

**TONE MARKING IN KĪKAMBA:  
A CASE FOR IMPROVING ITS ORTHOGRAPHY**

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This paper discusses the rationale for practically marking tone in the writing of Kĩkamba. It shows the limitations that readers of Kĩkamba encounter because of the absence of tone marking in its current orthography. Further, it describes the different tones present in the language and goes on to explain the functional load that tone carries in this language. Finally, it points out two different methods of marking tone and proposes one of them as the option that would adequately represent the tone of Kĩkamba without cluttering the text.

## **1. Introduction**

According to Pike (1948), a tone language may be defined as a language having lexically significant, contrastive, but relative pitch on each syllable. However, according to Welmers (1973), in specific languages, pitches may contrast on some syllables qualifying them as tones but other syllables are tone less and that there may be other morphemes composed only of tone. Welmers further modifies this definition by stating that "A tone language is a language in which both pitch phonemes and segmental phonemes enter into the composition of at least some morphemes" (1973:79-80).

Languages like English are not tonal but can be called "intonational". Their words consist of sequences of consonants and vowels; an utterance has an intonational contour spread out over the words, with stressed and unstressed syllables alternating, based on the basic stress patterns of the words as well as the composition of the utterance. The important feature in which intonational languages differ from tone languages is that on the whole, intonation does not cause distinction in word meaning. As Roach (2000) puts it, "intonation makes it easier for a listener to understand what a speaker is trying to convey", and it

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“helps to produce the effect of prominence on syllables that need to be perceived as stressed” (p. 183). If one does not use the correct intonation, one will sound “foreign or non-indigenous”, but people will still get the meaning. On the other hand, Tone is considered an integral part of the word in most African languages. Just as is the case with consonants and vowels, tone on any one syllable or word may signal minimal distinctions in meaning.

It, therefore, means that if a person is trying to learn a language and does not pronounce the correct tone on a syllable or word, he will not only sound “foreign or non-indigenous” but people may not understand him and / or may get a wrong meaning. Likewise, if the learner of a tonal language does not understand the tone of the language spoken to him, he will not understand the speakers. The absence of tone-marking in the orthography of a tone language is a challenge to the reader or writer of that language. It compels him to depend on the context for meaning or simply guess his way around. This makes reading a very difficult task and could make the acquisition of literacy skills difficult and a diminished interest in reading and writing in this language.

The overall effect of the lack of marking tone in a tone language is the inevitable failure to understand or to be understood in the reading or writing, thus resulting in a communication breakdown. However, if tone is incorporated in the orthography of these languages then reading and writing in them will become easier and more people will be more interested in reading and writing in such languages.

## **2. Describing tone in Kikamba**

The first step in the analysis of tone in any given language is to find out how many basic tones there are. Some languages have a two-tone system, some a three-tone system and others a four- or even a five-tone system. It is also

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important to find out how many of these tones are level and how many are rising or falling. Level tones are those that do not move either by rising or falling; rising tones move from a lower pitch to a higher one while falling tones are those that move from a higher pitch to a lower one, depending on the environment of their occurrence.

Kĩkamba, a Bantu language spoken in Eastern Kenya, has a two-tone system in the sense that it has two level tones. However, in actual pronunciation another three tones are derived depending on the context of occurrence of the two level tones. (See Kioko, 1994, and Mutiga, 2004). This process manifests itself in the language as a High (H), a Low (L), a derived Super-High (SH), a derived Super-Low (SL), and a derived Falling (HL) tone. The falling tone is a combination of a H and L tone mapped together on one tone-bearing unit (TBU). Illustration of the five levels is given in the examples in (1) below. The symbols for the tones are indicated under the relevant TBUs.

(1) a) Two-level tones

- |     |                        |           |
|-----|------------------------|-----------|
| i)  | <i>n + gũkũ</i><br>H H | ‘chicken’ |
| ii) | <i>n + gũkũ</i><br>L L | ‘a gulp’  |

b) Derived tones (SH, SL, HL)

- |      |                           |            |
|------|---------------------------|------------|
| i)   | <i>mũ + twe</i><br>H SH   | ‘head’     |
| ii)  | <i>n + gũ</i><br>SH       | ‘firewood’ |
| iii) | <i>mũ+ndũ</i><br>L SL     | ‘person’   |
| iv)  | <i>ngo</i><br>SL          | ‘leopard’  |
| v)   | <i>n + g o o</i><br>SH HL | ‘heart’    |
| vi)  | <i>n + do:to</i><br>HL SL | ‘dream’    |

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### 3. Functions of tone in Kĩkamba

Tone serves many functions in a language, one of which is to differentiate lexical items. Tone languages, therefore, would use tone differently to fulfill lexical or grammatical needs. Hence tone will have a heavier or a lighter load in a language depending on the intensity on which it is used to make minimal distinctions of meaning or grammar.

