

Insights into Naxi and Pumi at the end of the 19th century: evidence on sound changes from the word lists by Charles-Eudes Bonin

Alexis Michaud, Guillaume Jacques

▶ **To cite this version:**

Alexis Michaud, Guillaume Jacques. Insights into Naxi and Pumi at the end of the 19th century: evidence on sound changes from the word lists by Charles-Eudes Bonin. Cahiers de linguistique - Asie Orientale, 2010, 39 (1), pp.21-40. halshs-00516872

HAL Id: halshs-00516872
https://shs.hal.science/halshs-00516872

Submitted on 12 Sep 2010

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Preprint version. *Cahiers de Linguistique-Asie Orientale* 39(1), 2010.

Insights into Naxi and Pumi at the end of the 19th century: evidence on sound changes from the word lists by Charles-Eudes Bonin*

Alexis MICHAUD and Guillaume JACQUES

The word lists published in 1903 by C.-E. Bonin for several languages of East Asia are highly rudimentary; the transcription is based on French spelling conventions. These lists nonetheless provide hints about the pronunciation of these languages at the end of the 19th century. We examine two of Bonin's lists in light of more recent and more systematic descriptions of the same languages, looking for evidence about phonetic evolutions. The Naxi word list offers hints about the pronunciation of vowels /i/, /y/ and /o/ and the degree of palatalization of velars before high front vowels. The list for Pumi shows that the initial cluster /st-/ was still present at the time in the dialect recorded.

Key words: Naxi, Pumi, historical phonology, Charles-Eudes Bonin

Les vocabulaires de cinq langues d'Asie orientale publiés en 1903 par Charles-Eudes Bonin sont transcrits de façon rudimentaire, selon les conventions orthographiques du français. Ils fournissent néanmoins des indices concernant la prononciation de ces langues peu avant 1900. Nous examinons deux des listes de Bonin à la lumière de données plus récentes et plus systématiques, afin de déceler d'éventuelles indications sur des changements phonétiques. La liste de mots naxi fournit des indices concernant le degré de palatalisation des vélaires devant les voyelles fermées d'avant et la prononciation des voyelles /i/, /y/ et /o/. La liste de mots pumi révèle que le groupe /st-/ existait encore à l'époque dans le dialecte étudié.

Mots-clefs : naxi, pumi, phonologie historique, Charles-Eudes Bonin

---

* Many thanks to Boyd Michailovsky and Thomas Pinson, to the reviewers, and to the editors for useful suggestions and corrections. Fieldwork in Muli and Yongning was funded by the Agence Nationale de la Recherche (France) as part of the research project "What defines Qiang-ness? Towards a phylogenetic assessment of the Southern Qiangic languages of Muli" (acronym: PASQi, ANR-07-JCJC-0063).

Introduction

A relatively large number of word lists were collected in the 19th century and early 20th century in Southwest China. For instance, Cordier 1908 compiles data from no less than five sources for "Mo-so" (Naxi 纳西语), covering several dialects; for the same language, another word list is provided by Bacot 1913. These lists are highly rudimentary: they are impressionistic approximations in the orthography of the explorers' native languages, and are not consistent. Bacot puts down the inconsistencies in his notations to a supposed unstability of the language itself: "…the pronunciation is not even stable enough for a word to be transcribed in the same way for different speakers, or even for one and the same individual. For the word *lu*, I have sometimes transcribed *lou, lo,* or *leu*; for the word *kou*, sometimes *khou, kvou, khu, kheu, kveu, gheu*, etc" (Bacot 1913:27).[1] These early sources are clearly superseded by more recent work on the same languages. In the case of Naxi, extensive lexicographic work was conducted from the 1920s to the 1940s by Joseph Rock (though his Naxi-English dictionary was only published later, as Rock 1963-1972). Rock's idiomatic transcription is by and large consistent (see Michailovsky and Michaud 2006 for IPA equivalents), and it represents almost all the relevant phonemic contrasts. Rock's data show that the sound system of Naxi has not undergone any remarkable changes since the early 20th century – apart from the effects of an ever-increasing influence from Chinese, resulting in the introduction of new sounds and new phonotactic combinations. Rock's description of Naxi at the beginning of the 20th century can nonetheless be usefully supplemented by other sources as far as phonetic realisation is concerned. A word list by a speaker of a different language (Rock was Austrian) can potentially offer relevant indications.

