

Babanki Verbal Extensions

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Abstract

Verbal extensions occur in Grassfields Bantu languages and their presence and identity have been established in a good number of the languages including Babanki (Akumbu & Chibaka 2012), a central Ring Grassfields Bantu language of Northwest Cameroon. Hyman (2013) contains a presentation and reconstruction of Proto-Bantoid verbal extensions with a significant reference to Babanki. However, there has been no focus on the morphophonological processes (vowel deletion and fricative strengthening and weakening) caused by the addition of extensions in this language. The extensions themselves are toneless and only receive tone from the verb root. This paper accounts for the changes using classical Generative Phonology and concludes that true word final consonants in this language are only nasals and the voiceless velar stop, and that the voiceless fricatives [f] and [s] are exceptional cases that verbal extensions seek to regulate.

1. Introduction

The aim of this paper is to discuss the morphophonological processes that the addition of verbal extensions causes on Babanki verb roots¹. Verbal extensions occur in Grassfields Bantu languages and their presence and identity have been established in a number of the languages including Kom (Hyman 2013), Bafut (Mfonyam 1982, Tamanji & Mba 2003, Tamanji 2009), Mankon (Leroy 1982), Limbum (Fransen 1995), Isu (Kiessling 2004), Meta? (Ngum 2004), and Babanki (Akumbu and Chibaka 2012). Hyman (2013) contains an extensive discussion of Babanki as well as a presentation and reconstruction of Proto-Bantoid verbal extensions. In Babanki, adding extensions to verb roots can cause several morphophonological changes on the verb, namely, vowel deletion, [f] strengthening and [s] weakening. While vowel deletion occurs after the glottal stop, root-final [f] strengthening, and [s] weakening occur when a CV extension is added. The extensions themselves are toneless and only receive tone from the verb root. This paper accounts for the changes using classical Generative Phonology and concludes that true word final consonants in Babanki are only nasals and the glottal

¹Babanki (Kejom, as the native speakers call their language and villages), is spoken in Babanki Tungo (Kejom Ketinguh) and Big Babanki (Kejom Keku) in the North West Region of Cameroon by approximately 39,000 people (Simons and Fennig 2018). As a Babanki native speaker I have provided the data used in this paper from my own speech, but also checked with four other native speakers, namely, Vivian Ba'ah (female, aged 35), Mbighé Tigweh (male, aged 24) Vechese Dieudonne (Male, aged 23), and Tita Sherra (female, aged 21). I wish to sincerely thank all of them for making their knowledge on the language available and useful for the work done in this paper.

stop, and that [f] and [s] are exceptional cases that verbal extensions seek to regulate. In the second section, I provide an overview of the phonology and morphology of Babanki, indicating the sounds that can occupy the final position of roots in the language, the verb roots and extensions they can take as well as the two-tone groups of the language. In §3, I discuss the effects that extensions can have on the verb roots and then provide a conclusion to the study in §4.

2. Overview of Babanki morphophonology

2.1 Phonology

As analyzed in Akumbu (2016), Babanki uses 25 phonemic consonants (Table 1)², 8 vowel phonemes (Table 2) and two level tones: H(igh) and L(ow).

Table 1: Consonant Phonemes

	Bilabial	Labiodental	Alveolar	Postalveolar	Palatal	Velar
Stops	b		t, d			k, g
Nasals	m		n		ny	ŋ
Fricatives		f, v	s, z	sh, zh		gh
Affricates		pf, bv	ts, dz	ch, j		
Liquids			l			
Approximants	w			y		

Table 2: Vowel Phonemes

	Front	Central	Back
Close	i	i ɨ	u
Close-Mid	e		o
Open-Mid		ə	
Open		a	

The segments combine into the CV, CGV, CVC and CGVC syllable structures, where G stands for glide.

2.2 Root-final Sounds

Vowels and consonants can occupy the final position of Babanki verb roots. Of the eight phonemic vowels of the language, only /a/ does not occur in a CV root (1a). The six consonants that occur at the end of verb roots in the language are three nasals /m, n, ŋ/, two voiceless fricatives /f, s/, and the voiceless velar stop /k/ realized as [ʔ].

² The IPA counterparts for the following orthographic symbols used in this paper are given in square brackets: ny[n], sh[ʃ], zh[ʒ], gh[ɣ], ch[tʃ], j[dʒ], y[j].

