

Phonological Adaption of Swahili Loanwords in Matengo Language

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Abstract

The study investigates the phonological adaptation of Kiswahili loaned words in Matengo Language, with specific objectives, namely: to examine the underlying structure and surface structure of the loaned Swahili words in Matengo Language and to assess the phonological processes involved in the loaned Swahili words in Matengo Language. The study was guided by the Generative theory.

Data were collected through interviews and documentary reviews, employing a descriptive approach. Ten adult native speakers of Matengo language were sampled from Mbinga District and those residing in Dar es Salaam using non-probability sampling (purposive).

The study revealed that borrowing across languages shares commonality in phonological processes, although there is variation in the environments where the processes take place. Several strategies for phonological processes were identified in the adaptation of Swahili loaned words in Matengo: substitution, vowel deletion, adoption or structure preservation, insertion, homorganic nasal assimilation, devoicing, and stopping.

Keywords: Matengo, Loanword, Swahili, Adaption, Phonological Adaption

1.1 Introduction

Borrowing is an integral part of language growth, contributing to the expansion of its vocabulary, and it is a continuous process. When a language comes into contact with another language, it is not exempt from incorporating borrowed forms (Iribemwangi & Karũrũ, 2012). The adaptation of loanwords primarily involves a phonological process, wherein the borrowed words undertake phonological adjustments to align with the phonological structure of the receiving language (Tsvetkov & Dyer, 2016). Furthermore, the phonology of borrowed words reflects the adaptations made by native speakers who possess a phonological system capable of perceiving and producing forms belonging to another phonological system (Sarkar, 2012). This phenomenon is entirely phonological, given that loanwords undergo structural changes to align with the phonology of the receiving language. Due to the inherent differences in language phonologies, adaptations of borrowed words are necessary, given that foreign segments often contain unfamiliar structures that do not align with the underlying forms in the native phonology. Naturally, when languages borrow from each other, the structural modification of borrowed words may occur at the level of individual segments or at the syllabic level.

1.2 Background of the Matengo Language

Matengo Language is one of the Bantu languages which is spoken in the South-West of Tanzania including Mbinga District and some parts of Nyasa District areas called “Umatengoni” in namely wards: Tingi Ward, Kingirikiti Ward, Lumeme Ward, Luangalasi Wards, Mpepo Ward and Upolo Ward. According to Nobuko (2010) the number of Matengo speakers was about 160,000. Matengo language is one of the bantu languages which has prolonged contact with Kiswahili from beginning of 20th century. As a result, borrowing is

evident in Matengo Language where Kiswahili loanwords are modified phonologically to fit into Matengo language.

1.2.1 Matengo consonants

A full inventory of the consonant sounds attested in Matengo is given in the table below

	Labial	Alveolar	Palatal	Velar	Glottal
Plosive	P b	t		k g	
Fricative		s			h
Affricative			dʒ (j)		
Nasal	m	n	ɲ (ny)	ŋ (ng')	
Liquid		l			
Semi-vowel	w		j (y)		

Source: Nobuko (2006)

1.2.2 Matengo vowels

According to Turuka (1983), it is argued that Matengo speakers use seven vowels, consisting of five monophthongs and two diphthongs. Nobuko (2006) additionally stated that the short and long vowels are realized in 14 distinct phonemes. However, in contemporary times, many Matengo speakers no longer make the distinction between short vowel sounds and long vowel sounds, resulting in a reduction of their speech to just seven vowels. The following are the seven identified vowels in Matengo, as argued by Turuka (1983).

Front	Central	Back
i		u
e		o
ei		ou
ɛ		ɔ
	a	

These vowels may be observed in the following minimally contrasting Matengo words

Vowel	Word	Gloss
/i/	<i>kup<u>i</u>ta</i>	‘to come out’
/ei/	<i>ku<u>pe</u>ita</i>	‘to pass, excel’
/ɛ/	<i>kup<u>ɛ</u>ta</i>	‘to winnow’
/a/	<i>kup<u>a</u>ta</i>	‘to prune’
/o/	<i>kup<u>o</u>ta</i>	‘to twine’
/ou/	<i>kup<u>ou</u>ta</i>	‘to knock down’
/u/	<i>kup<u>u</u>ta</i>	‘to erase, delete’

Source: Turuka (1983)

Nobuko (2010) argued that diphthongs /ei/ and /ou/ are sometimes replaced by the half-close front vowel sound /e/ and the half-close back vowel sound /o/ respectively as they are in free variation.

