A COMPARATIVE ANALYSIS OF THE TONE SYSTEMS OF IBIBIO AND IGBO

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Abstract

This paper aims at investigating tone in Ibibio, a Lower Cross language and Igbo a Benue Congo language. The specific objectives are to identify the types of tone level that they have. It further examines the tonotactic patterns of the two languages in order to determine their similarities and differences. The study adopts the auto-segmental theory of analysis. The paper finds out that Ibibio has register and contour tones whereas Igbo has only terrace register tone system. Tone in the two languages perform lexical and grammatical functions

1. Introduction

Ibibio belongs to the Lower Cross language group of the Benue-Congo branch of the Niger-Congo language family (Williamson, 1989). The Ibibio language is the lingua franca in Akwa Ibom State. It is a language that is largely spoken in fifteen local government areas out of the thirty-one local government areas of the State in the South-Eastern part of Nigeria. It is mutually intelligible with the other existing dominant languages in the state such as Anaang and Oro. Ibibio is a tone language and each syllable is assigned a tone unit. The syllable structure in Ibibio comprises vowels and syllabic nasals. Tone contrasts meaning in the words, phrases and sentences of the language. There exist two types of tones in Ibibio, namely the register (level) tone and the contour (glide) tone. Tone carries out lexical and grammatical functions. Some tonal processes change from register tone to contour tone and vice versa in syntactic constructions. Furthermore, some tones float and become linked to neighbouring segments to contrast meaning.

2. Types of tone

Tones manifest in different ways in various languages. Ibibio is a classic example of a terraced level tone language with two basic levels or stable tones, namely, the high and the low tones. According to Trask (1996:358) in Urua (2000:158), terracing tone system is, "any of various phenomena in tone languages in which the absolute pitches realising particular tones change in a systematic way during an utterance". There are high (H), low (L) and a down-stepped tone or down-stepped high tone (!). Other tonal realisations include a high-low (falling) and a low-high (rising) contour tone as observed by Essien (1990), Urua(2000) and Udoh (2012).

2.1 Register Level Tone

As the name implies, the register level tone is a simple and stable pitch level on a syllable of a language. There are two level tones in Ibibio- high and low and a modification of these two tones result in down-stepped tones.

The low tone (L) is a level tone that is marked by grave accent[̀○]. It is a tone that has low pitch level during its production. Mostly, the low tone is mapped on vowels and syllabic nasals in words, it may occur at the initial, medial or final positions. Sometimes, the pitch of this tone affects the preceding or following tones thereby having sequence of patterns as in the examples below:

	Words	Gloss	Tone Pattern
(1)	(a) bìp	'ask'	L
	(b) bà	'stay'	L
	(c)ènò	'gift'	L-L
	(d)èbè	'husband'	L-L
	(e) ètè	'father'	L-L
	(f) ìnààn	'four'	L-L-L
	(g) èsìòn	'outside'	L-L-L
	(h) m̀fón	'goodness'	L-H
	(i) imăm	laughter	H-LH
	(j)é!kàk	game	H!L
	(k) ŋwèd	book	L-L
	(l) ékpàt-ńwèd	schoolbag	H-L-H-L

It is observed that low tones occur on vowel segments as well as the syllabic nasal except mostly in a compound noun where it changes to a high tone.

The high tone (H) is a level tone that is marked by an acute accent ['']. It has a high pitch level and may occur initially, medially and finally on the syllables of words. It occurs mostly at the nasal syllabic prefix as well as the final position of disyllabic words. Its pitch precedes and follows other tones thereby causing varied tone sequences in words. Examples:

(2)	Words	Gloss	Tone Pattern
	(a) tá	eat	H
	(b) kpá	die	H
	(c) tùá	cry	L-H
	(d) kpèyé	beg	L-H
	(f) ɪtìát	stone	H-LH
	(g) ékpé	lion	H-H
	(h) Ọ́!bọñ	cane	H!L
	(I) m̀brè	play	L-H
	(J) Ọ́!bọọñḿbrè	the leader of a play	H!-L-L-H-L

