

Germanising Oshiwambo language: Phonological integration of German loan words into Oshiwambo

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Abstract

Oshiwambo, a Bantu language spoken in Northern Namibia and Southern Angola, like other languages in contact, has adopted foreign words from other languages to meet the needs of its daily life vocabularies and activities. This paper identified and described the phonological changes which the loanwords from German go through to fit into Oshiwambo speech system and established the phonological rules that account for these changes. The paper is based on the hypothesis that words borrowed from other languages, especially European languages, into Oshiwambo, are phonologically modified to fit the Oshiwambo speech system because little information is available on the phonological wambonisation of German words. The data were collected from school textbooks, daily conversations and personal vocabularies of the researcher. The loanwords were transcribed for phonological analysis. The paper investigated how Oshiwambo borrowed words from German yet the two languages differ widely in terms of phonemic inventories and phonotactics. It has become evident that there are several vowel and consonant changes in the process of borrowing. The paper contributes to the linguistic study in the area of Oshiwambo in particular and Bantu languages in general. The knowledge acquired could be utilized by the institutions of higher learning too.

Introduction

Oshiwambo has borrowed several words from German language. In borrowing words from German, various phonological strategies have been used to integrate Oshiwambo words into Oshiwambo. This paper is an attempt to show how the different sound systems of German and Oshiwambo are handled, to account for the way Oshiwambo speakers articulate German loanwords. Abdul (as cited in Zivenge, 2009, p. 187) argues that “no two languages share the same phonological systems.” This suggests that the phonological systems of these two languages (Oshiwambo and German) must be different too. The phonological processes are necessary to handle vowels, monophthongs and

diphthongs, consonants and consonant clusters in German so that the loanwords are accepted in the Oshiwambo speech system.

Literature review

Phonological adaptation strategies

Since there are no two languages sharing the same phonological systems (Abdul, 2002), the phonological inventories of the source language and those of the recipient language are bound to be different. Therefore, in the borrowing process certain phonological rules that account for how recipient language speakers adapt loanwords from the source language without necessarily breaching their language rules are followed.

Scholars such as Whiteley (1963), Steinbergs (1985), Zivenge (2009), Apenteng and Amfo (2014), and Evans (2014) have observed that there are several phonological adaptation strategies that words undergo during the borrowing process. These strategies include sound alteration (substitution, addition, and deletion), insertion, cluster simplification and syllabic omission, depending on the differences in phonological patterns between the recipient language and the source language.

Vowel nativisation

Speakers of a recipient language use numerous phonological rules to handle the vowels of a source language to suit the phonological system of the recipient language. According to Crystal (1991), a vowel is one of the two general categories used for the classification of speech sounds, the other being the consonant. In addition, Crystal (1991) elaborates that:

Phonetically, they [vowels] are sounds articulated without a complete closure in the mouth or a degree of narrowing which would produce audible friction; the air escapes evenly over the centre of the tongue (pp. 376-377).

The following are phonological strategies employed in handling vowels of source language to suit the vowel system of recipient language.

Sound substitution

According to Ildoil (as cited in Zivenge, 2009), sound substitution refers to “the replacement of one linguistic item by another at a particular place in structure” (p. 233). In this case, a vowel in a source language, especially that does not exist in a recipient language, is replaced with a vowel of a recipient language to suit its vowel system. For example, Whiteley (1963) notes that all the English central vowels are realised in Kamba (Bantu language in Kenya) as **a**. ‘major’ [meid^{3ə}] **me:ya**

‘warrant’ [w^ərənt] **walandi**

‘nurse’[n^{ɜː}s] **na:si** (Whiteley,1963, p. 155)

Similarly, Apenteng and Amfo (2014) reveal that there are vowels that have been treated through substitution in Akan (the most prominent indigenous language in Ghana), and they are; the short neutral half-open unrounded vowel /ʌ/, the schwa /ə/ and the back open rounded vowel /ɒ/. So, Akan words borrowed from English with such unfamiliar sounds are replaced with more familiar

Vowel insertion/epenthesis

Evans (2014) defines vowel insertion as “a linguistic process where a vowel is added to a borrowed word” (p.50). Moreover, Batibo (1996) defines vowel insertion or vowel epenthesis as “a linguistic process that involves the insertion of a vowel between two consonants or after a final position” (p. 34), while John (as cited in Zivenge 2009, p. 212) defines vowel epenthesis as “the insertion of a vowel into the word segment”.

