

## **Tone and syllable structure in Jàbà**

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### **Abstract**

Jàbà is a tone language. It is spoken precisely in Kaduna and some parts of Kwara states of Nigeria. The focus of this paper is twofold. Firstly, it studies tone in Jàbà. Then, it looks into the structure of Jàbà syllables. Data were collected from educated multilingual native speakers of Jàbà who are also literate in the language. The paper, then, observed that tone is phonemic and varies in the associative construction. It also found out that three level tones exist in the language namely: high, mid and low. The mid tone is unmarked. However, Jàbà permits consonant clusters at the onset; it employs both open and closed syllables.

### **Introduction**

Jaba is the language of the Jaba people of Kaduna state of Nigeria. Jaba is also the language of the Kainji people of Kwara state of Nigeria. Jaba is spoken precisely in Kachia and Jama's Local Government Areas of Kaduna state. It has an approximate number of one hundred thousand speakers. Jaba belongs to Northern Jos group of the East Kainji sub branch of the Kainji language phylum of East Benue Congo family (Blench in <http://rogerblench.info/RBOP.htm>). The Kwoi dialect of Jaba is chosen for the present analysis because it is the variety spoken by my informants. This language under investigation is chosen because it is one of the neglected and endangered languages of Nigeria. The primary data were collected through tape-recording the speeches of some educated multilingual native speakers of Jaba who are also literate in the language. The speakers are multilingual in Jaba, Hausa and English.

Jaba is a tone language because it manipulates tone contrastively. In other words, it makes use of pitch in distinguishing between identical lexical items. Pike (1948:43), in affirmation to the above notion, defines a tone language as, "A language having lexically significant, contrastive but relative pitch on each syllable". Hyman (2007) has argued that there is no prototypical pitch accent language and that all languages that use tone phonemically should be classified as tone languages. Tones are referred to as tonemes especially when they distinguish lexical meaning.

The syllable, on the other hand, has been viewed by Mathews (1997:366) as, "A phonological unit consisting of a vowel or other unit that can be produced in isolation, either alone or accompanied by one or more less sonorous units".

Trask (1996: 346) highlights that syllable structure is usually seen as,

The requirements and constraints which determine the shapes of possible syllables, usually formulated in terms of sequences of consonants and vowels but also in terms of onset plus rhyme, or onset plus nucleus plus coda.

The syllable has a relationship with tone in that it (syllable) is usually seen as the tone-bearing unit. Clements (1983) uses the term ‘tone-bearing unit’ (TBU) to refer to the surface domain of tone. Tone is applied to words in order to distinguish two or more words whose composition in terms of consonants and vowels is the same. In Igbo, for instance, the application of pitch variations to certain lexical item yields different meanings.

For example ‘isi’

isi	‘head’
isì	‘smell’
ìsì	‘blindness’
isī	‘to cook’

(High tones are left unmarked. Macron is used here to represent downstep)

### **Tone in associative construction**

Tone is a phenomenon of pitch which has received much attention (See Pike (1948), Welmers (1973), Hyman (1975), Ifode (1995), Clements (2000) for example). Tone, according to Ladefoged (1993), is the distinctive pitch level of a syllable. Tone is the use of pitch in language to distinguish words. In tonal languages, tone is an integral part of a word itself.

Three level tones exist in Jaba. They are represented in (1) below:

High	´
Mid	-
Low	`

In the Jaba language, the high and low tones are marked while the mid tone is unmarked. Mid tone is phonemic in this language because it constitutes a semantic change. Also, it occurs freely in the three word positions namely Word Initial Position, Word Medial Position and Word Final Position. This is unlike the downstep in Igbo whose occurrence is predictive. They are manifested in words below:

(2)