The down-stepped tone is marked (!) phonologically. It occurs after the preceding high tone, that is, when the pitch on the succeeding syllable of the word is slightly lower than the pitch on the preceding syllable. It does not occur at the word initial position of any word, which stands in isolation. The down=stepped tone has been argued to be a juncture tone (see Mbah, 2010). It occurs in the following examples:

(3)		Words	Gloss	Tone Pattern
	(a)	ú!bɔk	hand	H!H
	(b)	ú!kàt	bondage	H!L
	(c)	ɪ!de	strength	H!
	(e)	m̀!bɔk	wrestling	H!LH
	(g)	ú!kɔp	lid	H!HL

It can be observed that the down-stepped tone occurs mostly on the first syllable prefix with other possible level tones that can possibly be combined.

The contour or gliding tone is a tone with gliding pitch movement on the syllables of a language. Udoh (2009:80) describes contour tone as, "a combination of two level tones or as 'tone clusters". It involves an upward or downward pitch shift on a single syllable; that is, it has an internal pattern of rising and falling pitch. The tones have high-low pattern (H-L) and low-high (L-H) pattern.

High-low(rising) contour tone is the type of tone with a high low gliding pitch level, which occurs mostly at the medial or final positions of words. It has a distinguished word meaning. Examples are:

(4)	Words	Gloss	Tone Pattern
	(a) ùnên	'hen'	L-HL
	(b) ùkwâk	'iron'	L-HL
	(c) ékǫ̂m	'greeting'	H-HL
	(d)éyôp	'palm fruit'	H-HL
	(e)édídêm	'king'	H-H-HL
	(f) Ínân	'four'	H-HL
	(g) énân	'cow'	H-HL
	(h) èbên	'pear'	L-HL

Low-high (falling) contour tone is atone that glides from low to high pitch level, which contrasts to make meaning distinct. It occurs mostly at the final position. Examples are:

(5)Words	Gloss	Tone Pattern
(a)ḿfõn	goodness	H-LH
(b) fórŏ	be rich	H-LH
(c) éfĭd	fifteen	H-LH
(d) ǫfõn	cloth	L-LH
(f) ńdúbă	competition	H-LH
(g)édĭ	come (many people)	H-LH
(h) wànă	share	L-LH

Tonal homograph in Ibibio

Ibibio is one tone language that manifests items that are homophonic based on tonal parameters (Urua, 2007:58). The Ibibio language manifests tonal differences in its word form that has the same segments as another word, usually having a different etymology. In other words, tone in Ibibio, when it is the same in words may produce polysemous words.

6.	Words		Gloss
(a)	ésít		heart
	ésít		inside
(b)	íkọt		bush
	íkọt		family
(c)	éfĩd		fifteen
	éfĩd		matchet
(d)	ábrè		snake
	àbrè		wateryam
(e)	íbèt		commandment
	íbét		forbidden

4.1 Significance of tones in the Ibibio language

Tones make meaning distinctive especially at the lexical and grammatical level. At the lexical level, tone produces minimal pairs:

7.		Words	Gloss
	(a)	ńtàŋ	sand
		ńdàŋ	lies
	(b)	íkpɔk	rashes
		ḿkpok	peel
	(c)	Ákpán	first son
		ákpãn	luggage
	(e)	éfĩd	fifteen
		éfîd	buttocks
	(d)	ḿkpàí	kernel
		ékpai	fish
	(e)	ńkàn	charcoal
		íkàn	fire
	(f)	ábrè	snake
		ébre(ábrè)	water yam

The above data have minimal pairs in which the tone pattern of phonemes and segmental phonemes enter into composition with the same morpheme. Tone also produces **g**rammatical contrasts in Ibibio as in the following examples:

Pronominalisation

Tonal differences become prominent in personal pronouns depending on the grammatical functions involved; the first person singular tends to have a high tone on the first syllable while the second and third persons take a low tone; examples are:

8.	Singular Person	Gloss	Plural Persons	Gloss
a.	ámíńdɪá	I eat	d.ńnyɪnídɪá	We eat
b.	àfòádɪá	you eat	e. ñdùfòèdɪá	You eat
c.	ènyéàdɪá	S/he eat	f.ǒmmôèdɪá	They eat

Disyllabic verbs

Verbs in Ibibio indicate the action carried out by the subject in a sentence. The disyllabic verbs have two syllables; the final syllable usually ends in a high tone, e.g.