Chimhundu (2002) notes that English consonant sequences may be expected to be broken up in accordance with Shona syllable structure, which is typically CV or open type by vowel insertion as appearing in the examples below:

‘cream’ /krim/ > /kɪrimu/ (Chimhundu, 2002, p. 127)

Vowel harmony rule

Generally, vowel harmony is the resemblance of vowels in different syllables in a word. Batibo (1996) describes vowel harmony as “a process where the inserted vowel adopts the phonetic features of the vowel from the preceding syllable” (p. 34). Batibo (1996) observes vowel harmony in the nativisation of English loanwords in Tswana and Swahili. Tswana is the national language of Botswana, one of the official languages of South Africa and a national language in Namibia, while Swahili is the main official language of Tanzania, the national language of Kenya, and functions as a lingua franca in Uganda, Burundi, Zaire and the Congo Islands.

In Setswana, the vowel harmony rule is applied either from left to right or from right to left as in the examples below:

Left to right case

‘week’ **beke**
‘note’ **nouto**
1996, p. 36)

Right to left

‘glass’ **galase**
‘screw’ **sekurufu** (Batibo,

Similarly, Batibo (1996) notes vowel harmony in English loanwords in Swahili as in the examples that follow:

‘driver’ **dereva**
‘German’ **mjeremani** (Batibo, 1996, p. 38)

As observed in other Bantu languages previously discussed, vowel insertion through vowel harmony can also be applied to German loanwords in Oshiwambo. Vowel harmony is a common rule in the Oshiwambo speech system. Fivaz (1986) explains that in some cases in Oshiwambo where a two-syllable sequence occurs, one vowel is replaced by an identical, or similar vowel to the vowel in the other syllable.

Consonant nativisation

This sub-section investigates how speakers of a recipient language use phonological rules to handle consonants of a source language to suit the phonological system of the recipient language. According to Crystal (1991), a consonant is one of the two categories used for the classification of speech sounds, the other being the vowel. Phonetically, consonants are sounds made by a closure or narrowing in the vocal tract so that the airflow is either completely blocked, or so restricted that audible friction is produced (Crystal, 1991, p. 74). The following are the phonological rules that account for handling consonants in loanwords in some Bantu languages:

Consonant deletion/omission

Evans (2014, p. 48) describes sound deletion as “a linguistic process in which a consonant in a word is eliminated from its position, where the deleted sounds are especially those that do not occur in Lubukusu Consonant Inventory”. A study carried out by Evans (2014) investigated how Lubukusu (a dialect of the Luhya language in Kenya in Bungoma District) borrows words from English and yet the two differ widely in terms of phonemic inventories.

With consonant deletion, a consonant is eliminated from its position in a loanword (especially those that do not occur in the Lubukusu consonant inventory, of which /h/ is one).

For example (h), English	Gloss	Lubukusu	Gloss
/hautel/	hotel	/eoteli/	eoteli
(Evans, 2014, p. 48)			

So, /h/ has been deleted because it does not exist in the Lubukusu inventory.

Similarly, Batibo (1996) observes the deletion of consonants in English loanwords in Setswana and Kiswahili respectively as in the example below:

Tswana	English	Deleted consonant	
posa	'post'	/t/	(Batibo, 1996, p. 37)
Swahili	English		
batiza	'baptise'	/p/	(Batibo, 1996, p. 39)

Batibo (1996) therefore stresses that “deletion was applied to avoid undesirable consonant clusters or too long words if other methods were used” (Batibo, 1996, p. 37).

It is evident that some Bantu languages employ consonant deletion; therefore it can be suggested that Oshiwambo, being a Bantu language, might use such a process or strategy in the adaptation of German loanwords as well.

Sound substitution

Sound substitution is the replacement of one linguistic item by another at a particular place in structure. Whiteley (1963) notes that as far as phonological assimilation is concerned, English loanwords in Kamba undergo consonant realisations and vowel realisations. For example, English consonants /p/, / b/, / f/ and /v/ are realised as /v/.

Examples:

- English ‘top’ Kamba > /tovu/
- English ‘rubber’ Kamba > /la:va/ (Whiteley, 1963, p. 149)

Likewise, Evans (2014) states that consonant substitution is another linguistic process in which a consonant is replaced by a completely different consonant. For example, the voiceless bilabial stop /p/ in an English word borrowed by Lubukusu changes to a voiced bilabial fricative /β/

English	Gloss	Lubukusu	Gloss
/zip/	zip	/esiβu/	esibu (Evans, 2014,
p. 49)			

Steinbergs (1985) observes a similar situation and therefore argues that:

Since borrowing and source 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 borrowing language lacks, the phonetically closest sound is substituted (p. 91).

