

Tonal Alternations in the Pumi Verbal System^{*}

Guillaume Jacques
CNRS (CRLAO), INALCO

This paper presents two hitherto unnoticed sets of alternations in the tonal systems of Northern Pumi. First, in some verbs, rising tone in the citation form alternates with falling tone in the perfective. Second, the verb ‘to go’, when combined with other verbs, presents tonal alternations which are not found elsewhere in the verbal system. A sample text is added in the appendix to illustrate the tonal phenomena discussed in the article.

Key words: Pumi, tonal alternation, directional prefixes

1. Introduction

Like most Qiangic languages (apart from Northern Qiang and Japhug Rgyalrong), Pumi dialects¹ have tonal contrasts. On monosyllables, either two tone categories (Lu 2001:21, Matisoff 1997) or three (Ding 2001, 2003, Lu 2001:97) are found depending on the dialect.

Earlier work on Pumi (Lu 1983:15-20, Fu 1998:18-20, Lu 2001) analyzes the tonal system of this language on the model of Chinese, transcribing all syllables as if they had

^{*} I wish to thank David Bradley, Katia Chirkova, Henriette Daudey, Randy LaPolla, Alexis Michaud, Cédric Patin, Thomas Pellard, Melanie Viljoen, Elizabeth Zeitoun, and three anonymous reviewers for comments on and corrections to this paper. I am responsible for any remaining errors. I am also indebted to my Mudiqing consultant Mr. Cao and to my Shuiluo Pumi consultant Ngag-dbang [ŋawó] 昂翁 who unfortunately passed away in late 2009, a few months after my field trip. This paper was completed during my stay at the Research Centre for Linguistics Typology, La Trobe University. Fieldwork in 2008 and 2009 was funded by the ANR (Agence Nationale de la Recherche) project PASQi (What defines Qiang-ness: Towards a phylogenetic assessment of the Southern Qiangic languages of Muli 07-JCJC-0063).

¹ Pumi (a.k.a. Prinmi) is a cluster of at least two distinct languages spoken across Yunnan and Sichuan, mainly in Lanping County, Ninglang County (Yunnan), Muli County and Jiulong County (Sichuan). The total number of speakers is above 30,000. In Muli County, it is the main language among ethnic Tibetans, and speakers of Shixing, Kami Tibetan, and other languages also learn it as a second language (Chirkova 2009:3).

an inherent tone. They do, however, mention some cases of sandhi and interaction between stems and affixes (Fu 1998:28-29, 88-89).

Matisoff (1997) is the first to use Africanist transcription instead of the Chao Yuen Ren system for transcribing Pumi tones, a system which is better suited for a language typologically closer to the African type than to the Chinese one (Hyman 2010, Evans 2008). Although the focus of this article was mainly on comparative linguistics, he nevertheless offers a valuable description of tonal sandhi and tonal alternation phenomena at the word level.

Ding (2001, 2006, 2007) analyzes the Pumi tonal system as a Pitch-accent system² and compares it to various Japanese dialects. Since his analysis is considerably more developed than those of his predecessors, it is worthwhile to describe it in more detail.

In the variety described by Ding, as in other dialects described by Lu (2001), monosyllables have three surface realizations: high (H), falling (F) and rising (R). He analyzes these categories as underlying H, HL and LH respectively. This analysis is justified by the patterns of tone spreading when an enclitic is added after a monosyllabic noun, as shown in Table 1:

Table 1: Analysis of Pumi tones in monosyllables according to Ding (2006:13)

Citation form	Realization with an enclitic		Meaning
ʃi ^F	ʃi ^H ge ^L	H.L	louse
ʃi ^H	ʃi ^H ge ^H	H.H	hundred
ʃi ^R	ʃi ^L ge ^H	L.H	new

The fact that the same tonal categories are realized as contour tones in citation form but appear as series of High and Low when a clitic is attached shows that an analysis in terms of syllable tone is not tenable for Pumi dialects, and that all contour tones of this language must be analyzed as combinations of high and low tones.

In polysyllabic words, the range of attested possibilities for a word of *n* syllables is much lower than 3^{*n*}, the number of categories which would be expected if each syllable had an underlying tone. Ding (2003:590, 2006:14) describes the following categories (where F, H, L and R represent the surface realizations of the tones, respectively falling, high, low and rising): only four patterns on disyllabic words (instead of an expected 3² = 9), six patterns on trisyllabic words (instead of 27) and seven on tetrasyllabic words.

² Since the category of ‘Pitch Accent’ is difficult to define rigorously cross-linguistically (Hyman 2009), we shall avoid this term in the present paper.

Table 2: Realization of the tonal categories in Xinyingpan Pumi (Ding 2006:14)

Category	Spread	1	2	3	4
A 1	–	F	HL	HLL	HLLL
B 1	+	H	HH	HHL	HHLL
C 2	–	R	<u>LH</u>	LHL	LHLL
D 2	+		<u>LH</u>	LHH	LHHL
E 3	–		LR	<u>LLH</u>	LLHL
F 3	+			<u>LLH</u>	LLHH
G 4	X			LLR	LLLH

The categories C and D on disyllabic words on the one hand and E and F on trisyllabic words are distinct only when a clitic or a compound word is added: with C and E categories, the high tone does not spread onto the next syllable, while it does with D and F categories. For instance, $t\tilde{o}^Lpu^H$ ‘donkey’ and $t\check{f}i^Lm\tilde{e}^H$ ‘dog hair’ pattern differently when a subsequent syllable is added: with $t\tilde{o}^Lpu^H$, which belongs to category D, the subsequent syllable has a high surface tone (for instance $t\tilde{o}^Lpu^Hk^H\text{’}\text{’}^H$ ‘donkey head’), whereas with $t\check{f}i^Lm\tilde{e}^H$, which belongs to category C, it has a low surface tone (no example provided in Ding’s papers).

According to Ding’s analysis, two underlying properties are enough to yield the observed categories: the place of the high tone in the prosodic domain, and whether this high tone can spread on the next syllable. The number in the first column indicates which syllable in the prosodic domain is the locus of the high tone, and in the second column, + indicates that the high tone can spread, – indicates that it cannot, and X that either is possible in free variation. The underlying high tone spreads rightwards, so that syllables situated on its left are realized with a low tone. If the number of syllables in the prosodic domain is inferior to the place of the high tone (for instance, category C with a monosyllable, the high tone should be placed on the second syllable, but only one syllable is present in the prosodic domain), a rising tone results.

This analysis elegantly accounts for the data of the Xinyingpan variety; however, it will be shown below that some tonal alternations found in other Pumi dialects are difficult to explain using this model.

Since the regular tonal alternation patterns in nominal compounding observed in these Pumi dialects do not seem to exhibit exactly the same behavior as in the variety described by Ding, I shall lay out basic facts about the tonal system of Shuiluo Pumi and describe tonal alternations in nouns (which are simpler) before discussing the problematic phenomena observed in the verbal system in the following sections.

2. Segmental inventory

The dialects investigated in this study are the Mudiqing (木底箐, Ninglang, Lijiang, Yunnan) and Shuiluo (水洛, Muli, Liangshan Yi Autonomous Prefecture, Sichuan) varieties, which belong to the Northern Pumi language (see Figure 1).³ The tonal alternation patterns in both dialects are almost identical. These dialects are related to the Xinyingpan dialect, with which they are mutually intelligible according to my informants' opinion. The data were collected during two field trips in July-August 2008 and February-March 2009 respectively. The present paper will mostly use data from the Shuiluo dialect.

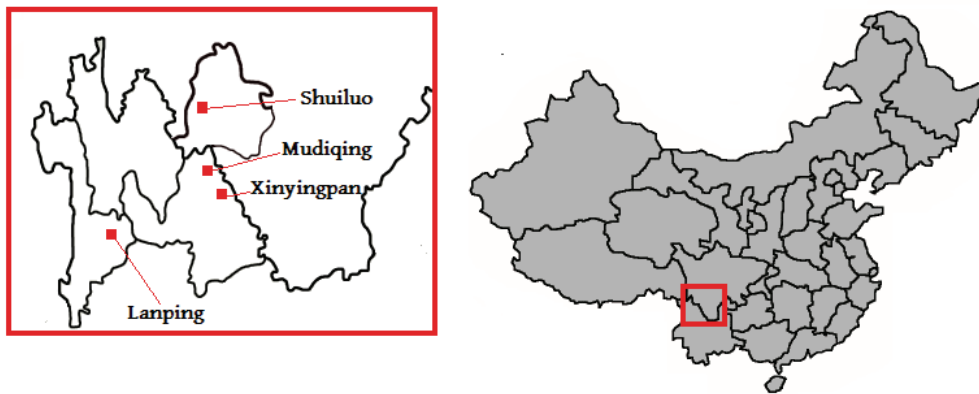


Figure 1: The location of Lanping, Shuiluo, Mudiqing and Xinyingpan Pumi dialects

Since the segmental phonology of Shuiluo Pumi differs from all previously described varieties (including the eight dialects in Lu 2001, among which it is closest to Taoba), I shall first present a basic account of the vocalic and consonantal inventory of this language. The basic syllabic structure is C(r)(G)V(G), where C, V, and G stand for consonant, vowel, and glide respectively.

