The Ìkáràm tone system

Georgina O. Maduagwu and Sulaiman G. Folorunsho
University of Ibadan, Ibadan

Abstract
This study investigates the tones of Ìkáràm, a dialect of the Akpes language, spoken in Àkókó North West Local Government Area of Ondo State, Nigeria. Specific areas of the Ìkáràm tonology are investigated with a view to establishing the Ìkáràm tone system. These areas include, Ìkáràm tones, functions of tones and tonological processes which Ìkáràm tones undergo, among others. The study reveals that Ìkáràm has three basic tones High (H), Low (L) and Mid (M). Contour tones, high-falling and low-rising, are also phonetically realized in Ìkáràm. Tone is a distinctive feature of Ìkáràm phonology and Ìkáràm tones perform both lexical and grammatical functions. These tones are used to distinguish meanings of segmentally identical words. They perform grammatical functions like assimilation in noun phrases, in possessive constructions, as negation markers, as relative clause construction markers, as subject-verb agreement construction markers, as tense markers, as imperative markers and as associative markers.

1.0 Introduction

Pike (1948: 3) defines as tonal any language "having significant, contrastive, but relative pitch on each syllable, According to Hyman (1973: 213), the phrase "lexically

significant" in relation to pitch simply means that it can cause semantic distinction (i.e. that the tone is phonemic otherwise known as, tonemic) between lexical items, thus, Ìkáràm can be said to be tonal because it has basically three contrastive level tones. Tone languages are generally classified into two broad types namely: Register tone systems and Contour tone systems.

According to Hyman (1975: 214), "in a pure register tone language, tonal contrast consists of different levels of steady pitch height, that is, perceptually, such tones neither rise or fall in their production. A pure contour tone language (on the other hand), consists of some tones which are not level in their production but rather rise, fall, or rise and fall in pitch. African tone languages are of the first type (i.e. register)… hence, Ìkáràm is a register tone (dialect of a) language. Three different pitch levels are identified and established in Ìkáràm. They are, High (H), Low (L) and Mid (M).

2.0 Three basic tones of Ìkáràm

2.1 High tones

	Phonetic	Tone	Gloss
1a.	[íjí]	HH	'day'
b.	[jútú]	HH	'steal'
c.	[kɪ́ni□□]	HM	'learn'
d.	[òkòlí]	LLH	'needle'

Mid tones

	Phonetic	Tone	Gloss
2a.	[e□bo□n]	MM	'which'
b.	[bi□s]	M	'wipe'
c.	[ìsága□]	LHM	'tooth'
d.	[le□lè□]	ML	'cold'

2.2 Low tones

	Phonetic	**Tone**	**Gloss**
3a.	[àjò]	LL	‘eye’
b.	[gbójèkè]	HLL	‘dwell’
c.	[kp t]	LLH	‘crocodile’
d.	[òku ti]	LHM	‘all’

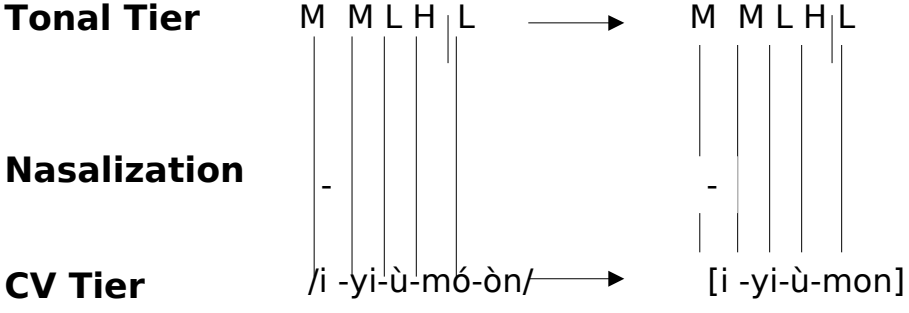
2.3 **Contour tones**

Although Ìkáràm, like many other African tone languages is a register tone dialect, there still occur in it contour tones. A contour tone consists of a sequence of two level tones and this can be classified as falling (H L) or rising (L H). The analyses of the two types are given below:

Phonemic

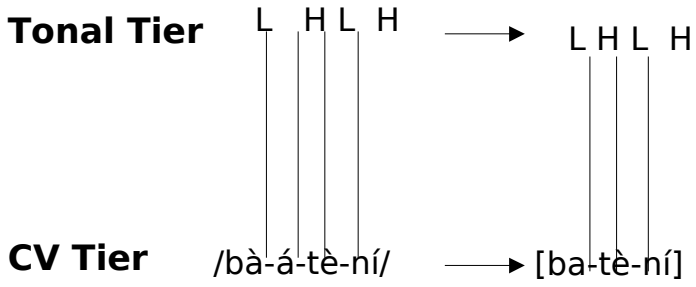
Phonetic **Gloss**

4.