In Kĩkamba there are minimal pairs in which tone is minimally contrastive, creating a situation in which all the consonants and all the vowels in such pairs are identical and the words differ on the basis of tone only. Such minimal pairs include:

- |     |    |                                |         |
|-----|----|--------------------------------|---------|
| (2) | a) | $\tilde{i} \ i \ a$<br>L SH SL | ‘milk’  |
|     |    | $\tilde{i} \ i \ a$<br>L H SL  | ‘weeds’ |

The pair 2(a) above gives us a minimal contrast created by SH and H tones found in the medial position of both words. The second contrast is created against the word-medial position by the L and SH tones of the two segments as seen in 2(b) below.

- |     |     |  |           |
|-----|-----|--|-----------|
| (2) | (b) | $m \ \tilde{u} + a \ k \ i$<br>L L SL  | ‘fire’    |
|     |     | $m \ \tilde{u} + a \ k \ i$<br>L SH SL | ‘builder’ |

In the lexicon of Kĩkamba, tone minimal pairs will be found to distinguish meanings in words as in example (3) below:

- |     |    |                                   |           |
|-----|----|-----------------------------------|-----------|
| (3) | i) | $n + g\tilde{u}k\tilde{u}$<br>H H | ‘chicken’ |
|-----|----|-----------------------------------|-----------|

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ii)  $n + g\check{u}k\check{u}$  'a gulp'  
 L L

In this non minimal pair contrast is based on tone alone whereby (3 (i)) has H and H in contrast with (ii) which has L and L. Also distinguished, on a minimal pair basis are the 2<sup>nd</sup> and 3<sup>rd</sup> person grammatical categories as seen in example (4) below:

(4) a)  $we$  'you' 2<sup>nd</sup> person (singular)  
 L  
 b)  $we$  'him/ her' 3<sup>rd</sup> person (singular)  
 SH

Another function that tone serves in this language is to differentiate between verbs and nouns that are derived from verbs, as seen in example (5) below:

(5) a)  $m\check{u}t\check{i}le$  'cut him' (imperative verb)  
 L H HL  
 b)  $m\check{u}t\check{i}le$  'the cut one' (class 7 noun)  
 L L H  
 c)  $m\check{u}lekye$  'neglect/let go of him' (imp.)  
 L L HL  
 d)  $m\check{u}lekye$  'the neglected one' (cl.1 noun)  
 L L H

Where (a) and (c) are imperative verbs, and (b) and (d) are derived nouns. The meanings of the words in example 5 (a-d) are differentiated on the basis of tone alone.

Apart from making lexical distinctions, tone in Kikamba is used to distinguish items of different grammatical categories. As shown earlier in example (4), Kikamba marks the 2<sup>nd</sup> person singular and the 3<sup>rd</sup> person singular as in example (6) below:

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- (6) a) *nĩ - ũ - kũ - tema* 'he is cutting' - 3<sup>rd</sup> pers. sing.  
HL HL HL SH L  
b) *nĩ - ũ - kũ - tema* 'you are cutting' - 2<sup>nd</sup> pers. sing.  
H HL HL H L

2<sup>nd</sup> person singular 2<sup>nd</sup> person plural are also distinguished by tone alone as shown in (c) and (d) below:

- c) *a - mũ - tema* 'he cut him' - 3<sup>rd</sup> pers. sing.  
L L H HL  
d) *a - mũ - tema* 'he cut you' - 3<sup>rd</sup> pers. plur.  
L H L H

The interrogative mood is also expressed through tone differentiation,

- e) *nĩ - ũ - kũ - tema* 'is he cutting?' - 3<sup>rd</sup> person singular  
H H HL H L (interrogative mood)

Tense in Kĩkamba is yet another feature that is distinguished by tone as shown by example (7) below:

- (7) a) *tũ - ka - mũ - tema* 'we will cut him' - 3<sup>rd</sup> pers. plur.  
L HL L H L  
b) *tũ - ka - mũ - tema* 'we used to / would cut him'  
L L L H L - 3<sup>rd</sup> pers. plur.