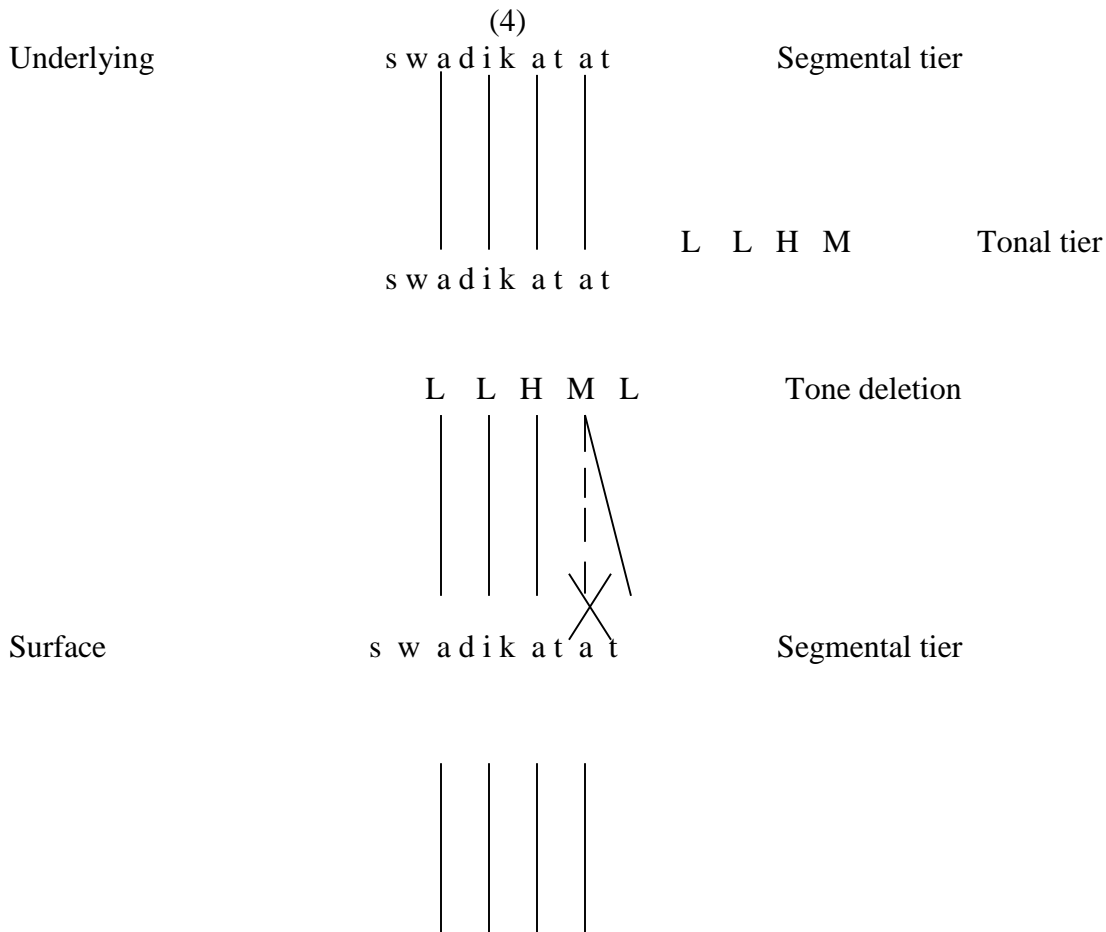
	Tone mark	Phonetic representation	Orthographic representation	Gloss
High	´	[zɪ́lɪ́]	zilli	one
		[lɪ́tsɪ́]	litsi	head
Mid	-	[nom]	nom	sun
		[ʃɔ́tʃɔ́t]	shout-shout	dance
Low	`	[sàsɪ̀t]	saseit	black
		[ʃànʃù]	shyanshu	eye

It is noteworthy that in a language attesting three tones High, Mid, Low, it is more usual to leave the Mid unmarked. That is our reason for not marking the Mid tone in the above words.