---

[1] Original text: « … la prononciation n'est même pas assez stable pour que, d'un individu à l'autre, ou seulement chez le même individu, un même mot puisse toujours être transcrit de la même façon. Il m'est arrivé d'écrire, sous la dictée, pour le mot lu, tantôt lou, lo, ou leu ; pour le mot kou, khou, kvou, khu, kheu, kveu, gheu etc. »

As for those languages which have not been the object of systematic descriptions until the second half of the 20th century, such as Pumi/Prinmi (in Chinese: 普米语), the amateur data collections from the 19th century and early 20th century can likewise provide some insights into their evolution in the course of the past century.

The present note concerns the Naxi and Pumi data in the word lists published in 1903 by Charles-Eudes Bonin (1865-1929).[2] Bonin was trained as an archivist and paleograph, but he chose to work in the administration; he was appointed to Vietnam (Indochina) in 1889 and sent to Laos (in 1893), then to Malaysia (in the same year). He did two exploratory travels in China. In 1895-1896, he travelled along the Yangtze river at the border between Yunnan and Sichuan, from Lijiang 丽江 to Zhongdian (中甸, present-day 香格里拉), Yongning 永宁, and (after ten days' negociations) into the territory of the king of Muli 木里, where he stayed in the vicinity of the monastery. He then proceeded to Gansu and Mongolia; the entire journey is described in Bonin 1898. Bonin's second journey in China took place in 1898-1900, when much of his attention focused on Emei Mountain (峨眉山). More information about Bonin's life and career is provided in his necrology by Pelliot 1930.

Bonin's 1903 word lists concern several languages of Vietnam and Southwest China, to which he referred by the labels in use at the time: the Naxi language (纳西语) as spoken in Lijiang (丽江) is called "Dialecte des Mosso de Li-kiang", and mistakenly placed within a "Tibetan dialects" section; the Pumi language (普米语) as

[2] Both Pumi and Naxi belong to the Sino-Tibetan family. The classification of Naxi is disputed: Naxi is classified as a member of the Yi/Lolo branch by Shafer (1955); however, Bradley (1975) shows that it does not share the innovations that characterise this branch and concludes that Naxi is "certainly not a Loloish language, and probably not a Burmish language either" (p. 6). Ongoing comparative work suggests that Naxi belongs to a Burmo-Qiangic branch of Sino-Tibetan, together with Qiangic and Lolo-Burmese (Jacques and Michaud under review). As for Pumi, it is uncontroversially classified as a member of the Qiangic branch (Sun Hongkai 1983).

spoken in the county of Muli (木里) is called “Dialecte des Si-fan de Meli”. The Naxi list comprises 71 entries (words and phrases), and the Pumi list 33 entries.

1. General observations about Bonin’s transcriptions and their interpretation

The method applied here consists in interpreting Bonin’s amateur notations in light of our knowledge of the French orthographic conventions. These conventions have not changed in the past century, and the sound system of ‘Standard French’ has changed only marginally (e.g. merger of /a/ and /ɑ/, and /ɛ̃/ and /œ̃/). We then compare the form restituted through the interpretation of Bonin’s orthography with the present-day pronunciation of Lijiang Naxi and Muli Pumi, looking for differences that may point to sound changes having taken place since the time of Bonin’s data collection. Such differences may in principle reflect dialectal diversity, rather than diachronic change within the same language variety; but fortunately Bonin’s Naxi and Pumi lists contain telltale evidence allowing for the identification of the dialects at issue, as will be explained below.

Consonants and vowels are evidently approximated by using the closest available French sound, itself rendered according to the orthography. Some examples are shown in Table 1.

