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## RHYTHM AND INTONATION: A CASE STUDY OF PERFORMANCE BY IBIBIO SPEAKERS OF ENGLISH

BY

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### Abstract

This paper attempts a description of the rhythm and intonation of the variety of English spoken by the Ibibio. It analyses the speech rhythm and pitch variation of the English of sixty final year secondary school students selected from six secondary schools by a stratified random sampling technique from the Ibibio speaking areas of Akwa Ibom State of Nigeria.

The terms *rhythm and intonation* are first explained before their applications to English and Ibibio are examined. Our findings as regards the performance of the informants are then presented and discussed before conclusions are drawn.

It is shown that Ibibio English has a peculiar kind of rhythm in which accentuation is given on more syllables than what obtains among British speakers, for instance. Also unidirectional intonation patterns are shown to occur more often than bi-directional ones in the performance of Ibibio speakers of English.

### 1.0 Introduction

#### 1.1 The Nature of Rhythm and Intonation

One indisputable feature of natural languages is that utterances are normally of rising and then falling, or falling and then rising patterns, or a combination of these major patterns. If the patterning relates to utterances which are of the rank of words, then, the pitch variation relates to tone and a language that uses pitch patterns in this way is said to be tonal. If the patterning relates to utterances which are of the same rank of sentences, then the pitch variation relates to intonation and a language that uses pitch patterns in this way is said to be intonational. A similar view is expressed in Abercrombie (1982:105) thus:

Tone is speech melody when it is a property of the word while intonation is speech melody when it is a property of a sentence.

Also, variations in tone are generally significant: they result in changes in the meaning of the words involved. Variations in intonation are important in a different way: they result mainly in changes in the shades of meaning of the sentences concerned. Ibibio has been classified as a tonal language<sup>1</sup> while English has been classified as an intonational language<sup>2</sup>. Details in respect of this distinction are shown later in our discussion of tone in Ibibio and intonation in English.

Another peculiarity of human speech is that it possesses rhythm even though the realisation of rhythmic patterns varies from language to language. Rhythm is experienced as movement by both the speaker and the hearer. Abercrombie (1967:36) also sees it as resulting from the manner in which accented and unaccented syllables succeed each other. Three types of rhythm have been identified: stress-timed, syllable-timed and mora-timed but the two main kinds of rhythm often analysed in languages are the syllable-timed and the stress-timed rhythms often associated with K.L. Pike<sup>3</sup> who first used the terms.

Languages with a stress-timed rhythm are those whose utterances can be divided into feet which are of equal length; that is isochronous. The accented syllables together with any

number of unaccented syllables between the accented ones form the basis of division. English and German are said to have stress-timed rhythms. The utterances in syllable-timed languages, on the other hand, can be segmented into parts but the syllable, which can be accented or unaccented is the unit of segmentation. It is therefore the number of syllables that determine the duration of an utterance in a syllable-timed language. French, Spanish, and Nigerian languages like Yoruba, Ibibio and Igbo are examples in this class (cf Abercrombie 1967:96, Eka 1986:1).

Given the above description of English and Ibibio namely: that English is an intonational language while Ibibio is a tonal one, and English has a stress-timed rhythm, while Ibibio is syllable-timed, it is to be expected that Ibibio speakers of English are influenced by the nature of the rhythm, tone and intonation of their language when they speak English.

## 1.2 Sources of Data

In this paper, the performance of sixty Ibibio speakers of English regarding aspects of rhythm and intonation in selected phrases and sentences will be presented. These data are the result of two tests: a Production and a Recognition Test. The sixty final year students were selected from six secondary schools in Akwa Ibom State of Nigeria. A Stratified Random Sampling Technique was used to select the schools from six of the eleven local government areas which are Ibibio speaking. The criteria for stratification were rural-urban location. Ten students were selected from each of the six schools. They each had to read a passage at normal speed during which their accentuation of ten chosen phrases were noted. Then they each had to read five sentences of specific intonation patterns. The test result are shown in Tables I and II. These will latter be discussed and the extent of difficulty that exists for Ibibio speakers of English as a result of the differences between the specific aspects of rhythm and intonation in English and Ibibio will be assessed. We shall first examine the issues of tone, intonation and rhythm in English and Ibibio.

