

THE FLOATING LOW TONE IN BAFUT*

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A spreading high tone from a verb to an object noun produces two controversial effects on the first syllable of the noun (which in most cases is a nominal class prefix): the same nominal prefix may surface with a level high tone in one context and with a falling contour in another. This paper describes this phenomenon and demonstrates that the controversy is due to the fact that some prefixes, including the nominal class prefix, are underlyingly toneless. As a result, when a high tone spreads unto them the result is a phonetic level high tone but when the initial syllable is underlyingly low toned high tone spread results in the falling tone.

L'épanchement (spreading) du ton haut d'un verbe sur un complément d'objet produit deux effets contradictoires sur la première syllabe de ce nom complément d'objet (la première syllabe est presque toujours un préfixe de classe): le même préfixe de classe se réalise en surface, en fonction du contexte, soit avec un ton haut, soit avec un ton descendant. Cet article décrit ce phénomène et démontre que cet effet contradictoire est la conséquence du fait que certains préfixes, le préfixe nominal de classe inclu, sont dépourvus de tons en structure profonde. Il semble donc logique que l'épanchement du ton haut verbal sur ces préfixes nominaux résulte en un ton haut sur la première syllabe de ces noms compléments d'objet, et en un ton descendant si toutefois la première syllabe du nom porte déjà un ton bas.

0. INTRODUCTION

A spreading high tone in Bafut results in a number of controversial effects on an object noun. It may result in the noun surfacing with either a level high tone or a high falling tone on the first syllable of the noun (which is usually a nominal class prefix). What makes this interesting is that the same nominal class prefix can surface with the level high tone in one case and with the high falling contour in another, depending on the noun root to which it is attached. This paper describes these phenomena and argues that the controversy noticed in the behaviour of the high tone in relation to the object noun, is as a result of a root floating low tone that is characteristic of some nouns of this language. The paper demonstrates that nominal class prefixes in Bafut are toneless, and not low toned¹ as has been assumed by earlier researchers (cf Dustan 1972, Mfonyam 1989, Tamanji 1991, Neba 1998).

The paper is structured as follows. In the first part, relevant information on the noun class system and the phonology of the language is presented. In part two, we present data to show the behaviour of a spreading high tone in the language. We show that the process of spreading produces two effects on an object noun: the formation of a

* Bafut is a language spoken by the people of Bafut in the North West Province of Cameroon. It is a grasslands Bantu language and is included in the Ngemba group in Williamson (1971), Voorhoeve (1971). Welmers (1971) includes it under the more general groups: Niger Congo, Benue

¹ We are grateful to two JWal anonymous reviewers who made very pertinent and thought provoking remarks that led to the reanalysis of the nominal prefix in this language as toneless. We equally appreciate their overall comments on earlier versions of the paper.

high falling (^) tone in some situations and a level high (˘) in others. In the third part we attempt an analysis of the data presented, showing with adequate illustration that the contour formation is due to a floating low tone in the root. In the fourth part we provide evidence for the postulation of a floating low tone in the analysis by examining negative noun derivations in Bafut. The paper ends with a summary conclusion.

1. PRELIMINARIES

1.1 A REVIEW OF BAFUT NOUN CLASSES²

The following 10 noun classes have been identified for Bafut by earlier researchers (see Eastlack (1968), Dunstan (1971), Leroy (1977) Mfonyam (1989) Tamanji (1991) Neba (1998)).

(1)	Cl 1a	ø -	Cl 2	bɪ -
	síŋ	bird	bìsíŋ	birds
	lón	horse	bìón	horses
	kàrì	ring	bìkàrì	rings
	kàsárì	cassava	bìkàsárì	cassavas
	Cl 1b	N³ -		
	ndóô	husband	bìlóô	husbands ⁴
	nlòŋ	greedy person	bìlòŋ	greedy people
	nlʷìn	old person	bìlʷìn	old people
	m̄fò	chief	bìfò	chiefs
	Cl 3a	ɪ -	Cl 6	mɪ -
	ìlèŋ	palm wine source	mìlèŋ	palm wine sources
	ìb ^h ɪ	sin	mìb ^h ɪ	sins
	ìsáʔà	case	mìsáʔà	cases
	ìl ^h ɪ	ant	mìl ^h ɪ	ants
	ìbòʔò	mushroom	mìbòʔò	mushrooms

³This is a syllabic nasal that agrees in place of articulation with the following consonant. This nasal is also attested in classes 3, 9, and 10. While it is replaced in the plural in class 1a, it is not in the other classes.