- (1) a. shí 'take'
 nú 'defecate'
 fì 'exit'
 chù 'soak'
 shá 'slice'
 chò 'pass'
- b. zím 'wither'
 tén 'push'
 káj 'fry'
 chíf 'advise'
 bìs 'scatter'
 kú? 'rise'

3. The Verb

3.1 Verb Roots

Only one-syllable roots are attested in Babanki except when there is verbal reduplication (Akumbu & Chibaka 2012, Akumbu 2015). The verb roots that appear to have two syllables always have a CV ending, which can be interpreted as an extension. Nevertheless, there are formal extensions that occur with roots that otherwise do not occur alone. Examples of the one-syllable roots and the lexicalized CV(C)-CV are given below.

One-syllable	Two-syllable (with formal extensions)
(2) sàŋ 'dry'	gìtè 'add'
chò 'pass'	bàŋlè 'dodge'
vì 'come'	shìsè 'remove'
búm 'hunt'	tóŋtá 'sift'
fəŋ 'fall'	fáʔtá 'hurry up'
kwén 'enter'	bíʔsá 'ignore'

The one-syllable roots can either have a CV or CVC structure whereas those with two syllables have a CV(C)CV structure. The first consonant can either be palatalized or labialized. It can also be seen in the data in (2) that the second of the two-syllable roots is always of the CV type, and that the V is always schwa. There are a good number of such roots that cannot stand alone without the second CV syllable also called 'formal extension'.

3.2 Extensions

The majority of what looks like two-syllable verbs results from the addition of a verbal suffix or extension³ to the root. At least five kinds of extensions are commonly found on verb roots, as illustrated below (cf. Hyman 2013 for additional discussion):

(3) -sà	-kà	-tə	-lə	-mə
vì-sà 'bring near'	bvi kà 'fail repeatedly'	myà-tə 'complete'	kò-lə 'scrape many times'	kwò?mà 'think together'
kùm-sà 'touch'	tàn-kà 'fly'	bà? -tə 'scrape'	dàn-lə 'spread'	sù-mə 'insist continually'
shìsà 'remove'	chò-kà 'pass repeatedly'	bùm-tə 'meet someone'	sì-lə 'caress many times'	chò-mə 'pass many times'
kwén-sà 'send inside'	fàn-kà 'fall repeatedly'	bà? -tə 'arrange'	kàn-lə 'fry in part'	píwó-mà 'return'
bén-sà 'make dance'	ká?-kà 'turn around'	té-tə 'select'	té-lə 'insult many times'	fàn-mə 'gather lots of things'
bwóm-sà 'praise'	bwí-kà 'give birth a lot'	nyin-tə 'run hurriedly'	fá?-lə 'pin many times'	só-mə 'melt'

The extensions appear in (3) with the same tones as the preceding verb roots and the most straightforward analysis is that extensions are toneless and only receive tone from the verb root and the inflectional morphology. Thus, in the progressive aspect, the extensions bear the progressive low tone while in the imperative mood, they bear the imperative high tone (see §4.4 for the imperative).

3.3 Lexical tones

As seen in the following minimal pairs, verb roots fall into two tone classes, L and H (Akumbu 2015).

L tone verbs		H tone verbs	
(4) fù?	'bubble'	fú?	'tune'
dəm	'grunt'	dóm	'play'
fàs	'break'	fás	'threaten'
zhwí	'pant'	zhwí	'kill'
mò	'narrate'	mó	'deny'
shìsà	'remove'	bósá	'melt'
myàtə	'complete'	bínsá	'lure to sleep'

³Verbal extensions in Babanki fall short of what is typical of Narrow Bantu in that some of the extensions in the latter have no correspondences in Babanki, e.g. 'applicative', 'passive', 'middle' (impositive). Most of these functions, where present at all, are based on combinations of autonomous lexical items. The common extensions are morphemes for 'attenuative', 'intensity', and 'repetitive', with different forms for the latter based on whether the verb is transitive or not.

As already mentioned, if the verb is bisyllabic, both syllables will be LL or HH.

4. Extensions and Verb Phonology

Adding a CV extension to a verb root can cause several morphophonological changes on the verb, namely vowel deletion after the glottal stop (CV?V→CV?), strengthening of /f/ (CVf→CVb) and weakening of /s/ (CVs→CVy).