1.3 Statement of the Problem

Borrowing is undoubtedly a crucial component of language growth and is, therefore, a continuous process. No language whose speakers have had contact with any other language is entirely free of borrowed forms (Iribemwangi & Karūrũ, 2012). From a phonological perspective, borrowing becomes particularly interesting when the borrower and the borrowed languages possess distinct phonological structures. In such cases, words are typically adapted to fit the phonology of the borrowing language. However, this adaptation is not without constraints. Importantly, there appears to be a requirement that the word from donor language maintains similarity as possible to the original form. Recently, there has been significant research in phonology, presenting various positions on the issue of borrowing. This has compelled the study to be conducted on phonological adaption of Swahili loanwords in Matengo Language. Ethnic community languages undergo rapid changes, leading to the loss of their original underlying representations and introducing uncertainty for researchers studying Bantu language and language change.

1.4 Objectives

This study has overall objective and specific objectives

1.4.1 Overall objective

The study aims at investigating phonological adaption of Kiswahili Loaned words in Matengo Language

1.4.2 Specific objectives

The study carried out base on the following objectives

- i. To identify the underlying structure and surface structure of the loaned Swahili words in Matengo Language
- ii. To explore the phonological processes involved in the loaned Swahili words in Matengo Language
- iii. To state phonological rules for the loaned Swahili words in Matengo Language

1.5 Study questions

- i. What is the underlying structure and surface structure of the loaned Swahili words in Matengo Language?
- ii. What are the phonological processes involved in the loaned Swahili words in Matengo Language?
- iii. What are the phonological rules for the loaned Swahili words in Matengo Language?

1.6 Theories Guided the Study

This study is guided by Generative theory of phonology. This theory provides a valuable lens for investigating the phonological adaptation of loanwords. When loanwords are integrated into a recipient language, generative phonology explains the systematic modifications in their sounds to align with the native phonological patterns. This process involves the application of phonological rules and transformations to ensure a seamless fit within the linguistic system. Chomsky and Halle (1968: 35) distinguished between underlying

structure and surface structure, where the underlying structure comprises a set of phonological rules applying to the underlying structures to produce surface phonetic representation

For instance, if a loanword contains a fricative sound not present in the borrowing language, generative phonology helps elucidate how the fricative may be replaced with a native stop sound, illustrating the dynamic adjustments that occur during the incorporation of loanwords. Additionally, generative phonology enables the study of syllable structure changes and stress pattern adaptations, shedding light on the intricate phonological transformations that loanwords undergo as they become an integral part of the phonological inventory of the recipient language.

Additionally, within the framework of generative grammar, Hyman (1970) proposed that the input for adapting loanwords consists of the surface form of the source language. The phonological grammar of the borrowing language is responsible for processing these adaptations. In the context of rule-based phonology, the adaptation of loanwords poses a distinctive challenge. This is because foreign words often contain structures that are not present in the underlying forms of the native phonology. To address these adaptations, it is necessary to introduce new rules into the grammar.

1.7 Significance of the Study

This study centered on the phonological adaptation of Swahili loanwords in Matengo Language. It is anticipated to serve as a valuable reference for future researchers interested in this linguistic phenomenon. This research not only adds to the existing body of linguistic literature but also enhances our comprehension of the phonological adaptation of Swahili loanwords in Matengo Language. The results from the study can be utilized by upcoming researchers as a source of knowledge in the field. Additionally, it holds significance for the future generation, fostering an appreciation for their local languages and understanding their

developmental shades. In essence, this study provides a substantial dataset supporting linguistic theories, particularly concerning the phonological adaptation of loanwords in Bantu languages.

1.8 Scope of the study

This study based on phonological adaption of Swahili Loaned words in Matengo Language. Data were collected from native speakers of Matengo only residing in Mbinga, some parts of Nyasa District and some residing in Dar es Salaam. Ten (10) adult native speakers of Matengo language were sample for data collection.

2.1 LITERATURE REVIEW

The utilization of borrowing serves as a crucial method for generating new terminology in Shona lexicography. This approach effectively demonstrates the phonological processes and rules that lexicographers must be familiar with when creating new terms through borrowing. The significance of borrowing in expanding the Shona lexicon is paramount. Lexicographers are obligated to familiarize themselves with the phonological rules governing the languages in which they engage in lexicographic activities (Mheta & Zivenge, 2009).

