

## Elements of Phonology of the Likwála, Variety of Koyó Ngandza

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### Abstract

*likwála* is a Bantu language spoken in the North of Republic of Congo by about people. It belongs to the mbochi group C20 and is classified C26 by Malcolm Guthrie (Guthrie, 1970). The language has seven vowels and twelve consonants. Most syllables are CV structured and the smallest syllable is made of a vocalic element only. *likwála* is a tonal language with two tones ( High and Low) only. This article aims to explain some of its phonological process according to the auto segmental theory.

**Keywords :** vowel, consonant, syllable, phonological feature, spreading, under specification, tone.

This paper is a descriptive attempt of *likwála* phonology. It will examine some of its phonological process concerning vowel, consonant and tonal changes.

We will be based on auto segmental phonology (Goldsmith, 1990) for its clarity to describe phonological process.

### 1. Vowels

*likwála* has seven vowels. They are: *i, e, ε, a, ɔ, o, u*.

They can be defined according to the following features [High], [ATR] and [Round] as bellow.

	<i>i</i>	<i>e</i>	<i>ε</i>	<i>a</i>	<i>ɔ</i>	<i>o</i>	<i>u</i>
High		-	-		-	-	
ATR			-	-	-		
Round					+	+	+

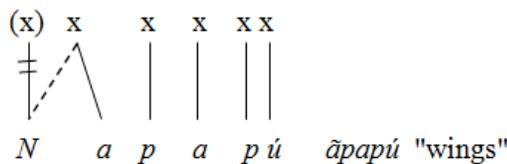
This board implies the following default rules:

- a. [ ] → [+ High]
- b. [ ] → [+ ATR]
- c. [ ] → [- Round]
- d. [-ATR] → [- High]

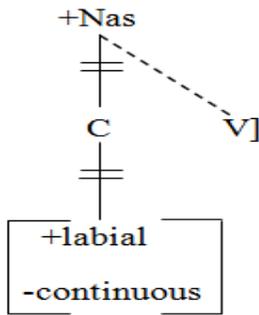
*/i/* is not specified. It is defined entirely by the inactive features, [+ High], [+ ATR] and [- Round]. Some nasal vowels [ĩ], [ɔ̃] and [ã] are heard in this language as in bokwele. But, contrarily to Nzete (Nzete, 1983) we don't consider them as phonemes of *likwála* because:

- 1- They are only attested in word initial positions whereas: oral vowels are attested everywhere;
- 2- They never appear in a root ;
- 3- They mean something whereas ordinary vowels don't have meanings;
- 4- They present themselves in complementary distribution with the classifiers whose initial is a nasal labial consonant: |*mo-*| (cl.1, cl.3), |*mi-*| (cl.4) and |*ma-*| (cl.6).

At the underlying level, the nasal vowels correspond to a sequence of Nasality associated to an oral vowel. The *likwála* word *āpapú* "wings" will then have the following representation:



Historically, the apparition of nasal vowels can be explained. The Nasal feature of the prefix spreads to the vowel which becomes prenasalized. This process can be represented as follow:



In fact the nasal consonant /m/ of the nominal prefixes /mo-/, /mi-/, /ma-/ never appear in the citation forms of likwála words. Its Nasal feature (Nasality) spreads to the vowel which becomes nasalized. So that, likwála nasalized vowels are found only in initial positions, only three nasalized vowels [ɔ̃], [ã] and [ĩ] exist in likwála. They respectively correspond to the nominal prefixes |mo-|, |ma-|, |mi-|.

**2. Consonants**

likwála has twelve consonants. They are: *p, b, m, t, n, l, s, z, ɲ, k, g* and *h*. They can be defined according to the following features: [labial], [coronal], [high], [nasal], [continuous], [lateral] and [voice].