9. Words   Gloss
(a).dáárá   be happy
(b). tòɪyo   remember
(c).kpèìyé   plead
(d).tèmmé   tell some-one
(e)bènné   carry something away
(f).sòɪyo   come down

In the above examples, the disyllabic verbs fuse with fossilised forms to form words. It is observed that most disyllabic verbs have fixed high tones at the final positions of words and phrases.

Nominalisation

This is a category changing process in which the words of other grammatical classes, phrases and clauses behave like nouns and occupy typical noun positions. This process takes different forms as in:

Noun-noun construction

This is an associative nominal construction whereby the following noun acts as the post-modifier to a preceding noun, while the first noun functions as the head noun. For example:

10	Words	Gloss
(a)	úfôkíbọk	'hospital'
(b)	òwòékọñ	'soldier'
(c)	ŋ́kpọítìè	'chair'
(d).	énàñúkwàk	'bicycle'
(e)	èkébèǹdìsé	'television'

It is observed that the following nouns can take low or high tone while the preceding noun (head) mostly takes a high tone.

Verbal nouns

These are nominalised verbs, which may be a single lexical item, where nouns are derived from verbs in a language through pre-fixation. The tones of these nouns are low while the verbs maintain their usual tone with a high or low tone prefix as in the examples:

11.	Words	Gloss	Word	Gloss
a.	dùàk	'wish something'	ùdùàk	'proper noun'
b.	bọ	'take'	ébọ	'bald head'
c.	tà	'eat'	ɪtà	'three'
d.	kpà	'die'	ɪkpà	'cane'

Adjective-noun construction

In the Ibibio language, adjectives do precede the noun they modify with varied type of tones while the noun indicates plurality by alternating the vowel prefix in the singular with the high tone syllabic nasal indicating plurality.

12	Singular	Gloss	Plural	Gloss
a	.àfiáòwò	'fair boy'	ńfiáòwò	'fair boys'
b	.ètìùtòm	'a nice job'	ńtìùtòm	'nice jobs'
c	.àbùbìdèbòd	'a black goat'	ḿbùbìdèbòd	'black goats'
d.	àyànétò	'a long stick'	ńyànétò	'long sticks'

Interrogative words

Tones are used to differentiate statements from questions as exemplified in 13:

13.	Statement	Gloss	Question	Gloss
a.	ámíńkérèÈtɩm.	'I am Etim'.	àmɩńkèrèÉtɩm?	I am Etim?
b.	àfòàkăńwèd.	'You go to school'	áfòàkăńwèd?	You go to school?
c.	àdɩáńkpɔ.'	(You) eat food'	ádɩáńkpɔ?	(You) eat food?

Tense

Tones also mark differences in their tense system

14.   Present tense   Gloss   Past Tense

    ènyèàdɩáédèsɩ   'She eats rice'   ènyèádɩáédèsɩ-'She ate rice'

ḿfònm̀mèÍmàèkăurua   'Mfon and Ima go to market' ḿfònm̀mèÍmàékăurua -'
Mfon and Ima went to market'

5.1   Tonal Processes in Ibibio

Tonal processes are those processes undergone by tone to exert the pitch level of a language. According to Urua (2000),the tonal processes attested in Ibibio include:

Tonal Spreading

Tonal spreading is a tone associated with a single vowel in a language that can spread to an adjacent vowel or tone-bearing unit. According to Urua (2000:166),

> "it is generally restricted to the class of noun. Noun with underlying H-L patterns are realised phonetically as a high pitch followed by a fall from the high pitch to derive an H-HLA HL contour tone is created on the second tone-bearing unit of the item. This is as a result of the initial high tone being spread to the following low tone".