Table 1. Examples from the Naxi word list illustrating Bonin's use of an orthography based on French spelling habits, and supplemented by using newly coined combinations for sounds that do not have close equivalents in French.

meaning	Bonin's transcription	interpretation of Bonin's transcription in light of French spelling habits	French words on the analogy of which Bonin's transcription is interpreted	present-day Lijiang Naxi
horse	joi	[ʒwa]	*joie* [ʒwa] 'joy'	ʐwɑ˧
head	cou-leu	[ku lø]	*cou* [ku] 'neck', and *Saint-Leu* [sɛ̃lø] (a place name)	ku˧ly˧
knife (1st syllable)	ze	—	(none)	zɿ˧
to go	bêu	—	(none)	bɯ˧

The last two examples in Table 1 illustrate the fact that vowels that are not found in French are transcribed by Bonin by means of combinations of letters that are likewise inexistent in French, such as *-êu* for Naxi [ɯ]; apical vowels (syllabic fricatives) are transcribed with *-e*, e.g. *ze* for Naxi [zɿ].

Tones are not indicated; the absence of tone marks in the word list for 'Annamite' (Vietnamese), a language whose complex tone system was adequately represented in the 17th-century *Dictionarium Annamiticum Lusitanum et Latinum* (Rhodes 1651), is a striking illustration of Bonin's lack of attention to tones. The subscript dot on *ngộ* (for the 1st person singular, /ŋɤ˩/) and *ạ* (for 'chicken', /æ˩/) in the Naxi word list is probably not a tone mark, but a

typographical device to indicate that the vowel symbols chosen for these words are not to be taken with the value they have in French: that the vowels at issue are perceived as 'unusual' – indeed, neither /æ/ nor /ɤ/ is present in the French vowel system. Likewise, the grave accent found on two Naxi words, *nà* 'you' and *là* 'hand' (present-day Naxi: /nɑ˨/ and /lɑ˩/), are presumably used as an indication of vowel quality. Since Bonin uses *â* for the back vowel [ɑ], it is unclear what he intended to transcribe by this idiosyncratic use of the grave accent.

2. Bonin's Naxi data: Some general observations, and six pieces of evidence

In light of Joseph Rock's *Dictionary,* as well as of more recent data on the Naxi language, it is clear that Bonin missed some distinctions, such as that between the rhymes /u/ and /ụ/, which Bacot did notice (Bacot 1913:27): Bonin transcribes both as *ou* (i.e. [u]). Conversely, Bonin uses several variants for the same phoneme, for instance *c'* and *k'* for [k^h], which reveals the lack of a systematic reflection on the choice of symbols. Bonin did not verify his transcriptions for internal consistency: for instance, [kɯ˧ʈʂʅ˩] 'speak, speech' is transcribed as *queu-tse*, but as *ke-tse* in the phrase 'tell me'; and one and the same syllable, [ɣɯ], is transcribed as *guêu* in 'book' (erroneously glossed as 'paper') and as *guiêu* in 'cow'. He also makes mistaken identifications, e.g. 'to drink', [$ʈ^h$ɯ˩], is transcribed *t'eu*, with the same rhyme as in 'fabric', [t^hø˧pụ˥] *(t'eu-pou)*, when in fact the rhymes [ɯ] and [ø] contrast with each other.

Bonin's list is nonetheless worth scrutinizing for possible hints about the pronunciation of Lijiang Naxi at the turn of the 20th century. The list contains a telltale indication that the variety recorded by Bonin is that of the city of Lijiang proper, i.e. the variety currently referred to, after the Chinese name of Lijiang old town, as 'Dayanzhen dialect', 大研镇. This indication is provided by the monosyllabic form for 'money', which is typical of Lijiang speech, as opposed to other Naxi dialects of the Lijiang plain,

where it remains disyllabic to this day: /ki˥jɤ˧/ (He Jiren and Jiang Zhuyi 1985:11 and our own data).

Table 2 presents words organized by rhymes. Some disyllables are presented twice, once for each rhyme; the relevant syllable is set in bold type. The phonemic notation for present-day Lijiang Naxi is only provided in cases where it is different from the narrow phonetic notation.

