On the Phonemic Status of /ɛ/ in Ukwuani

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Abstract

This paper examines the phonemic status of /ɛ/ in Ukwuani, an Igboid language spoken in Delta State, Nigeria. It evaluates whether the sound is a phoneme capable of creating meaningful differences in words or whether it is a variant of another phoneme as the case with other Igbo languages. The study also investigates the distribution of the sound and shows whether there are restrictions to its occurrence. To analyze the data, the Structgenautcy framework by Yul-Ifode, Okumo, and Ezenwafor (2016) was employed using data sourced from competent native speakers through the Ibadan four hundred wordlists. The qualitative method of analysis was adopted in analyzing the data. It was found out that the mid-front unexpanded vowel, /ɛ/, is a phoneme in Ukwuani in contrast with the phoneme /a/ and other phonemes. The language has nine vowels divided into two harmonic sets with the /a/ occurring with both sets. This is not the case in most other Igbo languages that have an eight-vowel system neatly divided into two sets with the exclusion of /ɛ/. Thus, while /ɛ/ is realized as a variant in Igbo, it is a phoneme in Ukwuani contrasting minimally with other phonemes.

Keywords: contrast, Igboid, phoneme, phonemic status, structgenautcy, Ukwuani

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1 Introduction

Every language has a set of sounds that distinguishes it from the other. A sound that may be significant or distinctive in one language may not be in another language. This is why Phonology is generally language specific. By this, it means that individual languages have different patterns and structures that make them unique from others. Language is the main core of human communication. It employs different meaningful sounds to make utterances. These sounds are structured and patterned according to the principles which govern the organization of sounds in each language. The phonological knowledge of a speaker enables him to produce meaningful sounds and to recognize strings of sounds that do not form meaningful units of his language. A phonological study is very essential in language learning. It helps native speakers of the language to know the functional sounds in their language and what differentiates it from other languages (Yul-Ifode, 2007).

According to Sommerstein(1977), no two speech sounds are exactly alike, even those that occur in corresponding positions in utterances which are intentional repetitions of one another. Sounds that are distinctive in one language may not be in another language. Different languages have different sets of contrasts based on the structuring or patterning of the language. Differences in meaning are conveyed by utilizing a limited number of distinct sounds. Clark et al. (2007) and McGregor (2009) note that the structure or status of a sound is simply treated as a question of interpretation within the linguistic system of which they are part. Phones that seem phonetically different initially might be allophones in the language while phones that look phonetically similar might be phonemes. This is why every phonological analysis is based on the particular language patterning and organization.

This study presents the vowels of Ukwuani and shows the phonemic status of the closed mid-front unexpanded vowel /ɛ/. Ukwuani is an Igboid cluster spoken in Delta State, Nigeria. While investigating the degree of relatedness between the Lower Niger Languages, Williamson (1973) classifies Ukwuani as a related Igboid language. Igboid is a sub-phylum under the Benue-Congo family of the Niger-Congo phylum (Williamson, 1989). Not much work has been done on the phonology of Ukwuanias compared with the other Eastern Igboid languages. The few works done, such as Armstrong (1967), Williamson (1968), and some research works, do not give detailed analyses of the languages. A language that does not have many written records may soon face the threat of endangerment. According to Aziza (2015), all the eleven languages spoken in Delta State of which Ukwuani is a part, are not healthy (endangered). This is because non of these languages can be found at 0-6a levels of the scale based on the Ethnologue 13 levels scale called the Extended Graded Intergenerational Disruption Scale (EGIDS) used to measure the endangerment of a language. This work will serve as future reference material for both native speakers and linguists who may want to work on the language. It is on this note that we have decided to work on the status of the closed mid-front unexpanded vowel /ɛ/.

Earlier studies on Standard Igbo such as Emenanjo (1978), Ikekeonu, Ezikeojiaku, Ubani, and Ugoji (1999), Okumo and Bright-Ajoku (2020) amongst others, show that there are eight phonemic vowels with the exclusion of the /ɛ/ which they classify as a variant of the open front unrounded vowel /a/since they can neatly replace each other without an alteration in meaning. In the case of Ukwuani, an Igboid language, it is not the case of variational pair but separate phonemes that can contrast minimally with each other and with other phonemes in the language. This work thus shows such contrasts to ascertain the distinctiveness of the phoneme and their distributions in the language. The main aim is to ascertain the phonemic status of the vowel /ɛ/ and to determine whether it is a distinctive phoneme capable of having independent existence or a variant of the sound, /a/. To do this, the following research questions will guide the study: what is the phonemic status of the mid-front vowel, /ɛ/ in Ukwuani? Is it a distinctive sound capable of contrasting with the open vowel, /a/, and other vowels? Can it conveniently replace the phoneme /a/ without changing the meaning of the word? This study is significant in that, it shows the uniqueness of Ukwuani an Igboid language from other Igboid languages and buttresses the point that individual languages have different patterns and structures that make them unique from others. It will add to the literature in phonology in general and specifically, it will serve as a reference material to the study of sounds in Ukwuani.

