.2 PM (K). **-ia* (< Pre-PM (K) **-ua*) vs. PKadai. **-aa*

	<i>PM (K)</i>	<i>PM (P)</i>	<i>Miao (K)</i>	<i>PKadai etc.</i>	<i>cf.</i>
'fish'	*-ia	*ndžre ¹ B ⁷ *mbr- (Chang)	ŋtše ²¹	*laa ⁰ ⁸ *p-la [^] (PKra)	PT. *plaa ⁰ PHlai. *hlaa ⁰ Pupeo. pjaw ³ PY(T). *blau ^{B2}
'ear'	*-ia	*ndžre ¹ A *mbr- (Chang)	ŋtše ⁵³	*raa ⁰ ~laa ⁰ *k-ra [^] (PKra)	Buyang (EC). (?bai ⁵⁵) ōa ³³ Yao (BM). blau ²⁻⁴
'stone'	*-ia	*ʔre ² A	(pɔ ⁵⁵) zɛ ⁵⁵	*phl/raa ⁰ (PT) 'rock' *p-ra [^] (PKra)	PKS. *pra ⁰ Buyang (EC). ma ⁰ ōa ³³ Pupeo. pjaw ³ PY(T). *yau ^{A1}
'near'	*-ia	*ʔre ² C	zɛ ³³	*laal [#] *d-la ^C (PKra)	Buyang (BH). ra ¹¹ Hlai (BS). khaal PT. *krau ²
'far'	*-ia	*qɛ ¹ A	tle ⁵⁵	*ləj ⁰	PT. *klaj ⁰

⁶As for the regular tonal correspondences in view of the old loans of Chinese origin, tones *0, *1, *2 and no mark of Proto-Kadai (Li Fang Kuei's *A, *B, *C and *D respectively) correspond to Ancient Chinese *ping* (平), *qu* (去), *shang* (上) and *ru* (入), and correspond to Proto-Miao-Yao *A, *C, *B and *D of Purnell's/Theraphan's tonal reconstruction. So the tones *A, *B, *C and *D of Proto-Kadai correspond to *A, *C, *B and *D of Proto-Miao-Yao respectively (attention to the order). As for the tonal reconstructions of Purnell's/Theraphan's Proto-Yao, those of *1/2, *3/4, *5/6 and *7/8 correspond to *A, *B, *C and *D of Proto-Miao-Yao respectively, of which the odd numbers indicate original voiceless initials as opposed to the even numbers indicating original voiced ones.

⁷The upper-cased numbers on the right side of initials and/or rhymes in Purnell's reconstructed forms are numbers to indicate that there are other versions of the same reconstruction showing different modern reflexes.

⁸The vowel **-ā* in an open syllable in Kosaka (2000) substantially means the same thing as **-aa*. The former is therefore retranscribed as **-aa* in the present study for the sake of comparison.

'rice plants'	*-ia	*nble ¹ A	mple ⁵³	*klaa ² (PT)	Buyang (EC). ta ⁰ la ¹¹
				'rice seedling'	'rice seedling'
					Buyang (LJ). la ³¹²
					'millet'
					PY. *blau ²
'you (pl.)'	*-ia	*mne ¹ A	mi ⁵³	*maa ⁰	PLakkja. *ma: [^]
				'you (sg.)'	'you (sg.)'
'we'	*-ia	*pe ¹ A	pe ⁵³	*ph(r)ua ⁰ (PNT)	PY. *pua ¹
				'we (dual, excl.)'	

The historical change presumed here from the proto-language to PM (K) is **-aa* > (intermediary **-ua* >) **-ia*. The diphthongization of **-aa* to **-ua* is a rather frequent sound change observed in various other languages (ex. **?daak* > Viet. *nước* 'water', **kǎjaal* > Laven. *kǎjuaɐl* 'wind').

The final **-l* posited for the proto-form for 'near' is considered to have remained in PKadai and disappeared in PM. The Buyang (BH) form also seems to have simply dropped the final consonant. The PKadai tone [#] indicates that the reconstructable tone is either *1 or *2. The form of Hlai (BS), the Baisha dialect of the Hlai language, is originally from Wang Li's data and was quoted in Nishida (2000). For the possibility of reconstructing final **-l* at the proto-level, refer to PKra **mal⁴* 'new', for example.

With regard to 'far', the rhyme of PT does not seem to go very well with that of PM (K). This is because the PM rhyme could have been assimilated to the form for 'near' by way of analogy, as the two forms semantically constitute an antonymic pair. The appearance of unetymological nasality in Portuguese *sim* [sĩ] < **sic* 'yes' in contrast with *não* [nẽõ] 'no' can be cited as an example of such an analogical sound change in a pair of antonyms.

A somewhat peculiar PM initial cluster **mn-* reconstructed by Purnell for 'you (pl.)' seems to be a result of, as it were, mechanical reconstruction reflecting the fluctuating initial realization between /m-/ and /n-/ according to dialects. In fact, there exists in Purnell (1970) no modern dialect actually showing the mentioned nasal cluster initial (two of the cited four dialects showing /m-/ whereas the remaining two /n-/).⁹ The author reconstructs **m-* here (cf. PY. **mwei²*). A synchronic alternation between vowels /-e/ and /-i/ observed in the Miao data of Lyman (1974; ex. /kě/~/ki/ 'road') might be capable of explaining the realization of the apparently irregular /-i/ in Miao (K) for this lexical item. The appearance of unetymological nasal final /-ŋ/ in the forms for 'you (sg.)' in many Tai dialects would have a lot to do with the original nasal initial and also with the fact that the lexeme in question is a (personal) pronoun.

⁹Purnell himself says that the reconstruction is done "with some degree of hesitancy".
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In connection with the rhyme of the PY for 'we' (that is, **-ua*), it greatly differs from that of the other PY examples cited here (that is, **-au*). However, the impossibility of finding cognate lexemes reconstructed with bilabial initial + **-au* at the PY level leads one to speculate that there was an irregular realization of PY **-ua* from a conditioned change of original **-aa* in the case of bilabial initials.¹⁰ As for the rhyme of the PNT form for 'we (dual, excl.)' cited from Strecker (1984), **-wa* often derives from **-aa* as we have already pointed out, thus the form **ph(r)wa⁰* can theoretically have come from **ph(r)aa⁰*. Moreover, the grounds for the reconstruction of Strecker's problematic **-(r)-* seem to lie in the fact that certain Tai dialects (ex. Western Nung and the SWT dialect appearing in the Ram Khamhaeng Inscription) show aspirate plosive /ph-/ for the initial of this word. However, the author supposes it to be insufficient for the reconstruction of the initial second element **-r-* (Strecker, in fact, also puts it in parentheses as if to indicate his doubts), as the feature of aspiration can be interpreted as a kind of articulatory weakening, and this could be the case here as well because the lexeme in question is a (personal) pronoun that usually appears unstressed and often allows aberrant sound changes, unlike common nouns (cf. the irregularly spirantized initial **h-* from **k-* for PHLai pronoun 'I, me'; cf. Kosaka, 1996, and Saek /phak tuu/ < **paak tuu* 'door'). Consequently, the author presumes the PNT form for 'we (dual, excl.)' to be **pwa⁰* (that further goes back to **paa⁰*), and therefore considers it feasible to relate this form to PMY for 'we' postulated here to be **paa¹*. Other than this lexical item, we have 'ear' and 'snake' as examples in which the original **-aa* also appears as **-wa* in PNT.

Purnell (1970) has interpreted the above series of lexemes to originally have had the rhyme **-au* at the PMY level, which developed to **-e* in PM, and stayed intact as **-au* in PY. Yet he did not provide a convincing explanation for the mutational process of his original **-au* to PM **-e*.¹¹ Furthermore, in terms of language universals, it seems highly improbable that the PMY rhyme **-aa* be reconstructed merely in two cognate examples ('moon' and 'five'; cf. Purnell, 1970). Accordingly, contrary to Purnell's hypothesis, the author posits proto-rhyme **-aa* for the above series of lexemes. This alternative (proto-rhyme **-aa* instead of **-aw/*-ua*) here seems to explain better the process of sound change from the proto-language to both PM and PY, as well as the question of the highly infrequent appearance of PMY **-aa* in Purnell's account. Moreover, this solution can equally and more easily account for the reconstruction of other proto-rhymes postulated by the author hereafter within the framework of systematic sound changes.

¹⁰In addition to 'we', there are lexical items such as 'hand', 'name' and 'three' as examples equally showing PY **-ua* and bilabial initials, of which the original vowel is suspected to be **-aa*.

¹¹As for the reconstructed forms by Wang et al. (1995), despite certain differences in regard to those by Purnell, the framework of reconstruction is considered essentially the same (Purnell's PM **-e* is represented with **-æ*, while his PY/PMY **-au* with **-au*), and the problem remains to be solved.

