

## **Tone in the Nyifon and Igbo Languages: A Preliminary Comparative Study**

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### **Abstract**

The focus of this paper is the comparison of tone in the Nyifon and Igbo languages of Nigeria, aimed at revealing the similarities, differences and uses of tone in both languages. The study will pave the way for further investigation and application of theories to the study of tone and other phenomena in Nigerian languages, especially the less studied like Nyifon. Data for Igbo were obtained from ten Igbo native speakers, existing literature, and the researchers' native speaker intuition. For Nyifon, thirty native speakers provided the data. From our data, descriptively analyzed, the study discovers that the two languages have three level tones in common- high, low and downstep. In addition, Nyifon has a high falling contour tone. Although tone performs lexical and grammatical functions in both languages, its degree of involvement differs significantly. From our data, the only grammatical function of tone in Nyifon is differentiating interrogatives from declaratives. In Igbo, tone performs this function and many more, including differentiating canonical words from associative words, proper from common nouns, subjunctive from imperative sentences, and relative clause from declarative sentence. On the differentiation of interrogatives from declaratives, Igbo changes high tone of the pronominal subject of declaratives to low for interrogatives while Nyifon uses a contrasting tone on reduplicated final vowel for interrogative. The findings call for more researches on the phonology of Nigerian languages for their better appreciation, ICT application and use in language pedagogy.

**Keywords:** Tone, Igbo, Nyifon, ICT application, Language pedagogy.

## **Introduction**

Many of the African languages, including Nyifon and Igbo spoken in Nigeria, are tonal. Crystal (1987) avers that well over half of the languages of the world are tone languages. According to (Pike 1948: 3) in his seminal work on tone languages, a tone language is "... a language having lexically significant, contrastive but relative pitch on each syllable." This is to say that in tone languages, words which are phonetically or structurally identical could differ semantically by just one contrast in the pitch of voice. Ifode (1995), Ladefoged (2006) and Anagbogu, Mbah & Eme (2010) support the above; they view tone as a pitch variation that affects the meaning of a word. Tone is applied to words, morphemes or syllables for distinction of meaning (Ward, 1936; Hyman, 1992; Yip, 2002). Ejele (1996, p.76) sees tone as, "the significant but relative pitch on each syllable", showing that tone is the distinctive relative, rather than absolute, pitch level of a syllable. Pitch variation is referred to as tone in the strict sense of the term if only it is distinctive in the language. This is the use we make of the concept in this paper, where we examine tone in Nyifon and Igbo languages, focusing on the similarities, differences and uses of tone in both languages. Both tone languages are Benue Congo languages, though belonging to different sub families, prompting our interest to conduct a preliminary investigation on how they relate or differ in their use of tone.

The Nyifon data for this study were elicited from thirty competent and fluent native speakers of the Nyifon language residing in ten communities that speak the language in Uga settlement areas of Benue State. For Igbo, standard Igbo data were got from three sources: ten native Igbo speakers who teach the language using standard Igbo, existing literature, and the researchers' intuition as Igbo native speakers. Our use of Igbo teachers is to enable us get the standard Igbo variety, as no native speaker speaks the standard Igbo as his/her first language. This paper adopts the Green and Igwe (1963) tone marking convention which leaves the high tone unmarked, the low tone marked with a grave accent [ ` ], the downstep tone marked with a macron [ - ] and the falling tone marked with a circumflex [ ^ ].

### **Language Information**

Nyifon belongs to the Jukunoid sub-group of the central Nigerian group of the East Benue Congo sub-family of the Proto-Benue Congo family (Williamson & Blench, 2000; Tabe, 2007). For this study, we shall discuss the variety of Nyifon spoken in Benue State of Nigeria, where the language is spoken by a minority group and is endangered. Nyifon refers to the language as well as the speakers, though its speakers are also referred to as the Nyonyo people. The Igbo language is classified as a Kwa language of the West Benue Congo sub family of the Niger Congo language family (Williamson & Blench, 2000). These two languages are indigenous languages of Nigeria; Igbo being one of the three major languages while Nyifon is a minority language.

