
Strengthening and Weakening of Tone in Igbo: A Descriptive Analysis

Aghaegbuna Haroldson Uwaezuoke

Abstract

Tone is a very important issue in Igbo phonology because of its lexical and grammatical functions of distinguishing meaning in the language. Over the years, scholars have researched extensively on Igbo tone in so many aspects. Also, past studies have discussed strengthening and weakening as phonological processes involving the segmental phonemes. In this paper, the Igbo tonal system is re-examined in order to establish that these processes also involve supra-segments (tone in particular) during connected speech. The data obtained from Igbo texts and Omambala speech varieties of the Igbo language were descriptively analysed. The results reveal that in Igbo speech production, the phonological processes of weakening and strengthening involve both the segmental phonemes and supra-segment (tone).

Key words: Phonology, strengthening, weakening, tone in Igbo, phonological processes

Introduction

Igbo is a register tone language where tones are essentially level as noted by Anagbogu, Mbah and Eme (2001). However, during connected speech, some tonal processes manifest. Scholars have reasonably investigated Igbo tone and they have come up with many findings. For example, Igwe (1975) notes that notwithstanding being a register tone language, gliding tone sometimes occurs in Igbo in two forms: the phonetically-motivated tone gliding and

grammatically-motivated tone gliding. He discloses that phonetically-motivated glides occur when two vowels appear contiguously either in the same word or in juxtaposed words and the second vowel, which constitutes a syllable, is either lower or higher than the one preceding it. In his study of tone in Igbo, Goldsmith (1976; 1979) submits that tone and the segments are represented on separate tiers with each tier being autonomous.

Clark (1990) discusses the tonal system of Igbo and states that spreading in Igbo is assigned to Phrase Level II on grounds of ordering. Using Goldsmith's (1976; 1979) Autosegmental Phonology (subsequently AP) model, Uwaezuoke (2017a) agrees with Igwe (1975) that gliding tone exists in Igbo during connected speech. The *Igbo Language Studies Vol. 2* (2017) reflects on a lot of other issues concerning tones in Igbo, such as: *Tones, dialects and mutual intelligibility in Igbo* (Emenanjo, 2017); *Underscoring the cross-dialectal uniformity of tone in Igbo* (Chukwuogor, 2017); *Igbo semiscriptalism – Igwe bu ike n'itinye akara udaolu* (Manfredi, 2017); *Vowel height, consonant type and the realization of H tone in Igbo* (Nkamigbo, 2017).

Despite these studies, the phonological issues of tone remain in-exhaustive. This paper discusses strengthening and weakening of tone in Igbo. Data used for analysis are from primary and secondary sources. The primary data are from Omambala Igbo varieties (Uwaezuoke, 2017b), while the secondary data are from Igbo texts. The researcher is from Omambala area, hence, the selection of Omambala varieties for primary data.

In tone-marking the data, Green and Igwe's (1963) tone-marking convention is adopted whereby high tone is left unmarked; low tone is marked with grave accent [`]. Downstep tone is marked orthographically with a macron [¯]; while phonemically and phonetically it is marked with a downward pointing arrow before the

syllable that bears the tone, followed by an acute accent on the tone-bearing unit [ʼ].

Strengthening (Fortition) and Weakening (Lenition)

Eme (2008) discusses strengthening and weakening of sounds in Igbo as features of articulatory parameter of intersegmental coordination in speech. She notes that consonants become stronger when the articulators are closer together and weaker as the articulators are more open. Hyman (1975:165), quoting Vennemann (1972) defines weakening and strengthening, thus:

A segment x is said to be weaker than a segment y if y goes through an x stage on its way to zero. Strengthening, on the other hand, refers to the reinforcement of a segment, as when a non-geminate [p] becomes geminate or double [pp]. This kind of weakening and strengthening suggested by Hyman (1975) could, in the opinion of Eme (2008), lead to segments produced at a particular place of articulation being stronger or weaker than their counterparts produced at another place of articulation.