In fact, lexemes for which **-aa* is reconstructed as PY in Purnell (1970) often show signs of being a secondary appearance. In other words, most of these lexemes are either:

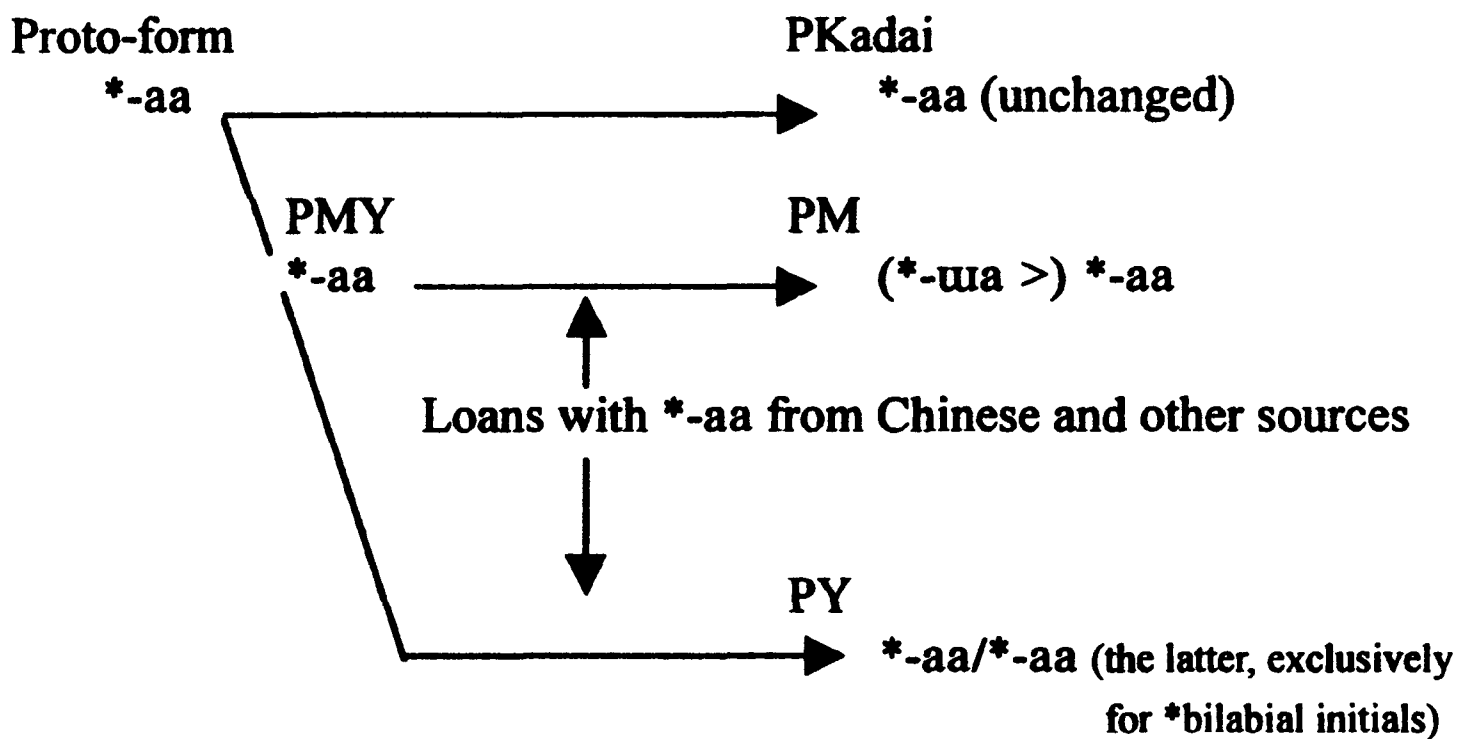
- (1) evident loans, especially from Chinese (cf. “馬 (horse)”, “茶 (tea)”, “牙 (tooth)”, etc.), or
- (2) ones lacking cognates on the Miao side, or
- (3) ones whose reconstructions are presented in an incomplete or doubtful manner.

As such, the author hypothesizes that the influx of external elements with **-aa* (from Chinese and other sources) into PMY could have caused the original **-aa* to leave its place “for the benefit of new-comers” and to avoid homophonic clash and evolve into **-aw* at the PY level, only that it became **-ua* in the cases of original bilabial initials (excluding the cases of the bilabial initial being the first element of cluster initials; ex. ‘rice plants’ above). The original rhyme **-ua* (~ **-uu*), on the other hand, turned into high front vowel **-ej* (cf. ‘head’ in 3.5) in PY. This pattern of systematic phonological shifts as a whole is quite similar to the historical changes found in a number of Gelao dialects as well as in Buyang (YL) (cf. Buyang (YL). /lau³¹/ ‘fish’ (< **-aa*), /ŋau³¹/ ‘snake’ (< **-aa*) and Buyang (YL). /ma:i⁵³/ ‘pig’ (< **-u*), /ta:i⁵³/ ‘head louse’ (< **-u*)).

In sum, according to the author’s alternative interpretation of the proto-rhyme in the lexemes above, the rhyme **-aa* of the proto-language turned into **-ia* in PM, and into **-aw*/**-ua* in PY. These diachronic changes are suspected to have been triggered by the influx of loans carrying the rhyme of **-aa* that supposedly took place at some post-PMY period. At the same time, PKadai also could have had some contacts with Chinese and other nearby languages in the ordinary course of events, but somehow (probably because of contacts of lesser intensity) ended up retaining the original rhyme **-aa*.

The diachronic development of proto-**-aa* to PM and PY is schematized as follows:

Chart 1.



In connection with this type of phonological restructuring as a consequence of the influx of loans, something parallel might have taken place in a post-PKadai period, as the rhyme **-aa* is set up at the PKadai level for lexical items such as ‘ear’ and ‘snake’ in contrast with **-ua* of PNT and **-uu* of PSWT.

As to the lexemes for ‘moon’ and ‘five’ for which Purnell reconstructed PMY **-aa* (namely, **lhaa¹ C* and **tʃraa A* respectively), these will be treated in 3.6.

So far, we have clarified the problematic and disputable points in Purnell’s reconstruction of PMY **-au* (and **-ua*) and have attempted to present an alternative solution to it, that is, I assume these etyma developed from PMY **-aa*.

Now, let us consider other correspondences presented below.

3.3 PM (K). **-a* (< Pre-PM (K) **-aj*) vs. PKadai. **-aj/*-aaj*

	PM (K)	PM (P)	Miao (K)	PKadai etc.	cf.
‘excrement’	<i>*-a</i>	<i>*qua B</i>	<i>qua¹³</i>	<i>*ɣaj² (PNT)</i>	PMY. <i>*Qai² B</i> PAN. <i>*tahi¹</i>
‘bamboo shoot’	<i>*-a</i>	<i>*ndʒua C</i>	<i>ŋtʃua²¹</i>	<i>*phraj¹ (PSWT)</i> ‘bamboo’	PMY. <i>*ndʒrai¹ C</i> Khmu (< SWTai loan). <i>phraj</i> Phlai. <i>*pl__j¹</i> ‘bamboo’
‘this’	<i>*-a</i>	<i>*ʔn__ B</i>	<i>nua¹³</i>	<i>*nii²~naj² (PT)</i>	PKS. <i>*nai¹</i> PY. <i>*n_i²</i>
‘to die’	<i>*-a</i>	<i>*dua C</i>	<i>tua²¹</i>	<i>*praaj⁰ (PT) ~</i> <i>*taaj⁰ (PSWT)</i>	PKS. <i>*pjai⁰</i> PY. <i>*tai⁶</i> PAN. <i>*pataj</i>

'to cross over'	*-a	*qlu _a C (?)	—	*phl/raaj ² (PT)	PY. *kwyia ⁵
				'to walk'	Chi. 過
'to have'	*-a	*mu _a A (?)	mua ⁵³	*me ⁰ (PKS) ~ *mii ⁰ (PT)	PY. *maai ²
'lower back'	*-a	*klua B (?)	tlua ¹³	*hlai ⁰ (PKS)	PKS (E). *k-la:i [^]
				'back (-bone)'	'spiral cord'
					MY. *klaai ¹ B

On the basis of the seven examples above, it is inferred that the proto-rhyme *-aj/*-aaj changed into PM *-a, thus occupying in PM the vacated phonological place of the proto-*aa (cf. 3.2). A similar type of phonetic change also occurred in Bu Dai, one of the Central Tai languages spoken in northern Vietnam (cf. Kosaka, 1997).

As for 'bamboo shoot', Li's (1977) PSWT reconstruction is *ph-, while the author assumes it to be *phr- based on the modern Khmu form, an ancient Southwestern Tai loan.

The instability of vowel realizations attested for 'this' can be due to its lexical feature being a (demonstrative) pronoun (cf. Chinese. zhè~zhèi for 'this').

With respect to 'to cross over', Purnell posits *kwyia⁵ as PY form and considers the rhyme of the Haininh dialect of Yao to be irregular (= kwai² (F), parenthesized "F" denoting irregular final). On the contrary, the author considers it as "regular" preservation of the original final consonant in this dialect rather than as irregular realization.

