

## **THE PHONOLOGICAL PROCESSES OF ASSIMILATION IN OKIJA IGBO SPEECH VARIETY**

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### **Abstract**

This work is a study of assimilation processes in Okija Igbo speech variety. Assimilation is a sound change in which some phonemes (typically consonants or vowels) change to become more similar to other nearby sounds. In some cases, assimilation causes the sound spoken to differ from the normal pronunciation in isolation. The major types of assimilation are progressive, regressive and coalescent assimilations. Many researchers have written more on other types of assimilation in Okija dialect but have not recognized regressive assimilation in Okija dialect hence, this research. The researcher uses Optimality theory (henceforth OT), in analyzing the data. The collected data were analyzed using survey design which conforms to the standard procedures in the study of dialect. The study covers the four regional linguistic areas which our data were drawn from sixteen resource persons (four from each area). Okija dialect of Igbo is spoken in Okija, which is one of the five communities that make up Ihiala Local Government Area of Anambra State. The dialect is spoken by a population of about 157, 785 (1991 census). The researcher finds out that the regressive assimilation process was more prominent in the Okija variety of Igbo than progressive and coalescent assimilations. It also facilitates the task of speaking because the speaker usually tries to conserve energy by using no more effort than is necessary to produce an utterance. This research will be of a great significance because it will enable scholars know the prominent assimilation process that are obtainable in Okija dialect. It will also pave way for better understanding of regressive assimilation.

## **Introduction**

Assimilation is a common phonological process in human language. During speech production, one of the contiguous sounds influences the other such that the sound so influenced drops its features partially or completely and takes features of the sound that influences it (Eme, 2008) and Schane (1973:49), earlier considered assimilation as a phonological process where ‘a segment takes on features of a neighbouring segment’; a process that arises when a sound changes to become similar to the nearby sound. The last fifty years or so saw the most dramatic changes and innovations of the history of theoretical development of phonology and linguistic enterprise generally. During this period, Generative phonology, an off-shoot of generative grammar, emerged out of dissatisfaction of its proponents with their predecessors. Noam Chomsky, Roman Jakobson, Morris Halle and Gunner Fante claim that their predecessors were unduly concerned with inventories and taxonomy of speech sounds. They argue, according to Mbah and Mbah (2010:139), “That linguistic description should aim to construct a grammar that is capable of generating linguistic form”, a grammar capable of containing “phonological rules which apply to underlying forms of language and yield surface phonetic representations”. The generativists, according to Mbah and Mbah (2010), contend that phonological rules which are more than mere inventory of phonemes and allophones are part of the model of language. The underlying representation, they posit, are converted into surface representation by the application of the rules.

According to Chomsky (1968), the emergence of generativism caused lots of ripples in the field of linguistics. The proponents and members of the orientation believe it to be “The first truly scientific account of phonology- the first to develop what could be truly called a theory of generativism dominated the parlance of phonology for the greater part of the last couple of decades. This, we must clarify, does not suggest that there have not been other approaches all these while. Of course, there have been; but the truth remains that only few of the latter approaches clearly departed from the generative tenets. Innovative approaches were built on generative foundation. For instance, among natural phonology, autosegmental phonology, consonant-vowel phonology, lexical phonology and dependency phonology, only the first mentioned [natural phonology] profoundly departed from generativism, but it serially flourishes (see Mbah and Mbah, 2010). Does this then suggest that generative phonology is impeccable? Why do new theories gain adherents while others do not? And why do new theories like Optimality Theory, Feature Geometry, etc are true and they arise when the truth is recognized cannot be sufficient, for two reasons. First, nobody knows at the onset whether a theory is true or not and second, no theory has yet turned out to be true. Therefore, there must be other factors which account for the rise of a new theory or paradigm.

Kuhn (1962) has observed that the ‘logical history’ of a field- the way it is presented in textbooks- represents an idealized version, formulated after the fact, of the actual history and at its very early stages (of a new theory) it is quite likely that even many of its adherents cannot articulate what it is that appeals to them about the theory, or why they think that it is the right way to go. Its presentation and defence is often enough of a reason at first.

