A MORPHOPHONOLOGICAL ANALYSIS OF OLUWANGA LOANWORDS: AN OPTIMALITY THEORY ACCOUNT.

BY

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DECLARATION

This proposal is my original work and has not been presented for a degree in any other university.

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ABBREVIATIONS, ACRONYMS AND SYMBOLS

CON:	Constraint
EVAL:	Evaluator
G.A	Generalized Alignment Theory
GEN:	Generator
IDENT (manner)	It is a universal constraint that requires that every feature ranging from manner, place, voice or aspiration (Asp) in the input segment is 'identical' to every manner, place, voice or aspiration (Asp) feature in the output segment.
O.T:	Optimality Theory

OPERATIONAL DEFINITION OF TERMS

Constraint: A structural requirement that may either be satisfied or violated.

Evaluator: The function that evaluates all the possible candidates and selects the optimal output.

Faithfulness: It is a constraint that imposes a requirement that there should be some semblance between output form and its input.

Generator: The function that generates a set of possible candidates' analyses, based on the universal well-formedness constraints.

Luo : Used restrictively to refer to Boro-Ukwala dialect of Dholuo language

Loanword: A borrowed word

Markedness: A constraint which imposes restrictions on output forms that they should meet the criteria of structural well-formedness.

Morphotactics: These are morphological constraints that determine what is permissible and impermissible in a given language.

Optimal: a candidate that is better on hierarchy of constraints, the one that survives after all the filtering.

Phonotactics: It refers to the phonological arrangement of distinctive sound units in a given language. This arrangement determines what is acceptable in a language.

Surface form: An optimal form (one that incurs the least serious violations of a set of vioalable constraints, ranked in a language specific hierarchy).

Syllable: This is the smallest possible unit of speech and it consists of a vocalic peak, which may be accompanied by a consonantal onset or coda.

ABSTRACT

Loanword adaptations are driven by constraints that are part of the grammar of the native language. Despite this, fewer studies have investigated this phenomenon with respect to indigenous dialects of unrelated languages in Kenya. This study therefore intends to undertake a constraint-based morpho-phonological analysis of loanwords during Oluwanga/Luo contact. In this regard, the study will seek to identify and describe the sound adaptations in Oluwanga loanwords from Luo, establish and analyse the phonological processes at play in Oluwanga loanwords, investigate the phonotactics of Oluwanga that constrain borrowing from Luo, describe the morphological adaptations and morphotactics of Oluwanga that constrain borrowing and lastly establish the extent of Optimality Theory's adequacy in explaining the morphological and phonological adaptations in Oluwanga loanwords. Optimality Theory as proposed by Prince and Smolensky (1993 and 2004) together with the Generalized Alignment Theory by McCarthy and Prince (1993a), will be used in this study. A descriptive linguistic field research design will be used to describe the morphological and phonological adaptation processes. Spoken data will be elicited through group discussion of pictures and unstructured interviews from 36 purposively sampled adults (eighteen males and eighteen females) who are native speakers of Oluwanga. This will be supplemented with participant observation and introspection. The study intends to use four research instruments: a tape recorder to record discussions and interviews, the pictures, field notes and unstructured interview schedule. It is hoped that this study will contribute to the existing literature on borrowing with respect to indigenous languages within the framework of Optimality theory.

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SECTION ONE

BACKGROUND TO THE STUDY

1.0 Introduction

This section presents the background to the study, statement of the problem, the research objectives, research questions and research assumptions. In addition, justification for the study, scope and limitations of the study as well as the conclusion are explored.

1.1 Background to the study

Lexicons of the world's languages confirm that intensive interaction between communities of speakers of different languages is widely spread cutting across many years ago (Thomason & Kaufman, 2001). According to Were (1967), the Bawanga and Luos have had intense contact dating back lots of years. Thus, this study intends to look at lexical borrowing in view of this contact.

Oluwanga, spoken by Bawanga, is one of the seventeen dialects of the Luhya language which is Bantu, predominantly spoken in the Western region of Kenya (Whiteley, 1974; Agongo, 1983; Itabete, 1974; Were, 1967). Bawanga people mainly live in Mumias Sub-county in Kakamega County.