Table 2. Selected words from Bonin's Naxi list, with corresponding forms in present-day Lijiang Naxi. Ellipsis (...) in the IPA interpretation of Bonin's notation means that no well-motivated hypothesis can be proposed.

meaning	Bonin	IPA interpretation of Bonin's notation	present-day Lijiang Naxi, phonetic notation	present-day Lijiang Naxi, phonemic notation	comments
to go	bêu	—	bɯ˧		*êu* = [ɯ]
1 (one)	diêu	—	ɖɯ˧		*êu* = [ɯ]; *i* may represent the affrication that phonetically accompanies the retroflex initial (Bonin has no adequate tool for recording retroflex stops)
foot	k'êu	—	k^{h}ɯ˩		*êu* = [ɯ]
book	t'ai-**guêu**	—	t^{h}ɛ˧ɣɯ˧	/t^{h}e˧ɯ˧/	*êu* = [ɯ]; *gu-* for the velar fricative initial

cow	guiêu	g...	ɣɯ˧	/ɯ˧/	same syllable [ɣɯ˧] as in ‘paper’, transcribed differently
meaning	*Bonin*	*Bonin > IPA*	*phonetics*	*phonemes*	*comments*
4 (four)	lou	lu	lu˧		*ou* = [u]
head	**cou-**leu	ku lø	ku˧ly˧		mistaken identification: the vowel is not [ø] but [y] (these vowels are distinct phonemes)
2 (two)	ngié	ŋie	ɲi˧	/ŋi˧/	initial was apparently a velar; /i/ was apparently a diphthong
house	guiě	g...	ɟi˩	/gi˩/	same comments as for ‘2 (two)’
10 (ten)	ts‘ai	$ts^h\varepsilon$	$ts^h\varepsilon˩$	/ts^he˩/	*ai* = [ɛ]
book	**t‘ai-**guêu	$t^h\varepsilon$ ...ɯ	$t^h\varepsilon˧ɣɯ˧$	/t^he˧ɯ˧/	*ai* = [ɛ]
tea	lai	lɛ	lɛ˧	/le˧/	*ai* = [ɛ]
chicken	ạ	—	æ˩		subscript dot indicates a vowel not found in French
sugar	bain	bɛ̃	bæ˩		[æ] perceived as a nasal vowel [ɛ̃] probably because of an acoustic similarity, rather than because the Naxi vowel was nasalised (note: present-day Naxi does not have

					contrastive nasal vowels)
meaning	*Bonin*	*Bonin > IPA*	*phonetics*	*phonemes*	*comments*
6 (six)	ts‘oa	ts^{h}oa	$ʈʂ^{h}wɑ˥$		strange that no retroflexion is indicated: one would expect *tch‘oa*
7 (seven)	chea	ʃea	$ʂɘ˧$		*ea* for [ɘ˧]
mule	n-guea	—	?		not recognized; on the analogy of ‘seven’, the rhyme might be [ɘ˧], which would yield [ŋgwɘ˧]
clothing	ba-lan	balɑ̃	$bɑ˧lɑ˩$		Bonin’s *-an* probably indicates his perception of a nasal vowel [ɑ̃]; this might point to the existence of nasality as a distinctive feature at the time (vowel nasalization is not contrastive in present-day Lijiang Naxi). Alternatively, it may simply be a misperception on Bonin’s part.
8 (eight)	h‘eu	hø	$hø˥$	/ho˥/	*eu* = [ø]
fabric	t‘eu-pou	t^{h}ø pu	$t^{h}ø˧pʏ˥$		*eu* = [ø]; Bonin missed the contrast between /u/ and /ʏ/, hearing both as [u].
to drink	t‘eu	t^{h}ø	$ʈ^{h}ɯ˩$		Bonin mistook the vowel [ɯ] for [ø].

to have	gueu	gø	gyꜜ		Bonin mistook the vowel [y] for [ø].
meaning	*Bonin*	*Bonin > IPA*	*phonetics*	*phonemes*	*comments*
speech; to speak	queu-tse	kø tsɿ	kɯꜜʈʂɯ˩		The first syllable is not transcribed as *quêu*, as one would expect for [ɯ] The second syllable is transcribed as coronal, not retroflex: for a retroflex, one would expect *tch'e*
head	cou-**leu**	ku lø	kuꜜlyꜜ		mistaken vowel: [ø] instead of [y]
pig	bou	bu	bu˩		*ou* = [u]
to come	lou-la	**lu** la	luꜜlɑ˩		*ou* = [u]; in fact an imperative: 'Come!', '...have to come'
9 (nine)	gou	gu	ŋgʮꜜ		Bonin missed the contrast between /u/ and /ʮ/, hearing both as [u].
to steal	c'ou	k^{h}u	k^{h}ʮꜜ		Bonin missed the contrast between /u/ and /ʮ/, hearing both as [u].
door	k'o	k^{h}o	k^{h}uꜜ		*o* instead of [u], perhaps due to the use of *k*^{h}*u* to transcribe [k^{h}ʮ] (see previous entry)