This syllabic structure is simpler than the one found in Lanping of Xinyingpan, as most consonant clusters have disappeared. The only attested clusters are br- and pr-, and br- freely alternates with dzw- in some words.

³ My Mudiqing Pumi consultant Mr. Cao was born in 1962 and lives in Yongning Township in a community of speakers of the Na language (see Michaud 2008 for more information about this language). He speaks Chinese, Na, and Pumi. My Shuiluo Pumi consultant Ngag-dbang was a retired cadre. He lived in Qiaowa (the seat of the government in Muli County), was married to a speaker of Taoba Pumi (a very close variety), and spoke the language on a daily basis, though Chinese was, of course, his main language.

The list of attested rhymes is the following:

Table 3: The rhymes of Shuiluo Pumi

	i	e	ɛ	ə	ɜ	a	u	o	ĩ	ẽ	ǣ	ã	õ
V	i		ɛ	ə	ɜ	a	u	o	ĩ	ẽ	ǣ	ã	õ
Vu				-əu				-ou					
Vi		-ei											
-jV		-je	-jɛ	-jə	-jɜ	-ja	-ju	-jo				-jã	-jõ
-wV	-ui		-wɛ	-wə	-wɜ	-wa			-wĩ	-wẽ		-wã	
		-wei		-jəu									

The phonetic realization of these rhymes is not entirely straightforward: /wə/ is realized [ʷ],⁴ the glide -w- is realized [-ɥ-] after a coronal consonant and before a front vowel. /ə/ has three allophones: [ɿ] after dental fricatives and affricates (as in *tsə* ‘to milk’ [tsɿ⁵⁵]), [ɤ] after retroflex fricatives and affricates (as in *tsə* ‘gall bladder’, [tsɤ⁵⁵]) and as the labial trill [ʙ] after bilabial stops (as in *pə* ‘to dig’ [pʙ⁵⁵]). As in other attested forms of Pumi, no final consonants are found.

There are 40 consonant phonemes in Shuiluo Pumi:

Table 4: The initial consonants of Shuiluo Pumi

p	t			k	
p ^h	t ^h			k ^h	
b	d			g	
	ts	tɕ	tɕ		
	ts ^h	tɕ ^h	tɕ ^h		
	dz	dʒ	dʒ _l		
	s	ɕ	ɕ	x	h
	s ^h	ɕ ^h	ɕ ^h		
	z	ʒ	ʒ _l	ɣ	ɦ
m	n			ŋ	
m _o	n _o			ŋ _o	
	l		r		
	l _o				

⁴ This analysis is preferred because the non-egophoric infix <w> added to a stem in -ə yields the surface vowel [ʷ]: *sə* ‘to jump’ > [sʷə] *sʷə*.

Unlike other Pumi dialects, Shuiluo Pumi has aspirated fricatives,⁵ and has a real trill [r] contrastive with the voiced fricative [z]. The velar fricatives /x/ and /ɣ/ are realized as uvulars before back vowels, and as palatal fricatives before /i/.

3. The tone system of Shuiluo Pumi

Like the Niuwozi Pumi dialect studied by Ding, Shuiluo Pumi has three surface tonal categories on monosyllables, that can be described as high, falling, and rising in isolation. This basic system on monosyllables is also remarkably similar to that of Shixing (Chirkova & Michaud 2009). For convenience, I use the Africanist tone marks (like Matisoff 1997), as summarized in the following table. Low pitch (which is either the effect of an underlying low tone or the realization of an absence of tone) will be transcribed with a grave accent.

Table 5: Tonal categories on monosyllables in Shuiluo Pumi

	Example	Meaning	Underlying analysis
ˆ	njê	eye	A: 1, –spread
ˊ	njé	red	B: 1, +spread
ˇ	njě	black	C: 2, –spread

For the time being, I follow Ding’s analysis. However, we shall see that the analysis of the rising tone is not straightforward. On disyllabic nouns, four distinct patterns are attested:

Table 6: Tonal categories on disyllables in Shuiluo Pumi

	Example	Meaning	Ding’s analysis
ˆˆ HL	rwábò	willow	A: 1, –spread
ˆˊ HH	rwámí	mare	B: 1, +spread
ˆˋ LH	rwəmí	female yak	C/D: 2
ˆˇ LR	rèdzǎ	alcohol	E: 3, –spread

We find here the same four surface categories presented by Ding (C and D can only be distinguished if a subsequent syllable is added). For trisyllables and tetrasyllables, there are not enough words in my lexicon to provide a comprehensive account of the possible surface forms. Contour tonal patterns are restricted to the last syllable of a phonological word, following a general cross-linguistic tendency (Zhang 2004:929).

⁵ These aspirated fricatives come from {s+aspirated affricate} clusters.

In compound words of two syllables, the following rule can be used to predict the tonal pattern of the resulting disyllable (rows indicate the first element and columns the second element of the compound):

Table 7: Examples of regular tonal change in composition

	dó ‘back’	rê ‘skin’	sěi ‘blood’
gwí ‘bear’	gwí dó	gwí ró	gwí séi
kwê ‘cow’	kwê dó	kwê ró	kwê séi
ywĩ ‘horse’	ywĩ dó	ywĩ ró	ywĩ séi

The tonal patterns observed in Table 7 can be described as follows:

Table 8: Regular tonal change in composition

	H	F	R
H	HH	HH	HH
F	LH	LH	LH
R	LH	LH	LH

Only two patterns are found: high-high and low-high. The tonal pattern of the disyllable only depends on the first syllable. A similar, though not identical rule is found in the neighboring Shixing language (Chirkova & Michaud 2009:549). However, this productive rule has a few exceptions, such as bípě ‘sand’ from bí ‘sand’ and pě ‘flour, powder’ (the expected form would be *bípě).⁶ These exceptions are best considered as older compounds, to which the regular rule is not applicable. The composition rules presented above do not only apply to compound nouns, but sometimes also to object+verb compounds, though the exact environment where these occur still deserves further research.

4. Regular alternations in the verbal system

The Pumi verb is very rich in affixes, most of which are monosyllabic. The longest suffix -mədə̀rə is three syllables long, made from the nominalizing suffix -mə (itself a grammaticalized form of the noun m̃ə ‘man’), the copula d̃ə and the progressive suffix -rə. It is an evidential marker used in stories to report facts that the speaker has not

⁶ The word ^{Mtsa}tsa.bɣ ‘flour, powder’ in Yongning Na, whose second syllable is possibly related to pě (either as a cognate or as a loanword) also presents irregular tonal patterns (Michaud & Latami 2009:14).

witnessed himself. Although the etymology of this trisyllabic suffix is still synchronically transparent, it is fully grammaticalized, and the lexical tone of the verb spreads over the three syllables.⁷

Suffixes are toneless, and the intrinsic tone of the verbal stems spreads onto it.⁸ The following table shows tonal spreading patterns with a monosyllabic suffix (the progressive -rə) and with the trisyllabic -mədərə.⁹

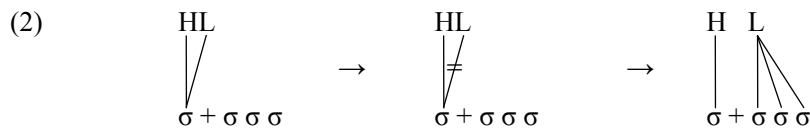
Table 9: Tonal spreading with monosyllabic verbs

Basic form	Monosyllabic suffix	Realization	Trisyllabic suffix	Realization	Meaning
ʔwí	ʔwí-rə	ʔwí-rə	ʔwí-mədərə	ʔwí-mədərə	observe
ʔê	ʔê-rə	ʔê-rə	ʔê-mədərə	ʔê-mədərə	stay
tă	tă-rə	tă-rə	tă-mədərə	tă-mədərə	arrive

The tonal spreading patterns of the first two tonal categories are straightforward. They can be represented in the following way:



The high tone is a single H tone underlyingly. It associates to the stem and spreads rightwards to all following suffixes, which are toneless.



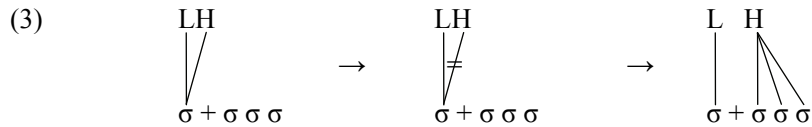
⁷ If it were not fully grammaticalized, one would not expect the tone spreading patterns described in this section. The copula, when it appears with nouns, does not show such peculiar behaviour: the high tone of monosyllabic nouns does not spread on the copula. In isolation, the copula followed by the progressive is realized də́-rə (or rather də́-rə), but in fluent speech it is often realized as low tone on both syllables as an effect of the intonation.

⁸ Apart from the suffixes, directional prefixes and many discourse particles are toneless; in the appended story, toneless affixes and particles have no tone marks in the underlying form. The idea that underlying low-tone syllables must be distinguished from toneless syllables in Pumi is found in Greif (2010).

