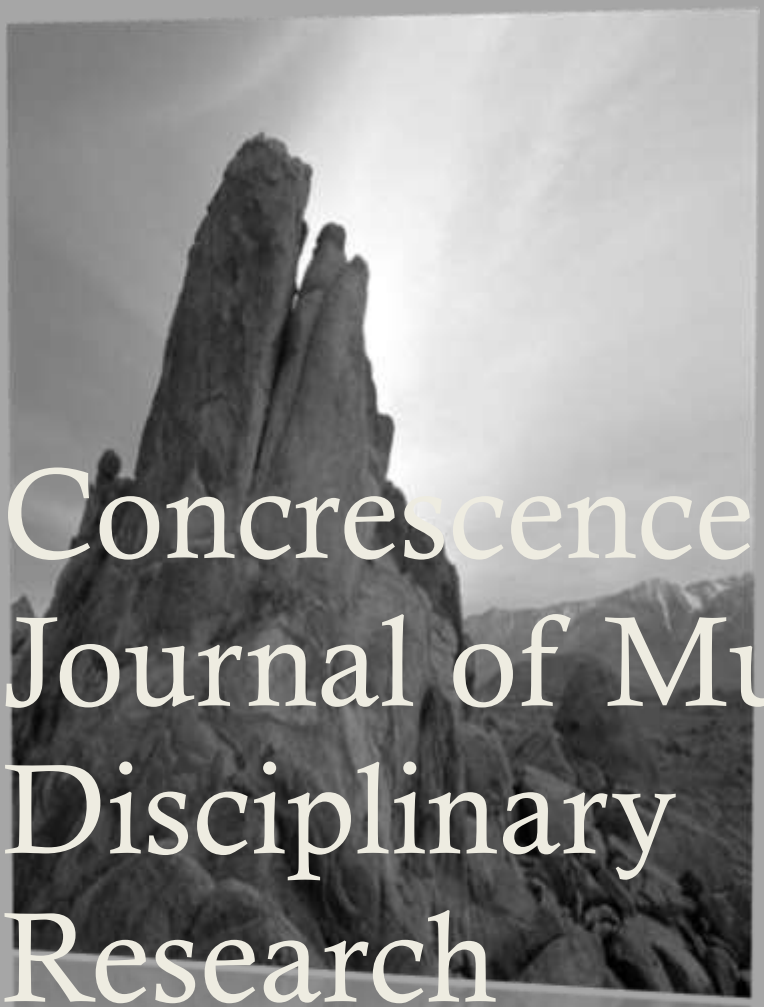

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Syllable Structure and Typology of Urhobo

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Abstract
The study examines the syllable structure and typology of Urhobo language. Urhobo is a minority language spoken in Nigeria's Delta region. It is little studied; hence this research extends research in its phonology. The motivation for this study, is to demonstrate its syllable typological characterisation gauged from Maddiesson 2005, within which it could be shown to belong to the simple structure type. It further provides evidence for the centrality of the syllable. Accordingly, the syllable is a vital aspect of language study, which enables one to understand the general workings of the spoken language. Data for this study comprises 400 words, elicited from two native speakers of the Agbarho dialect of Urhobo, using the Ibadan 400 wordlist. The data are analysed using the Autosegmental phonology of Goldsmith (1976); because it is a non-linear theory of phonology, which accounted for syllable appropriately. It was discovered from the analysis that only onset can branch in Urhobo; coda elements are not attested, and the nucleus may not branch, among others. Conclusion was drawn from the analysis that Urhobo operates the simple syllable structure typology.

Keywords: Urhobo, syllable structure, typology, non-linear, Autosegmental phonology.

1. Introduction

It is believed that syllable is the hub of phonology (Kahn 1980, Katamba 1989, Goldsmith 1990, Clements 2000, etc.). In trying to study the syllable structure of the Urhobo language, the sound inventories and tone system of the language shall be discussed before going into the syllable because they are the building blocks of the syllable. Then, syllable structure and typologies, data analysis and discussion, findings, and finally, conclusion.

