

## Tone Assimilation in Igbo: A Phonological Description

Aghaebuna Haroldson Uwaezuoke  
Department of Linguistics, Faculty of Arts  
Nnamdi Azikiwe University, Awka, Nigeria  
07038590552/07088853967  
[ha.uwaezuoke@unizik.edu.ng](mailto:ha.uwaezuoke@unizik.edu.ng)

### Abstract

*Past studies of assimilation in Igbo focus attention on segmental phonemes without relating assimilation to supra-segments (tone in particular). This paper re-investigates assimilation in Igbo with the aim of establishing that tone assimilation exists in the language. Data for analysis are obtained from both the primary and secondary sources. While the primary data are from Ogbunike Igbo variety, the secondary data are from existing literatures. The data are analysed using descriptive method. The results reveal that tone assimilation exists in Igbo. For example, in connected speech, where the first noun ends in a downstep tone and the second noun begins with any tone, the downstep tone of the final vowel of the first word assimilates the high pitch of the initial vowel of the second word. Also, where the first word is in its infinitive form with a  $H \downarrow H$  tone sequence and the second word has a  $H H$  tone sequence, the high tone of the initial vowel of the second word drops its high pitch and completely assimilates the reduced high pitch of the final vowel of the first word. Tone assimilation could be regressive or progressive.*

**Keywords:** Phonology, tone, assimilation, phonological processes, supra-segments.

### Introduction

Assimilation is one of the phonological processes that occur in the use of language when sounds are combined in speech production. Prior to this study, assimilation was studied as a phonological process involving segmental phonemes, where a segment is being influenced by another adjacent segment so that the influenced segment drops part or all its features to take part or all the features of the influencer. Scholars have discussed assimilation a lot, trying to find out the types of assimilation in language, the driving force for assimilation as well as the segments that are involved in assimilation. To the best of the researcher's knowledge, there has not been any study of assimilation in relation to tone in Igbo or in Ogbunike dialect of Igbo. Similarly, a lot has been done on tone in Igbo, but none has discussed tone assimilation as all the discussions on assimilation focussed on segmental phonemes.

This paper investigates the phonological process of assimilation in Igbo with a view to ascertaining if assimilation involves tone. In section two is a review of related literatures. Section three discusses the methodology. Data presentation and analysis is treated in chapter four. Finally, there is a summary and conclusion in section five.

## Literature Review

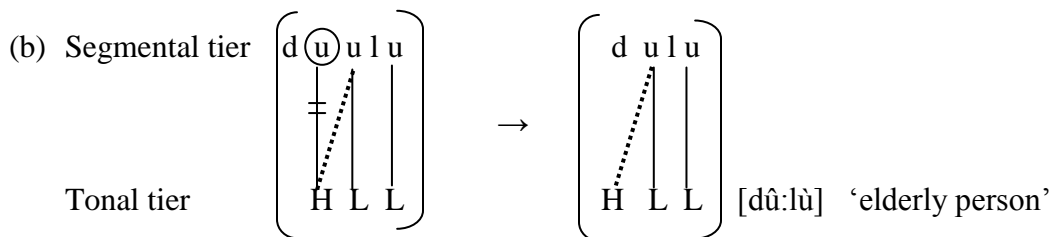
Scholars' view of assimilation could be said to be similar. Assimilation refers to where 'a segment takes on features of a neighbouring segment' (Schane, 1973:49). Napoli (1996) views assimilation as a process that arises when a sound changes to become similar to the nearby sound. In the opinion of Dirven and Verspoor (2004), assimilation is a phonological process that involves a sound causing an adjacent sound to be "more similar" to itself. What is germane from all these definitions is that in assimilation, there is an influencer and the influenced. The kinds of assimilation identified in Igbo include progressive/perseverative assimilation, regressive/retrogressive assimilation, complete assimilation, partial assimilation, conditional assimilation and coalescent assimilation (Eme, 2008; Emenanjo, 2015). However, in a reanalysis of assimilation in Igbo using distinctive feature approach, Uwaezuoke (preprint), suggests their reclassification rather as features of the kinds of assimilation, which he identifies as: vowel-vowel assimilation, vowel-syllable assimilation, consonant-syllabic nasal assimilation, consonant-vowel assimilation, and vowel-consonant assimilation. One can clearly observe that emphasis in these definitions is on the segmental phonemes, thus creating an impression that assimilation involves only the segmental phonemes. Does it then imply that assimilation does not affect supra-segments, and in particular, tone? As asserted by Emenanjo (2015), each of the vowels retains its duration and expected tone in complete regressive assimilation in Igbo. Emenanjo also points out that vowel assimilation occurs in Igbo without vowel elision and/ or tone assimilation, example:

1.        i.    ùde    +    isi    →    ùdi isī  
              'pomade'    'head'        'hair pomade'
- ii.    ozu    +    anụ    →    ozaanū or ozu anū  
              'carcass'    'meat'        'carcass of meat'

Uwaezuoke (2019) re-examined the data in (1) and discovers a manifestation of the phonological process of lenition. The words *isi* ‘head’ and *anyu* ‘meat’ have a H-H tone sequence each when they stand alone, but when combined with *ùde* ‘pomade’ and *ozu* ‘carcass’ in associative construction respectively, their second-high tone becomes weakened to a downstep tone.