‘thirst’

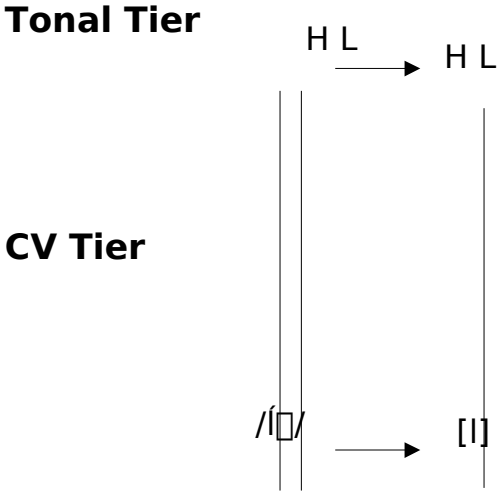
6.



7. **Tonal Ti**

‘follow'

CV Tier



‘mother’

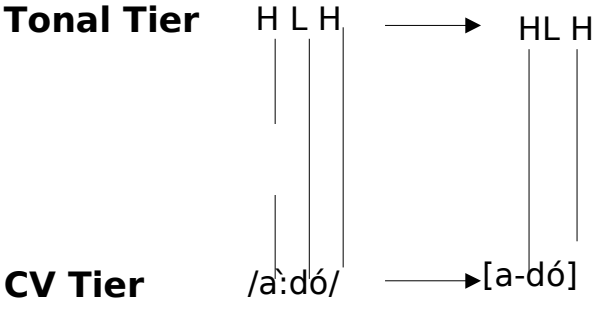
Tonal Tier L H

‘lose (verb)’

CV Tier

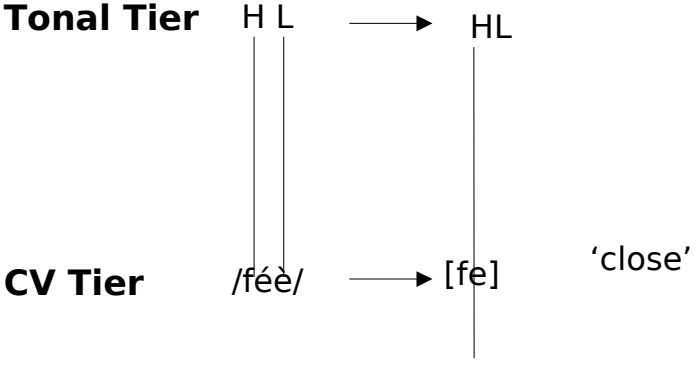
/ì-

9.



‘maize’

10.



‘close’

In examples (4) through (10) above, the underlying phonemic representations of the long vowels (consisting of two tonemic segments) are realized as a single vowel with either a falling or rising tone.

3.0 Functions of tones

Tones play important and distinctive roles in Ìkáràm dialect. Broadly, their roles can be classified into two viz:

i. Lexical functions
and
ii. Grammatical functions

3.1 **Lexical functions**

Tones like segmental phonemes distinguish lexical items from one another. In Ìkáràm, there occur two or more lexical items with identical segmental phonemes differing only in tone. These are illustrated in examples (11) through (14) below where the (a) and (b) of each pair differ semantically only because of the differences in their tones.

		Phonetic		**Tone**	**Gloss**
11.	a.	[ja͡s]		M	‘take’
	b.	[jàs]		L	‘hold’
12.	a.	[àjè]		LL	‘mother’
	b.	[a͡je͡]	MM		‘beans’
13.	a.	[t͡i͡ga͡]		MM	‘stand’
	b.	[t͡i͡gá]	MH		‘leave’
14	a.	[t͡áó]		HH	‘elsewhere’ to bring something elsewhere
	b.	[t͡àó]		LH	‘here\ to bring something here.