⁹ Many examples of verbs with this suffix can be found in the story in the appendix.

The falling tone is underlyingly composed of two tonal elements H and L. When suffixes are added to the stem, the high tone remains in situ, while the low tone is re-associated with the following suffix.

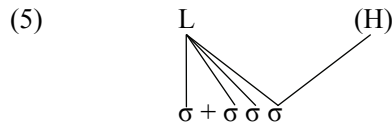
The same analysis cannot be proposed for the rising tone if it is analyzed as LH, as the following result would be expected:



We would obtain **tà-mádérǎ*, an impossible form. In order to explain the attested form *tà-mədərǎ*, a solution would be to analyze the surface rising tone as an underlying low tone. The form *tà-mədərǎ* would be as such:

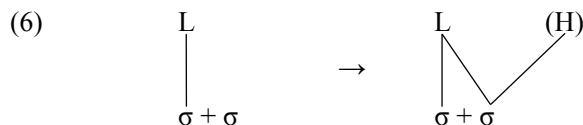


A rule against low-tone words (or rather the obligatory presence of a high tone in phonological words as in other Qiangic languages, see Evans 2008:484) would then change the last syllable of the word into a surface rising tone by insertion of a postlexical high tone.



A similar rule has been described for Yongning Na (Michaud 2008:186).¹⁰ In this analysis, low-rising words such as *rədzǎ* ‘alcohol’ cited in §1 must be analyzed with a low tone pattern L as the underlying form. The only problem with this theory is the form of verbs with monosyllabic suffixes: the suffix is realized with a high tone, not a rising one. If the analysis of rising tone monosyllabic verbs as having an underlying low tone were correct, we would expect the form **tà-rǎ* instead of attested *tà-ró*:

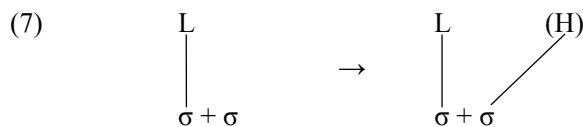
¹⁰ ‘[...] the L+L sequence cannot surface as such, due to a general prohibition against all-L phonological words (and a fortiori all-L utterances) in Na. The all-L sequence is avoided by post-lexical addition of a final M tone, which modifies L+L to L+LM[...]’



I do not propose any elegant explanation for this problem. Two analyses are possible.

First, one could analyze rising tone monosyllables as underlying LH, and add a rule according to which a high tone following a low tone is deleted if it has to spread on more than one syllable. However, this analysis is problematic as it increases the complexity of the basic form and requires the addition of an arbitrary rule.

Second, if one maintains the analysis of the monosyllables as low tones, one must account for the high tone by a special rule. A possible solution is to suppose that low tone fails to spread on one-syllable suffixes, and that the postlexical high tone (automatically added in words without underlying high tone) associates with a toneless syllable. Therefore, no surface rising tone occurs.¹¹



I shall adopt the second option in this paper.

Disyllabic verbs have a much simpler pattern: the suffixes are always realized with low pitch, except with low-rising disyllabic verbs (that is, underlying low tone verbs), as the last syllable of the verb undergoes the same change as for monosyllabic verbs.

Table 10: Tonal spreading with disyllabic verbs

Basic form	Tone	Meaning	Realization
səní	LH	to hear	sèní mǎdǎrǎ
máçé	H	to search	máçwé mǎdǎrǎ ¹²
súdju	HL	to think	súdjà mǎdǎrǎ
kətsěi	L	to be small	kàtsèi mǎdǎrǎ

¹¹ This idea was suggested by Alexis Michaud, but I remain responsible for any error in the analysis set out in this section.

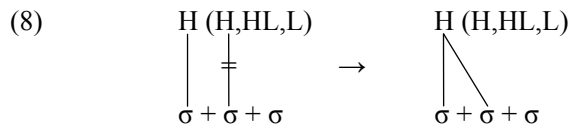
¹² This form has the non-egophoric volitive infix <w>.

Most prefixes are toneless, and are realized with a surface low tone,¹³ the default realization for toneless syllables. Among the directional prefixes, only the ‘up’ prefix has a high tone:

Table 11: Pumi directional prefixes

Direction	Shuiluo Pumi
up	tá-
down	nɜ-
out	k ^h ə-
in	hɜ-
cislocative	də-
translocative	t ^h ɜ-

The tone of this prefix regularly spreads rightwards onto the verb stem and the verb’s own tone is dissociated (the same phenomenon has been noted in Fu 1998:28-29 for a different dialect). However, the high tone of the prefix can only cross one morpheme boundary: the suffix will remain toneless, and ends up with a surface low pitch.



This phenomenon can be observed from the following examples (the perfective forms have either the egophoric¹⁴ -sǎ suffix or the non-egophoric one -ɕi).

Table 12: Spread of the high tone from the directional prefix

Basic form	Meaning	Perfective	Expected
tɕú	sour	tá-tɕú-ɕì	*tǎ-tɕú-ɕí
ɕ ^h í	wake up	tá-ɕ ^h í-sǎ	*tǎ-ɕ ^h í-sǎ
gǎ	lift	tá-gǎ-sǎ	*tǎ-gǎ-sǎ

¹³ Unlike Shixing where the tone of the verb spreads leftwards onto the prefix (Chirkova & Michaud 2009:550-551).

¹⁴ I adopt here Tournadre’s (2008) terminology rather than the terms ‘conjunct/disjunct’.

5. Irregular alternations

In the previous section, I have presented a basic account of the regular tonal alternations observed in the verbal system of Shuiluo Pumi. In the present section, I shall turn to two sets of alternations that cannot be accounted for synchronically by a set of simple rules and are lexically determined.

5.1 Rising tone monosyllabic verbs

We observe that several rising tone monosyllabic verbs undergo tonal alternation in the perfective form, when a directional prefix is added. The directional prefix has low surface tone, the verb stem high surface tone and the suffix low surface tone (the first example *suǎ* in the table is a non-alternating verb):

Table 13: Examples of alternating rising tone verbs

Basic form	Perfective form (1sg or 3sg)	Expected	Meaning
swǎ	k ^h ə-swǎ-sǎ		I counted
tɕǐ	nə-tɕí-sǎ	*nə-tɕì-sǎ	I poured
lěi	nə-léi-sǎ	*nə-lèi-sǎ	I ploughed
ɕ ^h ǎ	t ^h ə-ɕ ^h ǎ-sǎ	*t ^h ə-ɕ ^h ǎ-sǎ	I scooped
gǐ	nə-gí-sǎ	*nə-gì-sǎ	I wore (clothes)
těi	nə-téi-sǎ	*nə-tèi-sǎ	I wore (a hat)
ʒǐ	də-ʒǐ-ɕì	*də-ʒì-ɕí	It became lighter

The resulting perfective forms with LHL tone pattern look like perfective forms of falling tone verbs. Unlike the alternations observed with the prefix *tǎ-*, which can be explained as cases of assimilation, there is no evidence that the tone change observed here is caused by the directional prefixes. Some disyllabic verbs with low-rising tone pattern, such as *kətsěi* ‘small’, also present this alternation: the perfective form of this stative verb is realized as *nə-kətséi-ɕì* ‘it became small’.

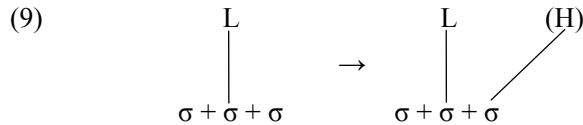
These alternations are observed both in running speech (recorded stories, as the one in the appendix) and isolated sentences. Therefore, it cannot be an effect of intonation.

Alternating verbs should be synchronically analyzed as a fourth lexical tonal class, distinct from both falling tone and rising tone, with a distinct underlying representation. However, an analysis in terms of H and L tones cannot easily account for the data presented above. Since falling and rising tone verbs have been respectively analyzed as H, HL and L in the previous section, we are left with only two possibilities: either to consider alternating verbs as underlying LH, or to suppose the existence of a contrast

between L and underlyingly toneless verbs.¹⁵

Proposing a category LH has one obvious advantage: we could unify the four tonal patterns found on monosyllables with those of disyllables shown in Table 4. However, the discussion in §3 has already shown that LH would account poorly for the spreading rules observed when various suffixes are added to the verb stem.