For 'lower back', PKS (E) is cited from Edmondson et al. (1988). The underlying idea found in the lexemes in common here might be "spatial rearwardness". Semantic deviation in lexemes designating body-parts sometimes occurs as in French *épaule* 'shoulder' vs. Spanish *espalda* 'back'

3.4 PM (K). *-i (< Pre-PM (K) *-e) vs. PKadai. *-e(e)-

	PM (K)	PM (P)	Miao (K)	PKadai etc.	cf.
'tongue'	*-i	*nbrai D *mbl- (Chang)	mplaj ²¹	*li(i)n ² (PT)	PMY. *nbret D Punu. ntla ⁸
'narrow'	*-i	*nga D *NG- (Chang)	Nqaj ²¹	*yeep (PNT)	PMY. *ngep D Chi. 夾

As to 'tongue', an interesting nasal~plosive alternation is observed with the final consonant (See PT *-n~PY *-t). Purnell (1970) reconstructs the PM form with plosive-ending tone *D, although the tones of three Miao dialects cited by Purnell — Petchabun/Tak dialects (both appearing with tone 6

indicating *C – non-checked rhyme) and Suyung dialect (appearing with tone 2 indicating *A – non-checked rhyme) — as well as that of Miao (K) do not reflect original plosive final, contrary to the examples for ‘narrow’ that exclusively show tones reflecting original plosive-ending. Among the Kadai languages, a parallel nasal~plosive final alternation is attested in examples for ‘fish scale’ (cf. PKS. **krin*¹~PT. **klet*), ‘dumb, mute’ (cf. PT. **-m*²~ Be. /-p/) and ‘to embrace’ (cf. PHlai. **-m*²~/-p/ in some modern Hlai dialects). Another parallel phenomenon confirmed among modern Hlai dialects is that Baocheng and Jiamao forms for ‘spade’ are /tsha:n²/ in contrast to plosive-ending /tsha:t⁷/ in Xifang and Tongshi (cf. Ouyang Jueya et al., 1983), though the item itself is certainly of Chinese origin (= 鏟) with *shang* tone (corresponding to PKadai *2). In this connection, it would be worth pointing out that glottal constriction appears in the pronunciation of rhymes with original *2 tone in many Southwestern and Central Tai dialects (ex. Li describes this as *nam*? ‘water’, *lin*? ‘tongue’, etc., cf. Li Fang Kuei, 1977). Besides, in Tibeto-Burman languages, lexemes for ‘tree’ and ‘stone’ are also known to demonstrate a nasal~plosive alternation, namely **-ŋ~*k* (**siŋ~*sik* and **luŋ~*luk* respectively; cf. Benedict, 1972)¹². Based on these supplementary pieces of evidence supporting sporadic nasal~plosive alternation, and the mentioned tonal realizations indicating a non-plosive ending of some Miao dialects, the author reconstructs **-e(e)n* as the proto-rhyme for this lexical item. In regard to the discrepancy in vowel height between PT **-i(i)-* and PMY (presumed by the author) **-e(e)-* for ‘tongue’, we would prefer to interpret it as simply due to phonetic alternation for the time being (cf. PNT. **-iŋ*⁰~ PSWT. **-een*⁰ ‘wasp’, PNT. **-iŋ*⁰~ PSWT. **-eeŋ*⁰ ‘red’, etc.).

For ‘narrow’, the manner of diachronic change is proto-**-e(e)p* > Pre-PM (K) **-e* (“falling of the final consonant”) > PM (K) **-i* (“raising of the vowel”). Concerning the vowel of PM (P), the author suspects that it should be **-ai* instead of **-a*, as its vowel correspondence pattern presented in Purnell (1970) is exactly identical to that of ‘tongue’.

¹²Prof. Edmondson mentions that there is another correspondence of this type, that is Utshet, an Austronesian language found on Hainan, in which the syllable *-tshet* may represent Cham, the name of the people on the lower coast of Vietnam of which the Utshet may be an offshoot.

3.5 PM (K). *-u (< Pre-PM (K) *-o) vs. PKadai. *-o(o)-, *-ua (~ *-uu)

	PM (K)	PM (P)	Miao (K)	PKadai etc.	cf.
'to drink'	*-u	*hau D	haw ¹¹	*trwap (PKS)	PLakkja. *hɔ:p ^D PY (T). *hop ^D
'head'	*-u	*heu ² B/C	haw ³³	*thrua ⁰ (PT) *kraw ² ~ *klaw ² (PT)	Pupeo. rhô ⁴ PKS. *kru ² PHlai. *ɣrw____ ² PLakkja. *kleu ⁰ PY (T). *plei ^{B1}
'hair'	*-u	*preu ² A	plaw ⁵⁵	*phl/rom ⁰ (PT)	PHlai. *nrom ⁰ PY. *py ¹ ei ¹ Punu. t̥a ¹
'iron'	*-u	*lhau C	hlaw ³³	*hlək (PT)	Pupeo. lhot ⁵ PY. *rhia? ⁷

The presumed change of initial for 'to drink' might be *tr- > *thr- > *hr- > PM *h-.

The realization of *h- in PM for 'head' can probably be interpreted in a parallel manner to the one seen with 'to drink' above, that is, *Kr- (K representing an optional plosive) > *Khr- > *hr- > PM *h-. The tone *2 of PKS and PHlai for 'head' corresponds to tone *B of PM. The PKra form *krai^B, compared to Lachi /na⁰ kha²³/, would be another etymon for 'head'.

With respect to 'hair', the diachronic rhyme change is described as *-om > *-o ("falling of the final consonant") > PM (K) *-u ("raising of the vowel").

As for 'iron', the supposition of final *-k allows the connection of Miao-Yao with Kadai (in this case, PT) to seem quite plausible. However, the rhyme discrepancy forces us to suppose that the original form for this might be something like *hr(l)wak~*hr(l)jak (cf. PLakkja *khl-Nak^D), or else we might as well take the "polysyllabic hypothesis" into consideration as espoused by Benedict (1975). A word like 'iron', in fact, is considered to be rather "culture-vocabulary".

From the correspondences presented in 4 and 5 above, we can formulate a general rule that PM (K) high simple vowels *-i and *-u diphthongized to /-aj/ and /-aw/ in Miao (K) respectively (cf. Both of these PM (K) vowels further merged into /-a/ in Punu, a language belonging to the Miao group).

The following correspondences can equally be understood in the parallel framework of historical diphthongization from PM (K) *-u to Miao

(K) /-au/.

	<i>PM (K)</i>	<i>PM (P)</i>	<i>Miao (K)</i>	<i>PKadai etc.</i>	<i>cf.</i>
'banana'	*-u	*tsei A	tšau ⁵⁵	—	Chi. 蕉 (*ping tone)
'liquor'	*-u	*tcei B	tšau ¹³	—	Chi. 酒 (*shang tone)

On the other hand, as in the following examples, the rhyme issuing from PM (K) *-uj came to occupy the vacated place of Miao (K) /-u/ as a result of the above-mentioned diphthongization of PM (K) *-u to Miao (K) /-au/.

	<i>PM (K)</i>	<i>PM (P)</i>	<i>Miao (K)</i>	<i>PKadai etc.</i>	<i>cf.</i>
'to sleep'	*-uj	*pi C	pu ³³	—	PMY. *pw ² ai ² C
'tail'	*-uj	*ti B	tu ¹³	—	PMY. *twei ² B

3.6 *PM (K)*. *-e (< *Pre-PM (K)* *-ia, *-aj(N)/*-aj(?) vs. *PKadai*. *-ia, *-aan/*-aat

	<i>PM (K)</i>	<i>PM (P)</i>	<i>Miao (K)</i>	<i>PKadai etc.</i>	<i>cf.</i>
'melon, gourd'	*-e	*qlai A (?)	tli ⁵⁵	*prian ⁰ (PNT)	Buyang (EC). tia:n ³³ 'cucumber'
'moon'	*-e	*lhai ¹ C	hli ³³	*blaan ^{0 13}	PHlai. *ʔnaan ⁰ PLakkja. *ʔbiən ^A Mulam. mya:n ² 'month' (< *mr- < *ml-) PY. *lhaa ⁵ PAN. *bulan PLakkja. *wiət ^D PMY. *Taat ² D PY. *daat ⁷
'wing'	*-e	*tei D	ti ¹¹	*vuat (PNT)	Saek. thaat ⁵ (< *d-) PY. *byaat ⁸ Yao (BMa). dlat ⁸
'peppery'	*-e	*ndžrei D (?)	ntšuw ²¹	*vraat (PT) ¹⁴	PY (T). *pla: ^{A1} PMY. *tšraa A PAN. *lima'
'five'	*-e	*tšr_i A	tšuw ⁵⁵	*mlaa ⁰ (Pre-PKL) *r-ma ^A (PKra)	
cf. 'eight'	*-e	*yai D (?)	zi ²¹	*pja:t (PKS) *pa:t (PLakkja)	PY. *yet ⁸ Chi. 八

¹³ Refer to p.169 of Kosaka (2000), where (*b(-)laan >) *(b~d)laan > *dlaan > *djaan (cf. PKra. *(C)tjar^A) > Pre-PKL *djaa (= *djā) is presumed to have occurred.