### **Literature Review**

Tone languages, according to Pike (1948), can basically be classified into register tone languages and contour tone languages, based on the type and nature of tone existing in such languages. He avers that while in a register tone language each tone bearing unit (TBU) has only one level tone, in contour tone languages there is a predominance of contour or gliding tones. For him, tone languages exist neither into the register tone class nor the contour tone class even though most of their data may be handled under the one or the other of these classes. This is to say that a language may predominantly be of one type or the other but may yet have occasional features of the other type. The classification of a language into either of the classes depends on the tone type predominant in that language. According to Katamba (1989), the distinction between register and contour tone languages is not absolute because most systems display some of the qualities of each of the two types. He points out that a register tone language will normally have high, mid or low pitch levels. Hartmann (2007) has it that every tone language has at least two contrasting level tones: high and low. Register tone system is largely associated with African languages, including Igbo and Nyifon. Asian languages are mostly contour tone languages.

Eme and Uba (2016) compare the phonology of Igbo and Yoruba with the aim of finding out the phonological problems the learners of both languages would encounter in their learning Yoruba and Igbo respectively as their L2. Using the contrastive analysis, they discovered that Igbo has all the consonants of Yoruba and an additional ten which are /p kw gw v z ɲ ɲw ɲ γ ɸ/. This is to say that these consonants in Igbo are not found in Yoruba. For the vowels, Igbo has eight oral vowels while Yoruba has seven oral vowels and five additional nasal vowels which are not found in Igbo. Those Yoruba nasal vowels that Igbo lacks are /ĩ ẽ ù ã õ/. The researchers also observed that nasal vowels are inherent and phonemic in Yoruba while in Igbo, a vowel can only be phonetically nasalized as a result of its environment of occurrence. More so, /ɪ/ and /ʊ/ are phonemically present in Igbo and absent in Yoruba, while /ɛ/ is phonemically present in Yoruba but absent in Igbo. They also point out that in the area of tone, Igbo and Yoruba make use of three tones each. While Igbo has high, low and downstep tones, Yoruba has high, low and mid tones. The difference in their tones is that whereas downstep is restricted in its occurrence, mid tone occurs in all environments. From all the differences observed in both languages, it is clear that they would definitely constitute problems in learning of either of the languages, the researchers recommend that Yoruba learners of Igbo and Igbo learners of Yoruba should make conscious effort to produce and use their target sounds as the owners of the language would; whether they are dealing with the unfamiliar sounds and tones or with the familiar ones.

Eme and Odinye (2008) discuss and compare the consonants and the tonal systems of Chinese and Igbo, and their implications for Igbo speakers learning Chinese. According to them, the motivation of the work is as a result of the recent introduction of the Chinese studies in the Department of African and Asian Studies of the Nnamdi Azikiwe University, Awka, which led to the Igbo speaking students of the department taking some courses in the Chinese language. Of course these students must face some challenges in their trying to learn the Chinese language. In order to proffer solution, the researchers discover that Chinese has

twenty-one consonants while Igbo has twenty-eight, showing that there are certain phonemes in Igbo which are not found in Chinese and vice versa. For instance, whereas Igbo has /ɣ ɔ̃ ɟ ɲ ɳ ɲw j w gb gw kp kw/ which Chinese does not have, Chinese has aspirated segments /p<sup>h</sup> t<sup>h</sup> k<sup>h</sup> tʃ<sup>h</sup> tʂ<sup>h</sup>/ and retroflex segments /ʂ ʈ tʂ<sup>h</sup>/ which Igbo does not have. For tone, whereas Igbo is a register tone language using three level tonemes, Chinese is a contour tone language with four tonemes, three of which are glides. These differences in the two languages' consonant inventories and tone systems are likely going to bring about some production difficulties among the Igbo speaking learners of Chinese. Therefore, the researchers advocate for the learners, articulation drill and listening carefully to the Chinese teachers/speakers as such would help them to correctly produce Chinese sounds and tones, especially those that are not found in Igbo.