## 2. Tone in Ibibio

As already mentioned above, Ibibio is a tonal language having 'lexically significant and contrastive pitch on each syllable' (Pike 1948:3). The following pairs of Ibibio words which show identical morphological shapes but are different in meaning as a result of tone illustrate the main features of tone:

dep	/dép/,	buy;
dep	/dèp/,	rain, shower;
etím	/étím/,	millipede;
etím	/ètím/,	you (plural) arrange.

The above pairs of words illustrate lexical functions of tone. Also, in the above examples, the contrast is made between high and low tones. Besides these two basic tones in Ibibio, there is terracing which involves downstep and down drift. This is why Ibibio has been described as a register tone language with a classical terraced level system (Urua 1987:108-109).

Downstep is the lowering of a high tone after an earlier high tone. It is nonautomatic and contrastive as can be seen in the examples:

Uko	/úkó/,	Valour;
Uko	/úkò/,	Over there;
Mbòk	/r̀b̀òk/,	Wrestling;
Mbòk	/r̀b̀òk/,	Please.

Downdrift, on the other hand, is the automatic lowering of a high tone which follows a low tone. According to Essien (1990:58), downdrift is phonologically conditioned and nonphonemic, unlike downstep. In the following examples:

Ubom	/ùbóm/,	Canoe;
Ime	/ímé/,	Patience;

the high tones following the low tones are not as high as they should be because of the influence of the low tone. Downdrift also occurs across word boundaries as in:

esit	/ésid/,	Heart;
ikot	/íkòt/,	bush;
esit ikòt/ésid ikòt/,		interior bush/inside the bush.

There are also modifications of the two basic tones: high and low in Ibibio which result in

rising and falling tones. These are contour tones since 'there is a perceptible rise or fall or some combination of rise or fall' (Pike 1948:44). In Ibibio, contour tones are significant.' They contrast with high, low and downstepped tones as the following examples show:

ima	/ímá/,	love;
ima	/ímâ/,	so....(what next?)
eti	/éti/,	good;
eti	/èti/,	guts;
okpo	/òkpó/,	male;
okpo	/òkpò/,	a non-initiate.

Tone can also perform grammatical functions in Ibibio besides the semantic ones discussed above. This is seen in compounds of nouns one of which has an adjectival function. It can also be seen in adjective plus noun constructions as well as in verb aspects and in the formation of nouns from verbs by the addition of prefixes. In the following compound words (one of which has an adjectival function), the tone of the second noun is modified to a high-low pattern:

ikpañ	/kpañ/,	spoon;
eto	/étò/,	wood, tree;
ikpañ-eto	/kpañ-étò/,	wooden spoon.
owo	/ówó/,	person;
emem	/èmém/,	peace;
owo-emem	/ówó-èmém/,	a peaceful person.

From the above examples, the following patterns are observable:

L H H H	—————>	L H H L
H H L L	—————>	H H H L

This pattern obtains in most compound words in Ibibio. Ibibio tones also affect the aspect of verbs. In the following examples, the changes of the tone in the verb signals a change from the progressive to the perfective aspect:

Emem atem ndidia;	
/èmém atém ñdídíá/,	Emem is cooking.
But	
/émém átém ñdídíá/,	Emem has cooked.
Atim adèp ntuen	
/àtìm àdèp ntùen/,	Atim is buying pepper.
But	
/àtìm àdèp ntùen/,	Atim has bought pepper.

In the above examples, the verb roots /tém/ and /dép/ have low and high tones respectively. These change to the High-Low (falling tone) in the progressive aspects and the downstepped tone to mark the perfective aspect as in the examples above.

The other area where the grammatical function of tone in Ibibio is noticeable is in the nominalisation of verbs by the addition of a prefix to a verb root as in the following examples:

/màn/,	give birth	-ù-màn/,	birth;
/má/,	love (verb)	-ì-má/,	love (noun).

As the above examples show, there is a correspondence between the tone of the prefix and that of the verb root. Any attempt to change the tone of the prefix could change the word class as in:

/ùmàn/	birth process;	/ùmàn/,	female.
/ìjwèd/	book;	/ìjwèd/,	I'm writing.

Thus it is the tone of the prefix that indicates the nominalisation.

## 3. Aspects of Intonation in Ibibio

It has been shown that a tone language can utilize variations of pitch with reference to

a phrase or sentence, and therefore intonation (Cf Jibril 1982:277, Essien 1989:99-111, Urua 1987:141-143). Three intonation patterns have been identified in Ibibio: the 'O' intonation pattern, the imperative intonation pattern and the interrogative intonation pattern (Essien 1989:100-107). Each of these intonation patterns involves the addition of the tonal morpheme at the end of an utterance to signify an attitude or a shade of meaning.