⁴There are some situations in this language where [d] is realized as [l] in intervocalic position. This change is not consistent as there are situations where [d] occurs in intervocalic position, for example, [àdɪgɪ] 'place'. This issue is out of the scope of this paper and we therefore not discuss it in any detail. □□□□□□

1.2 RELEVANT PHONOLOGICAL RULES

Two contiguous syllabic peaks across morpheme boundaries are not permitted in this language. As a result, when two vowels are juxtaposed one of them (the second) deletes. The rule in 2a will capture this.

$$(2) \text{ a. } V \longrightarrow \emptyset / V+ \text{ ______}$$

If one of the two syllabic peaks is a syllabic nasal, the nasal desyllabifies as stipulated by rule 2b.

$$(2) \text{ b. } \begin{array}{ccc} N & \longrightarrow & N \quad / V \text{ ______} \\ [+syll] & & [-syll] \end{array}$$

These two rules are very crucial for the discussions in this paper

3. HIGH TONE SPREAD

In Bafut, a high tone always spreads onto an object noun, which carries a low tone in isolation. Normally, this results in the following TBU being high toned, with no evidence of there having ever been a low tone present. The data in 3a illustrate this. (The constructions here are in the imperative).

(3) a. (i)	/fá + bɛ̀lɔ́/	→	[fábɛ̀lɔ́]	give husbands
(ii)	/fá + nɛ̀bɔ̀ʔɔ̀/	→	[fánɛ̀bɔ̀ʔɔ̀]	give a pumpkin
(iii)	/fá + mɛ̀lùʔù/	→	[fámɛ̀lùʔù]	give some wine
(iv)	/fá + fɛ̀tɛ̀/	→	[fáfɛ̀tɛ̀]	give a calabash

The nouns that have been collocated with the verb [fá] ‘give’ have been selected from different classes⁵. 3a (i) is from class 2, 3a(ii) from class 5, 3a(iii) from class 6 and 3a (iv) from class 19. One thing is clear in the data in 3a – that a spreading high tone can lead to a level high tone on the initial syllable of the object noun. This HTS rule can be formulated as shown in 3b⁶ below.

⁵ We have paid attention here only to the noun classes with a CV- nominal prefix because they show high tone spread distinctively. If we were to take class 3 or 7 nouns, the initial Vowel or syllabic nasal will have to be deleted or desyllabified respectively (Rule 2) and one will not be able to notice the HTS.

⁶ The final falling tone in the surface representation (SR) is a result of an intonational low tone that surfaces at the end of any phrase. Consider the following as example:

fâ ‘give’ fámû ‘give a child’ fámúwâ ‘give the child’

The phrasal tone is always realized on the last syllable of the phrase in this language. This is why most utterances in this language either end in a falling tone or a low tone.



Interestingly, however, is the fact that in some cases, when the high tone spreads onto the following low toned TBU, the result is a high falling tone with downstep occurring on any high tone that follows that falling tone. The data in 4 illustrate this.

- (4) a. (i) / f á + b ì s í ñ é / → [f á b ì s í ñ é] give birds
 (ii) / f á + b ì l ì m / → [f á b ì l ì m] give Lums⁷
- b. (i) / f á + n ì m f ó ó / → [f á n ì m f ó ó] give some fat
 (ii) / f a + n ì ñ g ò ò / → [f á n ì ñ g ò ò] give some plantain
- c. (i) / f á + m ì m f ó ó / → [f á m ì m f ó ó] give some fats
 (ii) / f á + m ì ñ g ò ò / → [f á m ì ñ g ò ò] give some plantains
- d. (i) / f á + n d z ò ñ / → [f á f ì n d z ò ñ] give a star
 (ii) / f á + f ì ñ g w á ñ / → [f á f ì ñ g w á ñ] give some salt

Notice that in these data we have the same nominal class prefixes as in 3a above. These prefixes that surface with a level high tone after HTS in 3a now bear a falling tone in 4.

The question to be answered here is: why does high tone spread result in a high tone in one case and in a high falling in another on the same morpheme? In the following section, we attempt providing an answer to this question by arguing that falling high tone in 4 above is as a result of a lexical floating tone that characterises the root nouns to which the prefixes are attached.

3. DATA ANALYSIS

An observation of the data in 4 reveals that apart from 4a, all the others (from b – d) have initial root nasals. This is true for all the nouns of classes 5, 6, and 19. That is, as far as these three classes are concerned only the nouns with initial root nasals surface with a falling tone after the application of HTS.