to come	lou-la	lu **la**	luˈlɑ˩		is in fact an imperative: ‘Come!’, ‘...have to come’
meaning	*Bonin*	*Bonin > IPA*	*phonetics*	*phonemes*	*comments*
duck	â	ɑ	ɑ˥		*â* used for back [ɑ]: as in French *âtre, âme, pâtre, pâte...*
sheep	yu	jy	jy˩	/y˩/	
meat	che	—	ʂɻˈ	/ʂɯˈ/	*-e* for apical vowels (syllabic fricatives)
3 (three)	sse	—	sɻ˩	/sɯ˩/	*sse* for [sɻ], i.e. *-e* for apical vowels
knife	ze-t‘ai	—	zɻˈtʰɛˈ	/zɯˈtʰeˈ/	*-e* for apical vowels
I, 1st pers. sg.	ngộ	—	ŋɤ˩		subscript dot indicates a vowel not found in French
how much does it cost?	kiêu-ze-da?	—	cjɤ˥ zeˈtɑ˩	/kjɤ˥ zeˈtɑ˩/	

We have been able to glean six pieces of linguistic evidence from Bonin's list, concerning the following topics:

(i) Palatalization of velar initials:

Velar initials are palatalized before high front vowels and before the semi-vowel /-j-/. The degree of palatalization differs from dialect to dialect: in the village of Guifeng 贵峰 (Naxi /ndɑ˧leɻ/, referred to below as Nda-le), palatalization is weak; in the village of Wenhua 文化 (Naxi /ɑ˧ʂəɻ/; referred to below as A-sher; see Michailovsky *et al.* 2006 and Michaud 2006), the realization is clearly palatal; in Lijiang city, schoolchildren tend to realize velars in this context as alveolo-palatals, adopting the same pronunciation as in Standard Mandarin Chinese. He Jiren *et al.* (1985), Fang Guoyu and He Zhiwu (1995) and other Chinese scholars use a notation as alveolo-palatal fricative: /tɕʰ-/, /tɕ-/, /dʑ-/, /ndʑ-/, but this may be due to transcription habits that are specific to China: the symbols for alveolo-palatal fricatives are taught in China as part of the IPA transcription of Standard Mandarin, whereas palatals are not; this explains why alveolo-palatal fricatives are especially common in transcriptions by Chinese linguists, including in cases where the articulation would be better described as palatal.

Bonin's word list contains an especially revealing example, which concerns nasal initial consonants. Bonin had different notational devices for the palatal nasal and the velar nasal: he transcribes 'two (2)' as *gni* in "Sifan" (Muli Pumi/Prinmi; see section 3), and as *ngié* in "Mosso" (Naxi); assuming (perhaps imprudently) a degree of consistency across Bonin's transcriptions for nasal consonants, the notation for Pumi can be interpreted as [ɲi], and his notation for Naxi as [ŋie], i.e. with a velar initial, not a palatal one. The word for 'two (2)' is transcribed as [ɲi] in the standardized IPA transcription for Naxi, in keeping with its present-day phonetic realization; it can be phonemicized as /ŋi/, an analysis which is apparently close to the phonetic reality of one century ago.

(ii) Articulation of the high front vowels /i/ and /y/:

Again using the example of 'two', and again contrasting its transcription by Bonin as *gni* [ɲi] in Pumi and as *ngié* [ŋie] in Naxi, Bonin's notation of the rhyme as [-ie] points to a degree of diphthongization in Naxi. This echoes Bacot's notations, such as *yé* for /i˧/ in the Naxi name of Lijiang, /i˧gɣ˧dy˩/ (Bacot 1913:3); on page 28 Bacot indicates that "each [simple] vowel and its diphthongs [diphthongized variants] are interchangeable" («...chaque voyelle et ses diphtongues sont interchangeables»), suggesting that diphthongization was limited.

