

Tone, Intonation And Pitch-Accent In Igbo

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Abstract

Pitch is an overriding prosodic feature that cuts across all languages. The universality of pitch while not disputable, the manner/pattern of application in various languages differs. This has resulted in the designation of languages as Stress/Intonation; Tone; or Pitch-accent languages. Igbo is classified as a tone language. This paper examines Igbo language as it exhibits tone, stress and pitch accent. It argues that all these pitch patterns are manifested in Igbo in varying degrees and concludes that the erstwhile straitjacket designation of languages as tone; stress/intonation or pitch-accent be revisited such that more details of the prosodic characteristics be reflected.

Keywords: pitch; tone; intonation; pitch accent; Igbo.

Introduction

Pitch is basically acoustic and has often been defined thus “sounds may be generally characterized by pitch, loudness and quality. The perceived pitch sound is just the ear’s response to frequency...”¹. The concern in this paper though, is restricted to pitch in speech, often equated to fundamental frequency (F_0).

Pitch in speech is generated at the larynx as a result of the vibration of the vocal cords/vocal folds.

The higher the vibration of the vocal cords the higher the pitch. The rate of vibration of the vocal cords has been the basis for the identification of voice quality in gender terms. The average male voice is lower in pitch than that of his counterpart female. The child’s (male or female) is highest in pitch. Languages are prosodically classified in terms of their use of pitch. So far three basic categories of languages are designated in phonological literature.

They may be diagrammatically captured as seen below:

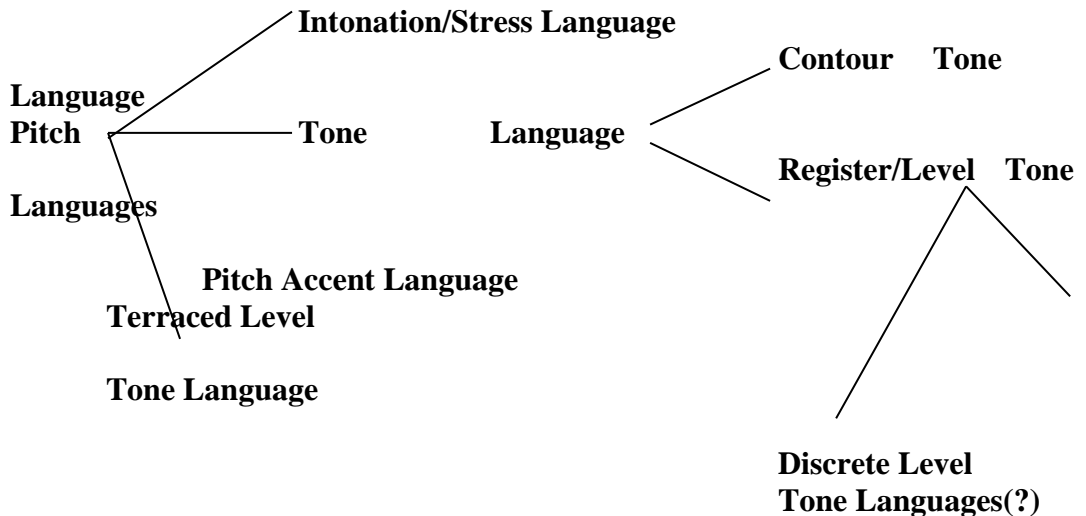


Fig. 1

1.1 Intonation/Stress Language

Stress is the defining characteristic of the intonation language. It inheres in the prosodic weighting of relative prominence as it were of the component syllables (often mapped into feet) of a given utterance. The effect of stress is often cumulative as it becomes more pronounced in longer utterances such as phrases, clauses and sentences. Canonical examples of stress/intonation languages are generally from the Germanic Group of the Indo-European language family. Of this group the English language is apparently the most cited probably due to the largely indepth study of this linguistic feature in English, Daniel Jones (1960) Abercrombie, D. (1967) O' Connor (1980) Gimson, A.C (1980) Cruttenden, A. (2014) Hyman, L (2010) states”...what makes English so unambiguous is that metrical stress is multiply ‘activated’ throughout the phonology...English ‘cares a lot more about stress than many other “stress languages”

For intonation, pitch is applied to word groups-phrases, clauses, sentences for a change of meaning, and the change here is not ‘lexical’ but attitudinal. A grammatical dimension may be involved in some cases as in:

- i. He ‘saw the ‘cat.
- ii. He saw the cat.

The first utterance using the high fall (HF) tune is a mere statement of fact while (ii) using the high rise (HR) is not only a question but implies some element of surprise on the part of the speaker. In both utterances the semantic component of each word/lexical item remains the same.

1.2 Tone Language

A tone language typically applies pitch variation to each syllable of a word either individually or in constructions such as phrases, clauses and sentences.²

The pitch variation is with meaning implications as in the following examples:

Igbo		Yoruba	
H H oke	‘male’	M H igba	‘calabash’
L L oke	‘share’ eg one’s share	L L igba	‘time/period’
L H oke	‘rat’	M M igba	‘two hundred’
H L oke	‘boundary’		

When tone is used to distinguish meanings between morphemically identical words, it is said to be performing a lexical function. If however it semantically distinguishes between phrases, clauses, sentence or any other syntactic structure. It is said to perform a grammatical function.