Khan and Bukhari (2011) argued that Pahari is a language has borrowed words from donor languages to satisfy vocabulary need of the language. Pahari speakers have been observed to incorporate English Loan words into their language, making certain modifications to align with the phonological syetem of the Pahari language: mostly, they replace / Θ / with / u / in (c + Θ + c) in the final syllable; / u /. In English syllables, consonant insertion was identified, and epenthesis was observed in onset consonant clusters, particularly at the word-initial position.

Iribemwangi and Karũrũ (2012) in their study investigated the phonological adaptation processes of Kiswahili loanwords into the Gĩ-Gĩchũgũ dialect of the Gĩkũyũ language. The research established the consonant and vowel adaptation processes employed to integrate

borrowed forms into the Gĩ-Gĩchũgũ lexicon. The identified processes encompass consonant and vowel deletion, substitution, preservation, and insertion.

Akidah (2013) asserted that phonological modifications occur in Arabic words, involving processes such as vowel and consonant epenthesis, consonant deletion, and consonant and vowel substitution, along with vowel shortening, lowering, and strengthening. These collective processes are termed adaptation. Our research has affirmed that the incorporation of Arabic into Swahili vocabulary has significantly contributed to the enrichment of Kiswahili. This linguistic integration is commonly associated with the substitution, deletion, and shortening of specific segments within the borrowed words.

According to the study conducted by Beel and Felder (2013), loanwords undergo modifications to adhere to the rules of the receiving language. The interconnectedness of cultures today and the specific changes in loanword phonology are evident in English-to-Turkish borrowing. The study contrasts the consonant cluster allowance in English with that of Turkish, highlighting the need for adaptations like substitution, deletion, and epenthesis. An interesting aspect observed in the Turkish language is vowel harmony, which plays a crucial role in the epenthesis process, determining the vowels native speakers insert. These adaptations reveal features of Turkish phonology, such as vowel harmony, and their impact on loanwords. The research emphasizes that adaptations of loanwords are not random, providing a clear understanding of the systematic rules employed by native Turkish speakers in loanword phonology.

In investigation into the Adaptation of Loanwords in Chasu, Msuya and Mreta (2019) found that the majority of loanwords undergo adaptations both phonologically and morphologically. Interestingly, in a few instances, loanwords are incorporated into Chasu without any modifications and retaining the original form and meaning from the donor

language. The research revealed that, phonologically, words featuring phonemes that depart from the recipient language are replaced with native phonemes. Additionally, various loaned words undergo processes such as deletion and addition, facilitating their naturalization and alignment with the phonotactic constraints of the Chasu language.

3.0 METHODOLOGY

This section describes the study approach, study design, study area, target population, sampling techniques, methods of data collection and the data analysis and presentation approach

3.1 Research approach

The selection of a research approach is typically based on the nature of the research problem, the researcher's personal experiences, and the intended audience for the study (Parahoo, 2003). A qualitative approach was employed in this study.

3.1.1 Qualitative Research Approach

Kothari, (2004) defines qualitative research approach as a type of scientific research that involves an investigation aimed at understanding a given research problem or topic from the perspectives of the local population. And it is considered appropriate for type of this study because it allowed participants to express their views, experiences, and ideas on Matengo loaned words.

3.2 Research design

Research design, crucial for planning, serves as the framework detailing procedures to gather information in a study (Wiid & Diggines, 2009). Burns and Bush (2010) categorize research into exploratory, descriptive, and causal designs. This study employs a mixed research

design, combining exploratory and descriptive methods to gather natural data. This choice aligns with the study's diverse scope, covering various locations and involving participants with different literacy levels. The approach facilitates a deep understanding of the research problem, accommodating the intricacies of both structured and unstructured data collection methods (Malhotra, 2010).

3.3 The Study Area

The quality of information generated by the study is influenced by the selection of the area where the data are obtained (Kothari, 2004). In this case, Mbinga District and certain parts of Nyasa District were deliberately chosen because these are the areas where the language is spoken. In addition to Dar es Salaam where some Matengo speakers reside.