¹⁴ In fact, cognate forms with this reconstruction do not appear in Central and Southwestern Tai groups. We have lexical items like 'sword' and 'tomorrow' as ones reconstructed with PT initial *vr- in Li (1977), both being represented as *ʃ- in PNT (except Saek) and as /th-/ in Saek as with 'peppery' (PT *ʃ- would give initial /s-/ instead of /th-/ in Saek).

The example for ‘melon, gourd’ reveals that the original **-ia-* constitutes one of the sources of PM (K) **-e*. Such being the case, the complete disappearance of original **-ŋ* at the PM level would have to be explained as with the case of ‘big’ appearing in 3.7, for example, by the formulation of a phonological rule that original **-ŋ* disappears in PM when preceded by vocalic clusters **-ia-/*-ua-*.

The origin of the PM voiceless sonorant initial, and of the tonal disagreement between Kadai and Miao-Yao for ‘moon’ remains unsolved, though the features of a certain prefixal element could have been the cause of the voiceless initial in question.

The peculiar and irregular capital initial **T-* of the PMY form for ‘wing’ will be detailed later on.

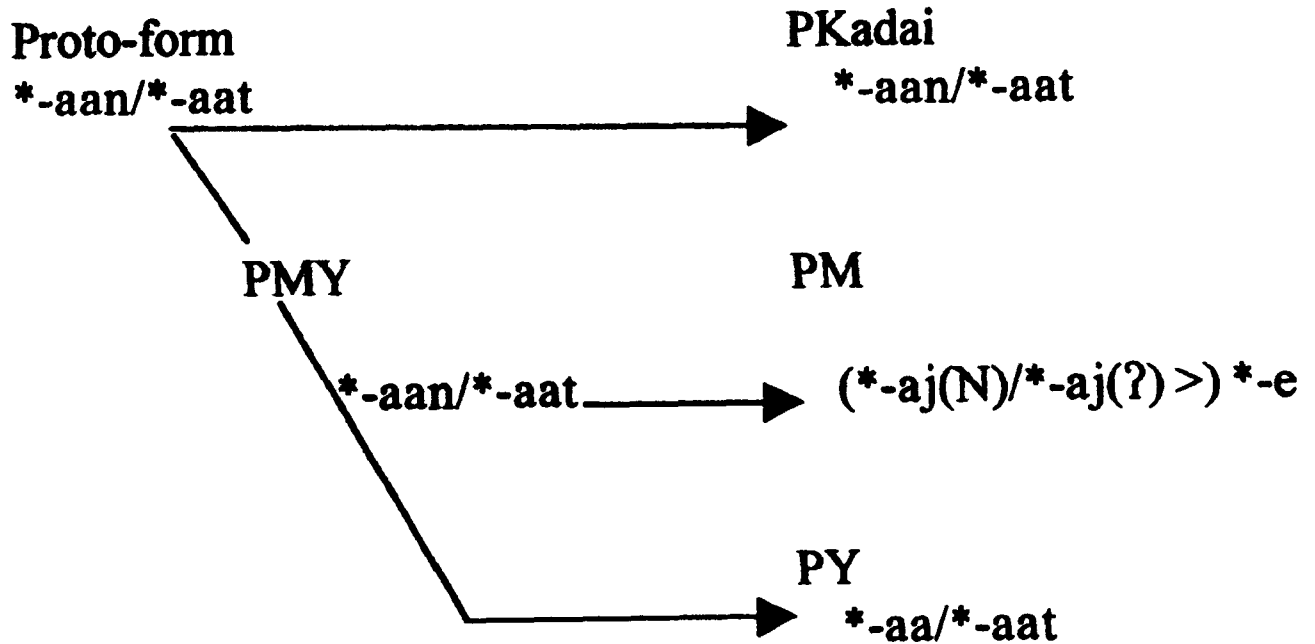
The vowel of Miao (K) for ‘peppery’ (= /u/) is not the regular reflex here. It is probably due to the influence from the retroflex articulation of the preceding initial.

As for the occurrence of palatalized on-glides at a certain pre-PM (K) stage assumed for the original finals **-n* and **-t* of ‘moon’, ‘wing’ and ‘peppery’, it is to be noted that a similar sound change occurred in the Tianxin¹⁵ (田心) dialect of the Southwestern Tai branch, that is, **-m/*-n >* (via **-n* (merger) *>*) **-jN*, and **-ŋ > *-N* (ex. Tianxin. /kæN/ [kǣ] ‘to creep’ (< *-ajN* < **-aan*) VS. /kaN/ [kǣ] ‘chin’ (< **-aan*)).

The diachronic rhyme changes which occurred in the above three cases can be schematized as follows.

¹⁵The Tianxin dialect is a Southwestern Tai dialect spoken by a relatively small number of people in Tianxin village of Wuding (武定) county of Yunnan province, China. From a phonetic point of view, the final /-N/ (nasalizing the preceding vowel) in this dialect is rather unstable and can occasionally drop out completely as long as there is no risk of homophonic clash or misunderstanding. The data of the Tianxin dialect were collected through the mentioned project.

Chart 2.



The following correspondence sets among other related languages seem to sustain laterally the supposition of quasi-parallel proto-rhymes **-aan~*-aat* for the cited three lexemes. The LYP (Layiping), YH (Yanghao) and DNS (Dananshan) forms of the Miao language are from Wang Fushi (1985). The Punu¹⁶ and She¹⁷ forms are from Mao Zongwu et al. (1982) and Meng Zhaoji (1993) respectively.

	<i>LYP</i>	<i>YH</i>	<i>DNS</i>	<i>Punu</i>	<i>She</i>	<i>PMY</i> (by Kosaka)	<i>cf.</i>
'moon'	(lha ⁵³)	lha ⁴⁴	li ⁴⁴	tu ⁵	ne ⁵	*hlaan C	PKadai. *bllaan ⁰
'wing'	te ⁴⁴	ta ⁵³	ti ³³	tu ⁷	te ⁶	*(-)taat D	PNT. *vuaat
'peppery'	mzei ³³	za ³¹	ɲtʂi ²⁴	ntsu ⁸	—	*(-)braat D	PT. *vraat

Curiously, Purnell (1970) reconstructs PM **-ai* for 'tongue' (cf. 3.4) and **-a¹* (same rhyme with upper-cased 1 for distinction) for 'moon'. Admitting that the latter is reconstructed with the number indicating a different correspondence pattern, the author is inclined to feel uneasy about the reconstruction considering the remarkable discrepancy of the manners of vowel correspondence attested in modern Miao dialects, as demonstrated below. The author's alternative PM reconstructions for these are **-i* and **-e*, respectively, as we have already seen. The phonological rules of "diphthongization" and "raising of the vowel" mentioned in 2.3 are the keys to these reconstructions here. Abbreviations CF, JC, HY, LL, KC, WN, KS, PT, TT and SY below represent Chengfeng, Jungchiang, Huayuan, Lungli, Kweichu, Weining, Kwangshun, Petchabun, Tak and Suyung dialects of the Miao language appearing in Purnell (1970) respectively.

¹⁶The Punu is officially categorized as part of the Yao nationality in China, but linguistically speaking their language obviously belongs to the Miao group.

¹⁷The original **-aa* is retained as /-a/ in this language.

	<i>CF</i>	<i>JC</i>	<i>HY</i>	<i>LL</i>	<i>KC</i>	<i>WN</i>	<i>KS</i>	<i>PT</i>	<i>TT</i>	<i>SY</i>
'tongue'	-i	-ε	-ɑ	-e	-e	-ae	-ai	-ai	-ai	-ai
'moon'	-a	-i	-ɑ	-a	-a	-i	-e	-i	-i	-i

In contrast, the rhyme correspondences in the above-cited Miao dialects between 'moon' and 'wing' for which Purnell reconstructs basically different rhymes (**-ai'* and **-ei* respectively) are as follows. The correspondences seem to support the author's PM reconstruction of the same rhyme (**-e*) at the PM level.

	<i>CF</i>	<i>JC</i>	<i>HY</i>	<i>LL</i>	<i>KC</i>	<i>WN</i>	<i>KS</i>	<i>PT</i>	<i>TT</i>	<i>SY</i>
'moon'	-a	-i	-ɑ	-a	-a	-i	-e	-i	-i	-i
'wing'	-a	-i	-ei	-a	-a	—	-e	-i	-i	-i

Next, we would need to explain the seemingly "remarkable" initial correspondence seen between Miao-Yao and Kadai for the example 'wing'. In Purnell (1970), the PMY form for 'wing' is reconstructed as **Taat²* D with extremely irregular "capital" initial. The initial represented by **T-* denotes that voiceless plosive **t-* is reconstructed in PM while voiced homo-organic **d-* is set up for PY. We have, in fact, another parallel example in the item 'excrement' for which Purnell reconstructs PMY **Q-* indicating PM **q-* (voiceless) and PY **G-* (voiced) as with the above case of 'wing'. See the following initial correspondences of these two lexemes.

