
URHOB0 REDUPLICATION AND ITS PHONOLOGICAL MANIFESTATIONS

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Abstract: *To create new meaning, or new grammatical forms, many languages characteristically reduplicate base morphemes, while subjecting their segmental materials to series of changes that evoke the interface between morphology and phonology. The study investigates this interconnection, using Urhobo (Edoid: Nigeria) as a case study. A qualitative descriptive research design is adopted, with data obtained through elicitation from fluent native speakers of Urhobo, and supplemented with relevant published linguistic materials in Urhobo. The analysis, conducted within the non-linear framework, employ CV Phonology. The findings on the aspect of morphology show that: (1) Urhobo derives reduplication by repeating base forms to the left; (2) it forms quantifiers, and marks progressives duplicating base forms. The findings also reveal that boundary vowels of the reduplicatives were either deleted or assimilated, yielding surface forms that are determined by qualities of the boundary vowels themselves. Our study demonstrates that Urhobo reduplication is not merely a morphological copying operation but also a linguistic operation that systematically interacts with the phonological component of the grammar. The findings reveal the creative morphological environments that condition phonological processes, shedding further light on the creative nature of the language system.*

Keywords: *Interface, Morphology, Reduplication, CV Phonology, Urhobo*

Introduction

Many languages create new meanings or derive new words through reduplication of morphological elements (Katamba 2006; Utulu 2015; Ejabee 2018). Thus, reduplication is a morphological process in which a linguistic form or part of a form is repeated to create a new grammatical or lexical expression. It is found in many languages and may perform functions such as expressing plurality, intensity, aspect, continuity and other grammatical meanings. In Urhobo, reduplication constitutes an important word-formation process and performs both grammatical and lexical functions. Previous research on Urhobo has examined reduplication from different perspectives. Ejabee (2018), for instance, demonstrates that reduplication in Urhobo performs grammatical and lexical functions and participates in the formation of adjectives and adverbs.

The present paper extends this line of investigation by focusing on the phonological consequences of reduplication. Rather than treating reduplication solely as the copying of morphological material, the study examines how the resulting structures interact with the phonological system of Urhobo. In this study, the researcher examines the formation of the quantifier many, the determiner every and continuous tense via reduplication. The aim of the study is to examine the interactions between morphological and phonological processes in reduplication.

Reduplication in Urhobo

The data examined in the study reveal that reduplication in Urhobo is structurally complex. Complete reduplication may occur with or without insertion, particularly in monosyllabic forms. According to Ejabee (2018) reduplication performs different grammatical functions in the language. Joshua Godwin-Ivworin (2023), for example, reports complete reduplication of monosyllabic adjectives with and without insertion.

The present analysis identifies three major reduplicative patterns: the formation of many via reduplication, the formation of every via reduplication, and the formation of continuous tense via reduplication. These patterns demonstrate that morphological reduplication can create environments in which phonological processes operate.

Theoretical Framework: CV-Phonology

The analysis adopts CV-Phonology, developed by Clements and Keyser (1983). The theory represents consonants and vowels on a skeletal tier consisting of C and V positions. It developed from the broader tradition of non-linear phonology and is useful for representing relationships between syllable structure and segmental material.

The framework is particularly relevant to the present study because the reduplication data involve changes in syllable structure, deletion, insertion, glide formation and assimilation. Through the CV representation, the analysis can show how the morphological addition of copied material affects the available C and V positions and how phonological processes subsequently modify those structures.

Methodology

The study adopts a qualitative descriptive research design. Data were obtained through elicitation from native speakers of Urhobo and supplemented by relevant published studies on Urhobo morphology and phonology. The data were examined according to the morphological structure of the reduplicated forms and the phonological changes occurring within them. Particular attention was paid to the relationship between the base, reduplicant and resulting surface form.