We observe that in Jaba, the tones words bear in isolation tend to change when such words are in construction with other words. This is mostly evident in numerals. For example:

			(3)		
Tat	[tat]	‘three’	→	soua-di ka tat	[swàdikátàt] ‘thirteen’
	M				L L H L
Noun	[naʊn]	‘four’	→	soua-di ka noun	[swàdikánaʊn] ‘fourteen’
	M				L L H L
Twoh	[to]	‘five’	→	soua-di ka twoh	[swàdikátò] ‘fifteen’
	M				L L H L

Notice the change from **M** to **L** on the vowels of [swàdikátàt], [swàdikánaʊn] and [swàdikátò]. In the underlying structure, the vowels of [tat], [naʊn] and [to] are mid but they lose their mid tone when they associate with [swàdiká]. The tonal change is represented as follows:



L L H L

Tonal tier

In the case of [swàdikátàt], above, we observe an obligatory tone deletion. ‘X’ and the broken line show that the original M tone of the vowel [a] is obligatorily deleted in order to make a way for the L tone.

### **Syllable**

The syllable is seen as a unit of connected speech. Although several attempts have been made towards defining the syllable, there has not been a strict definition of a syllable. Matthews (1997:366) claims that the syllable is, “a phonological unit consisting of a vowel or other unit that can be produced in isolation, either alone or accompanied by one or more less sonorous units.” Crystal (1997:164) views a syllable as, “an element of speech that acts as a unit of rhythm, consisting of a vowel, syllabic, or vowel/consonant combination.”

Urua (2000:66) adds that “the syllable provides an anchor on which a number of segmental and suprasegmental phenomena hinge.”

Eyisi (2000:161) attempts a definition of the syllable thus:

...a syllable may be defined as a segment which may constitute a single sound or a sequence of sounds of a given language produced with one chest pulse and possessing ‘a peak of prominence’ which is usually the vowel or a syllabic consonant.

The above definitions of a syllable are only guides to using the term. There has not been a satisfactory definition of the syllable. Sommerstein (1977:199) affirms the above notion by stating:

Perhaps the main reason for the reluctance of GP (Generative Phonology) to operate with the syllable concept has been the apparent difficulty of pinning down that concept itself ....We are still without a satisfactory definition of the syllable.

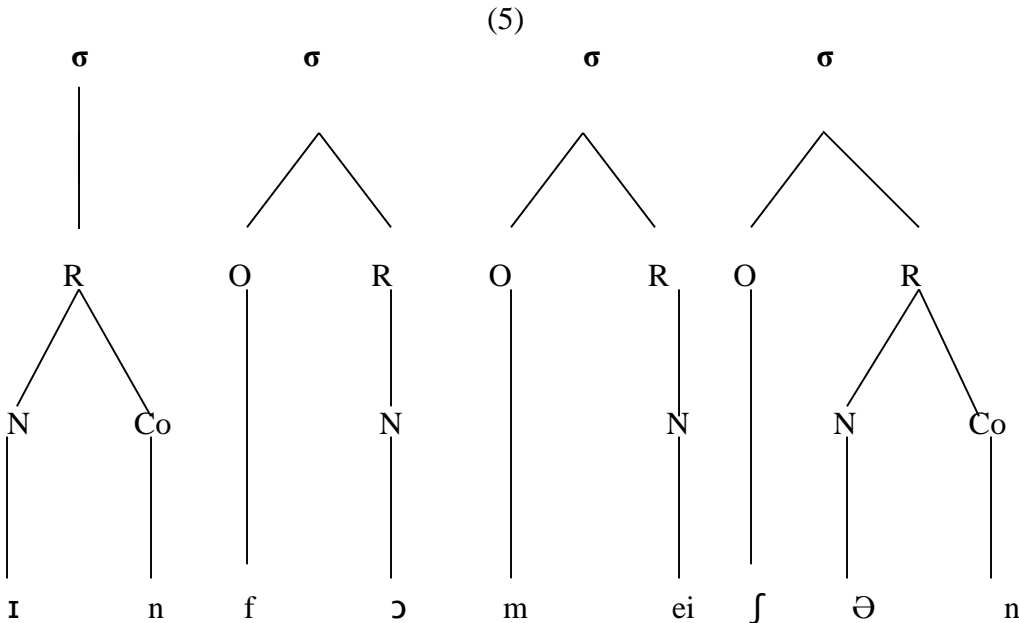
Let us consider the English word *information*. It consists of four syllables – in.for.ma.tion