3.4 Target Population

A population is conceptualized as the total collection of elements about which we wish to make inferences, whereas a sample consists of some of the elements in a population, and we seek to draw conclusions about the entire population (Babbie, 2008). The target population of this study comprised Matengo native speakers from Mbinga District, some parts of Nyasa District, and some residing in Dar es Salaam, as mentioned in Section 1.2.

3.5 Sampling Techniques

The researcher used one sampling technique, namely purposive sampling, to obtain a sample that satisfied the requirements of the specific objectives.

3.5.1 Purposive Sampling

Cohen et al., (2008) define purposive sampling as a judgment of sample elements regarded to be typical or representative, involves choosing elements from the population. In

this study, purposive sampling was employed, Considering the nature of the study only 10 adult native speakers of Matengo were included, aligning with the ideas of Limpamtugul (2009) who argued that it is often impractical for researchers to survey the entire population due to time and financial constraints, especially when the population is extensive. Therefore, the selected sample served as representatives of the whole population.

3.6 Methods of Data Collection

This study employed one method of data collection, which involved phone interviews and face-to-face interviews to obtain data on loaned words from Swahili. An interview is an exchange of views between two or more people on a topic of mutual interest, emphasizing human interaction for knowledge production and research data (Kothari, 2004).

3.7 The Data Analysis and Presentation

Data were categorized according to the research objectives and questions. The collected data were thoroughly analyzed and presented using qualitative methods, including tables and detailed explanations. This approach facilitated a comprehensive understanding and interpretation of the research findings.

4.0 Results and Discussion

As mentioned in section 1.1, phonological adaptation is influenced by the diverse phonological patterns existing across languages. In response to these variations, languages employ different techniques to integrate loanwords into their native lexicon. These adaptation strategies primarily arise from considerations of phonotactic constraints, phonemic factors, and to some extent, morphological considerations. In the case of Matengo, the incorporation of loanwords into the language involves employing specific strategies to adjust to its phonological characteristics as it is discussed below: -

4.1 Substitution

In linguistics, the term ‘substitution’ is employed to describe the phonological process or outcome of replacing one item with another at a specific location within a structure (Crystal, 1997). This involves the replacement of a phoneme due to a recipient language Matengo speakers when pronounce Swahili loanwords normally substitute /l/ with /r/, because in Matengo language there is no sound /r/ as argued by Nobuko (2010). This was observed in the following given loan words of the standard Kiswahili below:

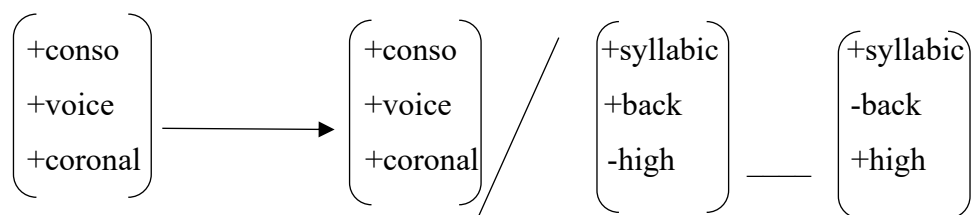
(1)

Kiswahili	Matengo	Gloss
<i>Taya-ri</i>	<i>Taya-li</i>	‘already’
<i>Haba-ri</i>	<i>Haba-li</i>	‘information’
<i>Mpi-ra</i>	<i>Mpi-la</i>	‘a ball’
<i>Serika-ri</i>	<i>Selika-li</i>	‘government’
<i>Aska-ri</i>	<i>Asika-li</i>	‘soldier’

Source: Field data (2023)

The substitution of the /l/ with /r/ in the table above is a result from the fact that Matengo phonology does not have the phoneme /l/. Instead, another neighboring liquid sound which is articulated at the same place is used.

The rule: /r/ → /l/ / V __ V



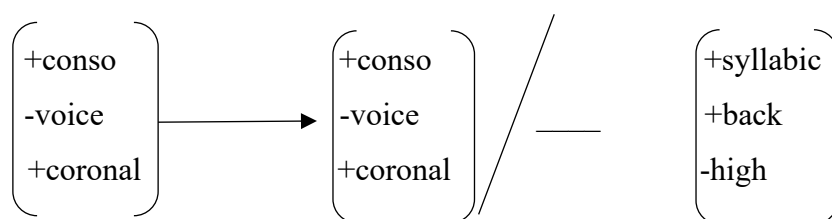
Moreover, consonant substitution can be more evidenced in the following given data, where sound /ʃ/ is replaced by sound /s/ because in Matengo does not have the voiceless postpalatal alveolar fricative /ʃ/

