The Adaptation of Consonants from English Loanwords into Bemba

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Abstract: *This study investigates how Bemba, a Bantu language adapts loanwords (consonants in particular) from English (Indo – European) to suit its pre-existing phonology. This adaption is expected because these two languages belong to two different language families. Because of this difference, Bemba employs ways to rephonologise new words borrowed into its vocabulary to fit, and to conform to native structure demands. English has 25 consonants while Bemba on the contrary, has 15. Such distinctions in phonological inventories cause for loanword adaptation. Although Bemba employs repair strategies such as vowel epenthesis and consonant deletions among others to adapt loanwords, this study will limit itself to consonant preservation and consonant substitutions only.*

Keywords: *borrowing, devoicing, native segment inventory, laterlisation, fricatisation, source language (SL), receiving language (RL)*

1. INTRODUCTION

Borrowing is a process through which languages acquire new lexis from other languages (Swann, Deumert, Lillis, & Mesthrie, 2004). When words are adopted from one language to another certain sounds may be substituted by others. There are various factors which lead to the substitution of sound segments in adapted words. In this study, substitution occurs because of lack of the equivalent sound segments in the recipient language. The sounds and forms which are incompatible with the sound segments of the receiving language are replaced by native ones. This type of substitution seems to be triggered by the native segment inventory constraint (Madiba, 2010). In terms of this constraint foreign sounds which do not occur in the recipient language sound inventory are barred from occurring and are therefore substituted by native ones.

1.1. Substitution of Consonants

Words borrowed from other languages are treated according to the sound system of the receiving language. Loanwords whose phonological structure does not fit into the phonology of the borrowing language need to be adapted to fit that phonological system, and consistent patterns of adaptation can be explained by assuming particular rankings of phonological constraints (Prince and Smolensky 1993).

When producing a loanword, speakers attempt the closest proximation to the model. However, because the SL and RL phonological patterns do not correspond identically, speakers may have to exercise sound alternation because the RL does not have the sounds that are in the SL (Hafez, 1996). To facilitate their production, speakers of Bemba resort to the closest native sound available in their repertoire.

In an attempt to facilitate our analysis of loanword adaptation in Bemba, it is important to look at both English and Bemba phonological systems.

Table1. *English Consonants*

	Bilabial	Labiodental	Dental	Alveolar	Palato alveolar	Palatal	Velar	Glottal
Plosive	p b			t d			k g	
Fricative		f v	θ ð	s z	ʃ ʒ			h
Affricate					tʃ dʒ			
Nasal	m			n			ŋ	
Lateral				l				
Approximant	w				r	J		

Source: *(Roach, 1983 p. 52)*

Table2. *Bemba Consonants*

Stops	p, t, k
Fricatives	b, f, ʃ
Affricates	tʃ
Nasals	n, m, ɲ ŋ
Liquids	L
Glides	y, w

Adapted from: *(Kula, 2002 p.48)*

As can be seen from the two tables above, Bemba lacks some phonemes found in English. These facts are key concerns when an English word is borrowed into Bemba. Logically, these missing sounds are substituted by the closest sounds that exist in Bemba.

According to Hussain et al, (2011), substitution is a general tendency to preserve sounds from deletion and it tries to reshape the word closer to the input form, but at the same time because some sound combinations are not allowed in the recipient language, they undergo certain adaptations. In substitution, an item is replaced to the phonetically-close phonemes in the recipient language (Hock, 1991).

Substitution is a process that takes place during borrowing and involves substituting consonants in the source language with others in the receiving language. It is usually attributed to the absence of equivalents in the receiving language. Absent segments will always be assigned the closest bundle in L1 (Antila, 1972). This therefore implies that if a segment is absent in Bemba, then a bundle that is close to it in Bemba will be used to substitute it. Sometimes a sound segment from English may be perceived differently by the Bemba people leading to substitution.

Since source and receiving languages most often do not have the same inventory of sounds, one obvious way in which loanwords are modified is by sound substitutions. That is, for any source language sound which the receiving language lacks, the phonetically closest sound is substituted.

In this case, English consonants which are not found in the Bemba consonantal inventory are substituted by those that are found in Bemba. English sounds which are not found in Bemba are substituted by the Bemba sounds that are phonetically close to them. This observation is illustrated in the following examples:

1.1.1. Devoicing

According to Collins English Dictionary (2015), in phonetics, devoicing is the process by which a consonant that is usually voiced becomes devoiced. It was discovered that devoicing phonemes was common in the process of adaptation of lexical borrowings from English to the Bemba phonological system. It should however be mentioned that Town Bemba maintains the existence of the voiced phonemes in English loanwords.