Analysis of Reduplication

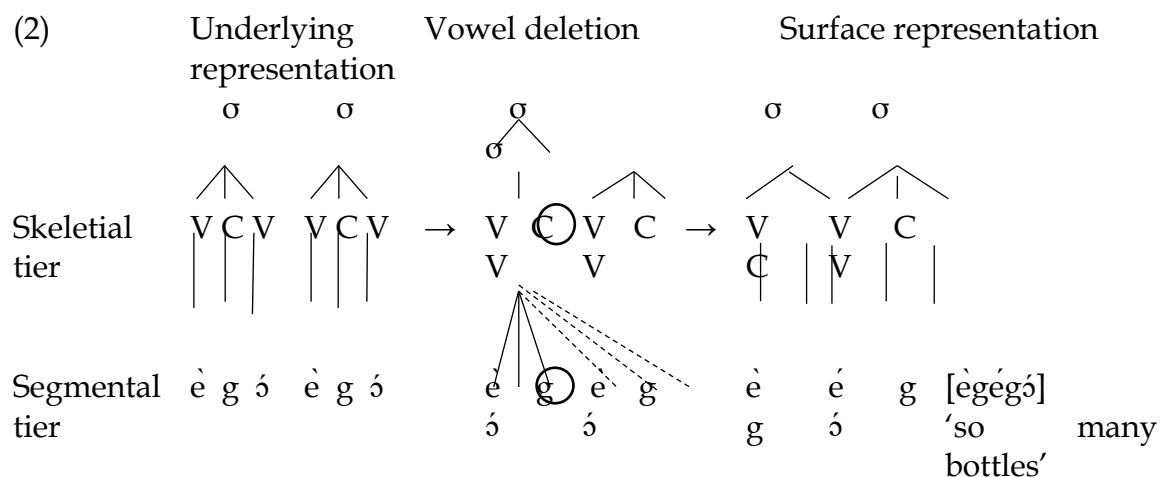
Formation of many via reduplication

In Urhobo, the quantifier 'many' is formed as a result of reduplication. This is done with the duplication of the full stem. The reduplication of the whole stem is called complete reduplication.

- (1)
- | | | | | | | | | |
|------|------|---|-----------|---|---------------|---|------------|-------------------|
| i. | Root | → | /ègɔ́ | + | ègɔ́/ | → | [ègégɔ́] | 'so many bottles' |
| | | | 'bottles' | | 'reduplicant' | | | |
| ii. | Root | → | /íyɔ̄ | + | íyɔ̄/ | → | [íyíyɔ̄] | 'so much money' |
| | | | 'money' | | 'reduplicant' | | | |
| iii. | Root | → | / írérē | + | írérē/ | → | [írírérē] | 'so many towns' |
| | | | 'towns' | | 'reduplicant' | | | |

iv.	Root	→	/ ìhwó 'people'	+	ìhwó/ 'reduplicant'	→	[ìhwíhwó]	'so many people'
v.	Root	→	/ íwéví 'houses'	+	íwéví/ 'reduplicant'	→	[íwíwèví]	'so many houses'
vi.	Root	→	/ íkó 'cups'	+	íkó/ 'reduplicant'	→	[íkíká]	'so many cups'
vii.	Root	→	/ èbē 'books'	+	ēbē/ 'reduplicant'	→	[èbèbè]	'so many books'
viii.	Root	→	/ ěmā 'idols'	+	ěmā/ 'reduplicant'	→	[éméma]	'so many idols'

The examples in data (1) are all reduplication processes conditioned by a phonological process known as vowel deletion. The examples above prove that for the quantifier many to be produced; deletion will take place first so the meaning of the word is not lost. This will be demonstrated in data (2).



Data (2) illustration shows how deletion occurs in the Urhobo language as a result of reduplication. The lines show a progressive reduplication pattern in the form of the broken lines because reduplication is moving to the right. The circled word shows there was a deletion process with that word.