(2)

Kiswahili	Matengo	Gloss
<i>Baha-sh-a</i>	<i>Baha-s-a</i>	‘envelope’
<i>To-sh-a</i>	<i>To-s-a</i>	‘enough’
<i>Badili-sh-a</i>	<i>Badili-s-a</i>	‘change’
<i>Ende-sh-a</i>	<i>Ende-s-a</i>	‘drive’

Source: Field data (2023)

Rule: /f/ becomes /s/ when followed by vowel sound /a/



4.2 Deletion

Mose (2021) defines deletion as omission or removal of one or more sounds within a linguistic structure. This linguistic phenomenon primarily impacts consonants, vowels, weak syllables, or may be employed to disrupt a consonant cluster. Deletion can take on three distinctive forms: aphaeresis, which involves the loss of a segment at the beginning of a word; syncope, the internal deletion of segments occurring within a word; and apocope, the loss of the final consonant. In Matengo language some loanwords from Kiswahili were observed to undergo deletion of consonant and vowel sound.

4.2.1 Vowel Deletion

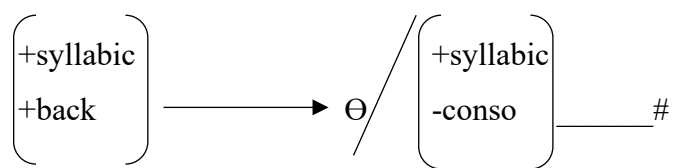
Vowel deletion is a linguistic process characterized by the removal of a high vowel within a specific linguistic environment (Mndeme & Ligembe, 2022).

In Matengo, when two vowels are following each other (vowel cluster) one is deleted to adapt the phonology of a loanword in recipient language. The vowel sounds /o/ get deleted when they occur immediately following another vowel sound /i/ or /u/. In Matengo, the study has revealed the following: -

(3)

Kiswahili	Matengo	Gloss
<i>Kichuji-o</i>	<i>Kisuji</i>	‘strainer’
<i>Kibani-o</i>	<i>Kibani</i>	‘clothe peg’
<i>Ufungu-o</i>	<i>Upungu</i>	‘key’
<i>Mufuti-o</i>	<i>Mputi</i>	‘rubber’

Source: Field data (2023)

Rule: /o/ \longrightarrow Θ / V _ #

4.3 Adoption/structure preservation

Preservation in linguistics refers to maintaining the original pronunciation, spelling, or linguistic features of borrowed words. When a language preserves phonological or orthographic characteristics of borrowed terms, it aims to retain authenticity and ties to the word's origin. However, languages may also adapt loanwords based on factors like phonetic compatibility, pronunciation ease, and the phonological structure of the adopting language. In certain cases, when loanwords are embraced into Matengo, they experience no modifications. In these scenarios, a loanword preserves its syllabic arrangement, pronunciation, and meaning, essentially staying unaltered from its original language of origin. Furthermore, in these instances, as the adopted words are employed in Matengo, they seamlessly assimilate into the native vocabulary.

(4)

Kiswahili	Matengo	Gloss
<i>Waya</i>	<i>Waya</i>	‘wire’
<i>Noti</i>	<i>Noti</i>	‘Note’
<i>Doti</i>	<i>Doti</i>	‘pair of clothes’
<i>Hoteli</i>	<i>Hoteli</i>	‘hotel’
<i>Meli</i>	<i>Meli</i>	‘ship’

Source: Field data (2023)

Nevertheless, it is worth noting that this adoption phenomenon is not exclusive to Matengo but is also observed in various other languages.

4.4 Insertion

Insertion, as described by Sarkar (2012), is the linguistic process involving the addition of one or more sound segments to a word. In Matengo Language in order the loanword from Kiswahili to adapt the phonology of Matengo, some segment (s) are inserted in the words.