Analysing English loanwords in Tonga, Zivengé (2009) notes that substitution is done to replace English consonants that do not exist in Tonga. Some of these sounds are /θ/, /θ/, /r/, /nθ/ and /ns/, and substitution is demonstrated in the following example:

English		substitution process	Tonga
'theory'	/θ ər /	-----→	/sijoli/ (Zivengé,
2009, p. 238)			

From this illustration, the underlying principle that accounts for English consonant substitution is the choice of equivalent consonants in Tonga, such that only those sounds that share similar distinctive features can substitute each other. In this example, the two sounds /θ/ and /s/ are both fricatives; the former is dental while the latter is alveolar.

Reproduction

In this context, reproduction refers to the adoption of a phoneme or phonemes in a language where such phonemes did not exist before. Chimhundu (2002) explains that there are instances "where Shona speakers fail to identify strange phonemes with any of their own, and may be expected to reproduce the original sound in the loans" (p. 126), as in the following example:

English /θ/ > /θ/
 'theory' /θ|əri/ > /θijori/ (Chimhundu, 2002, p. 126)

From this explanation, one learns that some languages can increase their phonemes by adopting phonemes which originally were not part of their inventory.

It is evident that sound/consonant substitution is accountable for handling consonants that occur in a source language but do not exist in a recipient language. However, it should be noted that sometimes a recipient language is forced to adopt or reproduce a sound that does not originally exist in its inventory as the case of / θ / in Shona.

Syllabic omission

With this process, a syllable in a word to be borrowed from a source language to a recipient language is left out. This is done for several

reasons. Batibo (1996) explains that “in a situation where undesirable clusters would result or where a word would be too long if other methods were used, a consonant or a source word part would be omitted” (p. 37). One reason for this is to simplify pronunciation, especially when the original form would be hard to pronounce to fit the recipient language system. Kayigema (2010) demonstrates how syllabic omission happens during the adaptation of English words into Kinyarwanda (a Bantu language spoken in Rwanda and beyond its borders).

Examples:

Kinyarwanda	French	English
isinya	<u>signature</u>	signature
umu-fana	<u>fanatique</u>	fanatic

(Kayigema, 2010, p.100)

As demonstrated above, the last syllables *ture* and *tic* have been omitted. It is important to note that since syllabic omission occurs in other Bantu languages, it might occur in the integration of loanwords from German into Oshiwambo too.

Consonant cluster tolerance

It is noted that typically Bantu languages do not allow consonant clusters, hence vowel insertion is employed. However, some Bantu languages in some cases tolerate consonant clusters. This is supported by Batibo (1996) in Setswana and Kiswahili, and Mahlangu (2007) in isiNdebele respectively.

For example:

English (settler) ----- Swahili [setla] (Batibo, 1996, p. 38)

Batibo (1996) maintains that the level of consonant cluster tolerance would depend on the speaker’s degree of bilingualism. Literate speakers tend to tolerate consonant clusters more often than the illiterate ones because of exposure to source languages. In another study, Mutua (2013), investigating the strategies used by the recipient system, Kikamba, to handle phonologically different words from English, noted that although consonant clusters are not allowed in Kikamba, some loanwords retain consonant clusters after nativisation.

Examples: English	Kikamba
Christ	Klistu

sacrament saklamendi (Mutua, 2013, p. 103).

This is also evident among Oshiwambo speakers, having two possible forms of one loanword borrowed from English; one form for the literate and the other one for the illiterate. For example:

English	bilingual/literate	monolingual/illiterate
school	oskola	osikola
petrol	opetlola	opetolola

This would suggest that consonant cluster tolerance might be applied to German loanwords in Oshiwambo especially among the educated and bilingual speakers who speak Afrikaans, German or English in which consonant clusters are permissible.

Phonological processes in handling vowels

The Oshiwambo vowel system differs greatly from that of German as observed in the present study. Therefore, any German word that has been borrowed into Oshiwambo undergoes some vowel changes for it to fit into the speech system of Oshiwambo. Four phonological processes, namely substitution, glide epenthesis, resyllabification and consonant addition have been observed in handling vowels when German words are borrowed into Oshiwambo.

Vowel substitution

According to Ibdoil (as cited in Zivenge, 2009, p. 233), sound substitution refers to the replacement of one linguistic item by another at a particular place in a structure. Therefore, vowel substitution in this study refers to the process whereby German vowels are replaced by Oshiwambo vowels during the process of borrowing.

The data below show how each German vowel has been treated. This helps to establish which Oshiwambo vowel has been used in substituting a German vowel and to find the underlying principles.