Igbo

HHHHL	osisi ụkwa	‘breadfruit tree’
LHHHL	osisi ụkwa	‘cooking of breadfruit’
LLLHL	osisi ụkwa	‘hardening of breadfruit’
HLLLHH	Ọ biara ahia	‘He/she came to the market’
LLLLHH	Ọ biara ahia?	‘Did he/she come to the market?’

As seen on fig. 1 there are different categories of the tone languages. There are the contour tone languages with examples such as Chinese, Vietnamese and other South-east Asian languages, on the one hand and the level tone languages, with examples such as Igbo, Yoruba, Akan, most African languages on the other. The basic distinctions are those of pitch realization, number and function.

There is generally an ‘unsteady’ outlook for the pitch patterns of contour tones hence there could be a glide from one pitch level to another within a lexical item as seen in the following.

mā	[[˥]]	‘mother’
má	[[˨]]	‘hemp’
mǎ	[^{˨˥}]	‘horse’
mà	[^{˨˩}]	scold

Adapted from Hyman, 1975

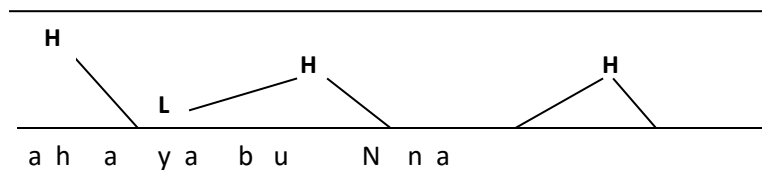
For the contour tone languages there could be up to six (6) pitch level distinctions or tones. In the contour tone language the function is lexical. The level Tone Languages have steadier pitch levels or tones high (H) mid (M) or low (Low). More often than not in the latter there are between two and three tones, and the function of tone is both lexical and grammatical.

The level tone language had also been categorized into two the terraced-level tone language as against the Discrete level tone language. (Welmers, 1959).

The Terraced-level tone languages possess the phonological phenomenon known as downdrift. Downdrift traditionally is said to result in the drop in pitch level of a high tone when preceded by a low tone and followed by yet another low tone. Hence in a phrase of the tonal make up:-

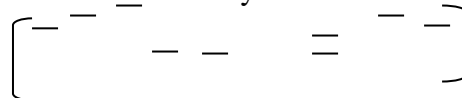
$L - H^1 - L - H^2 - L - H^3$

the second high tone is lower in pitch than the first but higher than the third, so some terrace pattern emerges.



For the Discrete level tone each pitch level remains more less static as it were. Diagrammatically, Welmers gives the Jukun example:

/ani ze sura a syi ni bi/ who brought these yams.



The existence of a discrete-level tone language has been disproved by subsequent researches. Yoruba language which was cited alongside Nupe and Jukun as depicting the discrete-level tone has been seen to possess according to Connell & Ladd (1990) a pitch pattern referred to as a ‘hog-back ridge’ tonal pattern whereby a preceding high tone is followed by a much higher pitched high tone.

Generally, the discrete-level tone language has not been validated by research based on any digital/computer based investigation.

1.3 Pitch-Accent

Pitch-accent languages combine in varying degrees, tone and intonation features. In a given lexical item a syllable gets the prominence over any other. This prominence which in many cases is reflected as a high tone, could also be a low tone. Basically there is a critical pitch change that results on the prominent syllable. Hayes (2009) profiles pitch-accent languages as follows:

Pitch accent languages are something of an intermediate case. Pitch distinguishes words... Pitch accent languages differ from pure tone languages in that words can only have one prominent syllable. This

syllable serve as the anchor point for a pitch change and pitch in the remainder of the word is predictable or determined intonationally.

Japanese is generally accepted as the epitome of pitch accent languages. Swedish with her word-accent is also classified a pitch accent language

Japanese

- i. na ga ‘vegetable’
- ii. makura ‘pillow’
- iii. kaki ‘fence’
- iv. okoro ‘heart’

Adapted from Katamba (1989)

In the above example (i) and (ii) have prominence on the first mora (iii) has prominence on the second mora while in iv it is the second mora.

Swedish Word accent also typifies the pitch accent. The language has two accents. In a given lexical item the prominent syllable may bear either the Acute or Grave accent.

Swedish

klòra stègen ‘manage the ladder’

klòra stégen ‘manage the steps’

Gosta Bruce (1977).

The compartmentalization of languages prosodically as seen above has raised some serious analytical issues that some scholars have had cause to draw attention to, and sometimes proffer solutions.

Van der Hulst (2009) comments as follows:

A considerable number (probably the majority and to me: all) of the worlds’ languages display a phenomenon known as word stress

Hyman, Larry 2010 states:

The approach that I advocate is what I call ‘Properties-Driven Typology’ (PDT).