Nkamigbo and Obiamalu (2016) carried out further studies on the phonology of Igbo and Chinese, bringing in the vowels and syllable structures of both languages in addition to the comparative study of Eme and Odinye (2008) reviewed above. For the vowels, the researchers observe that Chinese has five vowel sounds - i y u ə a. Three out of these five vowels (i u a) are in standard Igbo. So, only two vowel sounds are lacking in Igbo, which are not likely to pose pronunciation difficulty to Igbo learners of Chinese. Conversely, Igbo has eight vowels - i ɪ u ʊ e o ɔ a - while Chinese vowel inventory lacks five (ɪ ʊ e o ɔ) of these vowels. In the area of syllables, Chinese has both open and closed syllables while Igbo has only open syllable. This difference makes the Igbo learners of Chinese to ignore the codas in standard Chinese words most times, or insert vowels after codas for easy pronunciation. Another of their observations is that Chinese words do involve consonant clusters while Igbo does not permit consonant cluster. The Igbo learners of Chinese erroneously insert vowels in order to break the clusters. This is as a result of Igbo learners of Chinese transferring what is obtainable in their language into Chinese. Igbo learners of Chinese also find it difficult to master words with mid tone. What they do is to substitute the mid tone with high tone, resulting to wrong

pronunciation. Having observed all these differences, the researchers conclude by suggesting a remedial syllabus designed for teaching Chinese, which should pay greater attention to linguistics, specifically phonology, and encourage the deployment of Chinese teachers with linguistic background.

Waya and Kwambeh (2014) on carrying out a phonemic contrastive analysis of Tiv and English segmental phonemes observe that Tiv has more phonemic consonants than the English language while both languages exhibit equal number of vowels. The vowels /ə/ and /æ/ are present in English but not in Tiv. Also, tone plays a vital role in the use of vowels in Tiv while English marks vowel differences in intonation. Similarly, Mbah and Waya (2014) observe that Tiv speakers of the English language realize the phonotactics of English words differently. They opine that the speakers violate the phonotactic rules of the English language in realizing consonant clusters and vowel harmony. They also state that Tiv learners of English experience difficulties in realizing English consonant cluster; and they cannot produce an English word with consonant cluster without inserting a vowel sound, thereby transferring the feature from their language to the second language. It is obvious that the present study aligns with the previous studies reviewed so far on comparative/contrastive studies of phonologies of different languages, but none of the works is specifically on Nyifon and Igbo. This study, therefore, fills the gap in Nyifon and Igbo comparative phonological study, with focus on tone.

### **Tone in Nyifon**

Nyifon has four tones comprising three level tones: high, low, downstep tones, and a high falling contour tone. The TBUs in the language are vowels and syllabic nasals. High and low tones are common in the language and operate without restrictions. Downstep tone, unlike high and low tones, expectedly has a restricted distribution; occurring after a high tone and, in some instances, following another downstep tone. Contour tone is found only at the syllable final position, and could be preceded by

either the high or low tone. Examples of Nyifon words with their tones are:

- |     |          |               |
|-----|----------|---------------|
| 1a. | do       | 'pound'       |
|     | kpa      | 'payment'     |
|     | ana      | 'yesterday'   |
|     | funu     | 'semen'       |
|     | myimyi   | 'swelling'    |
|     | aŋa      | 'rejoice'     |
|     | funù     | 'lung'        |
|     | isè      | 'bottom'      |
|     | yuse     | 'begin'       |
| b.  | sè       | 'pour'        |
|     | bà       | 'wait'        |
|     | ɲtse     | 'blessing'    |
|     | inì      | 'seed'        |
|     | itì      | 'cricket'     |
|     | ɲgè      | 'person'      |
|     | iki      | 'head'        |
|     | éta      | 'termite'     |
|     | ùti      | 'tree log'    |
|     | nàkà     | 'before'      |
| c.  | kunā     | 'knee'        |
|     | bozū     | 'burst'       |
|     | tawā     | 'tobacco'     |
|     | ùtenwē   | 'ethnic area' |
|     | ùkusū    | 'road'        |
|     | duguākē  | 'advice'      |
|     | àzikī    | 'shame'       |
|     | wɛdɛsī   | 'innocent'    |
|     | tedūdūdī | 'be same'     |
| d.  | nû       | 'small'       |
|     | àhû      | 'horn'        |
|     | afī      | 'bile gall'   |
|     | àbiyikî  | 'desert'      |

ènâ	'there'
ìtòmô	'leopard'
ɲasô	'widen'
ufê	'year'
ɲgàlèmâ	'enlarge'

The items in 1(a, b, c, d) exemplify Nyifon words with high tone, low tone, downstep, and high falling contour tone respectively. The said tones appear in, at least, one syllable of the words presented.