Data for the study was elicited using the Ibadan 400 words list. The list includes words of everyday usage such as parts of the body, kingship terms, colors, animals, and common food items in the locality. The data were analyzed using the structgenautcy model of phonological analysis proposed by Yul-Ifode, Okumo, and Ezenwafor (2016). The theoretical framework incorporates the ideas of structuralism, generative phonology, and autosegmental phonology. It argues that none of these theories can work independently in the phonological analysis of our languages. It puts up the argument that these three theories must work together to complement each other and that instead of claiming an eclectic approach which shies away from any particular theoretical approach, that one could simply say the framework "structgenautcy" is applied since it incorporates the basic tenets of the three major phonological frameworks which are always paramount in a full phonological study.

The main focus of this model is that sounds are not just meant for oppositions, but rather, that a phoneme is made up of some phonological features or ingredients that are much smaller than the phoneme. These phonological ingredients highlight the various gestures involved in the production of speech sounds. The theory focuses on the linguistic competence of native speakers in which the underlying representations are converted to surface or derived representations by the application of phonological rules. In this model, tone is viewed as an independent entity that can exist on its own. Other supra-segments such as nasalization, intonation, and stress are also viewed as such. An association line is used to connect the segments to the tone-bearing units.

A review of various works in phonology in recent years shows methodological statements couched in phrases like 'purely descriptive', without exactly identifying what the peculiarity of this 'purely descriptive' work is, other than the avoidance of abstraction characterizing recent theories and, sticking to structuralism, but fearing to be identified with the same. The result is an eclectic framework, where no single dominates irrespective of how much one may try to impose one name on the operation. Moving from the basic principles of phonemic analysis, it is impossible to identify these distinctive units that Generative Phonology depends on successfully without recourse to Structuralism; similarly, without the use of these distinctive features and relying on some basic principles of Generative Phonology, Autosegmental analysis will more or less go back to the segment as its basic unit of analysis. The phoneme, phonological features, rule writing, and tonal analysis remain central to any phonological work and significant features that emerged from different theories. Thus, the acronym "Structgenautcy" is used to capture these theories and in the current dispensation of phonology, students or researchers should not feel condemned or inadequate in employing a framework where existing theories interact that successfully captures what is before them

In this study, we employ the structuralism view of structgenautcy in accounting for the structure and function of the sound through the use of minimal pair.

2.   Presentation, Analysis, and Discussion

The Vowels of Ukwuani

There are nine vowel sounds in Ukwuani which include /a e i o u ɛ ɔ ʊ ɪ/. This assertion is in line with studies in the language such as Okumo 2015, Williamson 1968 and others. The table below is a distinctive feature matrix for the vowels.

Table 1. *Distinctive feature matrix of Ukwuani phonemic vowels*

Feature		ɪ	I	e	ɛ	A	ɔ	o	ʊ	u
High	Ukwuani	+	+	-	-	-	-	-	+	+
Low	Ukwuani	-	-	-	-	+	-	-	-	-
Back	Ukwuani	-	-	-	-	+	+	+	+	+
Expanded	Ukwuani	+	-	+	-	-	-	+	-	+

Although all the sounds in the table above can contrast minimally in the language since a replacement of one sound for the other can bring about a change in the meaning of the word, the focus of this paper however, is to show that the sound /ɛ/ is a phoneme in the language. Studies in other central Igbo languages do not show such contrast, instead, they present the sound as an allophone of the open front vowel, /a/ that can replace each other conveniently without necessarily changing the meaning of the word in which they are found. It is therefore viewed as a case of dialectal variation and not a phoneme. In the following examples, we present data to show the contrast between the two vowels/ɛ/ and /a/ and other vowels in the language.

The vowel /ɛ/ can occur in the following environment in the examples below contrasting minimally:

ɛ/a

1. HH   /aŋʷʊ/ 'sun'   2. HH /akʊ/   'palm kennel'
          /ɛŋʷʊ/ mosquitor'   /ɛkʊ/   'palm fruit'

3. HF   /amʊ/ 'penis'   4. HHH   /ɛsʊsʊ/ 'worm'
          /ɛmʊ/ 'laughter'   /asʊsʊ/ 'a language'

5. HH   /ɛfɔ/   'stomach'   6. HF /ɛwɔ/ 'beard'
          /afɔ/   'a local market day'   /awʊ/ 'crocodile

In examples one to six, we show the contrast between the vowels /ɛ/ and /a/. The examples presented above show similarity in all aspects except for a difference in the particular positions bearing the vowels under contrast. In example one, /aŋʷʊ/ 'sun' and /ɛŋʷʊ/ 'mosquitor' contrast at the initial environment. Since the language, like other African languages, is a tonal language, the vowels bear the tone. Tone can trigger variation in meaning; hence the examples are carefully selected to have the same tonemic element. Both V^1 and V^2 bear the high tone (HH). This is the same as example two.