The other alternative, which I shall adopt in this article, is to hypothesize that of the alternating and non-alternating rising tone verbs, one category is toneless and receives a default low tone like affixes or sentence particles, and the second one has an underlying L tone. According to the analysis in §3, we should expect a prefixed monosyllabic verb with underlying Low tone to have the surface form LLH:



Non-alternating verbs are therefore verbs with underlying L tone. With toneless verbs, on the other hand, the insertion of a high tone is not accounted for by the rules presented in §3. The surface tonal pattern LHL looks as if the HL had been inserted on the toneless verbal stem (a simple H tone would not do, as it would result in an LHH pattern):



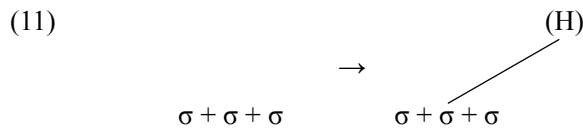
This process could be interpreted as a kind of polarity.¹⁶ However, a simpler solution might be possible. As mentioned in §3, a postlexical H tone must be inserted in all-low

¹⁵ One anonymous reviewer suggested that the alternation could be explained by assuming that the alternating verbs were LH underlyingly, with a leftward spread of the L tone on the prefix. He pointed out that such cases of leftward spread are attested in Pumi dialects (see for instance Ding (2001:76) concerning the *v*- prefix with the kinship terms). However, one would still have to explain why LH spreads leftwards with some verbs, and rightwards with others, and why in HL verbs the H tone does not spread leftwards. Besides, allowing leftward spread in the verbal system would unduly increase the complexity of the analysis. We adopt here the idea that only rightward spread is allowed.

¹⁶ Presence of polarity in Pumi would be one further argument in favor of Evans' (2008:484-485) idea that Qiangic languages, including Pumi, present tonal features thought to be characteristic of African tone languages.

phonological words. Since toneless syllables are normally realized with a surface low tone, the high tone insertion would have to appear in a word whose syllables are all underlyingly toneless.¹⁷ To explain the LHL tone pattern, we only need to add two specifications to the postlexical High tone insertion rule:

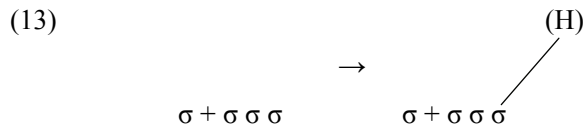
- (i) In verbal forms where all syllables are underlyingly toneless, the postlexical H tone is inserted on last syllable of the morpheme that contains the second syllable, regardless whether it is an affix or a verbal stem.¹⁸
- (ii) Postlexical H tones cannot spread.



We need an additional rule to explain why toneless and Low tone verb stems share the same tonal patterns in non-prefixed verb forms:

- (iii) In non-prefixed verb forms (when the verb stem is the first syllable of the phonological word), an L tone is inserted on toneless verbal stems.

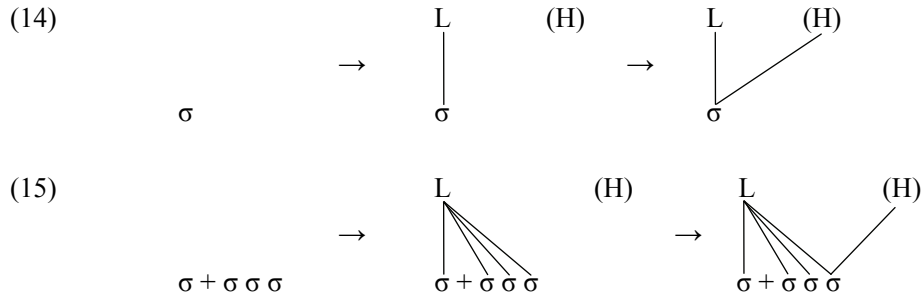
Without rule (iii), we would expect the bare stem form to be realized with a high tone (12), and the form suffixed with -mädərə to be realized as LLLH (13).



¹⁷ Note that in this hypothesis, toneless verb stems do not follow the same tone rules as toneless affixes or sentence particles.

¹⁸ In disyllabic verbal stems such as *nə-kətsé-i-çə* ‘it became small’ mentioned above, the high tone is placed on the second syllable.

With rule (iii), the non-prefixed verbal forms of toneless stems are virtually identical to L tone stems as in (14) and (15):



These alternations have never been described for Pumi dialects with three tones, but similar phenomena have been mentioned by Matisoff (1997) and Fu (1998), who both worked on two-tone dialects. Matisoff (1997:209) presents the following data:

Table 14: Alternating verbs in Matisoff (1997)

Meaning	Basic form	Prefixed form
carry on shoulder	tǎ	tǎ-tǎ
collapse	p ^h yě	t ^h ə-p ^h yé
drop	dǐ	nə-dǐ
dry	ɛyǔ	tə-ɛyú
get	ʒdʒǐ	tǎ-ʒdʒǐ / ɛ-ʒdʒǐ
hang	ʂǎ	tǎ-ʂǎ
hide	nǎN	t ^h ə-nǎN
mislay	mǐ	t ^h ə-mǐ
pull out	ɬwǎ	tǎ-ɬwǎ / t ^h ə-ɬwǎ
rot	bdʒǐ	nə-bdʒǐ
satiated	kwǐ	tǎ-kwǐ
sew	děi	tə-děi
take with one	zʒǒ	nǎ-zʒǒ
understand	tʂǒ ʃǐ	t ^h ə-tʂǒ-ʃǐ
wear heat	twǎ	tǎ-twǎ
wear clothes	gwǐ	tǎ-gwǐ

Matisoff (1997:209-210) only briefly comments on this phenomenon: “In what appears to be the majority of cases, a verb under the low tone acquires the high tone after a directional prefix in Dayang [Pumi]”. In the light of the Shuiluo Pumi data, it seems that

Matisoff’s examples actually conflate two distinct phenomena: the systematic high-tone assimilation of the ‘up’ prefix tɕ- on the one hand (these cases have been shaded in grey in the table) and the genuine tonal alternation occurring with all other directional prefixes (only seven examples in all).

Fu (1998:88-89) notices 21 verbs in her corpus which undergo tone change when a directional prefix other than tɕ- is added. Her list includes the following (all tone 24, low rising tone):

Table 15: Alternating verbs in Fu (1998)

Meaning	Basic form	Meaning	Basic form
爛 rotten	bɕi	換 change	ɕdɕu
天陰 dark	ɕəuŋ	還 give back	ts ^h ue
(棍子)斷 break	ɕən	垮 collapse	bie
脫落 to get off	ga	撕 tear off	t ^h e
脫臼 dislocate	li	賣 sell	ʃtʃi
剩餘 remain	xɑ	弄垮 cause to collapse	p ^h ie
聽見 hear	noŋ	拿 take	.ruɑ
滅 destroy	go	送 give	ʃtʃyn
採 pick up	q ^h ɑ	跑 run	bɕin
抽煙 smoke (= drink)	t ^h in	扔 throw	vba
連接 link	ʃtʃ ^h ua		

Several etyma are found in both Matisoff’s and Fu’s lists: “rot” and “collapse”, but since their fieldwork research was based on entirely different wordlists, relatively few comparable etyma are found. By contrast, I collected vocabulary on Shuiluo and Mudiqing Pumi using the same basic list, and as a result found many common etyma between these two varieties, allowing a better evaluation of how stable the tonal alternation is across Pumi dialects. In my data, I find the following list of examples belonging to the fourth category:

Table 16: Alternating verbs in Shuiluo and Mudiqing Pumi

	Shuiluo	Mudiqing
scoop	ɕ ^h ǎ	tɕ ^h ǎ
leak	zǎ	dzǎ
ride	dzěi	dzěi
plant	lěi	lěi
wear (hat)	těi	těi
pour	tɕǐ	
wear	gǐ	gǔ
remember	tɕǐ	
drink	t ^h ǐ	t ^h iě
flee	ts ^h ǐ	
break	dzǐ	dzě
light	zǐ	dzě (no alternation)
fat	ts ^h wǎ	ts ^h ǎ
flee		p ^h ě
fly		biě
run		dzě
bear on the back		kǔ
do		dzǔ
sell	ɕǐ	kǐ
hide	ɕǔ	tɕǔ
understand		nǒ
use	zɕzǎ	zǎ
obtain		rǐ
give		tɕyě

From this list, we observe that not all verbs are alternating in both dialects, even when we find cognates. Five exceptions are found (out of 13 verbs with cognates in both dialects). In Mudiqing there are two falling tone verbs, dzě ‘break’ and ts^hǎ ‘fat’, corresponding to alternating tone verbs in Shuiluo, and one rising tone verb, dzě ‘light’, without alternation (past k^hǎ-dzě-ɕǐ), whereas its cognate in Shuiluo has alternation. Similarly, in Shuiluo we find two falling tone verbs, ɕǐ ‘sell’ and ɕǔ ‘hide’, corresponding to alternating verbs in Mudiqing.

The tonal correspondences are even more complex if Fu’s (1998) data are taken into consideration. Although a few items in her list correspond to alternating verbs in Shuiluo or Mudiqing (‘give’, ‘hear’ = ‘understand’, ‘smoke’ = ‘drink’), in other cases they correspond to falling tone verbs, for instance ts^hue²⁴ ‘give back’, whose cognates are ts^hwê in Shuiluo and ts^hwǐ in Mudiqing.

These puzzling exceptions can be accounted for by supposing a process of analogical leveling at the expense of the alternating verbs: alternating verbs, which are much less numerous than either rising tone or falling tone verbs, tend to become falling tone verbs (or in one case, a rising tone verb) by generalizing the surface tone found on the prefixed verbal forms. In this hypothesis, whenever a verb has tonal alternation in any Pumi dialect, regardless of the fact that other dialects may have falling tone in the corresponding etymon, the verb in question ought to be reconstructed in proto-Pumi as belonging to the fourth tonal category, that is alternating verbs.