German word	German vowel	Phonetic transcription	Loanword
Oshiwambo Vowel			
Kühler	y:	ky:lɛ	okila [i]

Tüte	y:	'ty:tə	otite
okino	[i]	Kino	'ki:no
Maschine	i:	ma'ʃi:nə	omashina
Schlips	i	ʃlips	ofilipusa
[i]			
billig (adj.)		biliç	ombiliha
Radio	a:	ra:diə	oladiyo
[a]			
Draht		dra:t	odhalate
Zucker	ə	tsukə	osuka
[a]			
Koffer	ɔ	'kɔfə	okofa
[o]			
Karte	ə	kartə	
okaalita	[a]		
Mine		mi:nə	omina
Matratze	ə	ma'tratə	omatalashe
[e]			
Geschäft		gə'ʃɛft	ongeshefa
Stunde	ə	'ʃtundə	otundi
[i]			
Deutsche		dɔʏtʃə	omundowishi
Hotel	ɛ	ho'tel	ohotela
[e]			
Benzin		bən'tsi:n	openzina
Kamel	e:	ka'me:l	ongamelo
[e]			
Apotheke		apo'te:kə	oapoteka
Brötchen	ø:	brø:tʃən	
okambilishena	[i]		
Brot	o:	bro:t	omboloto
[o]			
Kartoffel	ɔ	kar'tɔfl	okatofola
[o]			
Kombi	ɔ	'kɔmbi	okumbi
[u]			

kurz [o]	ʊ	kurts	okotse
Strümpf		ʃtrʊmpf	oshitolofe
Stunde [u]	ʊ	ʃtʊndə	otundi
Butter		ˈbutə	ombuta
Kuchen [u]	u:	ˈku:xn	oshikuhuna
Bluse		ˈblu:zə	ombuluse

Data above show that each German vowel that does not exist in Oshiwambo has been replaced by an Oshiwambo vowel that has distinctive features close to that of German vowels. For example, German vowels /y:/, /i:/ and /i/, have been retained by the Oshiwambo vowel /i/. They share phonetic features such as -high, and -front. Similarly, German vowels /ʊ/, /u:/ and /ʊ/ have been replaced by the Oshiwambo vowel /u/. In this case, the same principle has been applied since these vowels share some phonetic features; that is they are back vowels. However, partial vowel assimilation is also observed. The German vowel /ʊ/ in words 'ʃtʊndə (otundi) and kurts (okotse) has been replaced by Oshiwambo vowels /u/ and /o/ respectively. This has occurred because /u/ and /i/ are high vowels, while /o/ and /e/ are low vowels.

Glide epenthesis

Crystal (as cited in Zivenge, 2009, p. 193) defines epenthesis as “the intrusion or insertion of an extra sound, medially in a word, while glides are semi-vowels, [w] and [j]”. So, glide epenthesis is the insertion of a semi-vowel in a word. The Oshiwambo and German vowel systems differ greatly. German has monophthongs and diphthongs, while Oshiwambo has monophthongs only. A semi-vowel is inserted to separate the German vowels that do not exist in Oshiwambo, as demonstrated in the examples which follow:

English	German	Phonetic	Oshiwambo
captain	Kapitän	/kapiˈtɛ:n/	kapitiya
radio	Radio	/ra:diə/	oladiyo
German (person)	Deutsche	/dɔɪtʃə/	omundowishi
tar	Teer	/tɛ:ə/	oteya

The palatal continuant /j/ was epenthesised to break German vowels which do not occur in Oshiwambo, and these are: /ɛ:/, /io/ and /e:ə/. The

labiovelar continuant /w/ was epenthesised to break vowel /oy/ in German Deutsche.

Resyllabification

Zivenge (2009, p. 187) defines resyllabification as “the reorganizing of the syllable tier”. One difference between German and Oshiwambo is in their syllable patterns. While German recognises both open and closed syllables, Oshiwambo recognises open syllables only. However, it can be argued that Oshiwambo recognises closed syllables to a lesser extent especially in interjections and silent /u/ after /m/, as in *omntu* (person). An open syllable is a consonant-vowel sequence (CV), because it is not closed by another consonant, while a closed syllable is a vowel-consonant sequence (VC) pattern (Crystal, 1991).

Regarding interjection, especially when a person is surprised, he or she might interject by saying *Mem!* (Mother) instead of *meme*. This results in a CVC syllable pattern. For example, the German word *Teer* /tɛ:ɐ/ is monosyllabic, but when it was nativised into Oshiwambo through glide epenthesis to become *oteya*, it became a polysyllabic word with three syllables (VCVCV) *o.te.ya*, in which all syllables are open.