	PM (K)	PM (P)	Miao (K)	PKadai etc.	cf.
'wing'	<i>*(-)t²</i>	<i>*tei</i> D	ti ¹¹	<i>*vuat</i> (PNT)	PMY. <i>*Taat²</i> D PMY (Kosaka). <i>*(-)taat</i> D PLakkja. <i>*wiət^D</i>
'excrement'	<i>*(-)q-</i>	<i>*qua</i> B	qua ¹³	<i>*yaj²</i> (PNT)	PMY. <i>*Qai²</i> B PMY (Kosaka). <i>*(-)qaj</i> B

These cognate pairs showing voiceless (PM) and voiced (PY) initial realizations allow us to hypothesize the existence of some kind of prefixal element¹⁸ like **Kə-* (K representing optional consonant), where the application of this element ended up voicing the original voiceless plosive initial inter-

¹⁸Concerning 'excrement', Theraphan (1993) withholds positing any PY initial consonant in particular in consideration of the peculiar and aberrant realization of /d-/ in Muen and Mun dialects (according to Theraphan, this correspondence pattern is attested here only). This might tentatively be explained by a historical process such as **tə-qəj* (preposition of a prefixal syllabic element involving an alveolar-series consonant; cf. PAN. **tahi'*) > **qə-təj* (metathesis) > **(qə)dəj* (voicing of the original initial in an inter-vocalic position and subsequent disappearance of the prefixal element). What is supposed to have occurred here might constitute another piece of circumstantial evidence to the postulation of an ancient prefixal element in 'excrement'. In any case, as to this lexical item we can point out the existence of an extremely rare and marked phenomenon in the reconstructions of both Purnell (1970) and Theraphan (1993).

vocally in PY, whereas the original initial remained uninfluenced in PM without being voiced (the contrast between Vietnamese, a language undergoing “spirantization” in the parallel inter-vocalic environment, and Muong, a language not undergoing it, could present a good comparison). It is also possible that the mentioned prefixal element could never have been applied in PM.

The author’s hypothesis of positing an ancient presyllabic prefixal element, at least, makes it easier to explain the appearance of spirantized initials attested in PNT forms for ‘wing’¹⁹ and ‘excrement’, and the rhyme discrepancy between PNT and PSWT for the latter (PNT. **yaj*² VS. PSWT. **xij*²; cf. Benedict’s “vocalic transfer”). The spirantization process of PNT initials in these two lexemes is presumably as is demonstrated below. The prefixal element is considered to have dropped out after causing the voicing of the following initial due to the general tendency toward monosyllabization²⁰ occurring both in PM and PY. The change from **ǰ-* to **v-* for ‘wing’ would have been brought about by the resemblance of acoustic features between the two.

- | | |
|---------------|--|
| ○ ‘wing’ | *(-)t- > * <u>-d-</u> > * <u>ǰ-</u> > *v- (PNT), > *w- (PLakkja) |
| | “voicing” “spirantization” |
| ○ ‘excrement’ | *(-)q- > * <u>-G-</u> > * <u>ɣ-</u> (PNT) |
| | “voicing” “spirantization” |

Concerning the PY vowel of ‘five’ (*-aa), the original vowel (of the major syllable assuming that it was a disyllabic word as is suggested by the Austro-Thai hypothesis) probably remained unchanged exceptionally in PY (one possibility of mutational process would be something like (**lima* >) **mīla* > Pre-PY **m(ǰ)laa* > *PY **plaa*). The manner of development from the original form to PM (K), on the other hand, would tentatively be assumed to be (**lima* >) **mīla* > Pre-PM (K) **(mǰ)lia* (“vocalic transfer”; refer also to Proto-Chamic **lima* > Haroi /ləmǰa/ ‘five’ from Thurgood, 1997) > *PM (K) *(-)le. The PKra form **r-ma*⁴ also seems to suggest some relation to Austronesian, as well as Pre-PKL where metathesis between **l* and **m* could have taken place. It is to be remembered again that basic numerals and pronouns are often observed to suffer aberrant changes. The appearance of the vowel /-u/ in Miao (K) instead of expected /-i/ must be due to the retroflex articulation of the initial as in the case of ‘peppery’.

¹⁹Therefore, PSWT form **piik* for ‘wing’ is not considered to be cognate with its PNT counterpart as is rightly pointed out in Li (1977).

²⁰A similar type of example concerning initial spirantization and subsequent monosyllabization is also observed in Vietnamese.

*-p- (cf. Rục. *kupał* ‘cotton’) > (*-b- >) *v- (cf. Viet. *vải* ‘id.’)
“voicing” “spirantization”

*-k- (cf. Rục. *căkụ* ‘bear’) > (*-g- >) *ɣ- (cf. Viet. *gấu* [ɣaũ] ‘id.’)
“voicing” “spirantization”

For the lexeme ‘eight’, the rhyme would probably have been **-aat* at some pre-PM period, though the origin of the lexeme itself must be of exterior nature. In this respect, note that the rhyme **-aat* is not reconstructed for this PY item as if to indicate its later loan origin.

3.7 PM (K). **-o* (< Pre-PM (K) **-ua*) vs. PKadai. **-ua-*

	PM (K)	PM (P)	Miao (K)	PKadai etc.	cf.
‘big’	<i>*-o</i>	<i>*lho</i> A (?)	lu ⁵³	<i>*hluan</i> ⁰ (PSWT)	PHlai. <i>*ʔl__ŋ</i> ⁰
‘I, me’	<i>*-o</i>	<i>*ku(ŋ)</i> B (Proto-Western-Miao)	ku ¹³	<i>*kuu</i> ⁰ ~ <i>*kaw</i> ⁰ (PT)	PAN. <i>*‘aku’</i>
cf. ‘to see’	<i>*-o</i>	<i>*bu</i> D	pu ²¹	—	PY. <i>*pw</i> ² at ⁸

The diachronic change of the rhyme in the example for ‘big’ can be explained in parallel fashion to that for ‘melon, gourd’ cited above in 3.6.

For the example ‘I, me’, in the view of the author, the rhyme of the Proto-Western-Miao bears resemblance enough to suggest a genetic relation with the Kadai counterparts, the tonal discrepancy being possibly explained again by the lexeme being a pronoun. Among the Yao forms we are not able to find forms considered to be undeniable cognates.

3.8 PM (K). **-ajN* (< Pre-PM (K) **-iN*) vs. PKadai. **-i(i)ŋ*²¹

	PM (K)	PM (P)	Miao (K)	PKadai etc.	cf.
‘leech’	<i>*-ajN</i>	<i>*nbr__</i> B	bla ⁵³	<i>*pli(i)ŋ</i> ⁰ (PT) ‘water leech’	PHlai. <i>*dliŋ</i> ⁰ PKS. <i>*mpliŋ</i> ⁰
‘monkey’	<i>*-ajN</i>	<i>*ʔleN</i> A	la ⁵⁵	<i>*li(i)ŋ</i> ⁰ (PT)	PY. <i>*biŋ</i> ¹
‘ginger’	<i>*-ajN</i>	<i>*qheN</i> B	qha ¹³	<i>*xi(i)ŋ</i> ⁰ (PT)	Chi. 姜

The modern Miao forms for ‘monkey’ and ‘ginger’ show the identical rhyme correspondence patterns to each other, for both of which the author supposes proto-**-i(i)ŋ* > PM (K) **-ajN* > Miao (K) /-a/ with reference to PT forms, etc. The PM (K) rhyme here appears as a result of vocalic diphthongization in accordance with the vocalic raising of the original **-e(e)-* (cf. 3.4). The final **-N* is proposed here because in certain modern dialects it shows reflexes somewhat different from those of **-ŋ*. Concerning the change of PM (K) **-ajN* > Miao (K) /-a/, a similar change had already occurred in Pre-PM (K) **-aj* > PM (K) **-a* (cf. 2.3②).

²¹It is not demonstrably clear yet whether a distinction of length for **i* existed at the PKadai level or not.

3.9 PM (K). *-aŋ vs. PKadai. *-aaŋ (, *-aam)

	PM (K)	PM (P)	Miao (K)	PKadai etc.	cf.
'yellow'	*-aŋ	*Gleŋ A	tlaŋ ⁵³	*hluwaŋ ⁰ (PT)	PHlai. *dlaaŋ ⁰
'neck'	*-aŋ	*klaŋ A (?)	tlaŋ ⁵⁵	*klaaŋ ⁰ (PT)	PY. *klaaŋ ¹
				'center, between'	
cf. 'blood'	*-aŋ	*ntšheŋ ² B	ŋtšhaŋ ¹³	—	PY. *džhyaam ³

In relation to the reconstruction of the form for 'yellow' that lacks cognates on the Yao side, the proto-rhyme can be posited to be *-aaŋ in reference to the rhyme correspondence patterns of the forms for 'eagle' (No. 263) and 'snake' (No. 840) in Purnell (1970). This proto-rhyme *-aaŋ suffered vocalic shortening and turned to *-aŋ in PM, resulting in "non-existence of the phonological distinction of vowel length" (cf. 2.3 (3)), one of the most outstanding features appeared in PM. The Be language also underwent the shortening of *-aa- to -a- (/laŋ¹³/ 'yellow' < *ŋaaŋ⁰) just as in PM, while the original *-a- turned into -o- (cf. 'nose', 'to walk, to go', 'far', etc.).