When 'O' is added to a sentence or a word which is rank-shifted to function at the level of a sentence, it signals informality, intimacy or warmth. At times it gives information which the speaker suspects the listener does not know as in the following:

ka di/ká dí/	Go and Come	(literary)
ka di-o/ká dí-ò/	Go and come	(Hint of interest)
Afò ádó áñwàn ómó?	Are you his wife?	
Àmi ndó áñwàn ómó-ò:	I am his wife	(did you not know?)

If a vowel which harmonises with the vowel of the verb root is added to an imperative sentence the imperative intonation is realised. An attitude of impatience or disapproval is often conveyed by the imperative intonation as in the following:

Dòp úyó	keep quiet (soft command).
Dòp úyó-ò	keep quiet (impatience)
Tié	sit down, (normal order)
Tié-é	sit down (What are you waiting for?)

The interrogative intonation pattern is realised by the replacement of the verb to be /bá/ and question morpheme /mòo/ or /dié/ by a harmonising vowel which acts as the question morpheme (Essien 1989:106, 1990:63). The pitch of the harmonising vowel is a falling one similar to the falling tune of wh-questions in English as in the following:

úsó ábá móo	Where is your father?
úsó-ò	
Áyádiá ùdiá	Do you want to eat yams?
Áyádiá-à	

It has been observed that the Ibibio do not distinguish between a question requiring 'Yes' or 'No' answer and a statement (Cf Essien 1989:106; 1990:63, Urua 1987:143). This distinction is, however, often made when the speaker demonstrates some warmth, anxiety or excitement. For instance, the following sentences:

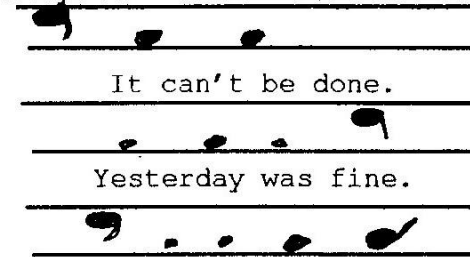
Áyádiá ùdiá:	Do you want to eat yams?
ídém mfó òsò	Are you well?

require the answer 'Yes' or 'No' when they are said with the falling tune / \ /. If the speaker wants to show some warmth or concern the same sentences can be rendered with the rising tune.

#### 4. Intonation in English

As already explained above, intonation refers to the rise and fall of pitch at the end of a sentence or an utterance of sentence status. According to Gimson (1980:264) such a variation may be said to have accentual, a grammatical or an attitudinal function. In the examples below intonation has an accentual function, drawing the hearer's attention to those parts of the utterance where the speaker wants to concentrate attention. A change of pitch signals the word or words carrying the accent.

Mary likes beans (not Jane).



Intonation in English also distinguishes sentence types (that is, whether a statement or a question is dealt with), and to indicate the attitude of the speaker. This is achieved with the use of the falling or rising tones or a combination of these as in the examples below:

He has come	(statement).
Can you come	(question).
How nice of him	(sarcastic).
I am waiting	(só hurry up).

However, as has been shown by Gimson (1980:227-278) and Fries (1964:242-253), any of the tunes can be used for any kind of utterance depending on the context both of situation and also of the speaker's personality.

#### 5. Rhythm in Ibibio

As already pointed out, Ibibio has a syllable-timed rhythm: every syllable tends to receive an equal amount of accentuation. In utterance like:

Ákón ádó áyin éká mmi - Akon is my sister.

we notice that there are five words of ten syllables: A-kon a-do a-yin e-ka m-mi. It takes approximately the same amount of time to say A- as it will take to say -kon. Also where a word has two syllables as in A-kon; a-do; the first syllable is rendered on a much more emphatic accentuation. Where the words constitute single syllables, they are equally emphasized as in 'ben' and 'sio' in the utterance:

/bén/ /kpó ádò sio/ - Take that thing away.

Ibibio tones also contribute to the rhythm of Ibibio: the rising and falling of pitch constitutes the essence of the melody of the language. The melody resides in the individual words in the first instance, where the words have more than one syllable, and then in the entire utterance as in:

Ubok utom /úbòk útóm/, Craft, hand work;  
sòp di /sòp dí/, Come quickly.