Consonant addition

Addition or epenthesis refers to a type of intrusion, where an extra sound has been inserted in a word (Crystal, 1991). In this regard, a consonant is inserted in a word for some phonetic reasons. The example which follows clarifies this:

English consonant	German	Phonetic	Oshiwambo	Inserted
car	Auto	auto	<i>ehawuto</i>	/h/

From the example above, the /h/, the glottal fricative has been inserted to avoid creating diphthong (not permissible in Oshiwambo) by the last vowel on a prefix of a particular nominal class and *auto*. If /h/ was not inserted, this could result in diphthongs which are not permissible in Oshiwambo. This could result in having words such as:

- eawuto*, Cl 5
- oshiawuto*, Cl 7
- oluawuto* Cl 11

This is also proven in other cases from other languages such as *omahooli* ‘oil’ from *olie* in Afrikaans. The underlying principle here is that epenthesis has been applied to avoid the creation of diphthongs in Oshiwambo.

Phonological processes in handling consonants

It is observed that Oshiwambo and German have different consonant systems, although similarities exist too. Therefore, German words that enter Oshiwambo have to undergo some consonantal changes. This is particularly common when such a word carries a consonant or consonants that do not exist in Oshiwambo.

This section therefore discusses consonantal changes observed when German words enter the Oshiwambo speech system and these are a result of sound substitution, deletion, consonant nasalisation and epenthesis.

Consonant substitution

Ibdoil (as cited in Zivenge, 2009, p. 233) describes sound substitution as “the replacement of one linguistic item by another at a particular place in structure”. In this study, consonant substitution refers to the replacement of German consonants with Oshiwambo consonants. It is observed that some German single consonants are adopted as they are, while others undergo phonological changes to suit the Oshiwambo phonemic system. The examples below illustrate such a process:

English Substitutes	German	Phonetic	Oshiwambo
mattress and /l/	Matratze	ma'trats _ə	omatalashe /sh/

Although the alveolar affricate /ts/ exists in both German and Oshiwambo, the alveolar affricate /ts/ was substituted with the alveopalatal fricative /sh/. This was done because the two consonants share the same place of articulation. They are both alveolar fricatives. It is evident that the substitution of consonants occurs between consonants which share the similar place of articulation.

The laterals /l/ and /r/ exist in Oshiwambo among its dialects and act as free variants. However, /l/ is more preferred than /r/. Therefore, in the German word *Matratze*, /r/ has been replaced with /l/ as a result.

Consonant nasalisation

Crystal (1991) states that a nasalised consonant would refer to a consonant which is articulated in a nasal manner because of an adjacent nasal sound. Therefore, some consonants undergo the process of nasalisation as in the examples below:

English	German	Phonetic	Oshiwambo
bread	Brot	/bro:t/	omboloto
dam	Damm	/dam/	ondama

Fivaz (1986) explains that in Oshindonga, the voiced labial stop /b/ and the voiced alveolar stop /d/, occur only in nasal compounds, namely /mb/, /mbw/ and /mby/; and /nd/, /ndw/ and /ndy/ respectively. Therefore, in German, words such as *Brot* and *Damm*, sounds /b/ and /d/ have been nasalised to /mb/ and /nd/ respectively in the initial position. The voiced labial stop /b/ has been nasalised with /m/ the voiced bilabial nasal while the voiced alveolar stop /d/, has been nasalised with /n/ the voiced alveolar nasal. The sounds /b/ and /m/ are bilabial while /d/ and /n/ are alveolar. The underlying principle here is that place of articulation plays a role in the process of consonant nasalisation.

The Kwanyama Law

Kwanyama Law is one of the phonological processes in Oshiwambo, especially the in Oshikwanyama dialect. According to Halme (2004), the Kwanyama Law denasalises the second of two successive pre-nasalised voiced consonants in a word in Oshindonga. Comparing the two dialects of Oshiwambo, Oshikwanyama and Oshindonga, the following examples illustrate this law:

Oshindonga

ondj**amba** (elephant)
ong**ombe** (herd of cattle)
(2004, p.16).

Oshikwanyama

ondja**ba**
ongob**e** (Halme,

As it can be seen above, the second pre-nasalised voiced consonant /mb/ in Oshindonga has been denasalized to /b/ in Oshikwanyama because Oshikwanyama does not allow two successive pre-nasalised voiced consonants /mb/ in *ondjamba* and *ongombe* in Oshindonga. It should not be concluded that it is only the /mb/ that can be denasalised. Observe this from the examples which follow. A word *ondondo* in Oshindonga (*grade* in Eng.) is pronounced as *ondodo* in Oshikwanyama. It is obvious that the /nd/ in the second syllable in Oshindonga has been denasalised in Oshikwanyama to /d/.