As for 'neck', we are provisionally inclined to accept Benedict's (1975) semantic analogy between 'center, between' and 'neck' (< 'the part between the head and shoulders (or body)'). The lexical structure of the French word *entrecôte* (< *entre* 'between' + *côte* 'rib') meaning 'the part between the ribs' may also be referred to.

With reference to the example for 'blood', the author assumes here that the original *-aam merged into *-aaŋ somewhere at a pre-PM stage to become finally *-aŋ (represented as *-eŋ in Purnell) in PM, whereas the original *-aŋ seems to have suffered vocalic rounding and turned into *-oŋ in PM as we will see below (cf. 'tree').

3.10 PM (K). *-oŋ vs. PKadai. *-o(o)ŋ (, *-aŋ)

	PM (K)	PM (P)	Miao (K)	PKadai etc.	cf.
'leaf'	*-oŋ	*nblon ¹ A	mplon ⁵³	*hroon ⁰ (PNT)	
				'banana leaf'	
'forest'	*-oŋ	*ʔron B	—	*ʔdon ⁰ (PT)	PKS. *dun ⁰ PHlai. *-ron ⁰
'bird'	*-oŋ	*non ¹ C	non ²¹	*nl/rok (PT)	PMY. *noʔ D PAN. *manuk 'chicken'
cf. 'tree'	*-oŋ	*nton ¹ C	nton ³³	—	PMY. *ntyaj ² C PY (T). *djaŋ ^{C1}

The PY form **nɔm*³ for ‘leaf’ is not considered to be a direct cognate with the corresponding PM form here, as the initial of the former is a simple nasal that would be irregular if the original initial were of “bilabial + -l-” type in view of the initial correspondences of ‘rice plants’ (= PM **nbl-* vs. PY **bl-*) and ‘forehead’ (= PM **bl-* vs. PY **pl*¹-/PY (T) **pl-*). Benedict (1975:25), on the other hand, considers the PM and PY forms for ‘leaf’ to be cognates and attributes the final discrepancy to secondary progressive assimilation from the labial initial occurred in PY (**m(b)lɔŋ* > **m(b)lɔm*).

For ‘forest’, the Hlai data except the seemingly irregular tone of the Tongshi dialect indicate the proto-form **-roŋ*⁰. The supposition of proto-initial **ʔ-* specifically for the Tongshi dialect, on the other hand, turns the tonal realization explicable. As for the PHLai vowel **-o-*, it is reconstructed based on the Heitu (HT) dialect representing rhymes in the most conservative manner. Note that original **-a-* (ex. ‘skin’, ‘to chirp’) developed to **-a:-* > *-ua-* *-u:-*, *-o:-* and *-ɔ:-* as a principle in dialects other than HT (cf. Kosaka, 1996:54).

Regarding the reconstruction of the form for ‘bird’, it is inferred that the final plosive (in this case, **-k*) of the proto-form developed to **-ŋ* by assimilation to the nasal initial **n-* at the PM stage instead of regularly disappearing completely (see also the example for ‘to cough’ below in cf. (a)). Note that the original **-k* is regularly represented as **-ʔ* in the PY of Purnell’s reconstruction, whereas Theraphan (1993) reconstructs **-k* as an earlier PY final. The coexistence of two different doublet-like forms having bilabial nasal initial /m-/ in common for ‘to go’, namely, with and without final /-ŋ/ (cf. No.369 and No.370 in Purnell, 1970) in many Miao dialects could be explained by the supposition of similar phonetic processes.

Concerning the appearance of tone **C* in ‘bird’ at the PM (P) level, the original plosive **-k* had already disappeared at the PM stage and substitutionally brought about certain tonal features perceptually identical or close to those of tone **C* rather than to those of plosive-ending tone **D* (see also the following examples for ‘iron’ and ‘six’ in cf. (b), where the original **-k* gave rise to tone **C* in PM instead of **D*). In the cases of the original final plosive being **-p* or **-t*, it disappeared and brought about the regular **D* tone as in **hauD* ‘to drink’ and **teiD* ‘wing’ respectively.

		PM (K)	PM (P)	Miao (K)	PY	PKadai etc.
‘bird’		<i>*-oŋ</i>	<i>*noŋ</i> ¹ C	<i>noŋ</i> ²¹	<i>*noʔ</i> ⁸ (< <i>*-k</i>)	<i>*nl/rok</i> (PT)
cf.(a)	‘to cough’	<i>*-oŋ</i>	<i>*nhoŋ</i> ¹ D	—	<i>*nhop</i> ⁷	—
	‘heavy’	<i>*-_ŋ</i>	<i>*ŋhɔŋ</i> ¹ B	<i>naŋ</i> ¹³	<i>*nhia</i> ²³	—
cf.(b)	‘iron’	<i>*-u</i>	<i>*lhau</i> C	<i>hlaw</i> ³³	<i>*rhia</i> ⁷ (< <i>*-k</i>)	<i>*hle</i> k (PT)
	‘six’	<i>*-u</i>	<i>*tleu</i> ¹ C	<i>tɕaw</i> ³³	<i>*kyu</i> ⁷ (< <i>*-k</i>)	<i>*xrok</i> (PT)
						<i>*-k</i> (Chi.; 六)

3.11 Other examples

In addition to the ones discussed so far, we enumerate the following supplementary examples that are possibly Miao-Yao/Kadai cognates.

	PM (K)	PM (P)	Miao (K)	PKadai etc.	cf.
'person'	—	*neŋ ¹ A~	neŋ ²¹ ~	*nan ² (PKS)	PY. *laan ²
		*leŋ ¹ A (clf.)	leŋ ²¹ (clf.)	'flesh, meat'	'person (clf.)'
'he, she'	—	*neN A (?)	—	*nan ² (PT)	PY (T). *njan ^{A2}
				'that'	
'insect'	—	*keŋ A	—	*ml/reen ⁰ (PT)	PY (T). *kleŋ ^{A1}
					Buyang (LJ). - leŋ ³¹² (< *0), 'a fly'
'otter'	—	—	—	*cha:t (PKS)	Mulam. - tsha:t ⁷
					PY (T). *tsha:t ^{D1}

As regards 'person', I would presume in consideration of the PY form for 'person (clf.)', that the PMY form was *naan^A (cf. PKS) which later changed to *laan² by initial dissimilation and sporadic final retention in PY, whereas it revealed an irregular change (because of the initial of nasal nature being identical to the final) to *naa(N) (dissimilation) > Pre-PM (K) *nwa(N) > PM (K) *nia(N) > Miao (K) /neŋ/ on the Miao side. The Miao (K) forms for 'person' and 'person (clf.)', namely /neŋ²¹/ and /leŋ²¹/, are thus doublets brought about through initial dissimilation. On the other hand, PY *ñen² meaning 'person' is a bit confusing at first glance but we consider it to be a Chinese loan (cf. 人), that constrained the original form for 'person' to be restrictedly used as a classifier in PY. The semantic discrepancy between Kadai and Miao-Yao could have been due to a process such as 'flesh, meat' ↔ 'body' ↔ 'person'.

In relation to 'he, she', although no concrete vowel is reconstructed for PY in Purnell (1970), the Haininh and Lingchun dialects of Yao show the rhyme /-an/ and could point to the original form *nan. The rhyme and tone irregularities must be due to the lexical feature of being a pronoun. The semantic alternation attested here between 'that' and 'he, she' is considered to be parallel to that which occurred in Romance languages (cf. Latin. *ille/illa* 'that' vs. French. *il/elle* 'he/she').

As for 'insect', the initial of PY (T) is more adequately compared with that of PT.

4. Miao-Yao forms showing resemblance to other languages

The following Miao-Yao examples demonstrate certain phonetic resemblance to languages of other families.

4.1 Forms showing resemblance to Mon-Khmer

	Miao (K)	PM (P)	cf.
'blood'	ŋtʂaŋ ¹³	*ntʂheŋ ² B	PY. *dʒhyaam ³ , PMK. *-aam
'bone'	tʂaŋ ³³	*tʂoŋ ¹ B	PY. *tʂuŋ ³ , PMK. *-aaŋ, PAN. *[t]ulaŋ
'three'	pe ⁵⁵	*pe ¹ A	PY. *p ¹ ua ¹ , PMK. *p__?
'fruit'	tsu ¹³	*tsri B	PY. *py ¹ ou ³ , PMK. *pl__?
'head'	haw ³³	*heu ² B/C	PY (T). *plei ^{B1} , Proto-Katuic. *pləə
'to cry, to weep'	—	*ʔŋeN B	PY (T). *ŋiam ^{B1} , Proto-Viet-Muong. *ja:m [?] /*ŋa:m [?]