As for present-day /y/, mistakenly transcribed as *eu* (i.e. [ø]) in the word for 'head', it was probably not a clear [y] sound (of the French type; about the acoustical definition of the French type of [y] and the Swedish type of [y], see Vaissière 2007), otherwise Bonin would have been led to a transcription as *-u* (or *ü*). The speculation that the fronting of present-day /y/ was less advanced at the turn of the 20th century than it is today is in line with historical evidence suggesting that this rhyme used to be articulated further back. The only stepping-stone available at present in the diachronic study of this rhyme concerns the time of the Yuan dynasty: the transcription of the Naxi name of Lijiang in Yuan-dynasty Chinese suggests a phonetic value *əw (see Jacques and Michaud under review).

(iii) Fronting of /o/:

A present-day characteristic of the Naxi dialect of Lijiang (and of other dialects of the Lijiang plain: see Pinson 1998) is the realization of the rhyme /o/ as a front rounded vowel [ø]. The dialect of A-sher retains the pronunciation as a back vowel, [o], except after a glottal initial /h/ or a 'zero' initial, in which contexts /o/ is realized as [ø]. Bonin's transcription *eu* strongly suggests that the vowel /o/ was already pronounced as [ø] in all contexts in Lijiang Naxi at the time when he recorded the word list: since /ø/ and /o/ are distinct phonemes in French, Bonin would have perceived an [o] differently, and would presumably have transcribed it as *o*.

Bonin's list also provides hints about the chronology of changes (or dialectal variants) for three words, 'speech', 'money' and 'knife'.

(iv) 'Language, speech' is /kɯ˧ʈʂɯ˩/ in present-day Lijiang Naxi: the first syllable is not transcribed as *quêu*, as one would expect for [ɯ], but as *queu* (and as *ke* in 'Tell me/*Dites-moi*'). It might be that, at the time, this syllable was pronounced /kɤ/ and not /kɯ/. Such is the case in Yongning Na (/kɤ˧ʈʂɯ˩/), which can therefore be presumed to be an earlier form, whereas Naxi /kɯ˧ʈʂɯ˩/ would result from a relatively recent (early 20th century?) process of vowel harmony. Again, this may simply be a mistake on Bonin's part.

(v) As was mentioned earlier, the monosyllabic form for 'money', /kjɤ˥/, is typical of the speech of Lijiang old town, as opposed to other Naxi dialects of the Lijiang plain, where it is disyllabic: /ki˥jɤ˧/. Bonin's transcription of this word as a monosyllable (in 'How much does it cost?/*Combien ça coûte?*) suggests that the word for 'money' was already monosyllabic in Lijiang at the turn of the 20th century.

(vi) There exist two variants of the word 'knife' in the Naxi dialect of A-sher: /zˬʷə˧tʰe˧/ and /zɯ˧tʰe˧/. In view of Bonin's transcription *ze t'ai*, it can be hypothesized that the realization with a coronal syllabic fricative is the standard form in the city of Lijiang, and that it was borrowed into the A-sher dialect by imitation of Lijiang Naxi, which is socially more prestigious. Under this hypothesis, the form with a retroflex initial and rhotacized rhyme (and medial -w- in dialects that allow this medial as part of their syllable structure), which is found in several dialects both in the Lijiang plain (dialect of the village of Nda-le: /zˬə˧/) and to the North-East (dialect of the village of A-sher: /zˬʷə˧tʰe˧/), can be interpreted as a conservative form.

3. Evidence from Bonin's Pumi vocabulary about the chronology of the loss of pre-initials in Pumi

The "dialecte Si-fan de Meli" recorded by Bonin is clearly a Pumi (Prinmi) dialect. In comparison to the Naxi vocabulary, it is fairly

limited, containing only 33 entries. Nevertheless, this short word list provides useful pieces of historical evidence.