In the data in 3a, one can notice that all the nouns are class 1a nouns (see section 2.1). Class 1b nouns where the class prefix is overtly a nasal (which is replaced in the plural form) behave differently. To understand this, see the data in 5 below.

(5) a.	Noun (sg)	Plural	Give + Noun(pl)	Gloss
	s í ñ	b ì s í ñ	[f á b ì s í ñ]	birds
	k à r ì	b ì k à r ì	[f á b ì k à r ì]	ring

⁷ 'Lum' is a female name.

b.	m̩fò	b̩fò	[fábí fòò]	chiefs
	n̩lʷìn	b̩lwin	[fábí lʷìn]	old person

As shown in these data, class 1b nouns (5b) have a nasal as a nominal prefix, which is replaced by the class 2 nominal, prefix b̩-, when they form the plural. When those plurals are collocated with a verb, the result is the level high tone on the prefix. Class 1a nouns on their part do not have an overt nominal prefix. When they take the class 2 nominal prefix to form the plural, we notice a falling tone on the prefix (5a). The point that we are making here is that it is easy to predict which nouns will surface with a level high tone and which will surface with a falling tone after HTS applies.

The fact that these two groups of nouns (all nouns with root initial nasals and class 1a nouns) behave the same suggests that there must be common features that these nouns have that the others do not.

The solution that we propose to this problem is that, where the application of HTS results in a falling contour tone formation, there is always a floating lexical low tone. The formation of a level high tone on the nominal prefix is normal because it involves the spreading of a high tone onto a toneless TBU (Tone Bearing Unit). The implication of this assumption is that the nominal class prefixes in this language are toneless. The derivations below illustrate what we are saying.

Consider the data in 3a above partly presented in 6a below.

(6) a.	/fá + b̩lóló/	→	[fábí lóló]	give husbands
	/fá + n̩bòʔò/	→	[fání bòʔò]	give a pumpkin
	/fá + m̩lùʔù/	→	[fámí lùʔù]	give some wine

We assume that the derivation of these data proceeds as shown in 6b below.

(6) b. Input	fa + b̩lo o	fa+n̩boʔo
	$\begin{array}{c} \text{H} \quad \text{H} \\ \quad / \\ \text{fa} + \text{b̩lo} \text{ o} \end{array}$	$\begin{array}{c} \text{H} \quad \text{L} \\ \quad / \\ \text{fa} + \text{n̩boʔo} \end{array}$
HTS	$\begin{array}{c} \text{H} \quad \text{H} \\ \quad / \\ \text{fa} + \text{b̩lo} \text{ o} \end{array}$	$\begin{array}{c} \text{H} \quad \text{L} \\ \quad / \\ \text{fa} + \text{n̩boʔo} \end{array}$
SR	[fábí lóló]	fání bòʔò]

As seen in 6b, the nominal prefix is toneless at the input. The high tone of the verb simply spreads onto the prefix and the result is the surface level high tone on the prefix. It should be recalled here that the falling tone on the last syllable of the first word in the derivation is as a result of the phrasal low tone (Footnote 6). We have not shown how it is assigned in this, and subsequent derivations.

In cases where we have a falling contour tone after HTS, as we mentioned earlier, there is a floating root lexical low tone that combines with the spreading low to yield the falling tone. The derivation in 7 illustrates this.

NEBA: The floating tone in Bafut

- (7) a. / fá + bì síŋə/ → [fábîsíŋə] give birds
 / fá + nî mfóó/ → [fánîmfóó] give some fat

(7) b. INPUT	fa bì síŋə	fa nî mfóó
	/	/
	H L H	H L H
ASSOCIATION ⁸	fa bì síŋə	fa nî mfóó
	··· /	··· /
	H L H	H L H
HTS	fa bì síŋə	fa nî mfóó
	/ /	/ /
	H L H	H L H
SR ⁹	[fábîsíŋə]	[fánîmfóó]

The assumption that a floating low tone is responsible for the contour tone formation after HTS applies and that the nominal prefix is toneless leads to a straightforward account of the data.

If noun class prefixes are toneless how do they get the low tones when the nouns are in isolation? The obvious answer to this question is that the low tone is assigned by default as shown in 8 below.

- (8) a. nîkúú bean àtsəʔə cloth
- b. nîku u atseʔə
- / /
- H L

⁸ By association, we are referring to the Association Conventions where tones associate in a one to one relation from left to right.

⁹ Before the SR, there is a lowering effect that takes place with the result being the lowering of the root high tone to a mid. We have not shown this in this derivation. Suffice it to know that a high tone lowers to a mid when preceded by a low tone. For more on this see Mfonyam 1989:71.