4.4.1 Prothesis

This phonological process, as outlined by Nathan (2008:82), involves the insertion of sound at the beginning of a word. This process can be observed in some loaned words as shown below: -

(5)

Kiswahili	Matengo	Gloss
<i>Akiba</i>	<i>h-akiba</i>	‘savings’
<i>ubatizo</i>	<i>h-ubatizo</i>	‘baptism’
<i>Idhini</i>	<i>h-idhini</i>	‘authority’
<i>andika</i>	<i>h-andika</i>	‘write’
<i>Elfu</i>	<i>h-elpu</i>	‘thousands’

Source: Field data (2023)

The loan words which have initial vowel sound are frequently pronounced in Matengo with an initial sound /h/. This adaptation helps maintain the phonetic harmony within the language and makes it easier for Matengo speakers to incorporate foreign words into their speech patterns.

Rule: $\emptyset \longrightarrow /h/ \text{ / } ______ V$

$\emptyset \longrightarrow \left[\begin{array}{c} +\text{conso} \\ +\text{dorsal} \\ -\text{voice} \end{array} \right] \text{ / } \left[\begin{array}{c} +\text{syllabic} \\ -\text{conso} \end{array} \right]$

Moreover, prothesis can also be seen in the following data where vowel sound /i/ is inserted at the beginning of the loaned word in Matengo

(6)

Kiswahili	Matengo	Gloss
<i>mbegu</i>	<i>i-mbegu</i>	'seeds'
<i>nyama</i>	<i>i-nyama</i>	'meat'
<i>ngoma</i>	<i>i-ngoma</i>	'drum'
<i>nene</i>	<i>i-nene</i>	'large'
<i>nyumba</i>	<i>i-nyumba</i>	'house'

Rule: $\emptyset \longrightarrow /i/ \text{ / } \# ______$

$\emptyset \longrightarrow \left[\begin{array}{c} +\text{syllabic} \\ +\text{high} \end{array} \right] \text{ / } \# ______$

4.4.2 Epenthesis

Epenthesis, as defined by Msuya and Mreta (2019), refers to a phonological phenomenon characterized by the insertion of a sound segment within a word. In the context of Matengo, this epenthetic segment is occasionally added to adhere to phonotactic constraints. For instance, the Matengo language prohibits consonant clusters like 'bl,' 'gl,' 'ks,' 'lh,' and 'sk.' Consequently, any loanwords featuring such consonant clusters in Matengo undergo this phonological process. The given data below show the epenthesis process.

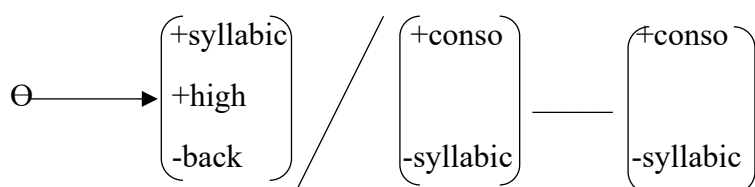
(7)

Kiswahili	Matengo	Gloss
<i>Askofu</i>	<i>as-i-kofu</i>	‘bishop’
<i>Teksi</i>	<i>tek-i-si</i>	‘tax’
<i>Soksi</i>	<i>sok-i-si</i>	‘socks’
<i>baiskeli</i>	<i>bais-i-keli</i>	‘bicycle’

Source: Field Data (2024)

In order to break consonant cluster which is not tolerated in Matengo language sound /i/ which is high vowel is inserted between the consonants.

Rule: $\emptyset \longrightarrow /i/ / C_C$



4.4.3 Gliding insertion

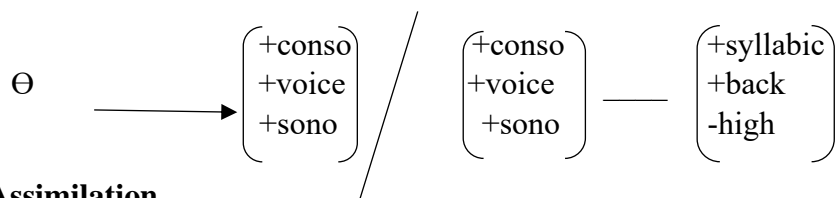
According to Zygis (2010) glide insertion is one of the phonological rules that involve consonantal insertion, where a consonant which is not present underlyingly appear on the phonetic surface. In this process, a glide sound, /j/ or /w/, is inserted between two adjacent vowels. Both /j/ and /w/ are considered glides in the phonemic system. Matengo demonstrate /y/ formation. When a vowel /i/ juxtaposed with any vowel except its identical /i/ in morpheme boundary changes to a glide /y/. Observe the following data in the table below

(8)