In examples three and six, the contrast is at the initial position. The tones are also similar. While V1 is a high tone, V2 is a falling tone (HF). Ukwuani has a distinctive falling tone that contrasts with other tonemes. Example four is a trisyllabic word with all high tones.

From the foregoing, we can observe that the mid-front unexpanded vowel /ɛ/ contrast minimally with the open vowel /a/. It is thus, not a variant. If we, therefore, assume that it is an allophone that can be substituted with /a/ without a change in meaning, it, therefore, means that we would have a construction like the ones below:

7./aŋʷʊ/   'sun'   →   [ɛŋʷʊ] mosquitor'

8. /akʊ/   'palm kennel' → [ɛkʊ] 'palm fruit'

9. /amʊ/   'penis'   →   [ɛmʊ] 'laughter'

10. /ɛwɔ/   'beard' →   [awʊ]   'crocodile'

If we decide to interpret the data above as cases of allophones, we would then have an absurd presentation as native speakers of Ukwuani, knowing that there are obvious contrasts between the underlying forms of the words and the surface forms. It will then create false and awkward representations as they are not meaningful to native speakers. ./aŋʷʊ/ and /ɛŋʷʊ/ will never mean the same thing as in the case of 'akwa' and 'ekwa' 'egg' in central Igbo. It is therefore okay to say that the pairs above are cases of distinct phonemes in contrast.

To further prove the distinctiveness of the vowel /ɛ/ in Ukwuani, we show contrast with other vowels.

Contrast with other vowels

ɛ/ɔ

11. HH	/ɛɲa/	'eye'		12.	/ɛmʊ/	'laughter'
	/ɔɲa/	'wound'			/ɔmʊ/	'grinding stone'
13. HF	/ɛŋʷʊ/	'mosquitor'		14. HH	/ɛkwa/	'cry'
	/ɔŋʷʊ/	'death'			/ɔkwa/	'a title given to an old man'

ɛ/ʊ

15. HH	/ɛkʊ/	'palm fruit'		16. HH	/ɛtʊ/	'chewing stick'
	/ʊkʊ/	'leg'			/ʊtʊ/	contribution (thrift)

Examples 11-16 show contrasts between the vowel /ɛ/ and other vowels. Just like the examples contrasting with /a/, the contrasts with /ʊ/ and /ɔ/ show distinctions at the initial positions. The fact that the sound could contrast with other sounds in the language proves its phonemic status. The mid-front unexpanded vowel, /ɛ/ is therefore a distinct phoneme in Ukwuani.

2.2   Discussion of Findings

The findings of this study were discussed using the research questions as follows:

Research Question One: what is the phonemic status of the mid-front vowel, /ɛ/ in Ukwuani?

The three principles of phonemic analysis are the principles of contrast, variation, and distribution as posited by Yul-Ifode (2007). This study applied these principles and realized that the phoneme /ɛ/ is significant in Ukwuani. A replacement of one sound for the other can bring about a change in the meaning of the words. This is exemplified in examples one to six and eleven to sixteen. The study, therefore, concludes that based on these data that show clear cases of contrast, the mid-front vowel in Ukwuani shows the status of a distinctive phoneme.

Research QuestionTwo: is the sound a distinctive phoneme capable of contrasting with the open vowel, /a/, and others?

The data from the analysis made earlier show clear cases of contrast with/a/ in examples one to six. Eleven to sixteen show contrasts with other vowels minimally such as /ɔ/ and /ʊ/. This finding is in line withOkumo (2020) that there are nine contrasting vowels in Ukwuani.

Research Question Three: can the sound /ɛ/ replace the phoneme / without changing the meaning of the words?

According to the principle of variation, a sound is said to be an allophone if the replacement of one sound for the other cannot bring about a change in meaning. This study found out thatunlikeotherIgboidlanguageswho can replace the /a/ for /ɛ/, Ukwuaniis not so. From the analysis in examples 7-10, we assumed that they were mere variants and hence can replace each other without obstructing the meaning of the word in the language. It was observed that this assertion cannot stand because it made the words sound awkward as native speakers would not understand nor accept such variation. We, therefore, conclude that the case of Ukwuaniis is unique in that the replacement of the two sounds for each other is not the norm in the language.The answer to this research question is thus, a No! Be that as it may, it is clear that the /ɛ/sound is a distinctive phoneme contrasting minimally with the other vowels listed above.

Summary of Findings

From the discussion in the foregoing, this paper concludes that unlike the central Igbothat classifies the sound as a variant of /a/, Ukwuani shows contrast for the sound.Theminimalpairtestpresented,showcontrastbetween/ɛ/and/a/. It is obvious from the data, that the substitution of the vowels for the other can bring about a change in meaning. The vowel has a restricted occurrence as it is restricted at the word-final position. The nine vowels of Ukwuaniare therefore significant phonemes in the language.

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