We find no cases of a correspondence between a high tone verb and an alternating verb across dialects,¹⁹ and this is expected since alternation verbs never behave like high-tone verbs either in prefixed and non-prefixed form; an analogical change from high-tone to alternating or vice-versa would not be motivated phonetically.

In summary, for the Northern Pumi dialects under investigation, I propose that we must distinguish four, not three tonal classes on monosyllabic verbs:

Table 17: Monosyllabic verbs

Toneless	Basic form	Perfective 1sg	Meaning
H	pó	nè-pó-sǎ́	to dig
HL	kô	nè-kó-sǎ̀	to win
L	bǔ	nè-bù-sǎ́	to bury
toneless	gǐ	nè-gí-sǎ̀	to wear

For disyllabic verb stems, we find five tonal categories:

Table 18: Disyllabic verbs

Tone	Basic form	Perfective 1sg (or 3sg)	Meaning
LH	rə́gí	hè-rə́gí-sǎ̀	to hug
H	ɕúwá	niè-ɕúwá-sǎ̀	to wring
HL	tɕéʂwà	k ^h è-tɕéʂwà-sǎ̀	to throw
L	ɬòdǒ	k ^h è-ɬòdǒ-sǎ́	to step across
toneless	kàtsěi	nè-kàtsěi-ɕì	to be small

No direct evidence of a toneless category has been found in either monosyllabic or disyllabic nouns, which seem to lack this kind of tonal alternation at least in Shuiluo Pumi, but traces of it could potentially be found in seemingly irregular nominal compounds (such as those mentioned in §2). No definite historical explanation for this

¹⁹ As was pointed out by an anonymous reviewers.

phenomenon can be given until the issue of Pumi tonogenesis has been properly addressed. This topic lies beyond the scope of this paper, as it would require a systematic comparison with other Qiangic languages.

5.2 The verb ‘to go’

When a monosyllabic verb is suffixed with the non-egophoric form ɕ^{h} of the verb ‘to go’, this verb undergoes unusual tone changes:

Table 19: Tonal alternations with the verb ‘to go’

Basic form	Suffixed with the verb ‘to go’	Expected	Meaning
dz^{h}	$\text{dz}^{\text{h}}\text{-}\text{ɕ}^{\text{h}}\text{-m}^{\text{h}}\text{d}^{\text{h}}\text{r}^{\text{h}}$	$^*\text{dz}^{\text{h}}\text{-}\text{ɕ}^{\text{h}}\text{-m}^{\text{h}}\text{d}^{\text{h}}\text{r}^{\text{h}}$	went to sit
t^{h}	$\text{t}^{\text{h}}\text{-}\text{ɕ}^{\text{h}}\text{-m}^{\text{h}}\text{d}^{\text{h}}\text{r}^{\text{h}}$	id.	went to see
z^{h}	$\text{z}^{\text{h}}\text{-}\text{ɕ}^{\text{h}}\text{-m}^{\text{h}}\text{d}^{\text{h}}\text{r}^{\text{h}}$	$^*\text{z}^{\text{h}}\text{-}\text{ɕ}^{\text{h}}\text{-m}^{\text{h}}\text{d}^{\text{h}}\text{r}^{\text{h}}$	went to sleep

When the basic verb is high tone, the tone of ɕ^{h} is assimilated, and the high tone propagates again onto the suffix, quite unlike the high tone of the directional t^{h} , which, as we have seen, cannot propagate across more than one morpheme boundary.

When the verb is falling tone, ɕ^{h} becomes low-toned, and so does the following prefix. This form is expected from the rules proposed in §2:

$$(16) \quad \begin{array}{c} \text{HL (HL)} \\ | \quad | \\ \sigma + \sigma + \sigma\sigma\sigma \end{array} \rightarrow \begin{array}{c} \text{HL (HL)} \\ | \quad \diagdown \quad \diagup \quad \diagdown \\ \sigma + \sigma + \sigma\sigma\sigma \end{array}$$

Finally, when the preceding verb is in the rising tone, we observe an entirely unexpected alternation: ɕ^{h} becomes high tone, and this high tone spreads onto the following suffix. No matter which underlying representation one chooses for ɕ^{h} , one cannot explain this phenomenon. Even assuming that ɕ^{h} were a toneless stem for instance, one would expect L-L-LLR $^*\text{z}^{\text{h}}\text{-}\text{ɕ}^{\text{h}}\text{-m}^{\text{h}}\text{d}^{\text{h}}\text{r}^{\text{h}}$, not L-H-LLL.

As with the preceding alternation, I have no theoretical analysis to propose that would solve this problem. In present-day Shuiluo Pumi, this verb is highly irregular: it has four unpredictable forms ɕ^{h} (basic form) ɕ^{h} (egophoric with directional prefixes), ɕ^{h} (non-egophoric) and ɕ^{h} (imperative).²⁰ Whether these unpredictable forms are the result of preservation of ancient alternations or secondary idiosyncrasies must be left for future investigations.

²⁰ Most of these forms are attested in the story in the appendix.

6. Conclusion

This article has documented and analyzed several tonal alternations in the verbal system of Shuiluo Pumi. It demonstrated that four tonal classes must be distinguished for monosyllabic verbs, and five for disyllabic verbs. The issue of tonal alternations in noun phrases (including tri- and quadric-syllabic nominal compounds), and of the effect of intonation on tone realization is left for further research. An important issue would be to determine whether evidence for the contrast between toneless vs. L tonal classes found in verbal morphology can be brought to light in the domain of nominal morphology.

Properly understanding the alternation patterns of Pumi is not only of interest for historical linguistics and theoretical phonology, it also has a considerable practical importance for transcribing Pumi stories correctly, as is illustrated in the excerpt from a Pumi traditional story presented in the appendix.

Appendix: A sample story in Shuiluo Pumi²¹

The glosses generally follow the Leipzig Glossing Rules, except for the following:

AGENT	agentive
ASSERT	assertive
EGO	egophoric
MOD	modal
NAR	narrative
N.EGO	non-egophoric
OBL	oblique
VOL	volitive
SIMULT	simultaneous

Clitics, indicated by = rather than -, differ from genuine suffixes in that only the rising tone can spread on them, the high tone cannot spread rightwards on clitics in this variety of Pumi, unlike in the variety described by Ding (2003).

tsək ^h wǎ	pá	rû = mə	= ɣə	tópí
tsək^hwǎ	pá	rû = mə	= ɣə	tópí
pig_head	divination	divinate=NMLZ	=GEN	story

The story of the one who made divination with a pig head.

01	ʒɛní	ʒɛní	mádɕɔ́	hmǐ́ = mə	tɕ-tsɔ́
	ʒɛní	ʒɛní	mádɕɔ́	hmǐ́ = mə	tɕ-tsɔ́
	before	before	poor_man	beg=NMLZ	one-CL

Once upon a time, there was a poor beggar.

02	hmǐ́	gjelǰě	úní	= k ^h jɛ	dzɛ̌-mədərə
	hmǐ́	gjelǰě	úní	= k^hjɛ	dzɛ̌-mədərə
	beg	while	this_way	time	go-NAR

He was begging around.

²¹ A partially similar story is found in the Tibetan *ro-sgrung* cycle (Robin & Klu-rgyal 2005:177-193). This story was recorded from Ngag-dbang in Muli in February 2009. We present here only one fourth of the entire story, for want of space. The recording will be made available on the LACITO Archive (<http://lacito.vjf.cnrs.fr/archivage/>) eventually.