	<i>p</i>	<i>b</i>	<i>m</i>	<i>t</i>	<i>s</i>	<i>z</i>	<i>l</i>	<i>n</i>	<i>ɲ</i>	<i>k</i>	<i>g</i>	<i>h</i>
Labial	+	+	+									
Coronal				+	+	+		+	+			
High									+	+	+	+
Nasal			+					+	+			
Continuous	-	-		-	+	+				-	-	+
Latéral							+					
Voice	-	+		-	-	+				-	+	-

According, they imply the following default rules:

- a. [+nas] → [-cont]
- b. [+nas] → [+voice]
- c. [+lat] → [+voice]
- d. [+lat] → [-cont]
- e. [+lat] → [+cor]

Because of these features, certain consonants are subject to some phonological process like the weakness of consonants /k, t/ and the fortition of lateral /l/.

**a. The weakness of consonants /k/ and /t/**

In likwála /k/ and /t/ are respectively realized [ɣ] and [r] when they occur between two vowels.

Examples:

a. *k* → *r*  
 -*kúku* → -*kúru* "cooks"  
 -*hóka* → -*hóra* "mad"

b. *t* → *r*  
 -*kótó* → -*kóró* "skin"  
 -*kita* → -*kira* "to sell"

This process can be represented as follow:

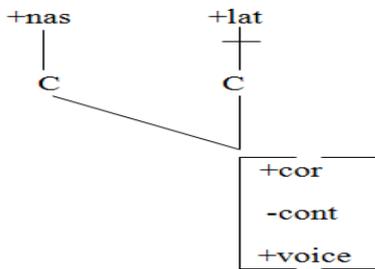


**b. The fortition of the lateral /l/**

In likwála /k/ is realized [d] when it is preceded by a Nasal in the phonological environment of pr+root. That N to say when the consonant /l/ (root initial) is preceded by the Nasal feature of the prefix.

*o-lému* "language" → *N-lému* → *ndému* "languages"  
*i-lébú* "palm rônier" → *N-lébú* → *ndébú* "fruit of the palm rônier"  
*o-laka* "to promise" → *N-laké* → *ndaké* "appointment"

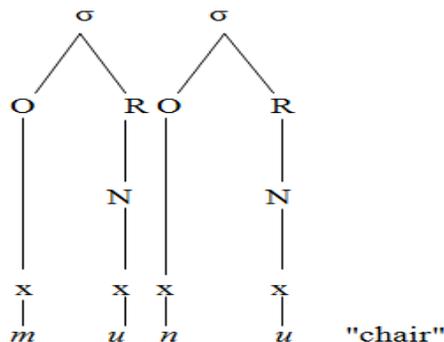
This process can be represented as follow:



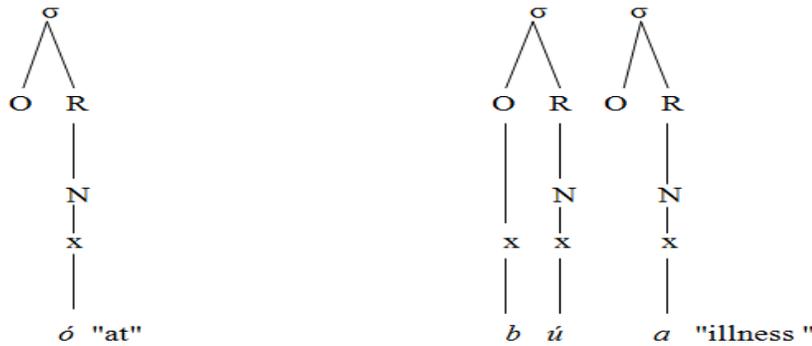
**3. The syllable**

Our analysis of the syllable is based on the model proposed by Kaye & al. (J. Kaye, 1984); (J. Kaye J. L., 1990). Contrary to Clement and Keyser (G. N. Clements, 1983), this approach considers the syllable as a hierarchized structure. The syllable node ( $\sigma$ ) dominates an onset (O) and a rhyme (R). The rhyme is obligatory and consists of a position of nucleus (N). likwála doesn't make use of margin all syllables are open. There are two types of syllables in likwála: the syllable with onset and the syllable with empty onset.

