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Realization of consonant clusters in foreign words by Yoruba-English bilinguals

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ABSTRACT: A plethora of studieson foreign words borrowed into native languages have shown that a series of consonants is forbidden in the syllable structures of most, if not all, the indigenous languages of the world. These early studies have revealed that the possible syllable canon of these local languages is CV.This paper investigates the consonant clusters and the syllable structure of the foreign words borrowed into Yoruba language. Data were gathered from Yoruba-English bilinguals, such as artisans that possess school certificates, government and public workers and Yoruba-English bilingual Bible. Words with consonant clusters were purposively selected for the study. These words that consist names of persons, places and objects were partially resyllabified to conform to the syllable template of Yoruba language. The approach to the study is based on the assumption of perceptual-similarity school of thought as argued by Steriade 2002; Fleischhacker2002, Walker 2003; Kenstowicz 2003a; Adler 2004.The study reveals that there is an extent to which these foreign words can be modified or else they will forfeit their perceptual similarity which is a major feature of foreign loanwords. The paper also shows that since these words cannot be fully nativised, they retain the syllable feature of English – a series of consonants.

KEYWORDS: *cluster, syllable, foreign words, indigenous language, resyllabification*

I.   INTRODUCTION

A consonant cluster is when two or more consonants are combined together without a vowel intruding them. This is a sequence of consonants in a syllable. A consonant cluster (henceforth CC) can occur word-initially, word-medially and word-finally. In the literature, it has been argued by scholars that CC is peculiar to English. A plethora of studies have submitted that CC is alien to indigenous languages. The common practice to retain similarity in a borrowed word is through vowel insertion.

In various studies, it has been reported that besides vowel epenthesis, consonant preservation and consonant deletion are major phonotactic processes in the adaptation of borrowed words. Syllable structures that are forbidden in the recipient language can be modified through either preservation or deletion of segments. These two common strategies in the adaptation of foreign lexical items have been reported in various studies on foreign word processes. Different scholars through various studies have submitted similar opinion have submitted on foreign words phonology. A group of scholars, such as (Silverman, 1992; Paradis, 1996; Dupoux & Perperkamp, 2002; Uffmann, 2006; Kang,2003, 2007; Kenstowicz, 2007; Ojo 2014) argue that vowel epenthesis is the only and commonly used strategy in resolving forbidden syllable structure which opposes consonant deletion.

II.   LITERATURE REVIEW

In his phonotactic study of foreign syllable structures, Yip (1993) opines that the probability of consonant deletion is connected with the perceptual salience of the target phonemes. He observes that the class and the environment of occurrence of a phoneme in a syllable structure determine the choice between vowel epenthesis and consonant deletion in the adaptation of foreign words. He concludes that the implication of these patterns in loanword processing is that a salient segment will be retained while a segment that is not salient will be deleted.

While studying loanword processes, Brasington (1997) discovers that in the adaptation of English words, segment position in the syllable and cluster structure must first be considered before the choice between vowel

insertion and consonant deletion is made. He asserts that vowel epenthesis is highly favoured in the breaking of the onset clusters while consonant deletion is frequent in resolving clusters at the word-final positions.

Miao (2005) reports that in loanword processes, the variableness in segmental mapping is inhibited by phonological influences so that the subsequent loan form will retain sufficient similarity to the source form. He maintains further that contextual features, such as stress may influence repair strategy. He says that besides vowel epenthesis, consonant preservation and consonant deletion vary across languages.

Kang (2007) posits that in loanword processes, the probability of the choice between vowel epenthesis and consonant deletion in segmental mappings is hugely determined by the process that results in maximal perceptual resemblance between the foreign input and the recipient output. She argues further that this position is based on a survey of adaptation of word-final plosives from English loans. She concludes that vowel epenthesis is likely to be highly ranked when a high vowel is preceded by a final consonant.

Bamisaye and Ojo (2015)investigate the patterns of the adaptation of English borrowed words by Yoruba-English bilinguals from the perspective of perceptual resemblance. Following the arguments of the scholars mentioned above, their study supports the proposal that borrowed word phonology maximally produces an adapted form that is perceived by the recipient language speakers as most similar to the foreign source pronunciation using Yoruba-English bilinguals as a case study.