3.2 **Grammatical functions**

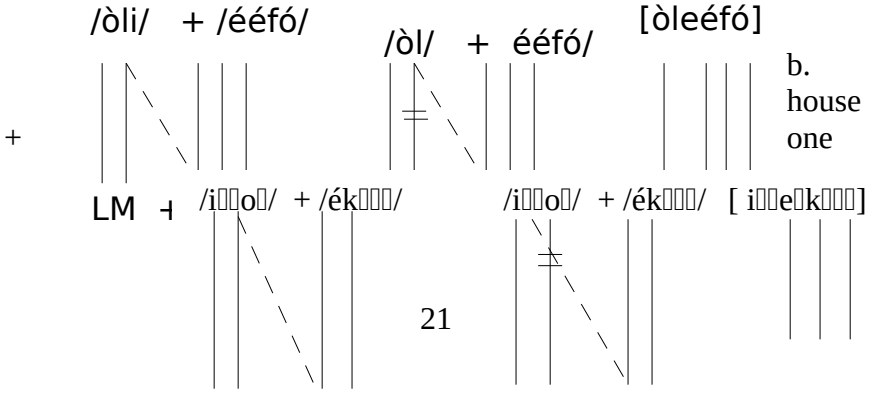
In Ìkáràm tones also perform grammatical functions. By grammatical function, is meant that they perform functions like assimilation in noun phrases, in possessive constructions, as negation markers, as relative clause construction markers, as subject-verb agreement construction markers, as tense markers, as imperative markers and as associative markers.

3.2.1 **Tone of noun phrase (NP) constructions**

A noun phrase (NP) is a group of words that function as a noun. NP constituents include a noun and at least a determiner. The noun is the head of the construction. Unlike languages such as English where the head comes last like in 'my house', the reverse is the case of Ìkáràm, the head comes first.

In phrasal constructions like noun phrases, the tone on the last segment of the first word influences the second word. If the tone of the last segment of the first word is mid (M) and the second word begins with high (H) tone, this high tone becomes mid (M). This is a type of an assimilatory process termed spreading (Hyman 1975). Examples are given below:

15. a. cloth + white 'white cloth'



MM + H L ⟶ MM + HL ⟶ M M L

In example (15a) above, when the segment ‘i' of the first word is deleted, its mid (M) tone is floating and later spread to the first segment of the second word. Similarly, in example (15b), ‘o’ of the first word is deleted and its tone spread to the first segment of the second word.

3.2.2 **Tone in possessive constructions**

In Ìkáràm, it is observed that linking the possessive pronoun with the appropriate noun construction results in the following tonal processes:

i) **ML ➔ LL**

This assimilatory tonal process occurs when one or more syllables take on the tone of neighbouring syllable, as exemplified below:

16. [i□□o□] + [bè] ➔ [ì□òbè]
M + L ➔ L L
house + our ‘our house’

The tone of the possessive pronoun [bè] assimilates the M tone of the noun [i□o□]. thus ML ➔ LL

ii) **MM ➔ HM**

The mid tone of the noun in a possessive construction is realized as a high tone in an MM sequence. Thus MM ➔ HM in possessive constructions as shown below:

17.	a.	[i□□o□]	+	[no□]	➔	[i□□óno□]
		M	+	M	➔	H M
		house	+	my		‘my house’
	b.	[i□□o□]	+	[hu□]	➔	[i□□óhu□]
		M	+	M	➔	H M
		house	+	his		‘his house’
	c.	[e□bo□]	+	[no□]	➔	[e□bóno□]
		M	+	M	➔	H M
		dog	+	my		‘my dog’
	d.	[e□bo□]	+	[so□]	➔	[e□bóso□]
		M	+	M	➔	H M
		dog	+	your		‘your dog’
	e.	[e□bo□]	+	[hu□]	➔	[e□bóno□]
		M	+	M	➔	H M
		dog	+	his		‘his dog’
		M	+	M	➔	HM

3.2.3 **Tone as negative marker**

The following are pairs of positive and negative sentences in Ìkáràm:

18.	a.	[□ bá de□□]	‘he will climb’
	b.	[□□ bá de□□ è]	‘he will not climb’
		L	

19. a. [dé jḯ] ‘he will see’
b. [dè jḯ e] ‘he will not see’
M

It will be noticed that [e] is a negative marker in (b) pairs of examples (18) and (19) above. The negative vowel [e] does not exist toneless, it bears a tone, a low or mid tone. Hence, the low tone and mid tone are used to realize negative constructions in Ìkáràm.