### **Functions of Tone in Nyifon**

Tone performs both lexical and grammatical functions in Nyifon. For the lexical function of tone, two or more words that are the same in form differ in meaning because of the difference in their tone. Let us use minimal pairs for exemplifying it, as presented below.

2. (a) achi 'poison'  
àchi 'medicine'
- (b) ùkè 'song'  
ùke 'door'
- (c) ba 'draw'  
bà 'wait'
- (d) teme 'remove'  
tème 'wrap up'
- (e) tsó 'sow'  
tsô 'pierce'
- (f) iji 'food'  
ìji 'vein'

Tone also performs grammatical function in Nyifon. It differentiates the interrogative from declarative by using a contrasting tone on the reduplicated final vowel for interrogative; as in the following examples:



- |    |     |                               |  |
|----|-----|-------------------------------|--|
| 3. | (a) | À sọ ẹtsu.<br>À sọ ẹtsuù?     | He/she went to market.<br>Did he/she go to market? |
|    | (b) | Ò wẹ chinye.<br>Ò wẹ chinyeè? | You are crying.<br>Are you crying?                 |
|    | (c) | Ìmbà sì.<br>Ìmbà sùi?         | Child is good.<br>Is child good?                   |
|    | (d) | À jì jì.<br>À jì jìì ?        | He/she ate the food.<br>Did he/she eat the food?   |
|    | (e) | Ẹ yeme ùti.<br>Ẹ yeme ùtìi?   | We cut the tree.<br>Did we cut the tree?           |
|    | (f) | Ò gò zèàmà.<br>Ò gò zèàmàá?   | You felt jealous.<br>Did you feel jealous?         |

We see from (3a-e) that the declarative sentences whose verbs end in high tone (as in a, b, d, e) have the reduplicated vowels bear low tone in the interrogative. For the declarative sentences in 3c and 3f that end in low tone, the reduplicated vowels bear high tone in the interrogative.

### **Tone in Igbo**

According to earlier researchers on the Igbo language, including Green & Igwe (1963); Nwachukwu (1976); Emenanjo (1978); and Nwachukwu (1995), Igbo has high, low and downstep tones. Apart from the downstep tone which does not start a word in isolation, can only follow a high tone or another downstep tone and cannot come after a low tone, all the tones are not restricted in their occurrence; as they can come in all the possible environments of the canonical word- initial, medial and final positions. Below are examples:

- |     |         |         |
|-----|---------|---------|
| 4a. | aka     | 'hand'  |
|     | isi     | 'head'  |
|     | akwa    | 'cry'   |
|     | akwụkwọ | 'book'  |
|     | akụkọ   | 'story' |

	darà	'apple'
	azizà	'broom'
b.	àlà	'land'
	àkù	'wealth'
	àjà	'sacrifice'
	òkè	'share'
	ùdèlè	'vulture'
	èkèle	'greeting/thankfulness'
	èberè	'mercy'
c.	egō	'money'
	onū	'mouth'
	mmirī	'water'
	igwē	'sky/to grind'
	anū	'bee'
	nkitā	'dog'

Example 4 captures the three tones in Igbo. In at least one of the syllables, items in (a) bear high tone, those in (b) have low tone. The last syllable of the items in (c) bears the downstep tone.

#### **Functions of Tone in Igbo**

Tone performs lexical and grammatical functions in the Igbo language. Below are some minimal pairs showing the lexical function of tone in Igbo.

5. (a) aka 'hand'  
akà 'bead'
- (b) enyi 'elephant'  
enyì 'friend'
- (c) ùdà 'sound'  
udà 'spice (for cooking, especially, nsala soup)'
- (d) okè 'boundary'  
òkè 'share'
- (e) eke 'python'  
èke 'market day'

From the above examples, we can see that tone is used to semantically differentiate between words that are formally identical; hence performing lexical function. Tone also performs grammatical function in Igbo. Most of the things discussed on the grammatical function of tone in Igbo in this paper are in line with Nwachukwu (1995). For instance, tone is used to differentiate between declarative and interrogative sentences.