One of the major differences between southern Pumi dialects (such as the Lanping 兰坪 variety described by Lu Shaozun 1983, 2001) and northern Pumi dialects (including all varieties spoken in Muli) is that the former preserve /fricative+stop/ clusters, whereas the latter have lost them,[3] as shown in Table 3.

Table 3. The simplification of /fricative+stop/ clusters in Northern Pumi dialects.

meaning	Lanping 兰坪县	Mudiqing 木底箐村 (永宁乡)	Shuiluo 水洛乡 (木里县)
to choose	$t^hə^2$ $st^hiɛ^1$	$t^hí$	$s^hɛ́$
to hide	$t^hə^2stʃu^1$	tʂû	ʂû
nine	sgiɯ^1	gû	ɣiə̂
horse	sgyɛ̃^{2}	guǐ	ɣuǐ
key	sk^hi^1	$k^hî$	xî

In some dialects, including the Shuiluo variety found in Muli, the loss of the preinitial consonant caused lenition: stops and affricates became fricatives, a process creating aspirated fricatives in some cases. This change is fairly complex and not exceptionless ; it is analyzed in more detail in Jacques (under review). In other dialects, such as the Mudiqing variety spoken in Yongning (Yunnan) or the Yiji 依吉 variety (south of Muli), the loss of the preinitial did not leave any traces.

[3] The Lanping data come from Lu Shaozun 2001, all the rest are from personal field notes. Lu's tone marks are replaced by a superscript 1 for high tone and superscript 2 for low tone.

In the short word list recorded by Bonin, only two words are relevant to this discussion: the numerals ‘nine’ and ‘ten’. Bonin gives two forms for ‘ten’, *casse-ti* and *ca-ti*. This numeral has a fricative preinitial in Lanping Pumi: /qa^{1}stiɛ̃^{1}/, but it belongs to the set of words that do not undergo obstruent lenition in Shuiluo Pumi: /kə́tɪ́/. The first form transcribed by Bonin implies a pronunciation [kasti] – or plausibly [kastĩ]: vowel nasalization could easily be missed, since no similar nasal vowel exists in French. This suggests that the /s-/ preinitial could still be heard in Northern Pumi dialects one century ago. At the same time, the fact that Bonin gives a variant pronunciation without preinitial, *Ca-ti*, indicates that the preinitials were in the process of being lost at the time he made his transcriptions; realizations with and without preinitials may have been in free variation at the time.

The numeral ‘nine’ also has a preinitial in Lanping Pumi, as can be seen in Table 3. It belongs to the set of words undergoing lenition in Shuiluo. However, no preinitial is transcribed in Bonin's data, suggesting that the loss of the preinitial did not occur simultaneously throughout the lexicon: instead, some clusters appear to have resisted longer than others.[4] The cluster /sg-/ disappeared earlier than /st-/. This raises the issue whether the dialect transcribed by Bonin was of the Shuiluo type (with lenition) or the Mudiqing type. The Naxi transcriptions show that Bonin used the letter *g-* to represent [ɣ] in several cases, so that the transcription *goue* for ‘nine’ is no proof that the dialect in question was of the Mudiqing type.

Fortunately, another item in the list can solve this issue: ‘man’, transcribed as *mi*. In Shuiluo-type dialects, the word for ‘man’ has a central vowel: /mə̂/, while in Mudiqing-type dialects we find a front vowel: /mî/. Since Bonin's dialect shares this feature with Mudiqing-type dialects, it is more likely that the dialect transcribed here belongs to this group. Had he heard [mə], the most

[4] This could be a clue to explain why some words do not undergo lenition in Shuiluo.

straightforward transcription, according to French orthography, would have been *me* or *meu*.

Conclusion

Bonin's rudimentary word lists do offer pieces of evidence on the dating of some phonetic changes in Naxi and Pumi. The sound system of Naxi has not undergone any remarkable changes since the late 19th century; Bonin's Naxi list nonetheless offers evidence on some details, such as the degree of palatalization of velars before high front vowels and the pronunciation of the vowels /i/, /y/ and /o/. On the other hand, the syllabic structure of Pumi simplified somewhat since the time of Bonin's expeditions: Bonin's list shows that the initial cluster /st-/ was still present at the time in the dialect recorded. These observations constitute a small contribution to the task of documenting the complex history of the Naxi and Pumi languages.