A case in point is the rapid rise of Optimality Theory (OT, Prince and Smolensky, 1993) in phonology. This serves as a new theoretical framework that deals with the interaction of violable constraints. In Igbo, many types of assimilation have been identified although there are varied opinions among scholars. Eme (2008), for example, presents partial assimilation, complete assimilation, progressive assimilation, regressive assimilation and coalescent assimilation. Emenanjo (2015), in addition to these types, identifies conditional assimilation but discusses regressive and partial assimilation under complete assimilation. Uwaezuoke (2021) re-analyzes assimilation as a distinctive feature approach. Despite several studies on the phonological processes of assimilation in Igbo, none considers regressive assimilation processes using an Optimality theory account which would engender easy descriptions of assimilation. This is why the present study is to analyze assimilation processes in Okija speech variety using Optimality theory.

This study is a survey designed to conform to the standard procedures that obtain in the study of the observed language of this type. The representative dialects which are Ụmụhu, Ụmụapani, Ụbahudara and Ụmụohi Okija were drawn from the speech communities in Ihiala Local Government Area in Anambra state. Other Igbo dialect clusters are not directly covered in this research, although examples might be drawn from any of them to elucidate a point on the subject of our focus.

### **Theoretical Framework**

According to De Lacy (2007:9), the OT grammar is an input-output mechanism that pairs an output to an input form (such that each input has precisely one output). To accomplish this function, the grammar contains a division of labour between a component which maps the input onto an infinite set of candidate output forms by a set of ranked constraints and selecting the optimal output among these. These two components are known under the names of GENERATOR (or Gen) and EVALUATOR (or Eval). This grammatical organization is schematically represented in a function notation as follows:

The grammar as an input-output mechanism


Gen (input)(cand<sub>2</sub> .....cand<sub>3</sub>) = output

Eval\Cand<sub>1</sub> .Cand<sub>2</sub> ... Cand<sub>3</sub>| output


That is, *Gen* is a function that, when applied to some input produces a set of candidates, all of which are logically possible analyses of this input. Similarly, *Eval* is a function that when applied to a set of output candidates, produces an output, the optimal analysis of the input. In addition to *Gen* and *Eval*, the grammar contains a LEXICON storing all lexical forms that are

Input to *Gen*.

### A classic Table

Input	C1	C2	C3	C4
(a) Cand.1			*	*
(b) Cand.2				* * !
(c)  Cand. 3		*!		
(d) Cand.4	*!			

(Adapted from De lacy 2007:17)

The table above is designed in such a way that the top left cell contains the input while the rest of the left most column contains candidate outputs. The asterisk (\*) indicates violation by the candidate, (!) indicates a fatal violation by the candidate and ()the pointing finger indicates the winning or optimal candidate at the output level. Each cell shows the number of violation of a constraints by a candidate. For example, candidate 1 violated constraints C3 and C4. By this, it does better than the rest, hence is taken as the optimal candidate. Any candidate that does worse than another candidate by incurring a ‘crucial violation’, (marked by (!) in the tableau) gets eliminated from the competition because of having incurred a crucial violation. According to wikipedia (2008), There is no way for it to be optimal even if it out-forms the other candidates on the rest of con. Thus, the cell(s) from the point it incurs the crucial violation is/are shaded, implying that whatever violation or obedience thereafter is irrelevant (De lacy, 2007:17)

## Empirical Studies

According to Uwaezuoke (2010:60), assimilation is a common phonological process by which the phonetics of a speech segment becomes more like that of another segment in a word (or at a word boundary). A common example of assimilation would be “don’t be silly” where the /t/ is deleted and the /n/ (i.e, in don’t”) is assimilated to /m/ by the following /b/, where said naturally in many accents and discourse styles (“dombe silly”). Assimilation can be synchronic being an active process in a language at a given point in time or diachronic being a historical sound change. A related process is co-articulation where one segment influences another to produce an allophonic variation, such as vowels acquiring the feature of nasal consonants when the velum opens prematurely or /b/ becoming labialized as in “boot”. (Crowley 1997:159)

According to Yul-Ifode (1999:32), when a sound changes one of its features to be more similar to an adjacent sound it is said that assimilation has taken place. Assimilation is furthermore said to be a process whereby a segment takes on features of a neighboring segment thereby becoming alike, sometimes totally, sometimes partially. In a full assimilation, two contiguous segments have identical features, see Yoruba examples below:

- |    |           |       |        |          |
|----|-----------|-------|--------|----------|
| 1. | ilé + iwé | _____ | ilééwé | ‘school’ |
|    | owó + ilé | _____ | owóólé | ‘rent’   |