**3 - 1 - The syllable with full onset**



3- 2 - The syllable with empty onset

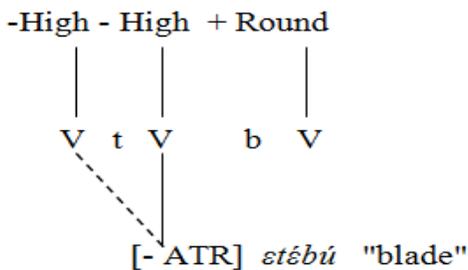


4 - The phonological variations

In certain phonological environments, some phonemes change their realizations. That is the case of the infinitive mark [-i]

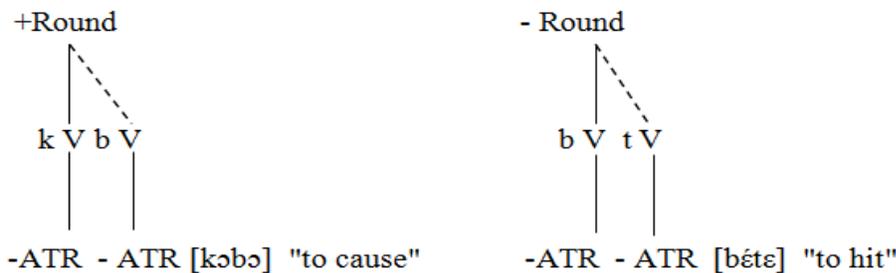
4 - 1 - Prefixes with variable realizations

The class prefixes [o-] (cl.11, cl.14) and [e-] (cl.7) of likwála are respectively realized [ɔ] and [ɛ] when the root's initial syllable consists of a marked vowel [- High, - ATR]. The feature [- ATR] of the root spreads and modifies the vowel of the classifier. This process can be represented as bellow.



4 - 2 - The mark of the infinitive

In likwála, the infinitive is marked by the vowel -a. But when the root contains a [- High, - ATR] vowel, the infinitive mark [-a] will assimilate the features [- High, - ATR] of the vowel of the root. This is progressive assimilation. That we represent like this for the feature [-ATR].



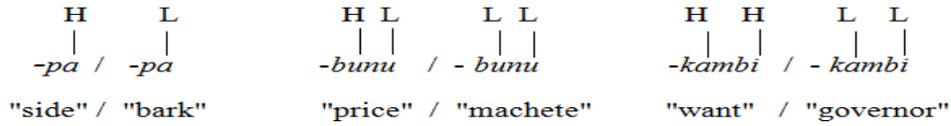
4 - 3 - The extension

An extension is a derivational morpheme whose function consists in orienting the sense of the verbal nominal root. It is formed by a continuation -vc-. The vowel of the extension suffix is generally represented by [i]. This unspecified vowel [i] assimilates the features of the root or that of the Nasality of the extensive morpheme.



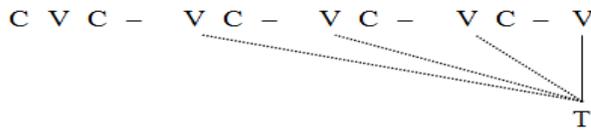
Like the other Bantu C group languages, likwála is a tonal language. That is, it uses the variations of melodic high for lexical and grammatical. Tone is a supra segmental unit, it is as important as the segments. Tone is generally associated to vowels. likwála makes use of two tones, that is the high tone (H) and the low tone (L). These tones are susceptible to appear on any syllable.

Examples:



The vowel of the extension suffix doesn't have tone. It receives its tone by the process of anticipatory association (Meussen, 1967) hereby represented.

Anticipatory tonal assimilation from the final vowel onto extension vowels: Meeussen, 1967



Examples:



**Conclusion**

The phonological system of likwála functions with seven vowels and twelve consonants. The vowels of that language are essentially oral. Some nasalized vowels result from the combination of an oral vowel with the Nasal feature. There is one unspecified vowel /i/. At the prosodic level, this language only has open syllables. Its syllables can have empty positions. Some segments have phonetically motivated variations likwála uses two tones: the high tone and the low tone. Tones are steady in the lexicon as in the statement. One notes that the vowel of the extensive doesn't have its own tone but it receives a tone by the process of anticipatory tonal assimilation.

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