The PMK and Proto-Katuic forms are given according to Prof. Gérard Diffloth (personal communication) and the Proto-Viet-Muong forms are cited from Ferlus (1991).

The blanks of PMK forms for 'three' and 'fruit' represent some kind of short and long front vowels respectively. According to my reconstruction, the PMY vowel for 'three' is postulated as *-aa (cf. 3.2), which does not go well with the short front vowel of PMK.

Concerning the resemblance between PY (T) (*plei^{B1}) and Proto-Katuic (*pləə) for 'head', it is considered to be merely by coincidence, for such diachronic changes as indicating *-ua (~ *-uu) > *-əə are not confirmed in the Proto-Katuic phonology while PY *-ej is traced back to *-ua (~ *-uu).

Among the examples cited above, forms for 'blood' and 'to cry, to weep' phonologically constitute a good set of examples worth comparing for claiming certain relationship between the two.

4.2 Forms showing resemblance to Tibeto-Burman

	Miao (K)	PM (P)	cf.
'four'	plaw ⁵⁵	*prou A	PY. *py ¹ ei ¹ , PY (T). *plei ^{A1} , PLo. *b-le ²
'six'	tʂaw ³³	*tleu ¹ C	PY. *kyu [?] ?, PLo. *C-krok ^L
'eight'	ʒi ²¹	*yai D (?)	PY. *yet ⁸ , PLo. *C-yet ^L
'tongue'	mplaj ²¹	*nbrai D	PY. *byet ² ?, PLo. *ʔ-l(y)a ¹
'moon'	hli ³³	*lhai ¹ C	PY. *lhaa ⁵ , PLo. *bəla ³
'sun, day'	nu ⁵⁵	*nhuN A	PY. *nhəi ¹ , PLo. *(?)-ne ¹

The original vowel presumed for 'four' is *-ua (~ *-uu) on the Miao-Yao side (cf. 3.5), that disagrees with front vowel *-e reconstructed in PLo.

In connection with the forms for 'tongue' and 'moon', Tibeto-Burman and Miao-Yao cannot be readily compared unless we solve the problem of discrepancy between *-a and *-e(e)n (cf. 3.4), and *-a and *-aan (cf. 3.6) respectively.

As for numerals, it is quite interesting to point out that some basic ones like 'three', 'four', 'six' and 'eight' present some sort of phonetic resemblance between Miao-Yao and Mon-Khmer/Tibeto-Burman. The cases of 'six' and 'eight' reveal some possibility of being traced back to phonetically common forms between Miao-Yao and Tibeto-Burman irrespective of the manner of relationship. In any case, there remains a high probability that these numerals are loan words introduced in an extremely ancient period from Mon-Khmer and Tibeto-Burman, if excluding the possibility of coincidental resemblance, considering that numerals as a whole, in a sense, make part of culture vocabulary and are sometimes suffer drastic substitution through intense contacts with other languages²².

At present, we can generally say that no consistent phonological correspondence patterns have been found for claiming genetic relationship neither between Mia-Yao and Mon-Khmer, nor Miao-Yao and Tibeto-Burman. Therefore, we conclude that as of now the phonetic resemblances sketched here are most probably due to language contact or have simply resulted from mere coincidence rather than from genetic relationship.

4.3 Forms showing resemblance to Chinese

Regarding the Chinese loans in Miao-Yao, there are so many items (ex. 'tea', 'silver', 'copper', 'to sell', 'hundred', 'false', 'expensive', 'cheap', etc.), some of which are evidently culture vocabulary. They must have been acquired by way of long-term and continuous contacts with the Chinese people.

5. Conclusion

5.1 Tonal correspondences between Miao-Yao and Kadai

In speaking of tones, the following examples show regular correspondence between Miao-Yao and Kadai.

- (1) Proto-tone *0 (Miao-Yao *A and Kadai *0)
'ear', 'stone', 'far', 'you (sg./pl.)', 'we', 'to have', 'hair', 'melon, gourd', 'five', 'big', 'monkey', 'yellow', 'neck', 'leaf', 'insect',
- (2) Proto-tone *1 (Miao-Yao *C and Kadai *1)
'bamboo shoot'
- (3) Proto-tone *2 (Miao-Yao *B and Kadai *2)
'excrement'

²²The numerals of Phunoi (Tibeto-Burman family) surveyed by the author in northern Laos have been entirely replaced by Tai loans.

- (4) Proto-tone *D (Miao-Yao *D (including Miao *C deriving from *-k) and Kadai *D)
 ‘to drink’, ‘iron’, ‘wing’, ‘peppery’, ‘bird’, ‘otter’

The total number of examples presented for comparison in this article is 40, of which ‘narrow’ and ‘ginger’ are considered to be old Chinese loans (cf. 夾 and 姜 respectively) after all. Therefore, the rate of regular tonal correspondence is represented by putting the denominator as 38 (= 40–2) and the numerator, the sum of the numbers of lexemes cited in (1), (2), (3) and (4) above, as 23. The solution, namely the rate of tonal correspondence between Miao-Yao and Kadai, is $\frac{23}{38} \pm \frac{2}{3}$, which is considered to be high enough to suggest a non-accidental resemblance between the two. As for the forms carrying tonally irregular reflexes, those equally lacking satisfactory explanation for the moment, though appearing at a more recent level, are found with Tai forms for ‘elder sibling’ (*1 for PSWT vs. *2 for PNT), ‘to weave’ (*1 for PSWT vs. *2 for PNT), ‘shrimp’ (*2 for PSWT vs. *1 for PNT), ‘to flood’ (*2 for PSWT vs. 1 for PNT), ‘widow’ (*2 for PSWT vs. *1 for PNT), etc. (cf. Li Fang Kuei, 1977), and with Kam-Sui forms for ‘pig’ (*1 for PKS vs. 0 for PT), ‘long’ (2 for PKS vs. *0 for PT), etc..

The disagreement in the first element of cluster initials attested in most of the lexemes above might be explained by the difference of the ancient prefixal elements (including \emptyset element) assumed to have existed in the proto-language.

5.2 *The genetic position of Miao-Yao*

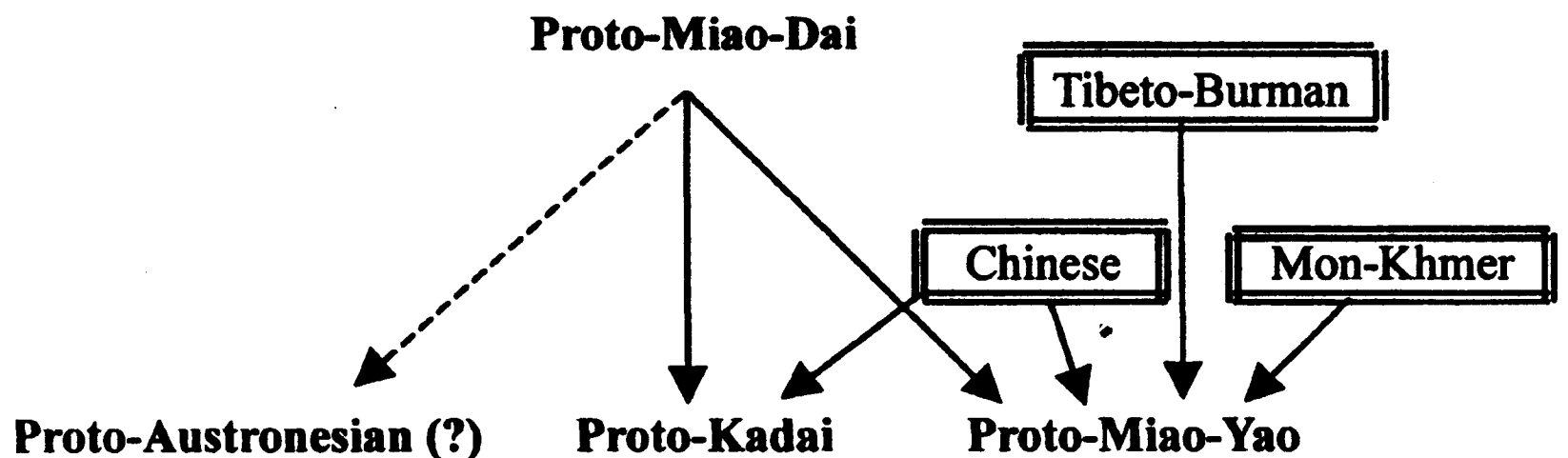
The Miao-Yao/Kadai cognate examples demonstrated here are not very numerous. This fact, however, might be attributed to their intense contacts with various (non-related) neighboring languages over a long period of time, and do not indicate their lack of genetic relationship.