Emenanjo (1978:25) says that vowel assimilation is a process whereby two dissimilar vowels on either side of the juncture may become similar in quality sounds tend to be modified by the environment they occur. Some sounds that combine with morpheme or words, lose their shape thereby causing the sound to undergo changes due to the sound close to it. This type of assimilation is a persuasive feature in Igbo because most words begin with vowel and end with vowel. He further says that vowel assimilation is a prevalent feature in Igbo because most words begin and end in vowels. To him, there are three types of vowel assimilation. They are complete, conditional and partial assimilation. In complete assimilation, the final vowel before the ( $V_1$ ) becomes assimilated to the initial vowel after the juncture ( $V_2$ ) following certain conditions. According to him, complete assimilation may take two forms, one of them is:

$$V_1 \quad + \quad V_2 \quad \quad V_2V_2$$

He concludes his discussion of vowel assimilation in Igbo by saying, among other things, that failure to assimilate does not constitute intelligibility problem



takes up only some of the features of the vowel assimilating it. However, they keep on describing what happens during partial vowel assimilation but their examples show only syllabic nasal assimilation. For instance, they say that in regressive partial assimilation, a following vowel causes a preceding vowel to partially change its features. Their examples are:

- |     |          |            |
|-----|----------|------------|
| (3) | m ga-eje | (ŋ geedze) |
|     | m dere   | [ n dere]  |

They explain further that in the above examples /m/ has taken up the place of articulation of /g/ and /d/ in 'ga' and 'dere' respectively, thus becoming /ŋ / in the first example but /n/ in the second.

Furthermore, according to Ume, Ugoji and Dike (1989:97), assimilation works together with vowel and consonant elision in Igbo. They noted that vowel elision manifests differently in the different dialects of the language. This is because where some dialects would elide segments; other dialects would regressively assimilate the segments.

Ikekeonwu, Ezikeojiaku, Ubani and Ugoji (1999:76), point out that examples of progressive assimilation are scanty in languages while those of regressive assimilation are many. Examples of regressive assimilation in Igbo include the following:

- (4) ákpá + ósé                      akpóóse                      'bag of pepper'

According to Ngoesi (2000:62), there are different types of assimilation. They are: olulo azụ (regressive assimilation), olulo ihu (progressive assimilation), olulo nlocha (complete assimilation), olulo nlofọ (partial assimilation) and olulo mmakọ (coalescent assimilation). He points out that regressive assimilation is the most prevalent in Igbo. Assimilation is said to be regressive if the initial vowel of a second word turns back to assimilate the last vowel of the first word. For instances:

- (5)            ñwá            +            éké            nweeke

Furthermore, Oyebade (2004) says that both regressive assimilation and progressive assimilation are cases of meaning which a speaker wants to convey remains clear irrespective of the fact that some vowels have been assimilated. This is not the case in partial assimilation. He explains that here, the meaning of an utterance may be blurred because of assimilated segments.



Moreover, his discussion of partial assimilation is confusing. Rather than discuss it in terms of what happens to adjacent sound segments, he goes into talking of whether the meaning of the realized word is clear or blurred.

Yul-Ifode (1999:45) studies sound by saying that when one changes its features to be more similar to an adjacent sound that a sound has assimilated one another. In a full assimilation, two contiguous segments have identical features by using Yoruba examples below:

→ (6)	ilé	+	iwé	ilééwé	‘school’
→	Owo	+	ilé	ówóólé	‘rent’

Roach (2000:97) carry out a comparative study of the consonant assimilation states that when a word ends a single final consonant ( $C^f$ ) and is followed by another that begins with a single initial consonant ( $C^i$ ) then we have

..... $C^f$        $C^i$

Word boundary

In a situation where  $C^f$  changes to assume the form of  $C^i$  is called regressive assimilation. In the further explanation he points out that if  $C^f$  is an alveolar and  $C^i$  is not alveolar, the  $C^f$  would assume the same place of articulation with  $C^i$  in certain instances, (t) in [ðæt] would change to [p] before bilabial consonant, [k] before a velar consonant as follows in English expressions:

7)	that person	[ðæp   p   ð
	:sn]	
	light blue	[ laip blv]

As will be seen, these are examples of regressive assimilation, where [p] in  $C^i$  assimilates the /t/ in  $C^f$ .

The segment at the left hand side is assimilated by the segment at the right hand side by which the two segments become phonetically the same.