III.   METHODOLOGY AND FRAMEWORK

The data for the study which were purposively selected were gathered from Yoruba-English bilingual Bible (King James Version). The corpus data consists 100 names of persons, places and objects. The data are drawn from Yoruba-English bilinguals, such as artisans that possess school certificates, apprentices who are on school holidays, government and public workers and Yoruba-English bilingual Bible. These lexical items are those that comprise of consonant clusters. The study was approached from Perceptual-Similarity of Steriade 2002; Fleischhacker 2001; Walker 2003; Kenstowicz 2007 and Adler 2004. The central assumption of this approach is that the processes of foreign words result to the integration of perceptual similarity into production grammar. In other words, it is an attempt to "maximize the perceptual similarity between the adapted form and the foreign input".   The proponents of this approach argue that, the adaptation of foreign words, 'perceptibility and similarity' play a crucial role. They argue further that when a segment or a structure is salient in the adaptation processes, it will be preserved and if repair is required, modification(s) will be done in such a way that similarity between the source and the recipient language is achieved.

3.1 Summary of Data Collection

S/N	ITEM	FREQUENCY	REMARK
1	Onset CC Clusters	22	
2.	Coda CC Clusters	30	
3.	CC Clusters Word-medially	48	
	Total	**100**	

IV.   DATA ANALYSIS AND DISCUSSION

This section presents and discussesCC Clusters word-initially, word-medially and word-finally. As earlier pointed out that scholars on foreign words phonology have opined that a foreign word containing a cluster is forbidden in indigenous languages, such as Yoruba (our current case study), and that it is usually resolved through phonological processes to make it conform to the native phonotactic patterns of the recipient language. The present study has a divergent opinion and claims that words with CC structure have entered into indigenous languages, (e.g Yoruba).

4.1 Onset CC Clusters

Miao (2005) asserts that in borrowed words phonological processes, there are three logical possibilities to simplify a word-initial onset cluster C_1C_2V; (# C_1C_2V) (i) vowel insertion after C_1 along with the retention of C_2 in the original onset position (i.e. $C_1C_2V \rightarrow C_1V_oC_2V$, in which V_o is an epenthetic vowel); (ii) deletion of C_1 along with the retention of C_2 in the original onset position (i.e. $C_1C_2V \rightarrow < C_1> C_2V$) and (iii) deletion of C_2 along with the retention of C_1 in the original onset position (i.e. $C_1C_2V \rightarrow C_1< C_2>V$). The two consonant are not expected to be deleted concurrently, otherwise, recipient syllable will be truncated.

In the data for this study, these three processes are not observed. For example, the notable instances in the data are words with CCVCC, e.g'Christ' [kraıst→ kristi# $C_1C_2VC_1C_2 \rightarrow C_1C_2VC_1C_2V_o$]. It is observed from this example that when the word 'Christ is borrowed into Yoruba, the consonant clusters at the syllables are retained.

Any attempt to break the CC will render the word sound puerile because you would have something like [kirisiti→$C_1V_oC_2VC_1V_o$ C_2V_o]. Some other instances in the data with initial CC are listed in (1) below.

1. SBE	Borrowed version	Gloss
/klɪə/	[klíà]	clear
/staut/	[stáòtù]	stout
/kri:t/	[krete]	Crete
/klipə/	[klípà]	clipper
/klɔ:dɪəs/	[klaudiu]	Claudius
/glæs/	[gláàs]	glass
/greɪs/	[gréès]	grace
/krɔnɪkəls/	[kronika]	Chronicles
/græf/	[gráàfù]	graph
/bleɪd/	[bléèdì]	blade

4.2 Coda CC Clusters
Various studies have shown that foreign consonants in word-final C_1C_2coda clusters undergo phonotactic adjustments. For instance, a phoneme may be deleted or resyllabified as a coda through vowel insertion. The results from the earlier research confirm that the cluster constituents undergo some processes. These processes include the retention of both segments in the cluster, preservation of one segment and deletion of the other.

The data for this present study show that insertion of an epenthetic vowel or deletion of a consonant is not obligatory to preserve CC like the typicaladaptation of foreign CC coda by which the syllable is reduplicated through vowel insertion to make the foreign word conform to the syllable template of the recipient language. For example, the word *pant* has CC at the coda - /pænt/. Going by phonological processes of foreign words,/pænt/would become [kpáǹtì]. In this instance, the final cluster is adapted through [C_1: C Del] – [C_2: V Epen], by which the first constituent is deleted and the second one is resyllabified by vowel epenthesis. Whereas, in the data for this study, it is [kpáǹtì], the CC at the coda is retained. Other examples are demonstrated in (2) below.