In the present article, comparative reexaminations of a series of lexemes that Purnell considers to have derived from PMY *-au, and for which the author alternatively posits PMY *-aa, made it possible to find out some other sets of phonological correspondences between Miao-Yao and Kadai fitting in the same historical framework of systematic sound changes. These systematic correspondences are explained more easily by their cognacy rather than by coincidence.

Accordingly, the author has concluded that Miao-Yao and Kadai are genetically related on the basis of the phonological correspondences between them discussed above (here, especially dealing with rhymes), although further precision in initial correspondences between these will have to be worked out.

The whole of this newly-hypothesized linguistic family, that connects Miao-Yao and Kadai, is temporarily designated as “Miao-Dai” family in this preliminary study. If we attempt to represent this family’s affiliational situation by means of a chart, it will be something like the one in Chart 3. The lack of arrows from Mon-Khmer or Tibeto-Burman to Proto-Kadai does not exclude, of course, cases of relatively recent borrowing on an individual basis (ex. Khmer influence on Siamese etc.).

Chart 3.



In terms of the question of ethnic homeland, observations on the geographic distribution of languages and the degree of mutual linguistic divergences with regard to surrounding related languages indicate that the probable area of the original settlement should be sought around the Tibetan Plateau to somewhere in the northeastern part of India for the Mon-Khmer (or Austroasian) and Tibeto-Burman families, whereas the common cradle sites for Miao-Yao and Kadai would quite vaguely be located somewhere in southern China.

As for the genetic relation of Miao-Yao/Kadai to Austronesian, that was proposed by Benedict (1942), it is true that the resemblance found in some highly basic vocabulary items seems hardly coincidental. On account of the paucity of examples allowing us to elicit sets of systematic correspondences, however, we cannot help but abandon, for the time being, the idea of affording any decisive judgment as to the genuine nature of the relationship between Miao-Yao/Kadai and Austronesian.

Talking about the distributional boundaries of animals, we have what is called “the Wallace’s Line” circumscribing the Australian Region from the Oriental Region. On both sides of this line lies an area where certain species of animals specific to either region are seen to coexist in a mixed but gradually increasing/decreasing manner. This dimension came to be referred to as “the Ecotone”. In a more or less parallel manner, the Miao-Yao languages might possibly be thought of as a group of languages that are beginning to acquire such blended and transitional (in other words, “ecotonal”) features through

long and intense contacts with languages of different families.²³

REFERENCES

- Benedict, P. K. 1942. "Tai, Kadai and Indonesian: A new alignment in Southeastern Asia." *AA* 44:576-601.
- Benedict, P. K. 1972. *Sino-Tibetan—A Conspectus*. Cambridge University Press.
- Benedict, P. K. 1975. *Austro-Tai: Language and Culture, With a Glossary of Roots*. New Haven: Human Relation Area File Press.
- Bradley, D. 1979. *Proto-Loloish*. Scandinavian Institute of Asian Studies Monograph Series, No. 39. Curzon Press.
- Chang Kun. 1976. "Proto-Miao initials, genetic relationship, diffusion and typological similarities of East & Southeast Asian linguistics." Papers for the 1st Japan-US Joint Seminar on East & Southeast Asian Linguistics. The Japan Society for the Promotion of Science.
- Dempwolff, O. 1938. *Vergleichende Lautlehre des Austronesischen Wortschatzes*. Dietrich Reimer.
- Edmondson, J. A. and Yang Quan. 1988. "Word-initial preconsonants and the history of Kam-Sui resonant initials and tones." *Comparative Kadai: Linguistic Studies beyond Tai*. Summer Institute of Linguistics and The University of Texas at Arlington, pp. 143-166.
- Ferlus, M. 1982. "Spirantisation des obstruents et formation du système consonantique du vietnamien." *CLAO* 11(1):83-106.
- Ferlus, M. 1991. "Vocalisme du Proto-Viet-Muong." Paper circulated at *ICSTLL 24th*, Ramkhamhaeng University, Bangkok and Chiang Mai University, pp. 10-11.
- Haudricourt, A. G. 1954. "Introduction à la phonologie historique des langues miao-yao." *BEFEO* 44:555-574.
- He Jiashan. 1983. *Gelaoyu Jianzhi (A Sketch of the Gelao Language)*. Beijing: Minorities Publishing House.
- Hoàng Văn Ma and Vũ Bá Hùng. 1992. *Tiếng Pu Peo (The Pupeo Language)*. Hà Nội: Academy of Social Sciences.
- Kosaka, R. 1992. "Tentative de reconstruction d'un proto-saek-chuang et comparaison de son vocabulaire avec l'ancien siamois." M.A. thesis, Tokyo University of Foreign Studies.
- Kosaka, R. 1996. "On the genetic location of the Hlai language." *Language, Area and Culture Studies No. 2*. Graduate School, Tokyo University of Foreign Studies, pp. 15-58.

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- Kosaka, R. 1997. "A phonology of the Bu Dai (Thu Lao) language." *JAAS* 53:137-153.
- Kosaka, R. 2000. "A Descriptive Study of the Lachi Language — syntactic description, historical reconstruction and genetic relation —." Ph. D. dissertation, Tokyo University of Foreign Studies.
- Kosaka, R., Zhou Guoyan and Li Jinfang. 1998. *A Wordlist of Ge-Yang Languages*. Guizhou Minzu Chubanshe.
- Li Fang Kuei. 1977. *A Handbook of Comparative Tai*. Honolulu: The University Press of Hawaii.
- Li Jinfang. 1999. *Buyangyu Yanjiu (A Study on the Buyang Language)*. Zhongyang Minzu Daxue Chubanshe.
- Liang Min. 1980. *Maonanyu Jianshi (A Sketch of the Maonan Language)*. Beijing: Minorities Publishing House.
- Liang Min and Zhang Jimin. 1996. *Dongtaiyuzu Gailun (An Outline on the Kam-Tai Language family)*. Zhongguo Shehui Kexue Chubanshe.
- Lyman, T. A. 1974. *Dictionary of Mong Njua — A Miào (Meo) Language of Southeast Asia —*. Series practica, 123. Mouton. The Hague-Paris.
- Mao Zongwu, Meng Zhaoji and Zheng Zongze. 1982. *Yaoyu Jianshi (A Sketch of the Yao Language)*. Beijing: Minorities Publishing House.
- Meng Zhaoji. (1993). "Sheyu shu Miaoyuzhi Buzheng (Supplementary Evidence of She's attribution to the Miao language group)." *MZYW* 2:17-22.
- Nguyễn P. P., Trần T. D. and M. Ferlus. 1988. *Lexique Vietnamien-Ruc-Français*. Université de Paris VII, Sudestasié.
- Nishida, T. 2000. *Tōnan-ajia shogengono kenkyū I — Kyodai gengogun-Shina/Chibettogozokuno tenbō—*. Kyoto University Press.
- Ostapirat, Weera. 2000. "Proto-Kra." *LTBA* 23.1.
- Ouyang Jueya and Zheng Yiqing. 1983. *Liyu Diaocha Yanjiu (Studies on the Li (Hlai) Language)*. Beijing: Chinese Academy of Social Sciences.
- Purnell, H. C., Jr. 1970. "Toward a Reconstruction of Proto-Miao-Yao." Ph. D. dissertation, Cornell University. Ann Arbor, University Microfilms International.
- Strecker, D. S. 1984. "Proto-Tai Personal Pronouns." Ph. D. dissertation, University of Michigan. Ann Arbor, University Microfilms International.
- Theraphan, L. T. 1991. "A Preliminary reconstruction of Proto-Lakkja (Cha Shan Yao)." *MKS* 20:57-89.
- Theraphan, L. T. 1993. "A view on Proto-Mjuenic (Yao)." *MKS* 22:163-230.
- Thurgood, G. 1988. "Notes on the Reconstruction of Proto-Kam-Sui." *Comparative Kadai: Linguistic Studies beyond Tai*. Summer Institute of Linguistics and University of Texas at Arlington, pp. 179-218.
- Thurgood, G. 1997. "Restructured register in Haroi: Reconstructing its historical origins." In Arthur S. Abramson, ed., *Southeast Asian Linguistics in Honour of Vichin Panupong*, pp. 283-295, Chulalongkorn University Press.

- Wang Fushi. 1985. *Miaoyu Jianzhi (A Sketch of the Miao Language)*. Beijing: Minorities Publishing House.
- Wang Fushi and Mao Zongwu. 1995. *Miaoyaoyu Guyin Gouni (Reconstruction of Proto-Miao-Yao Phonology)*. Beijing: Chinese Academy of Social Sciences.
- Wang Jun and Zheng Guoqiao. 1980. *Mulaoyu Jianzhi (A Sketch of the Mulao (Mulam) Language)*. Beijing: Minorities Publishing House.
- Zhongyang Minzu Xueyuan Miaoyaoyu Yanjiushi. 1987. *Miaoyaoyu Fangyan Cihuiji (A Dialectal Lexicon of the Miao-Yao Languages)*. Zhongyang Minzu Xueyuan Chubanshe.

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