This is noticed in [w] and [b] where Akpo dialect's [a¹wú] 'I am' becomes [a¹bú] in Standard Igbo (Eme, 2008:40). Eme avers that unlike what happens in the Finnish language and some other languages where weakening leads to the loss or elision of a segment, weakening or strengthening of consonants does not lead to loss of segments in Igbo. Rather, the phenomenon is exploited for bringing about dialectal variation; where one dialect uses a stronger consonant, another would use a weaker one. For tone, strengthening and weakening can be determined from the pitch of voice; the higher the pitch, the stronger the tone and the lower the pitch the weaker the tone. However, before presenting and analysing data to illustrate the two phenomena, let us first discuss the issue of tone in Igbo.

Tone in Igbo

Scholars do not agree on the number of tones in Igbo. For example, Igwe (1975) and Emenanjo (2015) identify two basic tones in the language – the high tone and the low tone; while in addition to the two, Ogbonnaya (1975) and Mbah and Mbah (2010) identify the third tone, which Ogbonnaya calls the mid tone and Mbah and Mbah refer to it as the down-step tone. Mbah and Mbah further note that each of the tones can form a minimal pair (subsequently MP) in the language (p.119). Igwe (1975) and Emenanjo (2015) argue against the down-step or mid tone being a basic tone in Igbo based on its phonotactic constraints such as, it does not begin a word in Igbo. Although Emenanjo (2015) further recognises the existence of a downstep tone in the language, he points out the difficulty in analyzing it because of its restricted distribution unlike the high and low tones, and the fact that it does not follow a low tone. Mbah and Mbah (2010) present the tonotactic characteristics of tones in Igbo, thus:

- i. High tone: It has an acoustically high pitch. It is usually represented by the acute diacritic mark (´) and can:
 - a. begin a word or sentence e.g. áká
 - b. come in the middle or at the end of a word e.g. ákwú kwò 'book'
 - c. be final in a word or sentence e.g. ákwá 'cry'
 - d. be reduced a little but not as low as to the level of a low tone, e.g. áká + chí = áká chí 'hand of God'
- ii. Low tone: It has a low pitch level. It is marked by the grave accent (`) and can:
 - a. begin a word or sentence e.g. àlà 'land'
 - b. come in the middle of a word e.g. ázìzá 'response'
 - c. come last in a word or sentence e.g. ụlò 'house'
 - d. get raised to a stop when it falls in between two high tones

across word junctures e.g. ụlọ + òke = ụlọ oké

e. can be transform to high when it occurs in a series and at syntactic junctures e.g. àlà ìgbò = àlá ìgbò

- iii. Step tone: It is a reduced high tone. It is usually marked with either an acute accent following a high tone or raised macron over the letter ($\acute{\text{~}}$) and:
- cannot start word or sentence
 - can occur in the middle of a word e.g. náāní 'only', nīlélé 'all'
 - can occur at word final positions e.g. éḡḡ 'money', nī nī irī 'water'
 - when it comes in between a series of high tones it can get raised or promoted to a high tone e.g. éḡḡ + élélé = éḡḡ élélé
 - cannot follow a low tone.

Chiri-Aniche (2013) discloses the segments that bear tones and the convention of marking tones in Igbo. She states that tones are marked above the vowel or syllabic nasal and generally, low tone [$\grave{\text{~}}$] and downstep [~] are marked, while high tone is left unmarked. This is in line with Green and Igwe's (1963) tone-marking convention. Other tone-marking conventions which Mbah and Mbah (2010:122-123) present, are: R. C. Abraham's tone-marking convention of writing syllables on high tone in capital letters, syllables with a step tone is written with an initial capital letter and the following vowel in small letters or if syllabic nasals or monosyllables in small capital letter, low tone has its syllable written in small letters; Welmers and Nwachukwu's tone-marking convention of marking high tones and step tones with acute accent and low tones with grave accent; Emenanjo and Williamson's tone-marking convention of leaving all high tones unmarked, marking all low tones with grave accent, and marking all step tones with a macron. Mbah and Mbah, however, note that R. C. Abraham's convention is no longer in vogue due to

the influence of science and technology.