- 03 $t\acute{s}$ -hná =bo rwâ ɬi $t\acute{s}$ -ká bá = wō tǎ-mədərə
 $t\acute{s}$ -hná =bò **rwə̀-** **ɬi** $t\acute{s}$ -ká **bà = wō** **tà-mədərə**
 one-day =TOP yak herd one-household house:GEN-LOC arrive-NAR
 One day, he arrived at a place where there was a household of yak herders.
- 04 rwâ- ɬi- hōbǎ ʉ-bje rwâ tsá-rə =k^hje zê-mədərə
 rwə̀- **ɬi-** **hōbà** **ʉ-bjé** rwâ **tsá-rə** =k^hjè **zê-mədərə**
 yak herd girl this-DAT yak milk-PROG when stay-NAR
 There was a shepherdess milking yaks.
- 05 tsǎ tiō tɕiwá mjě-ɕǐ, rwâ tsá = mə-bje zwí-mədərə
 tsǎ **tiō** **tɕiwá** **mjě-ɕí,** rwâ **tsá = mə-bjè** **zwí-mədərə**
 he any busy NEG-have yak milk=NMLZ-DAT watch-NAR
 He had plenty of time, and watched her milking yaks.
- 06 utí rwâ- ɬi- hōbǎ rwâ tsá-tɕwi p^hǎ = wō
 ùtí **rwə̀-** **ɬi-** **hōbà** rwâ **tsá-tɕwí** **p^hǎ = wō**
 this yak herd girl yak milk-PROG half-LOC
 As she was milking yaks,
- 07 rǐ gap^há nɜ-yâ =njɛ =bo
 rǐ **gàp^há** **nə̀-yâ** =njè =bò
 turquoise one_half PFV:DOWN-fall =AGENT =TOP
 one half of her turquoise pendant fell down.
- 08 kí = wō nɜ-tɕí-mədərə
 kí = wō **nə̀-tɕí-mədərə**
 pasture-LOC PFV:DOWN-fall-NAR
 It fell on the grass.
- 09 kí = wō nɜ-tɕí =k^hje tsǎ xá mǎ-kǔ-mədərə
 kí = wō **nə̀-tɕí** =k^hjè tsǎ xá **mà-kú-mədərə**
 pasture-LOC PFV:DOWN-fall when he know NEG-know-NAR
 She did not notice it when it fell on the grass.
- 10 tɜ-tɕ^hě =bo rwâ =njɛ xêi tɜ-pǎ
 tɜ-tɕ^hě =bò rwâ =njè xêi **tɜ-pǎ**
 one-moment =TOP yak =AGENT dung one-CL

tsá =tì rì =k^hú nə-x <w> èi-mədərǎ
 tsá =tì rǐ =k^hu nə-x <w> ǐ-mədərə
 he =this turquoise =on PFV:DOWN-defecate< N.EGO:VOL>-NAR
 At that moment, the yak defecated on her turquoise.

- 11 utí hmǐ =mə =tì tá-mədərə
 u-tí hmǐ =mó =tì tá-módǎró
 this beg=NMLZ this see-NAR
 The beggar saw it.

- 12 tǎbó tǎ-tǎ^hě rwǎ tsǎ ts^há =k^hjě =bo
 tǎbó tǎ-tǎ^hě rwǎ tsǎ ts^há =k^hjě =bò
 now one-moment yak milk end when TOP
 After a while, as she finished milking her yak,

- 13 rwǎ- ǎ- hǒbǎ nǎ hjǔ =po hǎ-zǎ =k^hjě =bo
 rwǎ- ǎ- hǒbǎ nǎ hjǔ =pó hǎ-zǎ =k^hjě =bò
 yak herd girl milk tent =under PFV:IN-take =when =TOP
 the shepherdess took the milk to her tent.

- 14 utí hmǐ =mə =tì tsǎ bǎ =wǒ hǎ-ǎǎ
 ùtí hmǐ =mó =tì tsǎ bǎ =wǒ hǎ-ǎǎ
 this beg=NMLZ this she house:GEN-LOC PFV:IN-go.N.3.VOL
 tǎbo, hmǐ-ǎǎ-mədərə
 tǎbò, hmǐ-ǎǎ-módǎró
 then beg-go-NAR
 The beggar went inside her house to beg.²²

- 15 “tǎbó bēi tǎ-k^hwǎ sǐtǎ^hě tǎ-zǐ ǎ^hě-ku
 “tǎbó bēi tǎ-k^hwǎ sǐtǎ^hě tǎ-zǐ ǎ^hě-kú
 now rice one-bowl breakfast one-CL feed-IMP
 t^hǎzǎ hmǐ-ku” tǎ <w> ǎ-mədərə
 t^hǎzǎ hmǐ-kú” tǎ <w> ǎ-mədərǎ
 thank_you beg-IMP say<N.EGO:VOL>-NAR
 He said, “Please, give me a bowl of rice for breakfast.”

²² This sentence shows an example of the alternation treated in §5.2. Note also the irregular form hǎ-ǎǎ of the verb ‘to go’.

- 16 ǔ = k^hje məkəbǝ = nje bēi tǝ-zǝ t^hǝ-ɕ^h < w > ɛ-mədərǝ
 ù = k^hjé məkəbǝ = nje bēi tǝ-zǝ t^hǝ-ɕ^h < w > ɛ-mədərǝ
 that-time family =AGENT rice one-CL PFV-feed<N.EGO:VOL>-NAR
 Then, the people from this family gave him a meal.
- 17 tsá bēi dzǝ-tɕui p^hǎ = wǝ ts^hǝ = k^hje = bo
 tsá bēi **dzǝ-tɕui p^hǎ = wǝ** ts^hǝ **= k^hjè = bǝ**
 he rice eat-PROG half-LOC time =when =TOP
 As he was halfway through his meal,
- 18 utí rwǝ- ɬi- hǝbǎ rǝ njǝ-mí-ɕi
 ùtí rwǝ- ɬi- hǝbǎ rǝ njǝ-mí-ɕi
 this yak herd girl turquoise PFV-disappear-EVD
 xá kǝ-mədərǝ
 xá **kǝ-mədərǝ**
 understand understand-NAR
 The shepherdess noticed that her turquoise pendant was missing.
- 19 “tǝbǝ â = ti rǝ ú-ní p^hǔ njê = mǝ = dǝ = k^hje,
 “**tǝbǝ â = tǝ rǝ ú-ní p^hǔ njé = mǝ = dǝ = k^hjè,**
 now me =this turquoise this_way price valuable=NMLZ =COP =when
 “My turquoise is so valuable,
- 20 tǝbǝ njǝ-mí-ɕi = bo tɕ^hǝní pǝ-jǝ dǝ”
 tǝbǝ njǝ-mí-ɕi = bǝ tɕ^hǝní pǝ-jǝ dǝ”
 now PFV-disappear-EVD =TOP how do-NMLZ:MOD modal
 tɕǝ-mədərǝ
 tɕǝ-mədərǝ
 think-NAR
 now, it is lost, what can I do ?”, she thought.
- 21 mǝɕ < w > ɛ-mədərǝ tɕǝ = wǝ hiǔ = wǝ lǝlǝǝ
 mǝɕ < w > ɛ-mədərǝ tɕǝ = wǝ hiǔ = wǝ lǝlǝǝ
 search< N.EGO:VOL >-NAR house- LOC tent-LOC all
 mǝɕ < w > ɛ-mədərǝ
 mǝɕ < w > ɛ-mədərǝ
 search< N.EGO:VOL >-NAR
 She searched for everywhere in the house, in the tent,

- 22 kɪ-wō mǎɕ <w> é-mədərə mǐ-tɕʰwǎ-mədərə
 kɪ-wō **mǎɕ <w> é-mədərə** **mǐ-tɕʰwǎ-mədərə**
 pasture-LOC search<N.EGO:VOL>-NAR NEG.PFV-find-NAR
 and on the pasture, but could not find it.
- 23 tǎbó rǐ nɪɜ-mî dǎ dǎ
 tǎbó rǐ **nɪɜ-mî** dǎ dǎ
 now turquoise PFV-disappear ASSERT ASSERT
 The turquoise was lost.
- 24 tǎbó utí rwǎ- ɬí- hōbǎ xwéi-tɕétɕé-mədərə
 tǎbó **ùtí** **rwǎ-** **ɬí-** **hōbǎ** **xwéi-tɕétɕé-mədərə**
 now this yak herd girl cry-about_to-NAR
 The shepherdess was about to cry.
- 25 â rǐ ú-ní tsʰwí=mə =də =kʰje
 â rǐ ú-ní **tsʰwí=mə** **=də** **=kʰjè**
 I turquoise this_way good=NMLZ =COP =when
 tǎbó nɪɜ-mî-ɕǎ
 tǎbó **nɪɜ-mî-ɕǎ**
 now PFV-disappear-N.EGO
 “My turquoise was so beautiful, and it is lost.
- 26 tɕʰápá nɜ-dzǎ-ɕǎ” tɕǎ =tǎbo xwéi-tɕétɕé-mədərə
 tɕʰápá **nɜ-dzǎ-ɕǎ**” tɕǎ =tǎbò **xwéi-tɕétɕé-mədərə**
 waste PFV-become-N.EGO say =then cry-about_to-NAR
 What a waste !” she said, and was about to cry.
- 27 “tʰɜɜɛ” hmǐ=mə-bje “nɪɜ kʰətí tʰô ɕǐ mǎ-a-wǒ”
 tʰɜɜɛ **hmǐ=mə-bjè** nɪɜ **kʰətí** tʰô ɕǐ **mǎ-à-wǒ**
 please beg=NMLZ-DAT you some method have NEG-Q-modal
 She told the beggar: “Don’t you have some trick,
- 28 nɪɜ pá rû nǎ ú-ní mǎ-a-ŋû”
 nɪɜ pá rû **nǎ** ú-ní **mǎ-à-ŋû**
 you divination divinate etc this_way NEG-Q-know

tɕ <w>ǎ- mədərə

tɕ <w>ǎ- mədərǎ

say<N.EGO:VOL>-NAR

wouldn't you know how to practice divination, by any chance ?"