4.1 Vowel Deletion

As stated earlier, there are two-syllable stems in the language whose second syllable begins with a glottal stop, followed by a vowel identical to that of the first syllable. When extensions are added to such roots, the vowel of the second syllable is deleted consistently:⁴

(5) mǎʔǎ	‘throw’	mǎʔ-lǎ	‘throw repeatedly’
tǎʔǎ	‘become stiff’	tǎʔ-lǎ	‘become stiff in parts/bits’
byǎʔǎ	‘carry’	byǎʔ-tǎ	‘carry in bits/carry lots of things’
shǐʔǐ	‘descend’	shǐʔ-tǎ	‘descend a bit’
myǎʔǎ	‘blink’	myǎʔ-mǎ	‘blink repeatedly’
byǐʔǐ	‘fold’	byǐʔ-tǎ	‘fold several times’

One may argue that the glottal stop is not allowed verb finally and that it requires the echo-vowel, that is, that the vowel is inserted after a glottal stop if it is final. However, there are numerous instances where the glottal stop occurs in final position but does not require the insertion of an echo-vowel:⁵

(6) sǐʔ	‘provoke’	sǐʔ-lǎ	‘provoke several times’
ghǎʔ	‘hold’	ghǎʔ-tǎ	‘hold repeatedly’
bǎʔ	‘snatch’	bǎʔ-lǎ	‘snatch repeatedly’
kúʔ	‘climb’	kúʔ-sǎ	‘raise’
kwǎʔ	‘break’	kwǎʔ-mǎ	‘break’
bǔʔ	‘pour’	bǔʔ-tǎ	‘pour a bit’

The data in (6) show that the glottal stop is capable of occupying final position and that the process in (5) is actually that of deletion of the echo-vowel when extensions are added. The echo vowel might be a reduced

⁴ In a Babanki File maker Pro™ database of 2,005 lexical entries (Akumbu 2008), 14 verbs have been found with an echo-vowel after the glottal stop.

⁵ There are 86 CV? roots in the database of 2,005 lexical entries.

extension and cannot co-occur with another extension. Forms in the imperative further confirm the claim and illustrate instances of vowel insertion:

(7) a.	Infinitive	Imperative	Imperative with Extension
	ákùṁ 'to touch'	kùṁá 'touch'	kùṁlá 'touch many times'
	ádzàṅ 'to call'	dzàṅá 'call'	dzàṅtá 'call repeatedly'
	ébwìn 'to return'	bwìná 'return'	bwìnsá 'send back'
b.	ábèʔ 'to snatch'	bèʔé 'snatch'	bèʔlá 'snatch many times'
	ákwaʔ 'to break'	kwàʔá 'break'	kwàʔmá 'get broken'
	ábuʔ 'to pour'	bùʔú 'pour'	bùʔtá 'pour a bit'
c.	émaʔà 'to throw'	màʔá 'throw'	màʔlá 'throw in bits'
	ábyeʔè 'to carry'	byeʔé 'carry'	byeʔtá 'carry a bit'
	émyəʔə 'to blink'	myəʔá 'blink'	myəʔmá 'blink many times'

The forms in (7a) have a nasal coda and a schwa is inserted in the imperative to bear the high imperative tone (see §4.4). In (7b) where the roots end in the glottal stop, the root vowel spreads to the final position to bear the imperative tone. However, in (7c) which contains the echo-vowel (underlyingly), that vowel bears the imperative tone, confirming that the echo-vowel is actually deleted when an extension is attached. The deletion process in (5) can therefore be captured by the following rule:

(8) **Vowel Deletion**

$$V \rightarrow \emptyset / VC_ + CV$$

According to the rule, a vowel is deleted when preceded by a VC and followed by a CV at a morpheme boundary as illustrated in the following derivation.

(9)	UR/màʔà-lə	byíʔí-tə	shíʔí/
<i>Tone assignment</i>	màʔà-lə	byíʔí-tá	—
<i>Vowel Deletion</i>	màʔ-lə	byíʔ-tá	—
	PR[màʔlə	byíʔtá	shíʔí]

4.2 [f] *Strengthening*

When extensions are added to verb roots that end in [f], the voiceless labiodental fricative changes to [b]:

(10)	kàf 'beckon'	kàb-tə 'beckon several times'
	fàf 'reduce'	fàb-tə 'reduce a bit'

byíḡ	'get bad'	byíḡb-sə	'destroy'
láf	'dress up'	láb-sə	'dress someone up'
tsíḡ	'push'	tsíḡb-lá	'push someone around'
líḡ	'hurry'	líḡb-lá	'hurry'
záḡ	'ache'	záḡb-ká	'feel pain'
chóḡ	'shout'	chóḡb-ká	'pick a quarrel'
gúḡ	'pull'	gúḡb-mə	'argue'
kwóḡ	'snatch'	kwóḡb-má	'snatch several times or by several people'