This paper aligns with the view that Igbo has three basic tones – the high tone, low tone and downstep tone; each of them differentiates meaning. It is argued that if downstep is not accepted as a toneme in Igbo, why does it differentiate meaning in the language? The toneme is a minimal distinctive sound pitch unit just as phoneme is a minimal distinctive sound unit.

Despite being a register tone language, tones sometimes glide in Igbo (Igwe, 1975; Ogbonnaya, 1975; Emenanjo, 2015; Uwaezuoke, 2017a). Igwe (1975) identifies both the phonetically motivated glide and grammatically motivated glide, but Ogbonnaya (1975) and Emenanjo (2015) recognize only the grammatically motivated glide. Igwe (1975) discloses three more facts about glides in Igbo:

- i. A glide occurs in the process of passing away from one syllable to another.
- ii. There must not be an intervening consonant between the vowels or syllabic nasals which occur in juxtaposition.
- iii. For glide to result, two vowels or syllabic nasals must be contiguous.

According to Igwe (1975), phonetically motivated glide occurs when two vowels occur contiguously either in the same word or in juxtaposed words and the second vowel, which constitutes a syllable, is either lower or higher than the one preceding it. He illustrates with data in (1).

- 1 (a) òmèē 'blood', nīīle 'all', ùgbuà 'now'
- (b) lèè 'look', làa 'go away'
- (c) Ọ zùtàrà azù
'he bought fish',
- (d) Ọ lètàrà ngwā
'he/she return PAST early'

The scholar discloses that this kind of glide is restricted to a single syllable and manifests as either down-glides or up-glides under any of these conditions: If a word or phrase or clause which functions as the subject in a sentence type of the Simple Sentence Form I has a high final syllable e.g. *Eghù tàrà jí* 'The goat ate the yam'; If the final syllable of a noun or a noun phrase is low and the noun or noun phrase is the head of the relative clause e.g. *n̄ gbě gāra āga* 'in past time'/'time which is past'; If a verb is the first in a sequence of verbal forms and the one immediately following it has a prefix e.g. *Ha n̄ àbya ème yā* 'let them keep coming to do it'.

Emenanjo (2015) contends that the grammatically motivated glide is marked with a circumflex and that it is not phonemic in Igbo because Igbo is a discrete level tone language. To this scholar, it always occurs on the last syllable preceding the verb in the indicative verb form. He opines that whenever gliding tones occur in words in isolation, they should be treated as two different pitch levels on two identical vowels. He suggests a reanalysis of gliding tone in Igbo as an extra vowel of the same quality following the preceding vowel. He exemplifies with the data in (2).

- 2 (i) Hâ bìàrà → Há à bìàrà 'They came'
(ii) E → Eé 'Indeed! (Are you sure?)'

Emenanjo's suggestion agrees with Mbah and Mbah's (2010) earlier opinion that where a register tone language has a glide, it is an orthographic convention involving graphological elision. Uwaezuoke (2017a) also aligns with Emenanjo (2015) and Mbah and Mbah (2010). Let us now present some Igbo data and do the analysis to show instances of strengthening and weakening of tone in Igbo.

Tone strengthening and weakening in Igbo

Emenanjo (1978; 2015) asserts that each of the vowels retains its

duration and expected tone in complete regressive assimilation in Igbo. He is also of the opinion that vowel assimilation occurs in Igbo without vowel elision and/ or tone assimilation. In (3) are examples from Emenanjo (2015) and Mbah and Mbah (2010).

3

- (a) i. $\dot{u}de$ + isi → $di\ i\bar{si}$ - weakening
'pomade' 'head' 'hair pomade'
ii. ozu + $an\dot{u}$ → $ozaan\bar{u}$ or $ozu\ an\bar{u}$ - weakening
'carcass' 'meat' 'carcass of meat'
iii. $\dot{u}l\dot{o}$ + \grave{a} → $l\bar{o}\ \grave{o}$ - strengthening
'house' dem. ADJ. 'this house'
(Emenanjo, 2015:81-84)