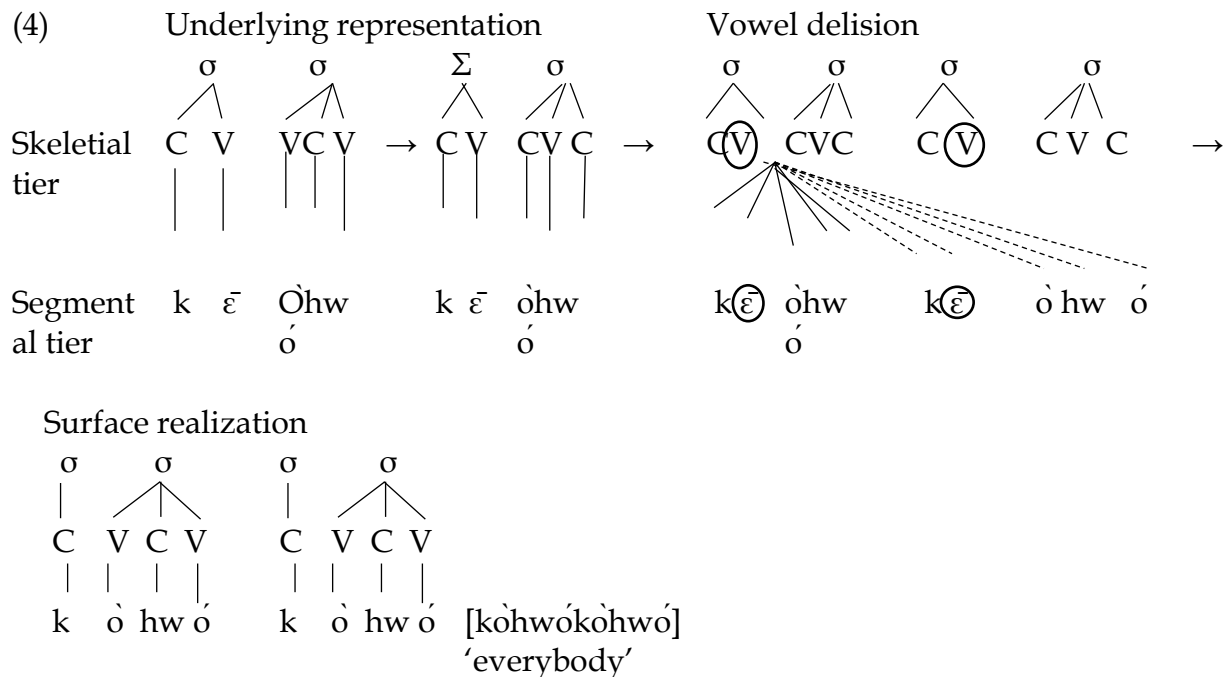
From the analysis in data (2), we see the difference between the underlying representation (showing the morphological process) and that of the surface representation (showing the word after phonological process has occurred).

Formation of every via reduplication

A second pattern involves noun stems preceded by the prefix /kē/. In these forms, prefixation creates a segmental environment in which vowel deletion occurs. The deletion is therefore not an isolated phonological event. It is conditioned by the morphological operation of prefixation, which brings particular segments into contact. This provides evidence for the central argument of the paper morphological structure can create the environment in which phonological processes apply. In Urhobo, the determiner 'every' is formed as a result of reduplication. This is done through complete reduplication process.

- (3)
- | | | | | | | | | |
|-------|------------------|---|------------------|---|------------------------------|---|--------------|---------------------|
| i. | /kē
'to give' | + | òhwó
'person' | + | kē + òhwó/
'reduplicant' | → | [kòhwókòhwó] | 'everybody' |
| ii. | /kē
'to give' | + | ḡbē
'book' | + | /kē + ḡbē/
'reduplicant' | → | [kàbékàbè] | 'every book' |
| iii. | /kē
'to give' | + | ōnī
'mother' | + | /kē + ōnī/
'reduplicant' | → | [kóníkónī] | 'every mother' |
| iv. | /kē
'to give' | + | ẹkru
'family' | + | /kē + ẹkru/
'reduplicant' | → | [kékrúkékru] | 'every family' |
| v. | /kē
'to give' | + | òvjà
'king' | + | /kē + òvjà/
'reduplicant' | → | [kòvjàkòvjà] | 'every king' |
| vi. | /kē
'to give' | + | òtá/
'word' | + | /kē + òtá/
'reduplicant' | → | [kòtákòtá] | 'every word' |
| vii. | /kē
'to give' | + | ōrō/
'town' | + | /kē + ōrō/
'reduplicant' | | [kòròkòrò] | 'every town' |
| viii. | /kē
'to give' | + | ũkpē/
'year' | + | /kē + ũkpē/
'reduplicant' | → | [kukpékukpè] | 'every year/yearly' |

As illustrated in data (3), the derivation of the determiner 'every' is as a result of an addition of a prefix to a noun stem. This is how the language derives 'every'. This will be analysed in data (4). However, the prefix /kē/ results to a phonological condition known as deletion which has been explained in data (2).



Data (4) just like data (1) shows deletion process, however in this case of reduplication, there was a flow from left (the stem) to right (reduplicant) giving rises to a new word. The prefix /kε̄/ does not simply attach to the noun without modification. Its combination with the noun creates a phonological environment in which vowel deletion occurs. This reduplication data provide evidence that prefixation may trigger vowel deletion in Urhobo. The forms in data (3) demonstrate that the prefix /kε̄/ is incorporated into the reduplicated noun structure, while the subsequent phonological representation in data (4) shows that one of the vowels is deleted during the derivation. The CV-Phonological representation is useful here because the deletion can be represented as the loss of a V position from the skeletal structure rather than merely as a change observed at the surface level.