The data show that the change in the root consonant is caused by the addition of the extensions. It can be argued, though, that the change is rather from [b] to [f] in final position. However, several other contexts show the occurrence of the fricative providing evidence that /b/ occurs at the end of a syllable when an extension is added:

(11) Infinitive	Imperative.	Progressive	Derived Noun
əḡfáf 'to reduce'	fáfə 'reduce'	fáfə 'reducing'	kəḡfáf 'reduction'
əḡchóḡ 'to shout'	chóḡ 'quarrel'	chóḡə 'quarreling'	kəḡchóḡ 'quarreling'

The occurrence of [f] is widespread and that of [b] is limited to the context where a consonant cluster results from the addition of an extension. It is seen that [f] occurs initially, intervocally, finally, but not pre-consonantly. The same is found with formal extensions where [b] is required instead of [f]:

(12)	lóbtə	'deceive'
	tábtə	'solidify'
	tábkə	'struggle'
	nyáblə	'maltreat'

The change from [f] to [b] can be captured by the following rule.

(13) [f] strengthening

/f/ → [b] / __ +C

The rule states that the voiceless labiodental fricative becomes the voiced bilabial plosive when followed by a consonant at morpheme boundary. The data in (10) are therefore derived as follows:

(14)	UR/ láf-sə	gúḡ-mə	líḡ/
<i>Tone assignment</i>	láf-sə	gúḡ-mə	—
<i>f strengthening</i>	láb-sə	gúb-mə	—
	PR [lábsə	gúbmə	líḡ]

It happens that [f] strengthening does not apply across words. If the C is in the next word, then the fricative survives:

- (15) águf wì? 'to pull someone'
 ákàf wúndóŋ 'beckon a friend'
 ábyí f nántó 'become too bad'

The data in (15) indicate that the process occurs only within stems, specifically due to the addition of an extension.

4.3 [s] Weakening

If the verb root final consonant is [s], it changes to [y] when an extension is added to the verb:

- (16) a. kás 'twist (face)' káy t é 'twist (face) again and again'
 bìs 'scatter' biy t è 'scatter several times'
 bàs 'cut open' bay l è 'cut open in several places'
 zàs 'loosen' zay l è 'loosen several times'
 sàs 'scatter' say k è 'scatter into several pieces'
 fwòs 'fart' fwòy k è 'fart repeatedly'
- b. tás 'surround' tás è 'surround'
 kás 'twist (face)' kás è 'twist one's face again and again'
 bìs 'scatter' bìs è 'collapse'
 bàs 'break' bàs è 'break up'

The data in (16a) illustrate that when extensions that begin with [m, t, l, k] are combined with roots that end in [s], it changes to [y]. The forms in (16b) show that if the [-sə] extension is added to such roots, [s] weakening does not apply but one of the alveolar fricatives is deleted, that is, deletion by identity takes place: ss → s. It must be the case that the deletion precedes [s] weakening. Again, it can be argued that the change is rather from [y] to [s] in final position but this is dismissed by the fact that [y] occurs only before a consonant whereas [s] occurs in several other contexts:

- | (17) Infinitive | Imperative | Progressive | Derived Noun |
|-------------------|-----------------|--------------------|---------------------|
| ábìs 'to scatter' | bìs è 'scatter' | bìs è 'scattering' | kèmbìs 'scattering' |
| ákás 'to twist' | kás 'twist' | kás è 'twisting' | kèŋkás 'twisting' |

The rule in (19) captures the change from [s] to [y].

(18) [s] Weakening

/s/ → [y] / __+C

According to the rule, the voiceless alveolar fricative becomes the palatal glide when followed by a consonant at morpheme boundary. If C occurs in the next word then [s] Weakening does not apply:

- (19) *ábàs kàm̀bò* 'to tear a bag'
 ákás tà`èkè? 'to twist only the face'
 áf̀wòs nántó 'fart too much'

This means that the process takes place only within a stem that results from the addition of an extension as illustrated in the following derivation.