We can think of the information about the syllable structure as being contained within a syllable tier. Trask (1996:346) notes that syllable structure is usually seen as “the requirements and constraints which determine the shapes of possible syllables, usually formulated in terms of sequences of consonants and vowels, but also in terms of onset plus rhyme, or onset plus nucleus plus coda.” Yule (1996) also maintains that a syllable must contain a vowel (or vowel-like) sound. The basic syllable is consonant before a vowel. He points out basic elements of the syllable as:

Onset (one or more consonants)

Rhyme (consists of the vowel which is treated as the nucleus, plus any following consonant(s), treated as the coda)

The symbol  $\sigma$  is used to represent a syllable. The nucleus (N), rhyme is represented as (R), onset is (O). The consonants following the nucleus are grouped together as the coda (Co). So, ‘information’ could be diagrammatized as follows:



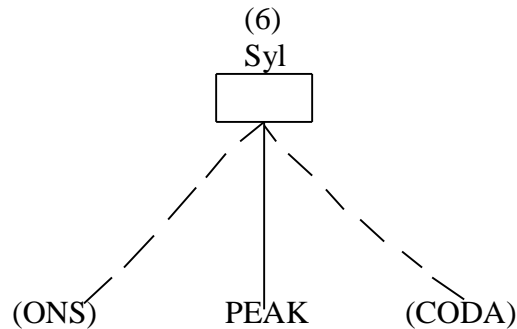
We shall present a discussion of Jaba syllable here because the syllable is seen as the tone-bearing unit (TBU) in the language. Clements (1983) uses the term ‘tone-bearing unit’ to refer to the surface domain of tone. The phonological unit which constitutes the underlying domain of tone differs from language to language.

Basically, we are familiar with languages in which the syllable is the underlying domain of tone. In some other languages, morphemes or other units such as the mora constitute the domain of tone.

The Jaba syllable can be expressed in a formula thus:

$$(C^{o-2}) V (C^{o-1}) \text{ or } (CC) V (C)$$

The Jaba syllable is schematized below:



The use of dotted lines shows that Onset (ONS) and Coda are optional while the thick line depicts the obligatory nature of peak in every syllable of Jaba.

### **Restrictions on the combinatory patterns of consonants in the Jaba syllable structure**

The consonants that occur at the onset and coda of Jaba syllable, and the restrictions on the occurrences of the consonants would be examined here.

#### The combinatory constraints at the onset

Constraint 1: One consonant at the onset

All consonants but /ŋ/ can occur at the onset.

Constraint 2: Two consonants at the onset

The first consonant of the two will be either a plosive or an alveolar nasal. The following consonant will be any of an approximant, voiced bilabial plosive or voiced alveolar fricative. For example:

/gb/ labiovelar plosive and palatal approximant /j/ as in /fɔgbjɛm/ 'sky'

/k/ voiceless velar plosive and alveolar trill /r/ as in /krɪpak / 'rock'

/t/ voiceless alveolar plosive and bilabial approximant /w/ as in /twani / 'six'

/n/ alveolar nasal and voiced alveolar fricative /z/ as in /nzɛdʒɛp/ 'sand'

/n/ alveolar nasal and voiced bilabial plosive /b/ as in /nbuno / 'toe'

#### The combinatory constraints at the coda

It should be noted here that we did not encounter such clusters as those in English here. In English, a word may have a cluster of two or more consonants at the coda. For instance,

Strength /strɛnθ/ two consonants at the coda

Constraints /kənstreɪnts/ three consonants at the coda

Jaba is quite different from English. In Jaba, only one consonant is found at the coda. So, we have just one constraint.