Tone is said to perform the same function of distinguishing meaning in tone languages as the segmental phonemes (Uwaezuoke, 2019). Studies abound on tone with a discovery that all tone languages do not operate the same system; and that is why tone languages are grouped into two: the register tone languages, and the contour tone languages. Igbo is a register tone language (Anagbogu, Mbah and Eme, 2010). For the basic tones in Igbo and their combination, see Mbah and Mbah (2010) and Uwaezuoke (2019). Recent studies on tone have led to a lot of discoveries. For example, Igwe (1975), Emenanjo (2015) and Uwaezuoke (2017) disclose that though Igbo is a register-tone language, gliding tone sometimes occurs in the language. In (2) is an illustration from Uwaezuoke (2017):

2. (a) *duùlù* → [dù:lù] ‘elder’



In 2(a & b), the tones of the two identical adjacent vowels are not of the same pitch. In speech, the two adjacent identical vowels are realised as one sound, but maintaining the different pitches. What occurs in (2) is supported by the autosegmental phonology (AP) model of Goldsmith (1979), which discloses that tone is represented on a separate tier different from segmental phonemes, such that a segment may be affected in connected speech without its tone being affected.

Clark (1990) studies the tonal systems of Igbo, where she identifies different phrase levels of analysis of tone and submits that spreading in Igbo is assigned to Phrase Level II on grounds of ordering. Uwaezuoke (2019) discusses strengthening (fortition) and weakening (lenition) of tone in Igbo and concludes that these processes involve both the segmental phonemes and the supra-segments (tone).

From the foregoing, it is evident that there has not been any study of tone assimilation in Igbo or any of its dialects. Hence, the target of this paper, to find out if tone assimilation exists in Igbo.

### Methodology

This paper is designed to be descriptive because of its fact-finding nature. The data for analysis are obtained from both the primary and secondary sources. The primary data are from Ogbunike Igbo variety, while the secondary data are from past literatures on Igbo. The choice of Ogbunike Igbo for the primary data is borne out of the researcher's intuitive knowledge of the speech variety, having come from Ogbunike community. These data are analysed descriptively.

In presenting the data, Green and Igwe's (1963) tone-marking convention is adopted by leaving high tone unmarked, marking low tone with a grave accent [ ` ], and marking the downstep tone with a macron [ ¯ ] orthographically or by first placing a down-pointing arrow before the syllable, followed by an acute accent on the tone-bearing unit [ ↓ ´ ] phonemically and phonetically.

### Data Presentation and Analysis

Secondary data from Emenanjo (2015) are first presented and analysed, followed by the presentation and analysis of primary data from Ogbunike Igbo variety.

3. Emenanjo (2015:116–118):	Word 1	Word 2	Connected Speech
(i)	elū +	ɯlò →	elu ɯlò
	‘top’	‘house’	‘house top’
(ii)	nkīṭā +	ɯlò →	nkīṭa ɯlò
	‘dog’	‘house’	‘domestic dog’

Emenanjo describes what happens in (3) as a case of a downstep tone being raised to a high tone when the first noun ends in a downstep tone and the second noun begins with any tone. It is considered in this paper as rather a case of tone assimilation where, at juncture in connected speech, a downstep tone of the final vowel of the first word assimilates the high tone of the

initial vowel of the second word. Tone assimilation here is regressive in nature. There are many instances of this kind of assimilation in Igbo. In (4) are data from Ogbunike Igbo variety.

4. Ogbunike Igbo variety:	Word 1	Word 2	Connected Speech
(i)	ibē	+ akwa	→ ibē ākwa 'to cry' 'cry' 'crying'
(ii)	ijē	+ afīa	→ ijē āfīa 'to go' 'market' 'to go to the market'
(iii)	itā	+ anụ	→ itā ānụ 'to chew' 'meat' 'to chew meat'
(iv)	ilī	+ nni	→ ilī nni 'to eat' 'food' 'to eat food'
(v)	izō	ife	→ izō ife 'to struggle' 'something' 'to struggle for something'
(vi)	ijē	+ ozi	→ ijē ōzi 'to go' 'errand' 'to go for an errand'
(vii)	ikū	+ aka	→ ikū āka 'to clap' 'hand' 'clapping'
(viii)	igbā	+ ọsọ	→ igbā ọsọ 'to run' 'race' 'to run a race'
(ix)	ikpū	+ isi	→ ikpū īsi 'to cut' 'head' 'to cut hair'

(4) reveals that the high tone of the initial vowels of the second words is influenced by the downstep tone of the final vowels of the first words thereby making it to drop its high pitch and to completely assimilate the reduced high pitch of the final vowel of the first words. Unlike the tone regressive assimilation witnessed in (3), what happens in (4) is tone progressive assimilation, where the first word must have a High Downstep (H ↓H) tone sequence, while the second word would have a High High (H H) tone sequence. It is seen that for this type of progressive assimilation to take place, the first words are in their infinitive forms, otherwise, there will not be any tone progressive assimilation.

### **Summary and Conclusion**

This paper re-investigated assimilation in Igbo in order to establish that tone assimilation exists in the language. The primary data from Ogbunike variety and the secondary data from Emenanjo (2015) were analysed descriptively. From the results, tone assimilation exists in Igbo. It is, however, contextual. In connected speech, where the first noun ends in a downstep tone and the second noun begins with any tone, the downstep tone of the final vowel of the first word assimilates the high pitch of the initial vowel of the second word. Assimilation here is progressive. If the first word is in its infinitive form with a high downstep (H ↓H) tone sequence and the second word has a high high (H H) tone sequence, the high tone of the initial vowel of the second word drops its high pitch and completely assimilates the reduced high pitch of the final vowel of the first word. It is regressive assimilation.

Assimilation, therefore, can be said not to occur only among the segmental phonemes, but also among the supra-segments (tone in particular).

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