(20)	UR /	<i>tás-mə</i>	<i>bìs-tə</i>	<i>sàs-kə</i>	<i>tás-sə/</i>
<i>Tone assignment</i>		<i>tás-mə́</i>	<i>bìs-tə̀</i>	<i>sàs-kə̀</i>	<i>tás-sə́</i>
<i>s deletion or fusion</i>		<i>táy-mə́</i>	<i>bìy-tə̀</i>	<i>sày-kə̀</i>	<i>tá-sə́</i>
<i>s weakening</i>		<i>táy-mə́</i>	<i>bìy-tə̀</i>	<i>sày-kə̀</i>	<i>tá-sə́</i>
	PR[<i>táy-mə́</i>	<i>bìy-tə̀</i>	<i>sày-kə̀</i>	<i>tá-sə́</i>]

It should be mentioned that the tendency is for [s] to assimilate the features of the following extension consonant and result to consonant gemination. Consider the alternative way of producing the forms in (16a) shown in (21a).

- (21)a. *kás* 'twist (face)' *káttó* 'twist (face) again and again'
 bìs 'scatter' *bìttə̀* 'scatter several times'
 bàs 'cut open' *bállə̀* 'cut open in several places'
 zàs 'loosen' *zàllə̀* 'loosen several times'
 sàs 'scatter' *sàkkə̀* 'scatter into several pieces'
 fwòs 'fart' *fwòkkə̀* 'fart repeatedly'
- b. *tás* 'surround' *táy-mə́* 'mix up'
 bìs 'scatter' *bìy-mə̀* 'collapse'
 bàs 'break' *báy-mə̀* 'break up'

The data in (21b) show that the only context where [y] alone can occur is when the following consonant is [m] (**támmə́*, etc.). Elsewhere, [s] is capable of assimilating the features of the following consonants resulting to consonant gemination. Therefore, [s] assimilates to a lingual consonant, not a labial one.

4.4 Imperative Tone and Extensions

The imperative is marked in Babanki by a floating high tone. When the root of one-syllable verbs has a low tone, a schwa is inserted (i.e. suffixed) as in (22a) to bear the imperative tone (Akumbu 2015). This might happen in order to avoid a rise on a single vowel because contour tones are rare in Babanki:

- (22) a. *bàs* 'cut!' *bàsə́* 'cut up!'

	gùf	'pull!'	gùfə	'argue!'
b.	byif	'get bad!'	byif	'destroy!'
	laf	'dress up!'	laf	'dress someone up!'
	fwós	'stir!'	fwós	'stir continually!'

When extensions are added to imperative constructions, they consistently take a high tone irrespective of whether the verb root is L (23a) or H (23b).

(23)	a.	kàf	'beckon!'	kàb-tə	'beckon several times!'
		fàf	'reduce!'	fàb-tə	'reduce a bit!'
		sàs	'scatter!'	sày-kə	'scatter into several pieces!'
		fwòs	'fart!'	fwòy-kə	'fart repeatedly!'
		bis	'scatter!'	bìy-mə	'collapse!'
	b.	byif	'get bad!'	byìb-sə	'destroy!'
		laf	'dress up!'	làb-sə	'dress someone up!'
		tsif	'push!'	tsìb-lə	'push someone around!'
		líf	'hurry!'	lìb-lə	'hurry!'
		tàs	'surround!'	tày-mə	'mix up!'

It has been noted earlier that extensions are toneless in the language and receive a tone by spreading from the verb root as soon as they are attached. If, however, the construction is in the imperative mood, the floating high imperative tone is introduced as shown in the following derivation.

(24)		UR /kàf-tə	fwòs-kə	tàs-mə/
<i>Imperative tone assignment</i>		kàf-tə	fwòs-kə	tàs-mə
<i>f strengthening</i>		kàb-tə	—	—
<i>s weakening</i>		—	fwòy-kə	tày-mə
		PR [kàbtə	fwòykə	tàymə]

5. Conclusion

The discussion in this paper has centered around the morphonological processes that the addition of verbal extensions cause on Babanki verb roots. It has been demonstrated that adding extensions to verb roots can lead to either post-glottal vowel deletion, [f] strengthening, or [s] weakening. [f] strengthening and [s] weakening occur in similar contexts and in each case a fricative is realized as a more or less homorganic stop or approximant. There is therefore a constraint in Babanki that prohibits the occurrence of fricatives before consonants in a cluster. It has been shown that the process occurs only within stems, specifically due to the addition of an extension. It remains unclear, though, why the change from [s] rather goes to the approximant whereas the alveolar stop is available in the language. This irregularity explains, in part, the tendency by some speakers to move towards consonant gemination when [s] assimilates to lingual consonants. In addition, it has

been explained in this paper that the extensions are toneless and only receive tone by rightward spread from the verb root.

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