Default L Insertion	n̩k <u>u</u>	atsəʔə
	⋮ /	⋮ /
	L H	L L
SR	[n̩kúú]	[àtsəʔə]

The default rule insertion is stated in 8c below.

- (8) c. V
 ⋮
 L

It has been assumed in this paper that there is a floating low tone that triggers the formation of a falling tone. This has been done without presenting any empirical evidence for making this assumption. In the next section we present the basis on which our assumption is founded.

The evidence to prove that a floating low tone is the cause of the falling tone formation can be found in the process of negative noun formation in the language.

In Bafut, there are nouns that are derived from verbs, and other nouns by prefixing the negative morpheme t̩̀ which means “One who does not”. Examples are presented in 9 below.

- (9) a. (i) kxǎ̀ run t̩̀kxǎ̀¹⁰ one who does not run
 (ii) jê see t̩̀jê one who does not see
- b. (i) àtû head t̩̀tû one who does not have a head
 (ii) ñdōō husband t̩̀ndōō one who does not have a husband

In 9, we have formed nouns by prefixing the negative morpheme t̩̀ to verbs in 9a, and nouns in 9b. In 9a the roots have no initial vowels or syllabic nasals while the roots in 9b begin in a vowel as in 9b (i) and a syllabic nasal as in 9b (ii). When the negative morpheme is prefixed in 9b, V-deletion and desyllabification apply. Watch how these nouns will behave in relation to HTS illustrated in 10.

- (10) a. (i) /fá t̩̀ kxǎ̀/ [fát̩̀kxǎ̀] give one who does not run
 (ii) /fá t̩̀jê/ [fát̩̀jê] give one who does not see
- b. (i) /fá t̩̀tû/ [fát̩̀tû] give one who does not have a head
 (ii) /fá t̩̀ndōó/ [fát̩̀ndōô] give one who does not have a husband

As it is the case with nominal prefixes, we also assume here that the negative marker t̩̀- is also toneless.

¹⁰ This noun is formed from a low tone class verb whereas the noun in 9a(ii) is formed from a high tone class verb. Low tone verbs in this language are believed to have a LH tonal melody and it is a typical characteristic of nouns derived from verbs of this class to lose the high tone in their nominal form. This accounts for the reason why it surfaces with a low tone.

As noticed in 10a, the collocation of the derived noun with the verb results in a level high tone after HTS. In 10b, there is a contour tone that results from HTS. We think that this is because the nouns in 10b have a floating low tone which, because it can no longer dock onto its vowel after deletion, it is obliged to dock on the prefixal negative marker following the Stranded Tone Principle of Clements and Ford (1979).¹¹ The nouns in 10a do not have any floating tone and this explains why after the application of HTS they surface with a level high tone. The derivation of these nouns is presented in 11.

(11) a.	UR	/#	fa	ti	kxə	#	ti	atu	#	f	a	ti	n	d	o	o
			H		H		H			H	L		H			
b.	V-Deletion		————			fa	ti	tu		————						
						H	L	H								
c.	Desyllabification		————			————		fa	ti	nd	o	o				
						H		L		H						
d.	Association		————			fa	ti	tu		fa	ti	nd	o	o		
						H	L	H		H	L		H			
e.	HTS		fa	ti	kxə		fa	ti	tu	fa	tind	o	o			
			H		L		H	L	H	H	L		H			
f.	SR		[fátí ^h kxə̀]				[fátí ^h tú]				[fátí ^h ndṑ]					

In 11a, we have the underlying representations of the data in 10. In 11b vowel deletion is applied. Desyllabification occurs in 11c, the association of the floating low tone occurs in 11d, High Tone Spread applies in 11e and the surface representations are presented in 11f. Notice the result of vowel deletion is a falling contour formation on the negative prefix just as it was the case in 4a – d. This shows clearly that it is a floating tone that causes the formation of the contours in 4. This is therefore a strong motivation and justification for arguing that the noun roots in 4 have a lexical floating tone. It can therefore be concluded that the controversy noticed in the behaviour of HTS is due to floating low tones that characterise some nouns in the language.

¹¹ The STP states that a floating tone typically docks onto the TBU that triggers the floating tone.

5. CONCLUSION

This paper has shown that the controversial effects noticed in the application of the rule of high tone spread (HTS) get a solution once two assumptions about the phonology of Bafut are made: that some nouns in the language have lexical floating low tones and that the nominal class prefixes in the language are toneless. The floating tones are actually part of the root and not nominal prefixes even though there is some evidence that they actually originated from nominal prefixes.

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