Formation of continuous tense via reduplication

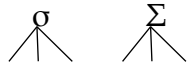
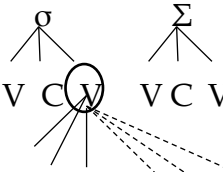
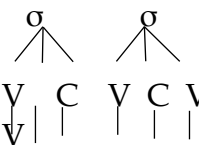
The third pattern is the formation of the continuous tense through reduplication. In Urhobo, continuous activity may be expressed by placing two gerund forms side by side. The resulting reduplicated form creates an environment in which neighbouring segments influence one another. This demonstrates that reduplication can create an assimilation environment. In data (5), the gerund acts as a continuous activity.

- (5)
- | | | | | | | | | |
|-------|------|---|------------|---|---------------|---|------------|-----------------------|
| i. | Root | → | /ésjó | + | ésjó/ | → | [èsjéesjo] | ‘continuous pulling’ |
| | | | ‘to pull’ | | ‘reduplicant’ | | | |
| ii. | Root | → | /édá | + | édá/ | → | [édéédá] | ‘continuous drinking’ |
| | | | ‘to drink’ | | ‘reduplicant’ | | | |
| iii. | Root | → | /ékwó | + | ékwó/ | → | [èkwéèkwó] | ‘continuous pouring’ |
| | | | ‘to pour’ | | ‘reduplicant’ | | | |
| iv. | Root | → | /émjó | + | émjó/ | → | [èmjeémjó] | ‘continuous milling’ |
| | | | ‘to mill’ | | ‘reduplicant’ | | | |
| v. | Root | → | /èfjó | + | èfjó/ | → | [èfjééjó] | ‘continuous leakage’ |
| | | | ‘to leak’ | | ‘reduplicant’ | | | |
| vi. | Root | → | /èrjó | + | èrjó/ | → | [èrjéèrjó] | ‘continuous eating’ |
| | | | ‘to eat’ | | ‘reduplicant’ | | | |
| vii. | Root | → | /édó | + | édó/ | → | [èdéèdo] | ‘continuous throwing’ |
| | | | ‘to throw’ | | ‘reduplicant’ | | | |
| viii. | Root | → | /émwó | + | émwó/ | → | [èmweémwó] | ‘continuous carrying’ |
| | | | ‘to carry’ | | ‘reduplicant’ | | | |

These examples show that the reduplicated gerund is not simply a phonetic repetition of the base. The interaction between the base and reduplicant produces an environment for assimilation. The dissertation specifically analyses /édá + édá/ → [édéédá] as an instance of vowel assimilation.

In deriving the tense ‘continuous’, gerunds are formed. The gerund reduplication data provides evidence of assimilation as another phonological process triggered by reduplication in Urhobo. The examples in data (5) demonstrate that the reduplicated

(6)

	Underlying representation	Vowel assimilation	Surface representation
Skeletal tier			
Segmental tier	é d á éd á	é d (ə) é d á	[é d é é d á] [édéédá] 'continuous drinking'

Discussion

The findings further demonstrate that morphological structure conditions phonological processes. In the formation of a quantifier, repetition creates the environment for vowel deletion, while for a determiner, prefixation creates the environment for vowel deletion, and in continuous-activity reduplication, repetition creates the environment for assimilation.

Consequently, reduplication in Urhobo should not be regarded simply as copying; it is a morphological operation whose output interacts with the phonological grammar of the language. The results therefore support the view that the morphology-phonology relationship in Urhobo is systematic and bidirectional. Morphological processes create phonological environments, while phonological constraints influence the surface realization of morphological structures.

Conclusion

This paper has examined reduplication in Urhobo from a morphology-phonology perspective. The analysis identifies three major patterns. The finding provides evidence that the phonological behaviour of reduplicated forms cannot be separated completely from their morphological structure. It also demonstrates that reduplication is more than a morphological copying process. The creation of reduplicated structures can generate phonological environments that trigger systematic segmental changes. CV-Phonology provides an effective framework for representing these changes because it makes it possible to account for the relationship between skeletal C/V positions and the segmental material associated with the reduplicated forms. The study therefore contributes to the description of Urhobo reduplication and strengthens the argument that Urhobo provides a valuable linguistic environment for investigating the interaction between morphology and phonology.

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