3.2.4 **Tone in relative clause constructions**

In Ìkáràm relative clause constructions, a single morpheme is used to represent any kind of relative marker – singular or plural – for humans and non-humans. A high (H) tone is placed on this monosyllabic word.

Examples are given below:

		Phonemic	**Gloss**
20.	a.	/ònì **gí** mò nàá ní:/	‘I am the one who said I won’t go’
	b.	/àhu **gí** ka s/	‘He is the one who refuses’
	c.	/àbe **gí** ma sáá nù ní/	‘We are the ones who said we won’t go’
	d.	/àba **gí** ka sà b gbe/	‘They are the ones who refuse to eat it’
	e.	/àbe ní **gí** ka sà b gbe/	‘You (pl) who refuse to eat’

3.2.5 **Tone in subject-verb agreement constructions**

Tone is used to distinguish singular verbs from plural verbs. The singular subjects take singular verbs and plural subjects take plural verbs. Tones on the underlying verb change to express singularity or plurality. For instance,

		Underlying form		**Surface form**	
21	a.	/dɪ̀ɪ̀nɪ̀/	➔	/dɪ̀ɪ́nɪ́/	‘eat’
	/àbá dɪ̀ɪ́nɪ́/	‘They eat’			
					H
H-H					
		MM ➔	HH		
	b.	/dɪ̀ɪ̀nɪ̀/	➔	/dɪ̀ɪ́nɪ́/	‘eat’
	/bé dɪ̀ɪ́nɪ́/	‘You(pl) eat’			
					H
H-H					
		MM ➔	HH		
	c.	/dɪ̀ɪ̀nɪ̀/	➔	/dɪ̀ɪ́nɪ̀/	‘eat’
	/ɔ̀ dɪ̀ɪ́nɪ̀/	‘He/She eats’			
					M H-
M					
		MM ➔	HM		

In examples (21 a & b), the underlying MM tone used on the verb ‘dɪ̀ɪ̀nɪ̀’ ‘eat’ is realized as HH to denote plural and this agrees with the H tone of the plural subjects ‘they’ and ‘you’.

In (21c), the underlying MM tone used on the verb ‘d□i□ni□’ ‘eat’ is realized differently as HM to denote singular and this agrees with the M tone of the singular subjects ‘He/She’.

3.2.6 **Tone as tense marker**

Tone marks various tenses such as present tense, past tense and past participle. Most of the verbs in Ìkáràm are monosyllabic. Thus, the tone on a single verb is modified to express various tenses. Examples:

22.

S/N	**Verb**	**Present Tense**	**Past Tense**	**Past Participle**	**Gloss**
a.	/kú/	/kú/	/ku□/	/ku□/	‘fall’
b.	/bá/	/bá/	/ba□/	/ba□/	‘come’
c.	/mì□/	/mì□/	/mì□/	/mì□ì/	‘sleep’
d.	/sà/	/sà/	/sa□/	/sà/	‘know’

The tones on most past and past participle tenses are realized as mid (M) while the present tense usually carries either high (H) or low (L) tone. Occasionally, there is no tonal difference between past and past participle tenses as observed in example (22) above.

3.2.7 **Tone on imperative constructions**

An imperative construction is used to make a request or give an order. Imperative sentences lack superficial subjects. The subject in imperative construction is underlying and such a subject is the second person singular or plural ‘you’. This underlying ‘you’ is, in most cases, represented in Ìkáràm by a nasalized close back rounded vowel /u□/ which bears a mid (M) or low (L) tone. Examples are:

		Phonemic	**Tone**	**Gloss**
23.	a.	/sígánaː b+/ u/ ‘stand’ + ‘you’	HHMM	‘stand up’
	b.	/ja/ + /u/ sit + you	MM	‘sit down’
	c.	/dáálò/ + /hu/ answer him + you	HHLL	‘answer or reply’

In the above examples (23a to c), it is observed that all the word final segments bear mid tone except (23c). This example (23c) can also be seen as having underlying mid tone which is lowered as a result of assimilation rule that affects a mid tone following a low (L) tone.