- (b) i. $\dot{u}l\dot{o}$ + $\grave{o}sa$ → $l\bar{o}\ \bar{o}\ sa$ - strengthening
house squirrel squirrel house
ii. $\grave{a}l\grave{a}$ + $\dot{I}gb\dot{o}$ → $la\ Igb\bar{o}$ - strengthening
land tribe Igbo land
(Mbah and Mbah, 2010:125)

(3ai and ii) exhibit tone weakening. *isi* 'head' and *an\dot{u}* 'meat' have a H-H tone sequence each when they stand alone, but when combined with *\dot{u}de* and *ozu* respectively, their second high tone becomes weakened to a downstep. In (3aiii) is a case of a low tone of the final vowel of the first word being strengthened to a downstep tone (i.e. strengthening of tones). For (3bi), the two vowels at junction are strengthened to a downstep tone; (3bii) shows the second vowel of the first word strengthened to a high tone. Weakening of tone is also witnessed in Emenanjo's (2015:82-83) data on coalescent assimilation and Mbah and Mbah (2010), as exemplified in (4).

- 4 (a) i. imi + ya → $imij\bar{e}$
'nose' 'his' 'his nose'

- ii. ike + ya → ikijē
 'strength' 'his' 'his strength'
- iii. aka + ya → akijā
 'hand' 'his' 'his hand'
- iv. afo + ya → afijā
 'belly' 'his' 'his belly'

(Emenanjo, 2015)

- (b) aka + chi → aka chī
 hand God 'hand of God'

(Mbah and Mbah, 2010)

The pronoun *ya* has inherent high tone. However, in (4i-iv), the high tone of *ya* is weakened to a downstep tone. This can only occur where the final vowel of the word preceding the pronoun has a high tone. This is also witnessed in (4b) where the high tone of the word *chi* is weakened to a downstep tone.

In Ọmambala varieties of Igbo, strengthening of tone occurs. In (5) are some examples.

5 i. Anàkù woman's speech e.g.

ubi + ànyị → [u¹bá á nĩ] 'our farmland'

ii. ̀lkem man's speech e.g.

(a) sisie + òsipaka → [sis¹oo¹ó sipaka];
 finished cooking rice 'finished cooking rice'

(b) àvọ + ̀lkem → [àv¹í kem]
 3rd market day town 'lkem market'

iii. Ogbunikē man's speech e.g.

okwu + àyị → [okwa¹á jị]
 speech us 'our speech'

In (5) are examples of complete regressive assimilation across word boundaries. It is perceived that there is tone strengthening whereby the tones of the final vowel of the first word and the first vowel of

the second word, which originally are low tone in *ubì* 'farmland' and *à nyí'we'*, are strengthened to a downstep tone in (5i). In (5iia & 5iii), the initial vowel of the second word, which has a low tone, is strengthened to a downstep tone; for (5iib), the final vowel of the first word and the first vowel of the second word have low tone in isolation, but when combined, the final vowel of the first word becomes strengthened to a high tone while the first vowel of the second word is strengthened to a downstep tone.

Ọmambala varieties also exhibit weakening of tone. In (6) are some examples to buttress this process.

- 6
- i. Ifite Ọ gwařì man's speech e.g.
ànwu + ala → [àṅ^wã a^llá]
suck breast 'suck breast'
- ii. Agùlerè girl's speech;
nnekwu + ewu → [nněkwe e^lwú]
big goat 'big goat'
- iii. Anarè (Ụmùdọrà) man's speech e.g.
nukwu + avja → [nũk^wa a^lví 'á]
big market 'big market'

(6i-ii) show that the second words have HH tone sequence in isolation, but when they are preceded by a word with a final high vowel, the high tone of the second vowel becomes weakened to a downstep tone. This is also the case with (6iii) except that the second word has two final vowels which are both weakened.

Summary and Conclusion

Unlike past studies which have discussed strengthening and weakening as phonological processes involving the segmental phonemes, this paper re-examined the Igbo tonal system in order to establish that these processes also involve the supra-segments (tone

in particular). Data obtained from Omambala varieties of the Igbo language and the secondary data from texts were descriptively analysed. From the results, tone is sometimes strengthened and sometimes weakened during speech in Igbo. Tones that are usually affected are tones of the second words. It is concluded that strengthening and weakening occur in Igbo tones just as they exist in segmental phonemes.