The Kwanyama Law has been observed with loanwords from German too. The German word *Bibel* is nativised in Oshiwambo as *ombimbeli* in Oshindonga and *ombibeli* in Oshikwanyama. So, the Kwanyama Law has been applied in nativising German words into Oshikwanyama.

Devoicing

This is the process by which a voiced consonant becomes devoiced. Kennedy (2007) argues that devoicing takes place when the recipient language lacks voiced consonants in its phonemic inventory which are present in the source language.

This study has observed devoicing of phonemes as well. The German words *Benzin* (English petrol) and *Abfall* (English waste) are nativised as *openzina* and *oapufala* in Oshiwambo respectively. So, the voiced bilabial plosive /b/ in the two words has been replaced by a voiceless bilabial plosive /p/. Although the phoneme /b/ is present in Oshiwambo and has been realised as /b/ or /mb/, as it appears in *ombimbeli/ombibeli* (Bible), it is not well established why it has been devoiced to a voiceless bilabial plosive /p/. However, it can be admitted that the two phonemes /b/ and /p/ share the same feature, being bilabial plosives; hence they can substitute one another. Sounds /b/ and /p/ are both bilabial plosives, one being voiceless /p/ while the other one, /b/, is voiced.

Therefore, devoicing in this case is not a result of lack of a voiced consonant in the recipient language as argued by Kennedy (2007). Devoicing has thus occurred as a substitution of a voiced consonant by a voiceless consonant that shares the same feature.

Phonological processes in handling consonant clusters

A cluster refers to any sequence of adjacent consonants occurring initially or finally in a syllable (Crystal 1991, p. 58). Zivenge (2009) argues that consonant clusters are not permissible in Bantu languages (p. 236). Therefore, Oshiwambo too, does not permit consonant clusters. Therefore, some ways of handling consonant clusters in loanwords are vowel insertion, deletion and extra-syllabic consonant truncation, discussed in the next sub-section.

Vowel insertion

Evans (2014) defines vowel insertion as a linguistic process where a vowel is added to a borrowed word. Batibo (1996) defines vowel insertion or vowel epenthesis as a linguistic process that involves the insertion of a vowel between two consonants or after a final position; whereas John (as cited in Zivenge, 2009, p. 212) defines vowel epenthesis as the insertion of a vowel into a word segment.

The difference between German and Oshiwambo is that German recognises consonant clusters while Oshiwambo does not. However, Oshiwambo recognises complex consonants. Zivenge (2009) differentiates the two terms, *consonant clusters* and *complex consonants*.

While the former refers to consonants that follow each other in a CC (consonant consonant) sequence pattern without being articulated simultaneously, the latter refers to consonants that are articulated in a CC sequence as a unitary segment. So, for some German words which have CC clusters, a vowel is to be inserted between consonants for a word to conform to the Oshiwambo syllable structure. The examples below illustrate this:

English vowel(s)	German	Phonetic	Oshiwambo	Inserted
map	Karte	/kartə/	okaalita	/o/, /i/
wire	Draht	/dra:t/	odhalate	/o/, /a/ and /e/

In the German words *Draht* and *Karte*, /dr/ and /rt/ are consonant clusters which Oshiwambo does not allow, therefore vowels /a/ and /i/ have been inserted to break these clusters respectively. There are three types of vowel insertions applied to German loanwords entering the Oshiwambo inventory. They are prothesis, word medial vowel epenthesis and paragogic vowel epenthesis. Prothesis refers to a type of intrusion where an extra sound has been inserted initially in a word (Crystal, 1991). John (as cited in Zivenge, 2009, p. 213, 222) explains that “while word medial vowel epenthesis refers to insertion of vowel in the middle of a word, paragogic vowel insertion refers to insertion of a vowel at the end of a word”.

Data collected show that all the three types of vowel epenthesis have been applied in the nativisation of loanwords from German into Oshiwambo as in the examples which follow in Table 1 below:

Table 1
Three types of vowel epenthesis

English	German	Loanword	Prothesis vowel	Mid-word vowel	Paragogic vowel
wire	Draht	odhalate	o	a	e
bread	Brot	omboloto	o	o	o
waste	Abfall	oapufala	o	u	a

It is important to note the underlying principles used in the vowel epenthesis process. This takes us to what Kennedy (2007) refers to as mirror vowel epenthesis in Bemba. This rule states that the same vowel before or after the consonant cluster determines the vowel to be inserted in a consonant cluster. The German word *Draht* has a vowel /a/ after the cluster /dr/, therefore it is the same vowel to be inserted in the cluster.