On the other hand, Dholuo language used by the Luo is one of the Nilotic languages which are generally called Lwo (Owino, 2003; Okombo, 1982). Both scholars note that Dholuo traces its origin in southern Sudan. According to Stafford (1967) and Oduol (1990), there are two regional varieties of Dholuo namely; Boro-Ukwala dialect henceforth referred to as Luo, which is the concern of the current study. It is spoken in Yimbo location of Bondo

Subcounty, some divisions in Siaya County namely Yala, Boro, Ukwala and Ugenya. The other variety is the Kisumu-South Nyanza dialect which is considered the standard one.

Language contact phenomenon is both multi and interdisciplinary (Mackey, 1968; Romaine, 1989; Beardsmore, 1982) thus Sociology, Law, Education, Psychology, Geographers and Ethnographers together with linguists study it though through various approaches. The approach that this study intends to adopt is a linguistic one since of interest to the study is the description of the morphological and phonological adaptations of loanwords during Oluwanga/Luo contact situation. This will hopefully add knowledge to the field of Linguistics.

A loanword is defined by Appel and Muysken (1987) as a non-native lexical item which is adapted phonologically and morphologically. This means that the language borrowing makes both phonological and morphological adjustments to borrowed words to suit them into its language structure (Sarkar, 2012). In view of this, Davis (1993) observes that there is a difference in the pronunciation of loanwords by the recipients from the native speakers. This he says is due to the fact that loanwords may contain phonemes that do not exist in the borrowing language thus, replacing the foreign phonemes with sounds in the recipient language that are phonetically similar. This study thus will seek to address the morphological and phonological adaptations as far as Oluwanga borrowing is concerned.

In this study, Dholuo is considered the donor language because previous studies on contact relating to Luhya and Dholuo (Whitely, 1974; Shivachi, 2002; Kebeya, 2008 & 2012) have demonstrated that Luhya bilinguals prefer the latter to their own language thus suggesting the direction of borrowing. Indeed, Haspelmath (2008 & 2009) and Weinreich (1974) note that in

real life, a donor language is usually the one that is perceived prestigious which in this case relates to the Luhya's perception of Dholuo as established by the above named researchers.

Myers-Scotton (2006) and Appel and Muysken (1987) identify two types of lexical borrowing namely; cultural and core borrowing. Cultural borrowing, they note, entails borrowing words which express concepts that do not exist in the lexicon of the recipient language while core borrowing deals with words that refer to concepts which already have referents in the borrowing language. The current study will attempt to look at borrowed words in a general sense without distinguishing the cultural from core borrowed forms.

Loanword adaptation is primarily a phonological process where donor words undergo phonological repairs to adapt a foreign word to the segmental, phonotactic, suprasegmental and morpho-phonological constraints of the recipient language (Holden, 1976; Coetsem, 1988; Ahn & Iverson, 2004; Kawahara, 2008; Hock &Joseph, 2009; Calabrese &Wetzels, 2009; Kang 2011). Indeed, the adaptations of loanwords are driven by constraints that are part of the grammar of the native language (Broselow, 2000; Jaccobs & Gussenhoven, 2000; Golstone & Yang, 2001; Kenstowicz, 2001; Faezeh & Zafarnlu, 2013). How Oluwanga's morphological and phonological constraints influence the adaptation of Luo borrowed words is the concern of this study.

Kenstowicz and Atiwong (2004) and Kenstowicz (2012) note that conflict is observed in loanword adaptation whereby, speakers of the borrowing language try to be faithful to the source word but also make the loanword to conform to the native language phonotactic constraints, segmental inventory and prosodic structures. Other than these phonological constraints, does Oluwanga native speakers in adapting Luo words also make them conform to its morphological constraints? Uffman (2001) in support of the emergence of conflict

during loanword adaptation says that loanwords undergo changes because requirements on the surface forms compel them to change. Such conflict is best expressed by Optimality theory (Kestowicz, 2012 & Yip, 1993). Kager (1999) points out that Optimality theory is surface- based from the perspective that well-formedness constraints evaluate surface forms only; an assertion that Uffman (2001) agrees to when he emphasises that Optimality theory is ideal in the description of loanword adaptation since it is out-put based , a significant point in loanword adaptation. Kager (1999) further notes that borrowing can be modelled from an input –output perspective using Optimality theory which he says has shown that complex surface phenomena can be well explained as an interaction of morpho-phonological constraints on the form of outputs and the relationships of inputs and outputs. This assertion is what has informed the current study.