- 29 ũ = k^hje = bo utí hmǐ̃ = mǎ = nje "pá rû
 ũ = k^hje = bǒ ùtí hmǐ̃ = mǎ = njẽ "pá rú
 this_time =TOP this beg=NMLZ =AGENT divination divinate

 hálǒti = bo ηû" tɕ <w>ǎ-mədərə
 hálǒti = bǒ ηû" tɕ <w>ǎ-mədərǎ
 a_little =TOP know say<N.EGO:VOL>-NAR
 Then the beggar said "I know divination a little."

- 30 tsǎ pǎdzí rwǝ-xêi = pǎ = po rǐ ũ = po
 tsǎ **pǎdzí** **rwǝ-xêi** = **pǎ** = **pǒ** rǐ **ũ = pǒ**
 he just_before yak-dung =CL =under turquoise it=under

 nǝ-ʂǝ̃ tsǎ tǎ-mədərə
 nǝ-ʂǝ̃ tsǎ tǎ-mǎdǎrǎ
 PFV:DOWN-go.N.EGO he see-NAR
 Just before, he had seen the turquoise going under the yak dung.

- 31 tsǎ gǐǎ = wǒ xwǝ = po dzwá tǝǎ-mədərə
 tsǎ **gǐǎ = wǒ** xwǝ = **pǒ** dzwá **tǝǎ-mədərǎ**
 he heart=LOC heart =under smooth very-NAR
 He was not worried at all.

- 32 pá rû hálǒti dei ηû" tɕ <w>ǎ-mədərə
 pá rû **hálǒti** **dèi** ηû" **tɕ <w>ǎ-mədərǎ**
 divination divinate a_little PART know say<N.EGO:VOL>-NAR
 He said "I know divination a little."

- 33 nǎdjé t^hǝ̃zǝ̃ njǝ = nje pá ti rû-ku
 nǎdjé t^hǝ̃zǝ̃ njǝ = njẽ pá tì rú-kù
 then please you =AGENT divination a_little divinate-IMP
 "In this case, please make a divination,

- 34 njê mjê k^hũ la ǎ-bə k^hĩ-ʂa bo
 njê mjê k^hũ **là à-bə k^hĩ-ʂá bə**
 you what need all my-house give-FUT TOP
 we shall provide you with anything you need,
- 35 njê pá rû =k^hje mjê ti k^hũ wõ,
 njê pá rû =**k^hjè mjê tì** k^hũ wõ,
 you divination divinate =when what a_little need modal
 pá rû-sǎ mjê k^hũ wõ” tɕ <w> ǎ-mədərə
 pá **rû-sǎ** mjê k^hũ wõ” **tɕ <w> ǎ-mədərǎ**
 divination divinate-NMLZ:OBL what need modal say<N.EGO:VOL>-NAR
 whatever you need when you divinate, whatever you use to divinate.”
- 36 utí hmĩ-mə ti tsá tɕéi-mədərə
ùtí hmĩ-mə tì tsá tɕéi-mədərǎ
 this beg-NMLZ this meat want_to_eat-NAR
 The beggar wanted to eat meat.
- 37 pá rû-sǎ bo tənǰ bo k^hətí k^hũ mǎ-wõ
 pá **rû-sǎ bə tənǰ bə k^hətí** k^hũ **mǎ-wõ**
 divination divinate-NMLZ:OBL TOP other TOP some need NEG-modal
 “To do divination, I don’t need anything else,
- 38 tsək^huǎ tǰǰ-jǎ ǎ-k^hĩ bo dzǎ-kei
tsək^huǎ tǰǰ-jǎ ǎ-k^hĩ bə dzǎ-kéi
 pig_head one-CL Q-give TOP fine-OPT
 if you give me the head of a pig, it will be just fine.
- 39 tsək^hwǎ tǰǰ-jǎ jǎ” tɕ <w> ǎ-mədərə
tsək^hwǎ tǰǰ-jǎ jǎ” tɕ <w> ǎ-mədərǎ
 pig_head one-CL bring say<N.EGO:VOL>-NAR
 Bring me a pig’s head,
- 40 tsək^hwǎ tǰǰ-jǎ k^hũ” tɕ <w> ǎ-mədərə
tsək^hwǎ tǰǰ-jǎ k^hũ” tɕ <w> ǎ-mədərǎ
 pig_head one-CL need say<N.EGO:VOL>-NAR
 I need a pig’s head.”

- 41 “áláçi” tɕ <w> ǎ-mədərə tʂʰǎ =kʰje tsəkʰwǎ
áláçi **tɕ <w> ǎ-mədərə** tʂʰǎ =kʰjè **tsəkʰwǎ**
 thank_you say<N.EGO:VOL>-NAR quick =when pig_head
 tʂǎ-jǎ tsǎ-bje tʰǎ-kʰ <w> ǎ-mədərə
 tʂǎ-jǎ **tsǎ-bjé** **tʰǎ-kʰ <w> ǎ-mədərə**
 one-CL he-DAT PFV-give<N.EGO:VOL>-NAR
 They said “Thank you”, and immediately gave him a pig’s head.
- 42 tǎbó tsǎ =nje tsəkʰuǎ-bje səkəradzɰí tǎ-tsá hǎ-tsí tǎbo
tǎbó **tsǎ =njè** **tsəkʰuǎ-bjé** **səkəradzɰí** tǎ-tsá **hǎ-tsí** **tǎbò**
 now he =AGENT pig_head-DAT wood_stick one-CL PFV-insert then
 Then, he inserted a wood stick into the pig head,
- 43 tsəkʰuǎ hǎ-ʂʰwěi tǎbo ǎ-kʰu hǎ-tsí tǎbo
tsəkʰuǎ **hǎ-ʂʰwěi** **tǎbò** **ǎ-kʰú** **hǎ-tsí** **tǎbò**
 pig_head PFV-pierce then this-above PFV-insert then
 he pierced the pig head, and inserted (the wood stick) into it.
- 44 tǎbó gutǎ =wǎ pǎró-mədərə
tǎbó **gutǎ =wǎ** **pǎró-mədərə**
 now hearth-LOC burn-NAR
 Then, he cooked it on the hearth.
- 45 tǎtɕí kʰətí swǎ-rǒ “....” tɕ <w> ǎ-mədərə
tǎtɕí **kʰətí** **swǎ-rǒ** “....” **tɕ <w> ǎ-mədərə**
 also some recite-DUR “....” say<N.EGO:VOL>-NAR
 He also recited something like “....”,
- 46 swǎ-ji bo tsǎ-bje tǎ la mǎ-bǎ-mədərə
swǎ-jí **bò** **tsǎ-bjé** tǎ **là** **mǎ-bǎ-mədərə**
 recite-NMLZ:MOD TOP he-DAT any all NEG-be_there-NAR
 it was not at all what had to be recited.
- 47 xaswaməsɰá pǎ tʂǎ pǎ-mədərə
xàsɰàməsɰá pǎ tʂǎ **pǎ-mədərə**
 recite_nonsense do trick do:N.EGO:VOL-NAR
 He was reciting nonsense, deceiving them.

- 48 tɔ́bó tsɔ́k^hwǎ t^hjě hmĩ-rə ts^hɛ̃ bo
 tɔ́bó tsɔ́k^hwǎ t^hjě hmĩ-rə ts^hɛ̃ bò
 now pig_head almost cooked-PROG time TOP
 As the pig head was about to be cooked,
- 49 tsɔ́k^hwǎ kɛradzɿ́ =k^hu djǎ-mədərə, utí k^hə-tʂǒ tɔbo
 tsɔ́k^hwǎ kɛradzɿ́ =k^hù djǎ-mədərə, ùtí k^hə-tʂǒ tɔ̀bò
 pig_head stick =on be_there-NAR this PFV-take_out then
 he took out the pig head from the stick where it was.
- 50 swǎ-rě pê nǎ bo kǒ lwǎ
 swǎ-rě pê nǎ bò kǒ lwǎ
 recite-SIMULT do etc TOP valley thrust
 jǎ lwǎ pǎ-mədərə
 jǎ lwǎ **pǎ-mədərə**
 mountain_crest thrust do:N.EGO:VOL-NAR
 While he was reciting, he thrust (the stick) around in a disorderly way.
- 51 hjǔ = wō tɛra, gǒ tɛra, tǎ-bjie tɔ-lwǎ
 hjǔ = wǒ tǎrà, gǒ tǎrà, tǎ-bjé tǎ-lwǎ
 tent=LOC these:GEN inside these:GEN here one-thrust
 únǒ tɔ-lwǎ t^hɛ́k^hwə tɔ-lwǎ
 únǒ **tǎ-lwǎ t^hɛ́k^hwə tǎ-lwǎ**
 outside one-thrust altar one-thrust
 He thrust it in all directions, towards the inside of the tent, towards the outside, on the altar,
- 52 ǔ = po kjǎ zə-bje tɔ-lwǎ, úní =k^hje
 ù = pó kjǎ zə-bjè tǎ-lwǎ, úní =k^hjè
 it=under door corner-DAT one-thrust this_way =time
 lwǎ-rě ʂǎ-mədərə
 lwǎ-rě ʂǎ-mədərə
 thrust-PROG go:N.EGO:VOL-NAR
 He thrust it on the corner of the door.
- 53 tɔ-tʂ^hě bo tsǎ́ ti rwə-xêi =pǎ =po rǐ ǔ = po
 tǎ-tʂ^hě bò tsǎ́ tì rwə-xéi =pǎ =pò rǐ ù = pó
 one-moment TOP he this yak-dung =CL =under turquoise under_it

kuî tsǎ tǎ-mədərə tsǎ xá kǔ-mədərə
kuî tsǎ **tǎ-mədərə** tsǎ xá **kù-mədərə**
be_there he see-NAR he know know-NAR
After a while, as he knew that the turquoise was under the yak dung,

- 54 hjǔ kjǎ = wō k^hə-lwǎ k^hə-ʒî,
hjǔ **kjǎ = wō** **k^hə-lwǎ** **k^hə-ʒî**,
tent door=LOC PFV:OUT-thrust PFV:OUT-come

ts^hí = wō k^hə-lwǎ k^hə-ʒî = njɛ bo
ts^hí = wō **k^hə-lwǎ** **k^hə-ʒî** = **njè** **bò**
pasture=LOC PFV:OUT-thrust PFV:OUT-come =AGENT TOP
he thrust it outside the tent, on the pasture.