Similarly, a German word *Brot* has a vowel /o/ following the consonant cluster /br/, as a result it is the same vowel inserted in the cluster and at the end of the word. However, a German word *Abfall*, the consonant cluster /bf/ initially sounds as if there is /u/ between /b/ and /f/ hence /u/ is inserted. The vowel /a/ that is inserted in the final segment of *Abfall* is a result of the vowel /a/ that follows the consonant cluster /bf/. The initial vowel /o/ in each of the loanwords in Table 1 has been inserted for morphological reasons. That is, it is an augment or a pre-prefix for nominal class 9 in Oshiwambo where all the three loanwords have been assigned.

Consonant deletion

As stated earlier, Evans (2014) describes consonant deletion as a linguistic process in which a consonant in a word is eliminated from its position. This process is also noticed in the integration of German loanwords into Oshiwambo as demonstrated in the examples that follow:

English deleted	German	Phonetic	Oshiwambo	Consonant
shop	Geschäft	/gə'ʃɛft/	ongeshefa	/t/
potato	Kartoffel	/kar'tɔfl/	okatofola	/r/

There are two reasons why consonant deletion is applied: to avoid undesirable consonant clusters (not preferred sequence) in a recipient language or to avoid a sound that does not exist in a recipient language inventory. In the examples above, the former has been applied. The consonant clusters /ft/ and /rt/ are undesirable in Oshiwambo, therefore sounds /t/ and /r/ have been deleted.

Extra-syllabic consonant truncation

Batibo (1996) states that with this rule a syllabic part of a word is truncated to avoid undesirable clusters or to avoid a word from being too long if other methods are used. There is no exception to this rule in Oshiwambo when treating German loanwords as in the examples below:

English part	German	Phonetic	Oshiwambo	Truncated
bakery	Bäckerei	/bɛkə'rai/	ombeka	/rai/
butchery	Schlahterei	/ʃlaxtə'rai/	oshilahite	/rai/

The syllable /rai/ (CV) has been omitted from the German words to avoid a word from being too long if other methods were used. For example, if glide epenthesis was used, the German word ‘Schlahterei’ (butchery)

would be *oshilahitelayi* (o.shi.la.hi.te.la.yi) with seven syllables in Oshiwambo. It can be suggested that truncation was employed in this case to avoid words from being too long.

Similarly, this strategy has been observed when Oshiwambo borrowed words from Portuguese too, as seen in the following examples:

English	Portuguese	Oshiwambo	Truncated part
	eucalyptus	omungalipi	-tus
	Portuguese	Oshiputu	-guese

As can be seen above, the two syllables *-tus* and *-guese* have been cut off from the two words *eucalyptus* and *Portuguese* respectively.

Consonant cluster tolerance

Batibo (1996) and Mahlangu (2007) argue that typical Bantu languages do not permit consonant clusters, which is why vowel insertion is employed in order to break up these clusters. However, speakers who are bilingual, or exposed to foreign languages which allow consonant clusters, tend to use consonant clusters as they occur in the foreign language forms. This is also observed amongst Oshiwambo speakers in pronouncing loanwords from languages in which consonant clusters are permissible.

In this study, some loanwords from German into Oshiwambo have two possible forms. One form is for the literate speakers or bilinguals, while the other form is for the illiterate or monolingual ones, as shown in the following examples:

Table 2
Consonant cluster tolerance in loanwords

English	German	Bilinguals/Literate	Monolinguals/Illiterate	Tolerated clusters
mattress	Matratze	oma <i>trashe</i> /oma <i>tlashe</i>	omatalashe	<i>tr/tl</i>
bread	Brot	om <i>bro</i> to/om <i>bl</i> oto	omboloto	<i>br/bl</i>
blouse	Bluse	om <i>bl</i> use	ombuluse	<i>Bl</i>
socks	Strümpfe	oshi <i>strom</i> fe/oshi <i>stl</i> omfe	oshisitolofo	<i>str/stl, mf</i>

These data have demonstrated that the degree of bilingualism of speakers of Oshiwambo has a great influence in tolerating consonant clusters. The more a speaker is exposed to foreign languages, the higher

the possibility of tolerating the consonant cluster. Those monolinguals that do not have foreign language exposure do not tolerate consonant clusters and therefore insert vowels to break up the clusters.

However, the consonant clusters /tr/, /br/, /bl/ and /str/ have been maintained in the loanwords when pronounced by the bilinguals. The consonant cluster /mpf/ in *Strümpfe* has been modified with the omission of /p/, hence there is /mf/. However, when these words are pronounced by the monolinguals, the consonant clusters have been broken through vowel insertion.