15. Words   Gloss

a. /íbààn/ ⟶ [íbáàn]   women

b. /íbɔk/ ⟶ [íbɔ̂k]   medicine

c. /ékòm/ ⟶ [ékôm]   greeting

d. /ísoŋ/ ⟶ [ísôŋ]   ground

e. /ékpàt/ ⟶ [ékpât]   bag

It can be observed that the tone in the first syllable spreads to the second syllable thereby creating a contour tone. In example 15, the underlying

low tone is changed to a high-low tone as a result of the high tone spreading into the following tone unit.

Tonal delinking/deletion

According to Urua (2000:167), tonal deletion,

> is restricted mainly to low tone when followed by a high tone, particularly in syntactic constructions. Although such tones appear to have been deleted at the surface structure, the impact of such a deleted low tone is usually felt by the lowering of the following high tone, e.g.

16.   Words   Gloss
a. áwàt + ùbòm ⟶ áwàrù!bòm   'one who rides a canoe'

b. ébé$_+$ ìbààn ⟶ ébí!bààn   'one who marries many wives'

From the above examples, it is observed that the effect of the initial low tone on the second item gives rise to a down-stepped high tone where the vowel of the first item is deleted leaving the higher vowel from the second item.

Tonal linking/re-linking

When a tone bearing segment is deleted in Ibibio, the tone may not necessarily be deleted: rather, it is re-assigned to the following tone-bearing segment usually to the right provided that the deleted segment and the potential receiver do not have identical tones. A contour tone is always created in this situation (Urua, 2000:168)

17. Words   Gloss

a.   /m̀bíré/ ⟶   [m̀brě]   play

b.   /m̀bòrò/ ⟶   [m̀brǒ]   banana

c.   fìdè ⟶   [frě]   forget

Thus, tonal re-linking occurs where the tone floats to create a contour.

Tonal simplification

This involves the simplification of contour tones into level tones. It is observed that contour tones are created in Ibibio by the juxtaposition of the two polar level tones-high and low (Urua 2000:178),e.g.:

17.   Words   Gloss

a.   úfôk +íbɔk   [úfòkíbɔk]   hospital

b.   ìsɔŋ + úfôk   [isoŋúfòk]   room

The contour tone is observed in 'íbɔk' and 'úfôk' in example 17.

Downdrift tone

According to Urua (2007:158), "downdrift involves a phenomenon where a high tone following a low tone is realised on a (slightly) lower level than a preceding high tone in the sequence". It occurs mostly in a phrasal sequence between high and low tones where the high tones become lowered in an interaction, e.g.

18.   Words   Gloss
(a)   ùbòm Ímè ànà mọ̀?   Where is Ime's canoe?
(b)   ú!mì kè ndì.   Here that I come.(I'm coming here).
(c)   bèn údìá òdò dì.   Bring the food here.

Finally, in Ibibio, tone progresses from the level tone to contour tone level. Tones affect each other phonetically, such that pitches of subsequent high tones may be lower than the preceding tones and vice versa. Tone is observed to make lexical (contrast meaning) and sentential (mark grammatical functions) differences in the language.

Tone in Igbo

The study of tone in Igbo dates back to the 19th century. Ganôt (1879) compiles a glossary of Igbo terms with their translations into French. Even though he appears to observe the existence of tone in the language,he does not discuss it. The first serious discussion of tone started with Rev. Bargery who first published the Hausa dictionary in 1926. Captain R. C. Abraham was initially opposed to the idea of tone. After being convinced by Bargery, he became a tone analyst. His (1967) publication refers to the down step as tone switching.

This term according to him is caused by the fact that Igbo has more than one mid tone. He classifies the tones in Igbo as high, mid, low tone, very low, deep and profound. Except for the profound low tone, the rest of the tone types are successive step tones. The analysis of Abraham is a development of Ward (1936). Ward was one of the first linguists who came from the School of Oriental and African Studies, University of London. She had earlier (before Abraham) classified the terrace-level pattern as a long run down. She was not conversant with the down step

tone and therefore she used musical scores to indicate the tones. The above position is maintained by Green and Igwe (1967) who explains that

> The fact that Igbo has only three level tonemes does not, of course, mean that only three tone, or pitch, levels are used by the language. An utterance may have five or six levels but they will consist in combinations of the three tonemes (p.7).