- **d – devoicing**: This rule states that English /d/ which is not preceded by a nasal is realised as / t / (its voiceless counterpart) in Bemba:

       d→t

(1)

English	Bemba
Adam	[Ataamu]
damage	[taameci]
dance	[taansi]
deacon	[tiikoni]
dear	[tiiya]
DC	[tiishi]
desk	[teshiki]
dam	[tamu]

Note that there are a few exceptions where /d/ is preceded by a nasal:

(2)

	English	Bemba
	doctor	[ndokotala]
	Diana	[Ndaina]

- **g – devoicing**: This rule states that English /g/ is realised as /k/ (its voiceless counterpart) in Bemba:

  g → k

(3)

English	Bemba
garage	[kaalaci]
garden	[kaalateni]
garlic	[kaaliki]
gate	[keeti]
gear	[kiiya]
gift	[kiifuti]
bag	[baaki]
gold	[kolite]

- **v – devoicing**: This rule states that English /v/ is realised as /f/ (its voiceless counterpart) in Bemba:

  v → f

(4)

English	Bemba
valve	[faalufu]
vest	[feshiti]
vaseline	[fashilini]
varnish	[fanishi]
vote	[foota]
five	[faifi]
November	[Nofemba]

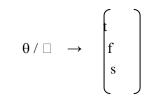- **dʒ - devoicing**: This rule states that English /dʒ/ is realised as /c/ (its voiceless counterpart) :

  dʒ → c

(5)

English	Bemba
charger /ˈtʃɑːdʒə(r)/	[caaca]
judge /dʒʌdʒ/	[caaci]
jackpot /ˈdʒækpɒt/	[cakipoti]
George /dʒɔdʒ/	[Cooci]
join /dʒɔɪn/	[coini]
jar /dʒɑː(r)	[caa]
July /dʒuˋlaɪ/	[Culai]
Junior /ˈdʒuːniə(r)	[Cuunya]

- **/θ/ and /ð/ devoicing**: This rule states that English /θ/ and /ð/ are realised as either /t/, /f/ or /s/ in Bemba:

$$\theta \, / \, \square \quad \rightarrow \quad \begin{Bmatrix} t \\ f \\ s \end{Bmatrix}$$

(6)

English	Bemba
father /ˈfɑ:ðə	[fáása]
bathroom /ˈba:θru:m/	[baafwa]
Arthur /ˈa:θa/	[aasa]
theatre /ˈθɪətə(r)/	[fyééta]
catholic /ˈkæθlik/	[kaatolika]
Corinthian /kaˈrinθan/	[koliinto]
Goliath /gaˈlaiaθ/	[Kolyaati]
three /ˈθri:/	[fili]

- **z – devoicing**: This rule states that English /z/ is realiesd as /s/ (its voiceless counterpart) in Bemba:

$$z \rightarrow s$$

(7)

English	Bemba
zero	[shiilo]
zone	[sooni]
zip	[shiipu]
size	[saishi]
dozen	[taseni]

1.1.2. s + i/c insertion: This rule states that English /s/ followed by /i/ or any other consonant is realised as /sh/ in Bemba:

$$s + i/c \rightarrow sh$$

(8)

English	Bemba
scone	[ishikoono[
spanner	[shipaana]
spare	[shipeeya]
basket	[bashikeeti[
steak	[shiteeki]
pastor	[pashita]
sink	[shiinki]

1.1.3. r – lateralisation: This rule states that English /r/ is realised as /l/ in Bemba:

$$r \rightarrow l$$

(9)

English	Bemba
radio	[leetiyo]
rape	[leepu]
rake	[leeki]

lorry	[loole]
room	[luumu]
ruler	[luula]

1.1.4. b–fricatisation: This rule states that English plosive /b/ is realised as fricative /β/ in Bemba except before a nasal compound.

$$b \rightarrow \beta$$

(10)

English	Bemba
bag	[βaaki]
ball	[βoola]
band	[βaandi]
bar	[βaa]
club	[akalaaβu]
hub	[aaβu]

The above information can be summarised as follows:

Rules
d→t
g→k
z →s
v→f
r→l
s→sh
b→β
θ and ð→ t, f, s
dʒ→c

Table2. *Substitution of consonants*

1.2. Consonant Preservation

It should however be noted that not all consonants are substituted when English words are borrowed into Bemba. The following are some consonants that are preserved in Bemba as loanwords from English enter it:

English	Bemba	Consonant preserved
/paen/ pan	/pani/	/p/
/kaendl/ candle	/kandulo/	/k/
/ti:m/ team	/timu/	/t/

The above loanwords show the consonants that are preserved in English loanwords in Bemba.

1.3. Conclusion

In the above discussion, consonant substitutions in English loanwords in Bemba have been discussed. The discussion was based mainly on the substitution of English consonants which do not have equivalents in Bemba. These sounds are restrained from occurring in the Bemba language by the native segment inventory constraint Therefore they are replaced by sounds which are phonetically closest to them.

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