References

- Anagbogu, Philip, B. M. Mbah and Cecilia A. Eme. (2010). *Introduction to linguistics, Second edition*. Awka: Amaka Dreams Limited.
- Clark, Mary M. (1990). *The tonal system of Igbo*. USA: Foris Publications.
- Chukwuogor, Mbanefo. (2017). *Underscoring the cross-dialectal uniformity of tone in Igbo*. In Chinedu Uchechukwu. ed. *Igbo Language Studies – A Journal of Igbo Language and Linguistics*. 2. 11 – 18.
- Eme, C.A. (2008). *Parameters of intersegmental coordination in speech – Insight from Igbo*. Awka: Amaka Dreams Limited.
- Emenanjo, E. N. (1978). *Elements of modern Igbo grammar*. Ibadan: University Press.
- Emenanjo, E. N. (2015). *A grammar of contemporary Igbo constituents, features and processes*. Port-Harcourt: Grand Orbit Communications limited.
- Emenanjo, E. N. (2017). Tones, dialects and mutual intelligibility in Igbo. In Chinedu Uchechukwu. ed. *Igbo Language Studies – A Journal of Igbo Language and Linguistics*. 2.1 – 10.
- Goldsmith, John. (1976). "Autosegmental Phonology." PhD diss., MIT,

- Cambridge.
- Goldsmith, John. (1979). *Autosegmental Phonology*. New York: Garland Press.
- Green, M.M and G.E. Igwe. (1963). *A descriptive grammar of Igbo*. Berlin: Akademie Verlag and Oxford University Press.
- Hyman, L. M. (1975). *Phonology: Theory and analysis*. New York: Halt Rinehart and Winston.
- Igwe, G. E. (1975). Ịgbò: A tone language. In F. Chidozie Ogbalu and E. Nolue Emenanjo. eds. *Igbo Language and Culture*. pp. 95 – 103. Ibadan: Oxford University Press.
- Manfredi, Victor. (2017). Igbo semiscriptalism – Igwe bụ ike n’itinye akara ụdaolu. In Chinedu Uchechukwu. ed. *Igbo Language Studies – A Journal of Igbo Language and Linguistics*. 2. 19 – 30.
- Mbah, B. M. & E. E. Mbah. (2010). *Topics in phonetics and phonology: Contribution from Igbo*. Nsukka: AP Express Publishers.
- Nkamigbo, Linda C. (2017). Vowel height, consonant type and the realization of H tone in Igbo. In Chinedu Uchechukwu. ed. *Igbo Language Studies – A Journal of Igbo Language and Linguistics*. 2. 43 – 62.
- Ogbonnaya, H. C. (1975). Igbo tones and how to mark them. In F. Chidozie Ogbalu and E. Nolue Emenanjo. eds. *Igbo Language and Culture*. pp. 104 – 113. Ibadan: Oxford University Press.
- Ohiri-Aniche, Chinyere. (2013). *Igbo speech varieties*. Abuja: Centre for Igbo Arts & Culture.
- Uchechukwu, Chinedu. Ed. (2017). *Igbo Language Studies – A Journal of Igbo Language and Linguistics*. 2. Onitsha: Asụsụ Amaka.
- Uwaezuoke, Aghaegbuna H. (2017a). An Autosegmental Account of Glides in Igbo Tonology. *Igbo Language Studies – A Journal of Igbo Language & Linguistics*. 2. 55–64.

www.ils.okwuigbo.org

Uwaezuoke, Aghaegbuna Haroldson. (2017b). Phonology of Omambala varieties of the Igbo language. *Doctoral dissertation*, Nnamdi Azikiwe University, Awka, Nigeria.

Vennemann, T. (1972). On the theory of syllabic phonology. *Linguistische Berichte*. 18. 1 – 18.

Aghaegbuna Haroldson Uwaezuoke
Department of Linguistics
Nnamdi Azikiwe University
Awka