Welmers (1973) also describes the Igbo tone pattern. He identifies the high and the low tones. He distinguishes between the mid and step tones. He associates the step tone with Igbo and the mid tone with languages like Yoruba. With the publication of Welmers (1973), the step tone became associated firmly with the language. Nwachukwu (1976) and Emenanjo (1978) classify the tone pitches into high, step and low.

High Tone

It has an acoustically high pitch. It is usually represented by the acute diacritic mark (̍○ (H). It can:

- (a) begin a word or sentences e.g. aka [HH]
- (b) come in the middle or at the end of a word e.g. akwụkwọ (HHH)
- (c) be final in a word or sentence–akwa [HH]-cry
- (d) be reduced a little but not as low as to the level of a low tone, e.g. áká +Chí [HH H] = ákáChī [HH S] – hand of God

Low Tone

It has a low pitch level. It is marked by the grave accent (L). It can:

- (a) begin a word or sentence e.g. ala [LL]– land
- (b) come in the middle of a word e.g. azịza[LHL]- story
- (c) come last in a word or sentences e.g. ala [LL] - land
- (d) get raised to a down-steppped tone when it falls in between two high tones across word junctures e.g. ụlọ [HL] + oke[LH]– ụlọ oke [HSSH]
- (e) can be transformed to high when it occurs in a series and at syntactic junctures e.g. ala Igbo [LL LL] ala Igbo [LH LL]

Step Tone

It is a reduced high tone. It is usually marked with either an acute accent following a high tone or a raised macron over the letter (S) It

- (a) cannot start a word or sentence in isolation
- (b) can occur in the middle of a word e.g. náānị [HSH] – only, níīlé – all
- (c) can occur at word final positions e.g. égō [HS] - money, mmiri [HHS] – water
- (d) when it comes in between a series of high tones it can get raised or stepped up to a high tone e.g. égō + élé [HS HH] – égó élē [HH HS]
- (e) cannot follow a low tone

Tone behaviour in associative constructions

Emenanjo (1978) reclassifies the Igbo tones based on their behaviour in associative constructions. There are basically two tone groups: the group that comprises words ending in any other tone than the high tone, namely the high tone. When the members of this group occur first in an associative construction, they do not change their inherent tone patterns but change them when they occur in the final position, e.g.

19	a	áka +éwu	→	áka ewú
		hand goat		forelimb of a goat
	b	àkwá + ọkụkọ →		àkwá ọkụkọ
		egg hen		egg of a hen

In the above examples, the initial words have retained their inherent tone patterns because they occur in the initial position of the associative construction. By contrast, if the members of the second tone group occur in the initial position, that is, those with the down-stepped tone and the low tone, they change their tone patterns but they will not change their tone pattern when they occur in the final position of an associative construction, e.g.

20	a	ákwà + Íje →	ákwà Ijè
		cloth Ije	Ije's cloth
	b.	égó + nri →	égo nri
		money food	money for food

Functions of tone in Igbo

Emenanjo (1978, 2015), Nwachukwu (1995) and Mbah (1999) classify the functions of tone in Igbo into two: lexical and grammatical. However, technically speaking, lexical function is grammatical function. We are of the opinion that tone performs lexical and post-lexical or sentential

functions. At the level of word, tones contract contrastive relationships amongst themselves and form minimal pairs, e.g.

20 (a) óbó - sheath
         óbò - palm (of the hand)
   (a)   ényì - friend
         ényí - elephant

In the above examples, the pairs differ only in their tone patterns. They form minimal pairs because the meanings generated from there are contrastive. They have every other thing in common except tones, which must differ only in one pitch level. When the difference in two or more words result from more than one difference either in their tone or segment, then, the sets of word do not constitute minimal pairs. Sets of word are either minimal pairs or not. The terms 'near minimal pair' or 'near minimal trios' are inappropriate. Let us examine the following examples:

21   (a) i   óké - male
        ii   òké - rat
        iii   ókè - boundary
        iv   òkè - share
        (b) i àkwà - bed
        ii   àkwá - egg
        iii   ákwá - cry
        iv   ákwà - cloth

In 21a – b, i and ii, and iii and iv are in contrastive distribution. They form minimal pairs. If we adopt Trubetzkoy's (1969) nomenclature, each member of the pairs can be said to be in privative opposition to the other members of its own set. They are identical except that one has a tonal mark, which the other one lacks. In 21, example (i) has a final low tone lacking in example (ii), while example (iii) has a final high tone lacking in example (i). A similar opposition is seen in 21(iii) and (iv). They differ only in the fact that example (ii) has a final low tone while example (iv) has a final high tone.