Whereas word-prosodic typology has been concerned with pidgeon-holing languages and given them names such as ‘tone’

‘stress’ and ‘pitch-accent’...the approach PDT is to eschew this concern and typologize on basis of individual properties which may or may not satisfy preconceived definitions and proto types.

2.0 Igbo Language

Igbo language belongs to the Benue Congo Language family. It had been classified by Greenberg (1967) as belonging to the Kwa Subgroup of

the Niger Congo language family. The language is spoken in the South East of Nigeria by an estimated over forty-five million native speakers.

Igbo has two basic tones high (H) and Low (L). Prosodically, Igbo is a tone language of the Terraced-level extraction. As I would subsequently show the language has aspects of intonation and pitch-accent as well.

2.1 Intonation in Igbo

The phenomenon of downdrift which manifests extensively in Igbo language is intonational. It can be compared to declination in intonation or stress languages. The pitch declination unlike earlier reports is not restricted to only L-H-L-H constructions. It is there in all tonal patterns including H-H-H-H and L-L-L-L. The first high H in the all high sequence is higher in pitch than all the others. The declination of pitch however is not as steep as in the L-H-L-H construction. Similarly in the all low (L) sequence the first low is high in pitch than the rest and each subsequent low is lower in pitch than the preceding one. Downdrift is automatic while the downstep, another phonological phenomenon often discussed alongside the downdrift in the language is not. The downstep is contingent on a number of factors such as the elision of segment(s) or lexical items and the indication of focus. (Ikekeonwu, 1993).

2.2 Pitch-Accent in Igbo

Pitch accent manifests in two basic ways in Igbo (i) Lexically (ii) phrasal/sentential form. In some dialects of Igbo especially the Northern Igbo dialects of Izi and Ezaa, often classified as the Abankaleke dialects, there exists the High Raising Tone (HRT). The HRT would generally occur between low tones in certain lexical items.

Izi

ìgbe'`rì	'guinea corn'
àshĩmòkù	'groundnut'
èku'`tàrà	'right hand'
àkǎ hù	'old/elderly'

Adapted from (Obianika, 2012)

The HRT is generally higher in pitch than the average high tone in the dialects. The latter could occur elsewhere viz word initially, medially or finally in constructions with other high or low tones. The HRT as it occurs in these dialects depict the pitch accent in the words where they occur. These words are, however, relatively few.

Another tonal phenomenon in Igbo that lends credence to the existence of pitch accent in the language is the alternation of pitch, as it were, among grammatical structures. For instance, for the declarative sentence the verb root must bear the low tone irrespective of their inherent

tones. For the future particle ‘ga’ must bear a low tone while the verb root to which it is prefixed retains its inherent tone. In the serialization of verbs there is also a fixed pitch pattern. If the inherent tone on the verb root is high, then it is retained and is followed by a high toned suffix.

If, however, the inherent tone is low, it is followed by a high toned suffix. See A – D below.

A

zù	zùó	‘buy’
zà	zàá	‘sweep’
mé	mèé	‘to do’
pú	pùrù	‘germinated’
wè	wèré	‘take’

B

zú	zúghì	‘did not buy’
zá	zághì	‘did not sweep’
mé	méghì	‘did not do’
pú	púghì	‘did not germinate’
wè	wéghì	‘did not take’

C

zú	gà-àzú	‘will buy’
zà	gà-ázà	‘will sweep’
mé	gà-èmé	‘will do’
pú	gà-èpú	will germinate
wè	gà-éwè	‘will take’

D

Ó	biàrà	zúó,	rié,	núó,
láá.				
He/she came	bought	ate	drank	left.
Yáá	pùó,	dàá,	wùó,	bàá
núlo.				
he/she went out	fell	jumped	entered	the house

A-D show that in each example the pitch makes a syllable prominent. It could be high or low but it is predictable based on the syntactic structure of the utterance.

Conclusion

It is clear from this paper that there are significant overlappings between the current universal taxonomy of prosody, lumping languages together as either stress/intonation or tone or pitch-accent. Most languages

are a combination of these categories. It is important from this perspective to revisit the classification.

I believe the PDT would prove a very useful tool of analysis of the prosodic affiliation of languages. However, the broad categories should still be retained as basic or broad outlines to capture the generalizations.

For instance, a language may be classified as basically stress/intonation while the properties would then reflect the existing elements of tone or pitch accent in the language, as the case may be. Alternatively, the PDT approach could be used more or less exclusively in the description of the prosodic properties of languages without recourse to the broad classifications. Then there would be need for the establishment of new types or categories but this may not be sustainable as the significant overlaps would still necessitate comparisons that would still point to the broad categories. I would suggest the two approaches be complementary.

Notes

1. Pitch-Hyperphysics
Hyperphysics, phy-astr.gsu.edu/hbase/sound/pitch.html
2. While Pike (1948) contends that of a necessity each syllable bears a distinctive tone, Welmers (1975) presents instances of some 'toneless' syllables.

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