- |    |     |                                |  |
|----|-----|--------------------------------|--|
| 6. | (a) | O gbùrù agwọ.<br>Ò gbùrù agwọ? | He/she killed a snake.<br>Did he/she kill a snake?     |
|    | (b) | O mèrè mma.<br>Ò mèrè mma?     | He/she did well.<br>Did he/she do well?                |
|    | (c) | O gàrà ugbō.<br>Ò gàrà ugbō?   | He/she went to the farm.<br>Did he/she go to the farm? |

In the first sentence of example 6a-c, the third person singular subject pronoun o/ò is on high tone, indicating declarative sentences. In the second sentence the pronoun bears a low tone to mark the structures as interrogatives. The role of tone also stands out in Igbo associative construction involving noun + noun. A number of relations, especially possession, content and origin are expressed in Igbo using associative construction. This is made possible by tone, such that a tone of one of the words in associative construction changes from what it ordinarily is when the words are in their canonical form. The following illustrate this:

- |    |        |            |                       |
|----|--------|------------|-----------------------|
| 7. | egō +  | àkwa       | ego àkwā              |
|    | money  | egg        | money for egg         |
|    | elū +  | àlà        | elu àlà               |
|    | top    | ground     | earth surface         |
|    | ọ̀nū + | agū        | ọ̀nū agū              |
|    | mouth  | tiger      | tiger's mouth         |
|    | egō +  | nri        | ego nrī               |
|    | money  | food       | money for food        |
|    | ezē +  | elū        | eze elū               |
|    | tooth  | up         | upper tooth           |
|    | elū +  | ọ̀jì       | elu ọ̀jì              |
|    | top    | iroko tree | top of the iroko tree |

From the data in 7, we observe that the inherent tone of the first noun is high downstep. But when it comes in company with another word, the downstep tone changes to high, resulting in new meanings. Another instance of grammatical function is differentiating between proper noun and common noun. Examples from Nwachukwu (1995: 23):

- 8a. nkɥɥ ɥzò 'road-side oil palm'  
nkɥɥ ʋzò 'Mr. Uzo's oil palm'
- b. ihu ɥzò 'the main road/track'  
ihu ʋzò 'Mr. Uzo's face'

Moreover, tone differentiates a subjunctive from imperative sentence. For the subjunctive, the verb bears high tones for high tone verbs but low high tone for high tone verbs. The following examples illustrate this:

- 9a. Kà ha ree ewū 'Let them sell goats'  
Rèe ewū 'Sell goats'
- b. Kà ha gaa ugbō 'Let them go to the farm'  
subjunctive  
Gàa ugbō 'Go to the farm' imperative

Tone also differentiates a relative clause from a declarative sentence. Whereas the verb bears high tones for the relative clause, it bears low tones for the declarative sentence. For example:

- 10a. Ike nwere egō... 'Ike who has money...' clause  
b. Ike nwèrè egō 'Ike has money'  
declarative sentence

### **Nyifon and Igbo Tones: A Discussion/Comparison**

From the foregoing, we see that the two languages are similar—they are tone languages, both can comfortably be classified as register tone languages since they have a predominance of level tones namely high, low and downstep tones. The high and low tones do occur at all positions of a canonical word (initially,

medially and finally) in both languages, but the downstep tone is usually restricted; it occurs after a high tone or following another downstep tone and does not occur at syllable initial position in a canonical word. Also, in the two languages, vowels and syllabic nasals (bilabial /m/ and velar/ŋ/) are the TBUs. By contrast, though Nyifon and Igbo share resemblance in having three level tones: high, low and downstep tones, Nyifon makes use of an additional tone, high falling contour tone, which is preceded by either the high or low tone and occurs only at syllable final position.

Again, tone performs both lexical and grammatical functions in Nyifon and Igbo, but its degree of involvement differs significantly. Our data show that the only grammatical function of tone in Nyifon is differentiating interrogatives from declaratives. But in Igbo, tone performs this function and many more, including differentiating canonical words from associative words, proper from common nouns, subjunctive from imperative sentences, and relative clause from declarative sentence. In differentiating the interrogatives from declaratives, Igbo only changes high tone of the pronominal subject of declaratives to low for interrogatives while Nyifon uses a contrastive tone on reduplicated final vowel for interrogatives.