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2. The Urhobo language and people

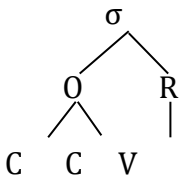
Urhobo is a Southwestern Edoid language. Edoid is a member of the West Benue-Congo group (in company with Igbo, Yoruba, Nupe, Idoma, etc). According to Aziza (2007), Urhobo has fifteen dialects, most of which are highly mutually intelligible. The Agbarho dialect is the standard variety, spoken generally across the Urhobo community and used for writing the language, and it is the variety that would be described here.

The Urhobo People are part of Nigeria, near the North Western Niger Delta. Urhobo is the major ethnic group in Delta State. Delta State is one of the thirty-six states in the Federal Republic of Nigeria. The oral tradition tells us that the history of the Urhobo people began from the Edo territory. All the kingdoms in Urhobo land trace their heritage back to the Ogiso dynasty.The term Urhobo refers to both the people and the language. With over one million indigenes and hundreds of communities scattered across Delta state. The Urhobo people spread across over nine Local Government Areas, namely; Uvwie, Udu, Ethiope East, Ethiope West, Okpe, Ughelli North, Ughelli South and part of Warri South, (Otite, 2011).

3. Urhobo Phonology: An Overview

In providing an overview of the phonological elements of concern, we synthesise Aziza (2003, 2008) and Ugorji (2013) alongside our data, the basis of which those constituents of syllable formations which account for the well-formedness conditions of the language (namely, all possible well-formed syllable constituents and all substantive segment and prosodic resources of the language, according to the viewpoint of the present research. The term 'syllable' may then refer to an element of phonological structure which consists of segment(s) organised in permissible intrinsic sonority sequences that might constitute the basis for prosodic statements (Ugorji 2002:89; cf. 2013). It is an organising principle – organising phonological grammar.

Accordingly, the syllable formalisation for Urhobo includes onset and rhyme constituents. The onset may branch, but a branching rhyme is not attested to our data. The syllable conditions of Urhobo may be concisely schemed as follows:



Some lexical samples support the above conditions (Ugorji 2013):

The Urhobo Syllable Conditions:

1.	(a)	tà	'say'
		ʃɛ̀	'sell'
		krú	'load'
		bró	'how many'
		vrɛ́	'get up'
		mrɛ̀	'to see'
	(b)	`ɔnɛ́	'yam'

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ékpètì 'box'
`ɔbàra 'blood'
`orí 'pomade'
úsèkpè 'snail'

As the above conditions suggest, the Urhobo syllable conditions would permit certain Onset clusters, as typified in *krú* 'load', *bró* 'how many', among others. However, onset elements may not occur in nouns. Also, there are no Coda elements, as all lexical forms would occur unchecked.

Urhobo is a tonal language. It thus contrasts lexical items on the grounds of minimal variations in tone patterns. Two basic tones are distinctive, namely, High [ˊ] and Low [ˋ]. There is also mid-tone or downstep [ˉ] (cf. Aziza 2003) with restricted distribution. The following are some illustrations:

2. (a) sé 'call'
sè refuse

(b) òdìbò 'servant'
ódìbó 'banana'

(c) ʃé fall
ʃè sell

d) úkpè 'bed'
ɔ́kà 'maize'
ɔ́sē 'father'
èwérī 'monkey'

Nouns in Urhobo may pattern slightly differently from other lexical classes, such as verbs, and do, therefore, deserve being separately examined. One major difference lies in the syllable patterns. Whereas the verbs, for example, tend to always require Onset units, the nouns lack this requirement and may begin with Nucleus units instead; see 1(b) and 2(d), above.

Urhobo contrasts seven oral vowels and seven nasal ones (cf. Aziza 2008). The vowel segments are shown in 3 below:

3. (a) Oral vowels: /i e ɛ a u o ɔ/
(b) Nasal vowels:/ĩ ẽ ɛ̃ ã ɔ̃ õ ũ/

In other words, the elements that form part of the Nucleus constituents may be shown to be about fourteen. Syllabic consonants are not attested. Thus, Aziza (2003:2) aptly remarks, "Only vowels bear tones in this language."