Phonological free variations and loanwords

Mompean (2008) defines phonological free variation as “a well-known phenomenon that occurs when two or more phonemes - the free variants - may replace each other in the same position without any change in meaning” (p. 2).

The Aawambo speak a cluster of dialects or languages which are jointly known as Oshiwambo. These dialects are: Oshikwanyama (spoken in southern Angola as well), Oshindonga, Oshingandjera, Oshikwambi, Oshikwaluudhi, Oshimbalanhu, Oshikolonkadhi, Oshiunda, Oshimbadja, Oshikwankwa and Oshindombodhola. It is observed and noted that most of the words in the different dialects of Oshiwambo differ with one or more phonemes in the same phonetic environment. This is because some phonemes may exist in one dialect while they may be absent in the other.

This sub-section therefore discusses how loanwords from German are phonologically handled in different dialects of Oshiwambo. This is analysed by looking at those phonemes that may be present in one dialect while they may be absent in another dialect. This is evident in the following examples:

Table 3
Phonological free variations and loanwords

Engli sh	Germ an	Oshindon ga	Oshikwanya ma	Oshimbala nhu	Free variant s
shorts	Kurz	okotse	okotwe	okotsw	ts/tw/tsw
wire	Draht	odh	odalate	ovalate	dh/d/v
sugar	Zucker	osuuka	oshuuka/ofyu uka	osuuka	s/sh/fy /s

base	Bass	ombaa tha	ombaa fa	ombaa fa	th/f/f
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It is evident that some German phonemes have been substituted by different Oshiwambo phonemes. From these data it is obvious that Oshiwambo dialects have different phonemic inventories that is why different Oshiwambo phonemes are used in substituting the different German phonemes.

The free variants and the German phonemes that have been substituted have something in common as observed in these examples (Table 3). The free variants share the same features. Free variants **/ts/ /tw/ /tsw/** are alveolar sounds replacing the German sound **/ts/** which is an alveolar sound. Free variants **/dh/ /v/** are dental fricatives, replacing the German alveolar stop **/d/**. Free variants **/s/ /sh/** are alveolar sounds while **/fy/** is a labio-dental sound, replacing the German alveolar sound **/z/**. Free variants **/f/ /th/** are dental fricatives replacing the German alveolar fricative **/s/**.

From this observation, it is evident that the place of articulation plays an important role in free variation among dialects. Thus, sounds with the same place of articulation but with a different manner of articulation form free variants as in the case of the dental fricatives **/dh/ /v/**, the dental fricatives **/f/ /th/**, and the alveolar sounds **/ts/ /tw/ /tsw/**. However, places of articulation that are adjacent play a role in the production of free variants too. Thus, **/d/** the alveolar stop and **/v/** the labiodental fricative are produced at two adjacent places (alveolar and dental).

The lateral sound // and /r/ in Oshiwambo as free variants of Oshiwambo

The two sounds **//** and **/r/** are used as free variants. Mbenzi (2011) argues that:

The use of the lateral sound **//** is going out of fashion at present for several reasons. Firstly, the use of the lateral **//** is associated with the Aambuga people of Ondonga who use strong **//** and they (Aambuga), are stereotyped as witches or wizards. That is why the new or young generation of Aambuga shy away from the use of **//**.

Secondly, the other Oshiwambo speakers such as Aakwambi, Aangandjera, Aakwaluudhi, Aambalantu and Aakolonkadhi inherently use lateral **/r/**, and it is assumed that they might have influenced the speakers of Oshindonga and Oshikwanyama to drop **//** and use lateral **/r/** instead.

Thirdly, the use of /r/ is associated with modernity, while the use of // is associated with primitive life, therefore the educated Aawambo tend to use *r* instead of //. (p. 15)

The use of /r/ in Oshiwambo is also associated with the cosmopolitans who are exposed to Otjiherero in which /r/ is inherently dominant. Therefore, the educated Oshiwambo speakers are associated with the use of /r/ as it appears in the examples which follow: *oshisitoromfe*, *omboroto*, *omatarashe* and *omburuse*.

Conclusion

Oshiwambo has used various phonological strategies to integrate German words into Oshiwambo. Phonological processes such as substitution, addition, deletion, insertion and resyllabification account for phonological changes in German loanwords into Oshiwambo. Some German words are nativised to such an extent that they become unrecognisable. The consonant clusters in the source languages have been broken, some consonants have been substituted, and syllables have been reorganised resulting in more syllables than in the source language. The speakers of Oshiwambo who are exposed to European languages tend to tolerate consonant clusters whereas the monolinguals insert vowels to break consonant clusters. The trill *r* is mostly retained in loan words due to its association with modernity and elitism.

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