Other examples where the underlying /u/ ‘you’ is not represented at the surface are:

		Phonemic	**Tone**	**Gloss**
24.	a	/ìòn dò/	LLLL	‘kneel down’
	b.	/èginò/	LLL	‘go out’
	c.	/fg /	ML	‘close the door’

3.2.8 **Tone as associative marker**

In Ìkáràm, the associative marker is realized as a high tone. An example is given below:

25. [i□□o□] + [a□fa] ➔ [i□□áfa□]
M M
house + book school
M ➔ H

The high tone on the vowel [a] in the above example (25) is the associative marker in Ìkáràm.

4.0 Conclusion

In this study, we have been able to establish a tone system for Ìkáràm dialect of the Akpes language of Nigeria. The phonemic (tonemic) status of tone has been accounted for and established. The dialect operates three significant tones, High (H), Low (L) and Mid (M). Lexical and grammatical functions of tones such as in associative, possessive and negative constructions among others are also revealed in the study.

References

Ajao, O.O. 2002. A Generative Phonology of Iyani Akoko, an unpublished undergraduate project, Department of Linguistics and African Languages, University of Ibadan, Ibadan.

Bendor-Samuel 1989. *The Niger-Congo languages*, University Press of America (R). Inc.

Chomsky, N. and Halle, M. 1968. *The sound pattern of English*. New York: Harper and Row.

Clark, J., C. Yallop and J. Fletcher. 2009. *An introduction to phonetics and phonology,* 3rd edition, Oxford, Blackwell.

Clements, G.N. and J. Goldsmith. 1984. *Autosegmental studies in Bantu tone: Introduction*. Dordrecht: Foris.

Crystal, D. 1980. *A first dictionary of linguistics and phonetics*. London: Andre Deutsch.

Fromkin, V.A. 1978. *Tone: A linguistic survey.* New York: Academic Press.

Goldsmith, John A. 1990. *Autosegmental and matrix phonology*. Oxford: Blackwell.

Goldsmith, J. 1976. 'Autosegmental phonology' Doctoral Dissertation, MIT: Cambridge (published by Garland: New York, 1979).

Jones, Daniel. 2003. *English pronouncing dictionary*, 16th Edition, Fort Worth, TX. London: Harcourt Brace Jovanorich.

Jochen, Trommer 2008. Autosegmental phonology: Tone

Katamba, F. 1985. 'A nonlinear account of the syllable in Luganda' in D.L.

Goyvaerts (ed) African Linguistics: Essay in Memory of M.W.K. Semikenke.

Larry, H. 1975. *Phonology: Theory and analysis*. New York: Holt, Rinehart and Winston.

Leben, W. 1978. 'The Representation of Tone,' in Fromkin, V. (ed) *Tone: A linguistic survey*. New York: Academic Press.

Oyebade, F. 1998. *A course in phonology*. Ijebu-Ode: Shebiotimo Publications.

Pike, K.L. 1948. *Tone language.* Ann Arbor: MI University of Michigan.

Pulleyblank, D. 1986. *Tone in lexical Phonology.* Dordrecht Reidel.

Pulleyblank, D. 1988. Tone and the morpheme tier hypothesis. In Hammond and Noonan.

Van der Hulst, H. and N. Smith. 1982a. *The structure of phonological representations*, Part 1. Dordrecht Foris.

Van der Hulst, H. and N. Smith. 1985. *Advances in nonlinear phonology*. Dordrecht Foris.

Welmers, W. 1973. *African language structures.* Berkeley and Los Angeles: University of California Press.

Conventions

/ /	-	Phonemic Transcription
[ ]	-	Phonetic Transcription
|	-	Association line
\	-	in the environment of
¦	-	Broken line indicating tone spreading
¦	-	Becomes
H	-	High tone
L	-	Low tone
M	-	Mid tone
C	-	Consonant
V	-	Vowel
´	-	High tone
`	-	Low tone
-	-	Mid tone
^	-	Falling tone
v	-	Rising tone