Urhobo attests to a partial vowel harmony system, which appears to preserve a vestige of the Proto-Edoid patterns (cf. Aziza 2008). Consider the following:

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4. a)

[+ATR]		[-ATR]	
i	u	ɛ	ɔ
e	o	a	

b)

cékpú	‘to trade’	kɔ̀	'plant'
kwéʋrì	‘oil’	ɛ̀kɔ̀	'to plant'
óbíbì	‘friend’	sà	'shoot'
ùgbèjá	'friend'	èsá	'to shoot'

Margin constituents may permit a rich inventory of consonantal elements. The table below shows the inventory of consonants (cf. Aziza 2003)

	Bilabial	Labio-dental	Alveolar	Palato-alveolar	Palatal	Velar	Labial-velar
Plosive	p b		t d		c ɟ	K g	kp gb
Fricative	ɸ	f v	s z	ʃ ʒ		h ɣ	
Nasal	m		N		ɲ	ŋ	
Trill/tap			R				
Flap			ɾ				
Approximant	ʋ				ʃ		w

4. Autosegmental phonology

Autosegmental phonology (1976) is an aspect of phonology that captures the autosegmental theory and the application of the theory to phonological features and processes that could not be accounted for by earlier theories. It is a non-linear approach captured as a multi-tiered or multi-linear approach to the study of phonemes and their elemental features such as tone, vowel harmony, assimilation, etc. it is a phonological theory in which phonological analysis is done by placing different features on separate tiers and in which various tiers are organized by association lines. Every segment on each tier is specific and unique to the tier, and segments on each tier are associated with segments on the other tiers with association lines.

6. The Nature of the Syllable

Syllables are usually described as consisting of a centre which has little or no obstruction to airflow and which sounds comparatively loud. However, before and after this centre (that is, at the beginning and end of the syllable), there will be greater obstruction to airflow and/or less loud sound. The syllable is made up of two parts: the Onset and Rhyme. The onset is occupied by consonants, which is optional; that is, it can be present or not and the rhyme is divided into two parts, the nucleus and the coda. The nucleus is occupied by the vowel V or a syllabic consonant(C); the nucleus is an obligatory constituent of the syllable; that is, it must be in the syllable. The coda is occupied by consonants(C), which is optional. Below is the schema of the syllable.

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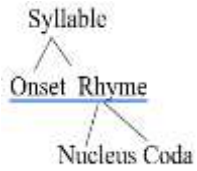

A syllable can be a vowel sound (V) alone, a vowel sound and a consonant (CV), consonant clusters and vowel (CCV), etc. A word can have one syllable (mono-syllabic word), two syllables (bi-syllabic word) and more than two syllables (poly-syllabic words).

7. Previous Studies on Syllable

According to Aziza (2007), Urhobo has three types of syllables: V, CV, and CCV, where V stands for a vowel, the nucleus of the syllable, and C stands for a consonant. Unlike Yoruba or Igbo, Urhobo has no syllabic consonants.

The V-Syllable

The V syllable consists of a vowel as the only segment. It is the minimum syllable type to be found in Urhobo. It can occur as a word, or it can act as a type of prefix in nouns, adjectives and demonstratives. For example:

Agogo [a-go-go] V-CV-CV Noun 'bell'

Ogagan [ɔ-ga-ga] V-CV-CV Adjective 'strong'

The CV Syllable

The CV syllable consists of a constant (C) and a vowel (V). It is the predominant syllable structure in the language. It can occur as a word or in any position in the word---initially, medially, or in the final position. Examples include the following:

sa [sa] CV verb 'shoot'

gbe [gbe] CV verb 'dance'

The CCV Syllable

This syllable type consists of two constants and a vowel. There are restrictions on the type of consonants that occur in this syllable type. The first consonant must be a labial (bilabial or labio-dental) or a velar consonant, while the second consonant must be the voiced alveolar tap consonant [r]. For example:

bru [bru] CCV verb 'cut'
mre [mʃƐ] CCV verb 'see'