- 55 rwê-xêi = rə = to la lwǎ-rōtɕə
rwê-xêi-rə = **tò** **là** **lwǎ-rōtɕə**
yak-dung-PL =on all thrust-pretend
He pretended to thrust it towards many yak dungs.

- 56 tɕ-tɕ^hě = k^hjɛ bo utí rwê-xêi rǐ
tɕ-tɕ^hě = **k^hjè** **bò** **ùtí** **rwê-xêi** **rǐ**
one-moment =when TOP this yak-dung turquoise

kwî-sǎ ti = to tɕ-lwǎ = njɛ bo
kwî-sǎ **tì** = **tò** **tɕ-lwǎ** = **njè** **bò**
be_there-NMLZ:OBL this =on one-thrust =AGENT TOP
After a while, he thrust it towards the yak dung where the turquoise was.

- 57 njê-bǎ rǐ tǎpǒ â-mə-kwî-rə ǎ''
njê-bǎ **rǐ** **tǎpǒ** **â-mə-kwî-rə** **ǎ''**
you-house:GEN turquoise on_the_ground Q-NEG-be_there-PROG INT

tɕ < w > ǎ-mədərə
tɕ < w > ǎ-mədərə
say<N.EGO:VOL>-NAR
He said: "Isn't it your turquoise here on the ground?"

- 58 məkǎ-bǎ njɛ-gjǔ = njɛ bo
məkǎ-bǎ **njɛ-gjǔ** = **njè** **bò**
house PFV-glad =AGENT TOP
The people of this house were very glad.

- 59 məkǎ-bǎ dzǐ ɲɛ-zǔ, ɲɛ-gǔ =ɲɛ “áláçi,
 məkǎ-bǎ dzǐ **ɲɛ-zǔ,** **ɲɛ-gǔ** =**ɲɛ** **áláçi**
 house true PFV-believe PFV-glad =AGENT thank_you
 tɕósǒtɕ^hí niǎ =bo mǎ mǎ-dzǎ tí dǎ-çi,
 tɕósǒtɕ^hí niǎ =**bò** **mǎ** **mǎ-dzǎ** tí **dǎ-çi,**
 my_respects you =TOP man NEG-same one COP-EVD
 áláçi” tɕ < w > ǎ-mǎdǎrǎ
 áláçi tɕ < w > ǎ-mǎdǎrǎ
 thank_you say<N.EGO:VOL>-NAR
 These people believed it was true and said: “Thank you so much, how extraordinary,
 you are an uncommon man, thank you !”
- 60 tǎbó tsǎ pá rǔ ɲǔ-rǎ tɕǎ,
 tǎbó tsǎ pá rǔ **ɲǔ-rǎ** tɕǎ,
 now he divination divinate know-PROG say
 mǎdzǎ pá rǔ ɲǔ-rǎ tɕǎ
 mǎdzǎ pá rǔ **ɲǔ-rǎ** tɕǎ
 poor_man divination divinate know-PROG say
 They said that he knew divination, that the poor beggar knew divination.
- 61 ljowá-bje thǎ-lǒz < w > ǎ-mǎdǎrǎ
 ljòwá-bjé **thǎ-lǒz < w > ǎ-mǎdǎrǎ**
 all-DAT PFV-tell<N.EGO:VOL>-NAR
 They told everyone.

References

- Chirkova, Katia. 2009. Shixing, a Sino-Tibetan language of South-West China: a grammatical sketch with two appended texts. *Linguistics of the Tibeto-Burman Area* 32.1:1-89.
- Chirkova, Katia, and Alexis Michaud. 2009. Approaching the prosodic system of Shixing. *Language and Linguistics* 10.3:539-568.
- Ding, Picus Sizhi. 2001. The pitch-accent system of Niuwozi Prinmi. *Linguistics of the Tibeto-Burman Area* 24.2:57-83.
- Ding, Picus Sizhi. 2003. Prinmi: a sketch of Niuwozi. *The Sino-Tibetan Languages*, ed. by Graham Thurgood & Randy J. LaPolla, 588-601. London: Routledge.
- Ding, Picus Sizhi. 2006. A typological study of tonal systems of Japanese and Prinmi: towards a definition of pitch-accent languages. *Journal of Universal Language* 7.2:1-35.
- Ding, Picus Sizhi. 2007. The use of perception tests in studying the tonal system of Prinmi dialects: a speaker-centered approach to descriptive linguistics. *Language Documentation and Conservation* 1.2:154-181.
- Evans, Jonathan P. 2008. 'African' tone in the Sinosphere. *Language and Linguistics* 9.3:463-490.
- Fu, Ailan. 1998. *Pumiyu Dongci de Yufa Fanchou* [*The Categories of the Pumi Verb*]. Beijing: China Literature & History Publishing House.
- Greif, Markus. 2010. Tones and intonation in Prinmi—a first survey. *STUF – Language Typology and Universals* 63.3:221-251.
- Hyman, Larry M. 2009. How (not) to do phonological typology: the case of pitch-accent. *Language Sciences* 31.2-3:213-238.
- Hyman, Larry M. 2010. Kuki-Thaadow: an African tone system in Southeast Asia. *Essais de typologie et de linguistique générale*, ed. by Franck Floricic, 31-51. Lyon: Les Presses de l'Ecole Normale Supérieure.
- Lu, Shaozun. 1983. *Pumiyu Jianzhi* [*A Brief Description of Pumi*]. Beijing: Nationalities Press.
- Lu, Shaozun. 2001. *Pumiyu Fangyan Yanjiu* [*A Survey of Pumi Dialects*]. Beijing: Nationalities Press.
- Matisoff, James A. 1997. Dayang Pumi phonology and adumbrations of comparative Qiangic. *Mon-Khmer Studies* 27:171-213.
- Michaud, Alexis. 2008. Phonemic and tonal analysis of Yongning Na. *Cahiers de linguistique – Asie Orientale* 37.2:159-196.
- Michaud, Alexis, and Dashi Latami. 2009. A description of endangered phonemic oppositions in Mosuo (Yongning Na). Paper presented at the Academic Session on

- Issues of Language Endangerment, 16th International Congress of Anthropological and Ethnological Sciences (ICAES 2009), July 27-31, 2009. Kunming, China. <http://halshs.archives-ouvertes.fr/halshs-00512028/>
- Robin, Françoise, and Klu-rgyal Tshe-ring. 2005. *Les contes facétieux du cadavre (mi ro rtse sgrung)*. Paris: L'asiathèque.
- Tournadre, Nicolas. 2008. Arguments against the concept of 'conjunct'/'disjunct' in Tibetan. *Chomolangma, Demawend und Kasbek: Festschrift für Roland Bielmeyer zu seinem 65. Geburtstag*, Vol. 1, ed. by Brigitte Huber, Marianne Volkart & Paul Widmer, 281-308. Halle (Saale): International Institute for Tibetan and Buddhist Studies.
- Zhang, Jie. 2004. Contour tone licensing and contour tone representation. *Language and Linguistics* 5.4:925-968.

[Received 9 March 2010; revised 28 September 2010; accepted 24 November 2010]

CRLAO
EHES
54 Boulevard Raspail
75006 Paris
France
rgyalrongskad@gmail.com

普米語動詞系統中的聲調交替

向柏霖

法國國家科學研究中心東亞語言研究所

法國國立東方語言文化學院

本文討論北部普米語聲調系統的一些現象，主要有兩個新的發現。第一，雖然普米語單音節詞只有三個調類（高平調、高降調、升調），但是有一部分升調的動詞詞幹在附加趨向前綴時變成高降調，我們把這一類動詞分析成是在底層沒有聲調的調類。第二，“去”這個動詞有非常不規則的聲調交替。附錄是一個普米語傳統故事的範例，在這個故事範例中可以找到許多動詞聲調交替的實例。

關鍵詞：普米語，聲調交替，趨向前綴