Constraint 1: One consonant at the coda

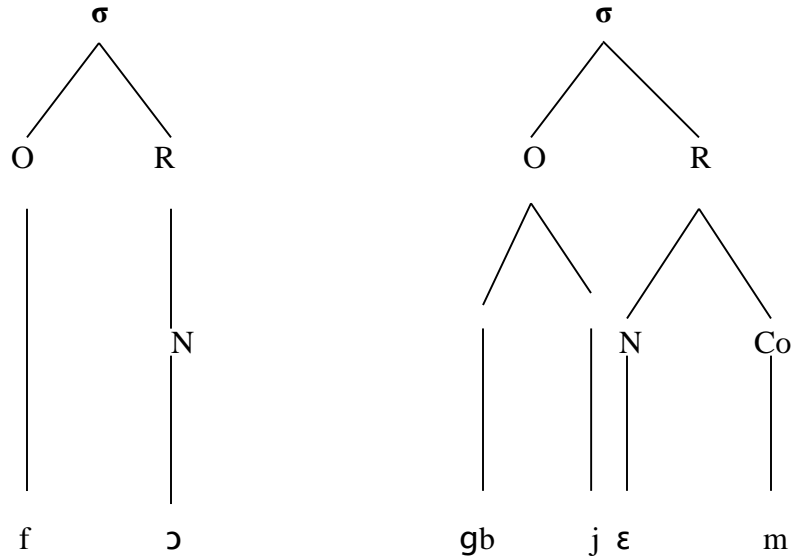
Plosives and nasals are the only consonants that are permitted at the coda. For example:

Consonant at the coda	Phonemic transcription	Gloss
/k/	/pak/	mountain
/g/	/dɔg/	river
/m/	/nom/	sun

/t/	/jɛt/	star
/p/	/titantep/	green
/ŋ/	/toŋ/	neck
/n/	/naʊn/	four

Let us present illustrations of few Jaba syllables below

(7)



(8)

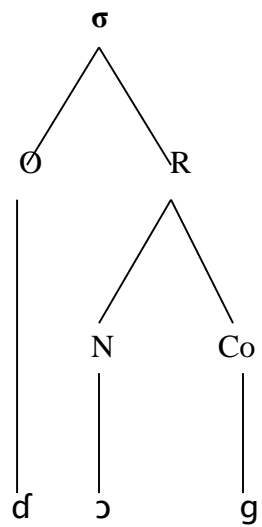


Fig.7 is a representation of constraint two of the combinatory constraints at the onset while fig. 8 is that of constraint one of the combinatory constraints at the coda.

The language permits open and closed syllables. An open syllable or zero termination is one that does not allow consonants at the syllable final position (Igbo is a language that has open syllables) while a closed syllable is one that permits syllable final consonants (English is a good example of languages that have closed syllables).

<u>open syllable</u>			<u>closed syllable</u>		
mino	/mino/	'cloud'	kpak	/pak/	'mountain'
litsi	/litsi/	'head'	kop	/kop/	'ten'
gwanda	/gwanda/	'paw-paw'	thyang	/θɪaŋ/	'shoulder'
gbu	/bu/	'fall'	souk	/sɔk/	'twelve'
huno	/huno/	'best'	yet	/jɛt/	'star'

### **Conclusion**

In the light of growing interests in minority languages under the threat of endangerment, this paper has attempted an investigation into the Jaba language of Nigeria. Having attempted a brief phonology of this language, this paper has come up with the following assumptions:

Jaba employs tone contrastively. Three level tones are observed in the language. They are:

High ´                      Mid ¨                      Low `

While high and low tones are marked, the mid tone is unmarked. The language has both open and closed syllables. For example:

<u>open syllable</u>			<u>closed syllable</u>		
mino	/mino/	'cloud'	kpak	/pak/	'mountain'
litsi	/litsi/	'head'	kop	/kop/	'ten'

Consonants are permitted at the three positions namely: Syllable Initial Position (SIP), Syllable Medial Position (SMP) and Syllable Final Position (SFP) except the voiced palatal nasal /ɲ/ and the voiced labialized velar nasal /ŋʷ/. They do not occur at SFP. Vowels are restricted in occurrence. They are not allowed in SIP. A good look at the words presented in this paper would confirm that. The syllable is the tone-bearing unit.

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