A second type of the CCV syllable consists of one consonant and two vowels. Ordinarily, this should constitute two syllables, namely, a CV and a V syllables. However, the type of CVV syllable that we are discussing here is the one in which the first vowel is a high front vowel [i] or high back vowel [u] and the second vowel is another vowel that is not [i] or [u]. When this syllable is pronounced, it is realized as a CCV syllable because the high front vowel becomes the palatal approximant [j] while the high back vowel becomes the

labial-velar approximant [w]. Since this syllable is realized as a CCV syllable, it is usually not classified as a syllable type on its own but as a type of this syllable. The following are examples:

mie	CVV	[mje]	CCV	'take'
vie	CVV	[vje]	CCV	'cry'

Maddieson (2005) identified three syllable structure types: Simple syllable structure- languages that permit more predominance of CV structures are referred to as having a simple syllable structure, CVC and CCV are 'modest expansions of the simple syllable type'(p.54), Moderately complex syllable structure- languages that permit consonant clusters patterns of sequencing and Complex syllable structure- languages that permit freer combinations of two consonants or more at onset and /or coda. Hence, we can say that Maddieson (2005) distinguished two syllable typologies: Simple syllable typology and Complex syllable typology. Complex syllable is divided into two, they are; moderately complex syllable typology and complex syllable typology. Complex syllable typology indicates branching onset and coda constituents, while simple syllable typology may not, except that onset may branch minimally and coda may not branch as a tendency.

In order to do the work of syllabification properly in any language, rules or theories guiding this are applied. Giegerich (1992) asserts that the sonority theory can be employed in syllabification by recognizing a peak of prominence in a word. Also, the Maximal Onset principle by Kahn & Selkirk (1982) states that syllabification can be done by assigning consonant clusters before and after the obligatory nucleus.

8. Data Analysis and Discussion

8.1 Data classification according to grammatical categories

Nouns

1.	/u.jo.ʋi/	'head'	[V-CV-CV]
2.	/o.ɣwo/	' soup'	[V-CCV]
3.	/o.di/	'grass'	[V-CV]
4.	/eja/	' woman'	[V-CV]
5.	/o.da/	'cutlass'	[V-CV] '
6.	/u.ho.ho/	' shadow '	[V-CV-CV]
7.	/e.ru/	'cap'	[v-cv]
8.	/o.ru.ru/	'thread'	[v-cv-cv]
9.	/e.ki/	'market'	[v-cv]
10.	/o.sjo/	'rain'	[v-ccv]

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Verbs

1. /ge.ri/ 'vomit' [cv-cv]
2. /ʊjɛ/ 'to give birth' [ccv]
3. /ʊe.rɛ/ 'sleep' [cv-cv]
4. /rɔ/ 'swallow' [cv]
5. /du.ʊu/ 'pound' [cv-cv]
6. /bɔ/ 'build' [cv]
7. /mu.dja/ 'stand' [cv-ccv]
8. /kpa.he.ɸi.jɔ/ 'reply' [cv-cv-cv-cv]
9. /bɛ.re/ 'tear' [cv-cv]
10. /mrɛ/ 'see' [ccv]

Adjectives

1. /mjɛ.mjɛ/ 'sweet' [ccv-ccv]
2. /ɟi.ro/ 'cold' [cv-cv]
3. /ɔ.kpo.kpɔ/ 'new' [v-cv-cv]
4. /o.bje.bi/ 'black' [v-ccv-cv]
5. /ɔ.fwa.fo/ 'white' [v-ccv-cv]
6. /kpɔ.rɔ/ 'wet' [cv-cv]
7. /gro.gro/ 'long' [ccv-ccv]
8. /krɛ.krɛ/ 'short' [ccv-ccv]
9. /to.rɛ/ 'hot' [cv-cv]
10. /ro/ 'big' [cv]

Preposition

1. /o.bo.hwɛ.re/ 'left' [v-cv-cv-cv]
2. /o.bɔ.re/ 'right' [v-cv-cv]
3. /o.ta.fe/ 'outside' [v-cv-cv]
4. /o.ba.ro/ 'front' [v-cv-cv]

Pronouns

1. /mɛ/ 'I' [cv]
2. /wo/ 'you' [cv]
3. /o/ 'he/she' [v]