Furthermore, in both sets of example, (i) and (iv) are minimal pairs. They differ in only one tonemic mark. While (i) and (ii), and (iii) and (iv) differ in the tone structure of the final syllable, (i) and (iv) differ in the tonemic mark of the initial syllables. The opposition between (i) and (iv) is also privative. However, in both sets of example, (ii) and (iii) are not minimal pairs. The difference is in the tone structure of the initial and

final syllables. Sets 21a and 21b present an interesting picture: each member has at least one feature marking it out from the other(s). It makes them have their different lexical properties. It is pertinent to note here that some lexical items, especially the morphologically induced ones, inherit their tones via derivational operation:

18(a)	ílì	-	tomb
	ílí	-	together (from li "fasten to")
(b)	ngwu	-	mystical tropic tree
	ngwú	-	digger (from gwu "dig")
(c)	éro	-	mushroom
	érò	-	thinking (from ro "think")

Opinion is divided as to regarding such gerunds as minimal pairs. Put differently, do we regard the down-step tone as an independent tone or as an allotone of the high tone? Our contention is that even though there are minimal pairs based on the opposition between high and step tones, such minimal pairs are very few. However, they should be adequately described in the phonology and morpho-syntax of the language. Such examples include:

22(a)	i	ókwú	-	word
	ii	ókwū	-	alter
(b)	i	óche	-	chair
	ii	óché	-	a scoop of fufu
(c)	i	Ókō	-	name of a town
	ii	ókó	-	tuber of or a stick of

In addition to 22, there are gerunds ending on step and forming minimal pairs with some basic nouns e.g:

23(a)	i	ívú	-	burden
	ii	ívū	-	to carry
(b)	i	ígwé	-	sky
	ii	ígwē	-	to grind

We believe that example 22-23 provides evidence for regarding the step tone as an independent tone in the language. The examples in 23 perform all the syntactic functions as other basic lexical items. In addition, they behave like the other nouns in the syntax of the language. They should

therefore be treated as basic lexical items. Their tone pattern should equally be re-appraised in the sense of 22.

Sentential functions of tone

Tone performs other functions at the post-lexical level. These functions have been pointed out by Emenanjo (1978) and elaborated on in Nwachukwu (1995). The first function is that tone distinguishes between cardinals and ordinals, e.g.

24(a)	i	élé ìsé		
		Antelope three	-	five antelopes
	ii	élé īsé -		fifth antelope
		Antelope five		
(b)	i	éhí àsáà		
		cow seven	-	seven cows
	ii	éhí āsáà		
		cow seventh	-	seventh cow

The second grammatical function of tone is that it differentiates questions from statements, e.g.

25 (a) i Ổ jere Owere(statement)
        He came
   ii   Ó jere Owere (interrogative)
        Did he go to Owere
(b) iHà gburu ágụ (statement)
   ii   Hà gburu ágụ (question)
        Did they kill a tiger?

The third grammatical function is that tone distinguishes between statements and relative clauses as in:

26 (a) i   Ngọzi byàra (statement)
            Ngọzi came

       ii   Ngọzi byára… (relative clause)
            Ngọzi that came
(b)   iÙdĕlĕ dàra n'ala (statement)
            Vulture fell on the ground
       ii   Ùdĕlé dāra n'àla… (relative clause)
            the vulture that fell on the ground

The role of tone cannot be sufficiently described using only a diachronic or a synchronic approach. A transformational analysis of sentences and phrases is necessary to account for how tone contributes towards the assignment of grammatical and other theta functions to lexical items. We argue that tone projects into phrasal forms. It varies its pitch according to its function and context. We shall use TNP for tone phrase. At the lexical level, Tn shall symbolize tone while Tns will represent tense. We shall indicate bar levels when such levels are necessary in our discussion. We shall assume that tone is an INFL category in the following paradigm. TNP dominates TP. This logically results from the fact that TNP determines the tone nature of TP and VP. Let us exemplify the above claim with the illustration below:

> 21   Ngọzi byàra
> Ngọzi come past – Ngọzi came

Example 24 has example 25 as its underlying form:
> 25   Ngọzi TNP   TP   byá

Each level syntactically stands in contrastive relation with the other(s). As such, inherent tone patterns of lexical items can be modified to alter the meaning of any syntactic structure. In other words, at the base generation level, each lexical item generated retains its inherent tonal property until it is interfered with by morphonemic principles. In 25, bya retains its high tone until the TP tone which is low, mapping unto –rV past marker, hops over it. Because TNP c-commands TP and bya, it also dominates them as a superordinate node. 24 is quite different from 26 below:

26.   Ngọzi byára..
> Ngọzi who came

Sentence 26 has the structure 27.
> 27   [Ngọzi [Comp [e TNP TP byá…]]]

Example 26 contradicts the tone pattern of 24. Example 27 is a N^{11} embedding a sentence. COMP has an unvarying step tone. The step tone (of COMP) dominates the tone pattern of S^{1}, which would have been low as seen in 25. However, the verb of the embedded structure manifests the scopal power of the dominating tone by changing to step (see also Mbah 1993).

The unvarying nature of the tone of COMP reflects in the way the preceding tones change to accommodate its feature. If the preceding tone is high, there is no problem because a step tone can be preceded by a high tone. However, if the preceding lexical item ends in a low tone then it undergoes either of the following changes:

      (a) it changes to high or
      (b) forms a rising glide, e.g.

28 (a) Nwá ahụ byara
        The child came or
   (b) Nwá ahụ byàra
          (see also Nwachukwu 1995)

Comparison between Ibibio and Igbo tone

From the foregoing discussion on the tonotactics of Ibibio and Igbo, a comparison may be made between the two languages. The two languages are similar; they are tone languages. Furthermore, they belong to the terrace-level type of languages. Each of them has two stable tones, namely the high and the low. The high tone may be reduced in height in certain consecutive syntactic constructions. In Igbo for instance, when the high tone ends a word, which occurs at the word boundary and follows a high tone, which either ends a preceding word or is part of the word bordering the construction, it is reduced to a down-stepped tone. For Ibibio, see example 16.

The occurrence of the down-stepped tone does not appear to be as systematic as it is in Igbo; however, in both languages, the down-stepped appears to be a juncture tone; the down-stepped tone occurs within two words in morphological or syntactic constructions. There is a semantic impact on the change. In other words, in all the occurrences of a down-stepped tone, a new meaning is yielded to the meaning of the lexical items, which are either concatenated or juxtaposed. The second similar tonal characteristic of the two languages is that the low tone is used to mark interrogatives. See examples 13 and 25 for Ibibio and Igbo respectively. Finally, each syllable has a tone unit.

Though there are similarities between the two languages, there are also differences between their tone patterns. The first is that the word order of the lexical items in the Igbo and Ibibio noun or adjective phrase differs. Whereas the adjective precedes the noun in Ibibio, the reverse is the case in Igbo. This order invariably affects the tone behaviour in the languages. In Igbo, for instance, when adjectives end in low and down-

stepped tones but are followed by either low or high tones, they change either to the high or down-stepped tones as the case may be. But if the same adjectives come last in consecutive constructions, they do not change their tones. The order of words affects tone changes in construction. Another noticeable difference in the two languages is the treatment of tonal processes such as glides in the languages. In Ibibio, there are said to be glides, which though exist in Igbo are not treated as tone types but results of tonal processes. In Igbo, ọkụkọ which is LHL could be reduced to a low rising glide if the initial voiceless velar plosive [k] is elided. This is not a glide strictly speaking. This type of feature is regarded as a glide in Ibibio (see example 15). It is unlikely that in syllable timed languages, where each vowel is a peak syllabic nucleus bearing a tone, there are glides. In such instances, there is always some phonological processes underlying such glides.

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