### The Phonological Processes of Assimilation in Okija Igbo Speech Variety

This section examines some regressive assimilation words that are different from standard Igbo in Okija variety of Igbo. The data were presented in a tableau. The tableau is designed in such a way that the top leftmost cell contains the input while the rest of the following column contains candidate outputs, the



arrow (→) indicates the optimal candidates, each cell on the right shows the number of violation incurred by each candidate. The candidate that does worse than other candidates by incurring a crucial violation is marked by (!) in the tableau and it automatically loses the chances of winning the competition because, having incurred a crucial violation, “there is no way” for it to be optimal even if it out performs the other candidates on the rest of CON.

#### 4.1. Table 1;

Lines	Before assimilation	After assimilation
1	ihe ojo	iy ojo
2	oara ehu	obale ehu
3	u o aha	u o aha
4	ulu ahu	ula awu
5	mpi ewu	mpe ehu

**Table 1:** Structural input is “ihe ojo” (bad thing)

iy ojo		ALIGN	IDENT	NOHIATUS	DEP
Candidate A	iy ojo	*			
Candidate B	iy ejo		*	***!	
→ Candidate C	iy ojo				*
Candidate D	yejo	*	*		
Candidate E	nojo	*	*		

**Table 2:** Structural input is “oara ehu” (goat’s blood)

obala ehu		ALIGN	IDENT	NOHIATUS	DEP
Candidate A	obala ehu	*			
Candidate B	obala ahu		*	***!	*
→ Candidate C	obale ehu			*	*
Candidate D	Mbalehu	*	*!		
Candidate E	Mblehu	*			

From the table 1 and 2 shown below, we can see that when the lexeme [h, r] is in the input side, it changes to [y] and [l] respectively.

**Table 3:** Structural input is “ujō agha” (fear of war)

ujō aha		ALIGN	IDENT	NOHIATUS	DEP
Candidate A	ujō aha	*			
Candidate B	ujō oha		*	**!	*
☞Candidate C	uja aha		*	*	*
Candidate D	Jeaha	*	*!		
Candidate E	Jaha	*	*		

**Table 4:** Structural input is “ulu ahū” (skin/flesh)

ulu aho		ALIGN	IDENT	NOHIATUS	DEP
Candidate A	ulu ahū	*	*		
Candidate B	ulu uhū		*	*	
☞Candidate C	ula awū				*
Candidate D	ulaawū	*	*!		
Candidate E	ulawū	*	*!		

**Table 5:** Structural input is “mpi ewu” (goat’s horn)

mpi ewu		ALIGN	IDENT	NOHIATUS	DEP
Candidate A	mpi ewu	*			
Candidate B	mpi iwu		*	**!	*
☞Candidate C	mpe ewu			*	*
Candidate D	mp <sup>h</sup> ewu	**!	*!		
Candidate E	Phewu	**	*		

From the analysis shown below, we can see that from nos. 3, 4, and 5 that the lexemes (ŋ, r, w) from the output side, changes to [j, l, w] respectively. On the other hand, more number of regressive assimilation found in nos 1 to 5 constitutes a point to be considered. The possible reason which may account for this situation may be that the topic of discourse which we used indicated high regressive assimilation in the appendix. It might not also constitute a case of language change since there are no cases where adults in the speech community do have more or less regressive assimilation in their speech inventory. We are therefore, of the opinion that the course of our discussion resulted in it and our respondents adhered to the questions of the interview.

## Summary

From the result of the analysis, the researcher found out that regressive assimilation was found to be more prominent in our data. Also, the overall function of faithfulness which was used for our analysis was to enforce the phonological shape of lexical

] forms in the output as a sort of inertness limiting the distance between outputs and their basic shapes. The findings from the analysis of the data from the interview therefore, reveal that the phonological, morphological, syntactic and lexical aspects of Okija speech variety of Igbo are affected rather than the semantic aspects of the dialect.

We found out that progressive and coalescent assimilation were less in assimilation processes in Okija while regressive assimilation was found to be more prominent in Okija dialect.

## Conclusion

In conclusion, we have to point out that even though we carry out an indepth study of assimilation in Igbo speech pattern, we are far from having done all that needs to be done in this area of study. For instance, one could get interesting input from some other Igbo dialects, especially those of them that use aspiration. The effects of Optimality analysis on tones in the Igbo language could be more elaborately investigated. Moreover, this research is an Optimalist study. Another phonological theory in Igbo could be carried out either to authenticate or falsify the findings of earlier researches on the study.

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