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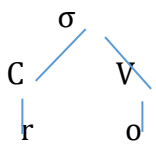
4. /a.ʊa.re/ 'we/us' [v-cv-cv]
5. /a.je/ 'they' [v-cv]
6. /ɔ.mɛ/ 'mine' [v-cv]
7. /ɔ.wɛ/ 'yours' [v-cv]
8. /o.ma.rɔ.je/ 'herself/himself' [v-cv-cv]
9. /o.hwɔ.vo/ 'someone' [v-ccv-cv]
10. /ɔ.na.na/ 'this' [v-cv-cv]

8.2 Syllable typologies

8.2.1 Open and closed syllable

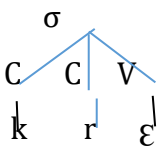
a. /ro/ 'big' [cv]
b. /to.rɛ/ 'hot' [cv-cv]
c. /krɛ.krɛ/ 'short' [ccv-ccv]
d. /o.bje.bi/ 'black' [v-ccv-cv]
e. /mjɛ.mjɛ/ 'sweet' [ccv-ccv]

8.1a



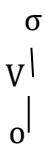
Skeletal tier:
Segmental tier:

8.1c.



Skeletal tier:
Segmental tier:

4.1d. .



Skeletal tier:
Segmental tier:

The first syllables in data 1a,1c and 1d were analyzed above. From the data above, it indicates that Urhobo operates only open syllable type since all syllables end with a vowel only.

8.2.1 Onsetless/Codaless syllables

a. /hwe.re/ 'sweep' [ccv-cv]
b. /o.sjo/ 'rain' [v-ccv]
c. /o.kri/ 'he-goat' [v-ccv]

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d. /u.sjo/ 'star' [v-ccv]

e. /jo.ʊi/ 'beautiful' [cv-cv]

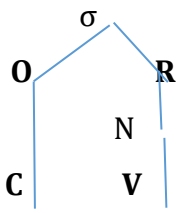
8.2b. σ

Skeletal tier: V

Segmental tier: o

This indicates an Onsetless and Codaless syllable.

4.2e. **.**



This data indicates a Codales syllable.

The data above shows that in Urhobo, an onset and a nucleus alone can make up a syllable, but a nucleus and a coda alone cannot. Hence, a coda-less syllable is attested in Urhobo. Also, there is the case of a Codaless and onset-less syllable, that is, the syllable is made up of just a nucleus.

8.2.3Branching Onset/Rhyme

a. /o.sjo/ 'rain' [v-ccv]

b. /o.kri/ 'he-goat' [v-ccv]

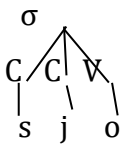
c. /u.sjo/ 'star' [v-ccv]

d. /u.ɣɔ.ʒɔ/ 'clock' [v-cv-cv]

e. /hwe.re/ 'sweep' [ccv-cv]

In the data above, the second syllables would be analysed.

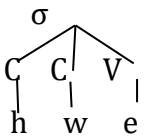
4.3a. **.**



Skeletal tier:

Segmental tier:

4.3e



Skeletal tier:

Segmental tier:

From the data above, it is only onset that branches in Urhobo strictly follow the phonotactic rules of consonant clusters at the onset domain.

9. Findings

The following are the findings from this work:

1. Urhobo operates the simple syllable typology following Maddieson's (2005) classification.
2. Urhobo has three syllable structures: V, CV and CCV.
3. Not all consonants form consonant clusters in the CCV syllable structure of Urhobo.
4. There are no closed syllables in Urhobo; there are only open syllables.
5. The onset and nucleus alone make up a syllable in Urhobo, but the coda and nucleus cannot.
6. Only onset branches in Urhobo.
7. Urhobo syllabification follows the theory of the Onset Maximal principle.

10. Conclusion

So far, we have investigated the syllable structure and typology of Urhobo. It was found that syllabification is a vital phenomenon in all languages—different languages with their syllable structure and typologies. From the data presented and discussed, it was discovered that Urhobo has a syllable structure; there is no closed syllable in the language, only open syllable, and it operates the simple syllable typology. This work would be beneficial to learners of the language and scholars who would be interested in this language because information on syllables and syllabification in the language would bring a better understanding of the workings of the language.

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