### **Conclusion**

The article discussed the tone system of two indigenous languages of Nigeria – Nyifon and Igbo. Both languages are tonal and were observed to be Benue Congo languages though from different sub-families. This aroused our interest in carrying out a preliminary investigation on how Nyifon and Igbo relate or differ in their use of tone. Using adequate examples to show their environments of occurrence and restrictions, our findings pointed out that both languages have high, low and downstep tones in common but differ by an additional high falling contour tone attested in Nyifon, and that tone performs lexical and grammatical functions in both languages in different degrees – the degree being higher in Igbo. Our research findings, therefore, advocate for more linguistic investigations of many Nigerian

languages, especially comparing certain phonological phenomena in two or more Nigerian languages not just for their better appreciation, but for the application of the knowledge in ICT and pedagogy.

## References

- Anagbogu, P.N., Mbah, B.M. & Eme, C.A. (2010). *Introduction to linguistics*(second edition). Awka: Amaka Dreams.
- Crystal, D. (1987). *The Cambridge encyclopedia of language*. Cambridge: Cambridge University Press.
- Ejele, P. E. (1996). The role of grammar and pragmatics in communication in Nigerian languages: A study of the Esan language. *Journal of Nigerian Literatures and Languages (JNLL)*, 2, 3-9.
- Eme, C.A. & Odinye, I. S. (2008). *Phonology of standard Chinese and Igbo. Nkuzi na Omumu Asusu*, 1, 26-37.
- Eme, C.A. & Uba, E.D. (2016). A contrastive study of the phonology of Igbo and Yoruba. Retrieved 12 November 2018, from <http://dx.doi.org/10.4314/ujah.v17i1.4>
- Emenanjo, E.N. (1978). *Elements of modern Igbo grammar*. Ibadan: Oxford University Press.
- Green, M. M., & Igwe, G. E. (1963). *A descriptive grammar of Igbo*. Berlin: Akademie-Verlage.
- Hartmann, K. (2007). *In place-out of place? Focus in Hausa*. Amsterdam: John Benjamins.
- Hyman, L. M. (1992). Tone in phonology. In William Bright (ed). *International Encyclopedia of Linguistics*, Vol. 3. New York: Oxford University Press.
- Ifode, S. (1995). *Basic phonetics*. Port Harcourt: Sunray Publications Limited.
- Katamba, F. (1989). *An introduction to phonology*. Harlow, Essex: Longman.
- Ladefoged, P. (2006). *A course in phonetics*. New York: Harcourt Brace Jovanovich Inc.
- Mbah, E.E. & Waya D. T. (2014). A Constraint Based Study of the Tiv Learners of English Phonotactics. *Innovare Journal of Social Sciences*.
- Nkamigbo, L. C. & Obiamalu, G.O. (2016). *Phonological differences and the phonological problems of Igbo learners of Chinese. IOSR Journal of Humanities and Social Science*, 21(4), 52-61.
- Nwachukwu, P. (1995). *Tone in Igbo syntax. Studies in Igbo Linguistics*, vol. 2. Nsukka: The Igbo Language Association.

- Nwachukwu, P. (1976). *NP sentential complements in Igbo*. Ph.D. thesis, University of London.
- Pike, K. L. (1948). *Tone languages*. Michigan: Michigan Press.
- Tabe, S. (2007). *A brief history of Etulo: An introduction to a divine kingship 1596-2006 AD*. Makurdi: Aboki Publishers.
- Ward, I. C. (1936). *An introduction to the Ibo language*. Cambridge: W. Heffer & Sons Ltd.
- Way, D. T. & Kwambeh, S.T. (2014). A phonemic contrastive analysis of Tiv and English segmentals. *Innovare Journal of Social Sciences*.
- Williamson, K. & Blench, R. (2000). *Niger-Congo languages*. In Hein and Nurse (Eds.), *African languages: An introduction*. Cambridge: Cambridge University Press.
- Yip, M. (2002). *Tone*. Cambridge: Cambridge University Press.