#### 4. Tone in orthography

Kĩkamba does not represent tone in its orthography due to the fact that there has not been agreement among those who developed orthographies for African languages on the importance of representing tone in orthography or even on the symbols and the methods to use for that purpose. Also, there has been divergent opinion on where tone should be marked in individual words, with some arguing that representing tone in the orthography would make the language difficult to

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read. Armstrong (1967), for example, argues that it is unnecessary to use tone marks in a native orthography.

In this paper, however, I would like to state that marking tone would make the reading of Kikamba much easier than it is now, not only for its learners, but also for its mother tongue speakers who are learning to read their language and who so far must depend on context or on guessing to understand the text. At least two systems of tone-marking in orthography have been proposed in the literature. The first one, which uses accents, was proposed in studies based on Suprasegmental Phonology, like Pike (1948). Illustration of it is given in (9) below.

(9) Use of accents to mark the High, Low, Falling and Rising tones

Acute accent:	á	é	í	ó	ú	(High)
Grave accent:	à	è	ì	ò	ù	(Low)
Circumflex accent:	â	ê	î	ô	û	(Falling)
Wedge:	ǎ	ě	ǐ	ǒ	ǔ	(Rising)

In more recent studies another system was proposed, based on Autosegmental Phonology: according to this system, different tones are marked on different tiers from those of the sound segments. (See e.g. Mutiga 2004.). Illustration of the system is given in (10) below.

(10)	a	e	i	o	u	High tone
	H	H	H	H	H	
	a	e	i	o	u	Low tone
	L	L	L	L	L	
	a	e	i	o	u	Falling (i.e. High and Low mapped together on one TBU)
	HL	HL	HL	HL	HL	

## 5. A proposed option for marking tone in Kikamba

When it comes to the question of how tone should be represented in Kikamba two questions arise: One, should tone be written on every tone bearing unit in the language, or should it be marked only on units which represent a potential for ambiguity of meaning? One can, in a two-tone language, write one of the tones, say the H, and leave the L unmarked. In a language with three tones, two could be marked throughout the language while the third remains unmarked. Likewise a language with four or five tones could mark three or four and leave the last one unmarked.

When tones are written throughout the language, especially in traditional methods of tone-marking—such as the use of accents—which mark tone suprasegmentally, there is crowding on the text and consequently difficulty in reading is created by the clutter. Marking tone on the potentially ambiguous tone bearing units has been the approach recommended for Bantu languages. However, this has the problem of creating confusion where a learner, for example, may be able to only read the marked tones but fail to recognize the unmarked ones, since they are not explicitly marked.

Following the Autosegmental phonology approach of marking tone, I suggest that Kikamba tone be marked on all tbus. Since this approach marks tone on its own tier, separate from the lexical tier, there would be no clutter on the text and hence no difficulty in reading Kikamba, as all tones would be explicitly marked for ease of recognition. See the examples in (12).

(12)

a) Lexical tier: *ngo nĩ yakwata mbũi* ‘the leopard has caught a goat’  
Tonal tier: L H H H L HL

b) Lexical tier: *nzokolo niyakunya kaana* ‘the cockerel has scratched  
Tonal tier: L L L HH L L LH L the child’



## 6. Conclusion

This paper first described the various levels of tone in Kikamba: it showed that although it has two level tones, in actual pronunciation three more will be derived, making a total of five. Then it discussed two functions of tone in Kikamba, namely distinguishing lexical (e.g. distinguishing between nominal minimal pairs) and grammatical (e.g. distinguishing between different tenses). Finally, the paper highlighted the challenges of failing to mark tone in Kikamba before putting forward a proposal to the effect that one should be marked on every tone-bearing unit in line with the Autosegmental Phonology approach which separates the lexical tier from the tonal one.

## References

- Armstrong, L.E. 1967. *The Phonetic and Tonal Structure of Kikuyu*. London: Dawsons of Pall Mall.
- Kioko, A.N. 1994. "Issues in the Syntax of Kikamba: A Bantu Language". Unpublished Doctoral Thesis, Monash University.
- Mutiga, J.M. 2004. "The tone system of Kikamba. A case study of Mwingi Dialect". Unpublished Doctoral Thesis, University of Nairobi.
- Pike, K.L. 1948. *Tone Languages*. Ann Arbor: The University of Michigan Press.
- Roach, P. 2000. *English Phonetics and Phonology*. 3<sup>rd</sup> ed. Cambridge: Cambridge University Press.
- Welmers, W.E. 1973. *African Language Structures*. Los Angeles: University of California Press.

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