2. SBE	Borrowed version	Gloss
/i:dʒɪpt/	[idʒipti]	Egypt
/tælənt/	[talenti]	talent
/klement/	[klémέǹtì]	Clement
/peɪnt/	[kpéǹtì]	paint
/tent/	[tέǹtì]	tent
/rɪdʒənt/	[rídʒέǹtì]	regent
/dæməsk/	[dàmáàskì]	damask
/eɪdʒent/	[édʒɛntì]	agent
/æsɪdent/	[ásídέǹtì]	accident
/əkaunt/	[akáǹtì]	account

From (2) above, it is obvious that CC at the coda is easily adapted into Yoruba without obstructing the sequence of the consonants. In other words, vowel is not required to break the consonant cluster to resolve the syllable.

4.3 CC Clusters Word-medially
The data revealed that some foreign words retain CC word-medially. These foreign words are found in the speech of Yoruba-English bilinguals and Yoruba-English bilingual Bible (King James Version). The CC word-medially is noticeable in different categories of syllables, such as disyllabic, trisyllabic and multisyllabic words. There is no single case of monosyllabic words.

4.3.1 Disyllabic CC Word-medially
These are the words that consist two syllables with CC at the middle. For instance, *Admah* has the syllable structure of VCCV /ədma:/ and [adma] in both English and Yoruba respectively. This syllable structure is

forbidden by Yoruba syllable canon. However, any effort to break the CC would cause a great damage to the word. Others are demonstrated below.

3. SBE	Borrowed version	Gloss
/esrə/	[esra]	Esra
/ædres/	[adrésì]	address
/eɪbrəm/	[abramu]	Abram
/hæŋgə/	[áŋgà]	hanger
/ændru:/	[ándérù]	Andrew
/ɪzreɪəl/	[israeli]	Israel
/bɪskɪt/	[biskíìtì]	biscuit
/timnə/	[timna]	Timna
/dɔktə/	[dɔktə]	doctor
/dʒeɵrəu/	[dʒetro]	Jethro

4.3.2 Trisyllabic CC Word-medially

These are the words that consist three syllables with CC at the middle. For instance, *Naphtali* has the syllable structure of CVCCVCV /nəftəlɪ/ and [naftali] in both English and Yoruba respectively. This syllable structure is also not permitted in Yoruba syllable rule. Any effort to break the CC would alter the word. Others are demonstrated below.

4.SBE	Borrowed version	Gloss
/saɪlensə/	[salέńsà]	silencer
/ɪpɪsl/	[episteli]	epistle
/ka:pentə/	[kákpέńtà]	carpenter
/tælənt/	[talenti]	talent
/emərəld/	[emeraldi]	emerald
/kənsəunənt/	[kɔnsònàntì]	consonant
/kælendə/	[kàlέńdà]	calendar
/kəntrəktə/	[kɔngílákítə]	contractor
/gɔlgəɵ/	[gɔlgɔta]	Golgotha
/beɵləhem/	[betlehemu]	Bethlehem

4.3.3 Multisyllabic CC Word-medially

These are the words that consist more than three syllables with CC at the middle. For instance, *Gethsemane* has the syllable structure of CVCCVCVCV /geɵsəmənɪ/ and [gestimani] in both English and Yoruba respectively. This type of syllable structure is prohibited in Yoruba syllable rule. Any effort to break the CC would destroy the meaning of the word. Others are demonstrated below.

5. SBE	Borrowed version	Gloss
/fətəugræfɪ/	[fɔtográfà]	photographer
/ba:ɵɔləmju:/	[batlomeu]	Bartholomew
/əkauntənt/	[akátáǹtì]	accountant
/vɪktərɪə/	[fiktóríà]	Victoria
/nebjukədnezə/	[nebukadnesari]	Nebuchadnezzar
/helɪkɔptə/	[ɛlikɔptà]	helicopter'
/əbednɪgəu/	[abednigo]	Abednego
/æmplɪfaɪə/	[ankplifájà]	amplifier
/græməfəun/	[gramɔfóònù]	gramophone
/ədrəmələk/	[adrameleki]	Adrammelech

V.　　　FINDINGS AND CONCLUSION

Analysis of data reveals that some foreign lexical items with consonant clusters are evident in the speech ofYoruba-English bilinguals. It is also observed in the data analysis that if the CC structure in the syllable is resyllabified, it would compromise the meaning of the word. The study finds out that epenthetic vowel is not necessarily required in the nativisation of these foreign words in the speech ofYoruba-English bilinguals. Finding in the study also shows that the rate of perceptual similarity in the adaptation of CC by local phonology is higher than the employment of epenthetic vowels for syllable repair.

The study concludes that there is an extent to which these foreign words can be modified or else they will forfeit their perceptual similarity which is a major feature of foreign words phonology. The paper as well reveals that since these words cannot be fully nativised, they retain the syllable feature of English – a series of consonants, which has also become the feature of Yoruba in a way.

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