Ibibio tones vary when words occur together as has been shown above in section 2. This affects the rhythm of the language. For instance in 'ubòk' and 'utom' the individual words which have high tones change to three high tones and a final low tone. Though there are certain word combinations which resist this tendency so many words in Ibibio follow this pattern and the rhythm of Ibibio tends to feature low tones at the end of utterances.

The other very important features of Ibibio rhythm has to do with the behaviour of high tone in association with other succeeding high tones. For instance in the utterance:

ke ubak usen ado / ke ubák usèn àdò/ That early morning

we find that the phenomenon of downstep operates. Here, the second high tone is slightly lower than the initial high tone. The result is that in a sequence of many words in an utterance in which each word begins on a high tone, the final high tone will be rendered virtually on a low tone. In the above examples all the words except 'ubak' have high tones as individual words but in association with other high tones, the tones on the last two words are altered. The same phenomenon obtains in:

mbóm éti òwò ádò - pity (expressed) for a good person.

## 6. Rhythm in English

English rhythm is regular and quite often predictable. This is because of the stress-timed nature of the language. The alteration between accented and unaccented syllables produces the flow of the language. For example, the sentence:

Can I have your pencil, please?

has three accented syllables and four unaccented syllables. The syllables carrying the accentuation are signalled to the listener by means of pitch prominence. Those not accented are articulated faster. An utterance containing more content words - nouns, verbs, adjectives, adverbs - has more accentuation than one having more form words - pronouns, prepositions, conjunctions. Negative markers and demonstratives are also often accented in English. But where a special effect or emphasis is required, any word in the sentence can be accented. The following examples demonstrate the accentual pattern in English:

'This is a 'book (2 stresses).  
I 'want a 'pen' 'not a 'pencil (4 stresses).  
This is 'my 'ruler not 'yours (contrastive).

It is the alternation between the prominence given to accented syllables and the lack of prominence which leads to hurrying over the unaccented syllables that give English its speech rhythm.

Another observation about English speech rhythm is that accented syllables tend to have the same interval of time between them even though the number of unaccented syllables may be different. If there are several unaccented syllables, the rhythm is fast. If there are no unaccented syllables the rhythm is slow because the accented syllables are often spoken more slowly. Also to maintain the natural rhythm in English, it is important not to realize the weak forms as if they were strong forms. This is because structural and form words have weak and strong forms. The weak forms are hurried over in English speech. In the following examples, the strong forms of the structural words have been capitalised to give an idea of how they are normally said:

What are you looking At?  
I'm looking at the house.  
Can you swim?  
Yes I CAN. I can swim very well.

## 7. Ibibio and English Rhythm and Intonation: Comparison and Implications

From the foregoing discussion of issues in the rhythm and intonation of English and Ibibio, it is clear that the rhythm of Ibibio is different from that of English: every syllable in Ibibio is strongly accented. The accentual patterning of English on the other hand is quite complex and tends to follow specific phonological rules. For example, in an unmarked utterance, every noun, adjective, full verb, adverb and relative pronoun tends to be accented, other words are normally not accented. In a marked utterance, however, practically every word in English can be accented. The above is owing to the syllable-timed nature of Ibibio as contrasted with the stress-timed nature of English.

Also following the usual nature of the tone languages Ibibio tone operates on words. A change in tone can, and often does, lead to a change in meaning of the word. Again, tone in Ibibio has grammatical function in that words in association tend to compel changes in tone which do not necessarily lead to changes in meaning. On the contrary, English is an intonational

language. Like other languages of this class, intonation operates on the sentence and signals not a change in meaning as such but a change in a shade of meaning.

Two other issues in relation to rhythm are worthy of mention. Ibibio constantly admits the use of 'O' at the end of an utterance resulting in what has come to be called the 'O' intonation pattern. In an utterance of more than one word, the Ibibio language tends to have a progressive reduction in the pitch; a high tone after an initial high tone tends to be progressively lower in pitch than the preceding high tone. This feature generally referred to as downstep, does not operate in English.

The implication of the above differences in the rhythm of Ibibio and English is that an Ibibio speaker of English will tend to employ syllable-timed rhythm in rendering English utterances. In other words, Ibibio speakers of English will tend to place accentuation or at least make prominent almost every syllable in an English utterance. Also, contrastive emphasis as in

I 'saw her and I saw 'her.

would prove difficult for an Ibibio speaker of English.