Kiswahili	Matengo	Gloss
<i>Lako</i>	<i>lyako</i>	‘your’
<i>Linu</i>	<i>lyinu</i>	‘yours’
<i>Langu</i>	<i>lyangu</i>	‘mine’
<i>Labo</i>	<i>lyabo</i>	‘theirs’

Source: Field data (2024)

Rule: $\Theta \longrightarrow /j/ \text{ / } C __ V$



4. 5. Assimilation

Hyman (1952:221-3) argues that assimilation refers to all adaptive modifications of a segment in a chain of segments by a neighboring segment. According to Dirven (2004:119), assimilation is a process whereby one sound causes an adjacent sound to be “more similar” to itself. Assimilation can be conditioned by preceding or following sounds. In loanwords from Kiswahili into Matengo were observed to undergo two assimilation process; homorganic nasal assimilation and Consonant assimilation.

4.5.1 Homorganic Nasal Assimilation

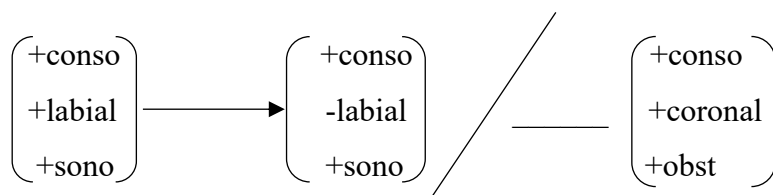
According to Mndeme and Ligembe (2022) describe Homorganic Nasal Assimilation as a phonological phenomenon in which a nasal consonant sound adopts the characteristics of an adjacent consonant by assimilating to its position. In Matengo some loanwords were observed undergoing homorganic Nasal assimilation to adapt phonology of loanword in recipient language (Matengo). This assertion can be substantiated by examining the provided data: -

(9)

Kiswahili	Matengo	Gloss
<i>m-situ</i>	<i>n-situ</i>	‘forest’
<i>m-samiati</i>	<i>n-samiati</i>	‘vocabulary’
<i>m-salaba</i>	<i>n-salaba</i>	‘cross’
<i>m-siba</i>	<i>n-siba</i>	‘funeral’

Source: Field data (2023)

Rule: /m/ becomes /n/ when followed by consonant sound



4.5.2 Devoicing

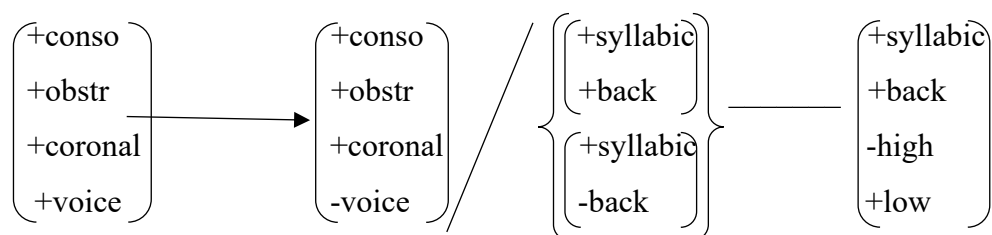
In this process a voiced sound becomes voiceless sound this occurs when there are different voicing values for the consonants, particularly if the consonants are obstruent as stated by Nathan (2008:78). In Matengo language the loanwords assimilate the sounds from voiced to voiceless as the provided data below show the changes: -

(10)

Kiswahili	Matengo	Gloss
<i>Me-z-a</i>	<i>Me-s-a</i>	‘table’
<i>Ele-z-a</i>	<i>Ele-s-a</i>	‘state’
<i>La-z-a</i>	<i>La-s-a</i>	‘admit’
<i>Ka-z-a</i>	<i>Ka-s-a</i>	‘tight’

Source: Field data (2023)

The rule: /z/ \longrightarrow /s/ $\quad \text{v_v}$



5.6 Stopping

Leung and Brice (2012) provide a definition of stopping within the field of linguistics, explaining it as a phonological process where fricative or affricate sound is substituted with stop sound. The phonological process is also known as labiodental fricative stopping. In this

process, the fricative sound /f/, which is produced by the lower lip against the upper front teeth, is substituted with the stop sound /p/, where the lips come together to completely block and then release the airflow. In Matengo language, stopping can be seen in the data given below: -