References

BACOT Jacques (1913). *Les Mosso, ethnographie des Mosso, leurs religions, leur langue et leur écriture, avec les documents historiques et géographiques relatifs à Li-kiang par Ed. Chavannes*. Leiden: E.J. Brill.

BONIN Charles-Eudes (1898). Note sur les résultats géographiques de la mission accomplie au Tibet et en Mongolie en 1895-1896. *Bulletin de la Société de Géographie*, vol. XIX, pp. 389-403.

BONIN Charles-Eudes (1903). Vocabulaires. *T'oung Pao*, series 2, vol. 4, pp. 117-126.

BRADLEY David (1975). Nahsi and Proto-Burmese-Lolo. *Linguistics of the Tibeto-Burman Area*, vol. 2, no 1, pp. 93-150.

CORDIER Henri (1908). Les Mosos. *T'oung Pao*, series 2, vol. 9, pp. 663-688.

FANG Guoyu 方国瑜 and HE Zhiwu 和志武 (1995). *A dictionary of Naxi pictographic characters* 纳西象形文字谱. Kunming, Yunnan, China: Yunnan Renmin Chubanshe.

HE Jiren 和即仁 and JIANG Zhuyi 姜竹仪 (1985). *A Presentation of the Naxi Language* 纳西语简志. Beijing: Minzu Chubanshe.

JACQUES Guillaume (under review). The origin of aspirated fricatives in Shuiluo Pumi: a panchronic study.

JACQUES Guillaume and MICHAUD Alexis (under review). Approaching the historical phonology of three highly eroded Sino-Tibetan languages: Naxi, Na and Laze.

LU Shaozun 陆绍尊 (1983). *A Presentation of the Pumi Language* 普米语简志. Beijing: Minzu Chubanshe.

LU Shaozun 陆绍尊 (2001). *Pumi Dialectology* 普米语方言研究. Beijing: Minzu Chubanshe.

MICHAILOVSKY Boyd and MICHAUD Alexis (2006). Syllabic inventory of a Western Naxi dialect, and correspondence with Joseph F. Rock's transcriptions. *Cahiers de linguistique - Asie Orientale*, vol. 35, no 1, pp. 3-21.

MICHAUD Alexis (2006). Three extreme cases of neutralisation: nasality, retroflexion and lip-rounding in Naxi. *Cahiers de linguistique - Asie Orientale*, vol. 35, no 1, pp. 23-55.

PELLIOT Paul (1930). Nécrologie de Charles Eudes Bonin. *T'oung Pao*, Second Series, 27, no 2/3, pp. 235-236.

PINSON Thomas M. (1998). *Naxi-Chinese-English Glossary, with English and Chinese Indexes.* Dallas: The Summer Institute of Linguistics.

RHODES Alexandre de (1651). *Dictionarium Annamiticum Lusitanum et Latinum*. Rome.

ROCK Joseph (1963-1972). *A Na-Khi -- English encyclopedic dictionary*. Roma: Instituto Italiano per il Medio ed Estremo Oriente.

SHAFER Robert (1955). Classification of the Sino-Tibetan languages. *Word*, vol. 11, pp. 94-111.

SUN Hongkai 孙宏开 (1983). Minority languages of the Six River Valley and their genetic classification 六江流域的民族语言及其系属分类. *Minzu Xuebao* 民族学报, vol. 3, pp. 99-274.

VAISSIÈRE Jacqueline (2007). Area functions and articulatory modeling as a tool for investigating the articulatory, acoustic and perceptual properties of the contrast between the sounds in a language. In: BEDDOR Patrice Speeter, SOLÉ Maria Josep and OHALA Manjari (eds). *Experimental Approaches to Phonology*. Oxford: Oxford University Press. Pp. 54-72.

Alexis MICHAUD
LACITO-CNRS
7 rue Guy Môquet, F-94800 Villejuif, France
alexis.michaud@vjf.cnrs.fr

Guillaume JACQUES
CRLAO-CNRS
rgyalrongskad@gmail.com