With regard to intonation, many Ibibio speakers and learners of English will tend to have a falling intonation pattern for many utterances: questions, statements or commands. Also, the combined intonation patterns - bi-directional patterns-like the falling-rising tunes and the rising-falling tunes are likely to be problematic to Ibibio speakers and they are likely to use the falling tune again in such situations. In spontaneous speech, there will also likely be a tendency for Ibibio speakers to introduce the intonation patterns peculiar to Ibibio namely, the 'O' intonation pattern and the special imperative and interrogative intonation patterns into English.

## 8. The Findings

Our test was aimed at finding out the extent to which Ibibio tone and rhythm may be said to affect or interfere with the realisation of English intonation and rhythm. It was made up of a passage which was to be read at normal conversational speed to test the subjects' disposition to accentuation, and another section containing five sentences also to be read at normal speed and the informants' ability to use English intonation assessed. Details in respect of our subject's performances are shown in Tables I and II.

INTONATION PATTERN	NO. Able	No. Not Able	Percentage Able	Percentage Not Able
1. Rise, Rise, Fall or Fall, Fall, Fall	27	33	45	55
2. Falling tune + low-level tag	28	32	47	53
3. Rising tune	60	0	100	0
4. Rising and Falling tune	6	54	10	90
5. Falling tune + Falling tag	2	58	3	97

TABLE II: REALISATION OF ACCENTUATION PATTERNS

CATEGORY	Average No. Able	Average No. Not Able	Percentage Able	Percentage No. Able
1. 3 stresses, no pause	26	34	43	57
2. 2 stresses, no pause	27	33	45	55

#### 9. Discussion

As can be seen from table 1 above the subjects were able to read the sentence with the rising tune. We however observed that all the words in the sentence were accented so that the sentence which would be normally produced as:

Do you 'like' rice

was realised as

'Do 'you' like 'rice

The worst produced patterns were the rise-fall and the falling tune followed by a falling tag in the sentences

Early last year, Paul went to Abuja.  
That was the problem, wasn't it?

The reason for the poor performance can be attributed to the tag: the informants did not appear capable of realising it with the pattern. The performance in numbers I and II though better are still below average. This we put down again to the presence of more than one tune. This state of affairs vindicates our suggestions in section 7 about the production of unidirectional and bi-directional tunes.

Table II reveals that the problem with accentuation is not as acute as we suggested. However, in each category <sup>6</sup> less than a half (50%) were able to read the sentences giving the appropriate accentuation and avoiding pauses between the words. That the problem has not been as acute as anticipated shows that there has been an intervening variable which we identify as the quality of teachers and teaching in the school visited.

#### 10. Conclusion

The above results show that there is no one to one correspondence between the syllable timing in Ibibio and stress-timing in English. Also, a great majority of our informants realised appropriately, utterances requiring unidirectional intonation patterns: the fall and the rise while the bi-directional intonation patterns: the rise-fall, the fall-rise and other combinations tended to be difficult for them.

With regard to pauses, we found that many of our informants used irrelevant pauses thereby obstructing meaning. Also hardly did any informant use syllable-timing in its pure form in the realisation of English utterances. What featured was a predominant use of accented syllables. The rhythm of Ibibio English can therefore be described as having a peculiar syllable-timing with a preponderance of accented syllables.

#### END NOTES

1. Essien (1990:52).
2. Abercrombie (1983:97).
3. The existence of syllable-timed and stress-timed rhythms was first pointed out by Arthur Lyloyd (1940:25) and he called them "machine-gun rhythm" and "morse-code rhythm". The terms syllable timed and stress-timed were coined by K.L.Pike (1945:35) and first used by him in 'The intonation of American English'. (See Abercrombie 1967:171).
4. Though a tonal language, Ibibio also utilises intonation (Cf Essien: 1989:99, Urua 1987-14-43).
5. Urua (1987:117-121) analyses contour tones in Ibibio as resulting from segment deletions and therefore not significant. We, however, agree with Essien (1990:53-54) that contour tones in Ibibio are significant and contrast with high, low and downstepped tones.
6. Of the ten sentences which the subjects were supposed to read at normal speed giving correct accentuation, four had three accented syllables while six had two. The average score of the sixty subjects are therefore presented in two categories.

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