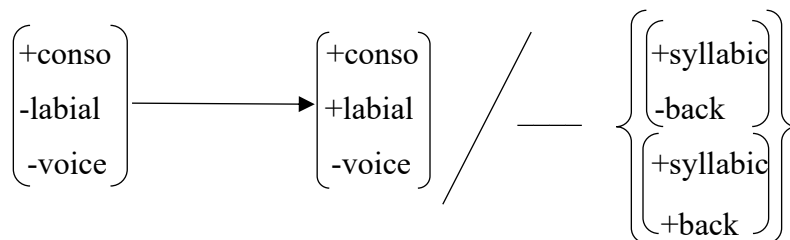
(11)

Kiswahili	Matengo	Gloss
<i>f-uta</i>	<i>p-uta</i>	‘delete, erase’
<i>hala-f-u</i>	<i>hala-p-u</i>	‘then’
<i>ki-f-ua</i>	<i>ki-p-ua</i>	‘chest’
<i>f-unga</i>	<i>p-unga</i>	‘close’
<i>usa-f-i</i>	<i>usa-p-i</i>	‘cleanliness’

Source: Field data (2024)

In this case, the labiodental fricative /f/ is becoming a bilabial plosive /p/, which is a type of labial sound when is followed by vowel /i/ or /u/.

Rule: /f/ → /p/ / ____ v



5.7 Depalatalization

Bateman (2011) asserted that depalatalization is the phonological process where an alveolar fricative is substituted for a palatal fricative. In Matengo language some loaned words are subjected to depalatalization as the following give data show: -

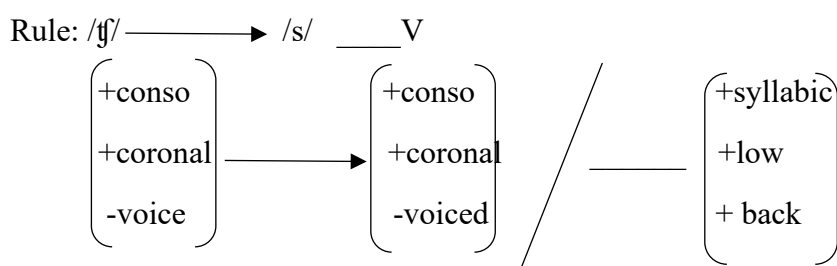
(12)

Kiswahili	Matengo	Gloss
<i>ch-aki</i>	<i>s-aki</i>	‘chalk’
<i>ch-ama</i>	<i>s-ama</i>	‘party’
<i>ch-andalua</i>	<i>s-andalua</i>	‘mosquito net’
<i>ch-ai</i>	<i>s-ai</i>	‘tea’

<i>ch-akula</i>	<i>s-akula</i>	‘food’
<i>ch-apa</i>	<i>s-apa</i>	‘beat’
<i>ch-angu</i>	<i>s-angu</i>	‘mine’

Source: Field data (2024)

Palatalization involves the change in articulation of a sound towards the hard palate. In this case, the original palato-alveolar affricate /tʃ/ becomes a palatalized alveolar fricative /s/. This occurs when it is followed by vowel sound



5.1 Conclusion

The paper examined the phonological adaption of Swahili Loanwords in Matengo Language. In their respective phonologies, Kiswahili and Matengo exhibit the implementation of various strategies for phonological processes. The phonological strategies for adaption found were: substitution, vowel deletion, adoption or structure preservation, insertion, homorganic nasal assimilation, devoicing, stopping and depalatalization.

Firstly, on substitution, sound /r/ was replaced by sound /l/ since Matengo language has not sound /r/. Secondly is deletion which involved vowel deletion. Thirdly is adoption, where the structure of some loanwords was preserved as they are without any modifications and remains the same as it was pronounced in the original language. Fourth is insertion, in some loanword undergo insertion of consonant where sound /h/ and gliding /j/ were inserted to some words studied. Fifth, is assimilation where the study observed homorganic nasal assimilation and devoicing. Sixth, stopping, where fricative was replaced by stop bilabial and seventh, depalatalization whereby an alveolar fricative is substituted for a palatal fricative. In view of

the literature and the findings found in the study, there is a commonality in phonological processes observed in language borrowing across different languages, despite variations in the specific environments where these processes occur.

Conflict of Interest: The corresponding author, on behalf of all authors, confirms that there are no conflicts of interest to disclose.

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