Silverman (1992) observes that phonological processes apply to loanwords which Katamba (1989) notes are motivated, in every language, by the need to preserve or create preferred syllables. He goes further to note that languages differ with respect to their syllable types. Dholuo for instance, Owino (2003) observes has CV, V, CVC, VC syllable types which can be collapsed as: (C) V (C).He also notes that Dholuo's syllabic structure has monosyllabic words which have a vowel that could be phonetically long or short, and a diphthong. Additionally, he notes that the onset and coda positions within the syllable can only be occupied by one consonant except for cases of prenasalization, palatalization and labialization.

On the contrary, Oluwanga prefers the open syllable as is the characteristic of Bantu languages (Akida, 2000; Green, Marlo & Diericks, 2019). Green, Marlo and Diericks (2019) observe that the CV can occur anywhere, CVV word- internal and V- only syllables at word initial otherwise, they are preceded elsewhere by a ghost consonant. Besides, they note that

there are nasal + (plus) voiced obstruents sequences (NC), and consonant + (plus) glide sequences (CG) often as a result of glide formation. However, these are not prevalent in languages. Given these differences, the question that begs is; what phonological processes come into focus during the adaptation of Luo borrowed words into Oluwanga? Therefore, it is the interest of the current study to explore (within a constraint-based theory of phonology) segmental adaptations what Silverman (1992) calls phonemic adaptations; phonotactics and morphotactics that constrain borrowing and the phonological and morphological processes that come to play with respect to the adaptation of Luo loanwords into Oluwanga.

1.2 Statement of the Problem

The adaptations of loanwords are driven by constraints that are part of the grammar of the native language. Despite this, the investigation of Oluwanga constraints that influence the adaptation of Luo borrowed words has not been given much attention. This study therefore seeks to address this phenomenon by identifying and describing the sound adaptations in Oluwanga loanwords from Luo, establishing and analysing the phonological processes at play in Oluwanga loanwords, investigating the phonotactics of Oluwanga that constrain borrowing from Luo, describing the morphological adaptations and morphotactics of Oluwanga that constrain borrowing and establishing the extent of Optimality theory's adequacy in explaining the morphological and phonological adaptations in Oluwanga loanwords.

1.3 Objectives of the Study

i. To identify and describe the sound adaptations in Oluwanga loanwords from Luo.
ii. To establish and analyse the phonological processes at play in Oluwanga loanwords.
iii. To investigate the phonotactics of Oluwanga that constrain borrowing from Luo.

iv. To describe the morphological adaptations and morphotactics of Oluwanga that constrain borrowing

v. To establish the extent of Optimality Theory's adequacy in explaining the morphological and phonological adaptations in Oluwanga loanwords.

1.4 Research Questions

i. What are the sound adaptations in Oluwanga loanwords from Luo?

ii. What are the phonological processes at play in the adaptation of Oluwanga loanwords?

iii. What are the phonotactics in Oluwanga that constrain borrowing from Luo?

iv. How do the morphological adaptations and morphotactics of Oluwanga affect the adaptation of borrowed words?

v. To what extent is Optimality Theory capable of accounting for morphological and phonological processes of Oluwanga loanword adaptations?

1.5 Research Assumptions

i. There are consonantal and vowel sound adaptations in Oluwanga loanwords from Luo.

ii. There are phonological processes that influence Oluwanga loanword adaptations.

iii. There are phonotactic constraints in Oluwanga that influence adaptation of Luo borrowed words.

iv. That morphological adaptations and morphotactics of Oluwanga affect the adaptation of borrowed words.

v. That Optimality Theory can significantly account for morphological and phonological processes of adaptation in Oluwanga loanwords.

1.6 Justification and Significance of the Study

There are studies on loanwords with respect to Luhya dialects in contact with other languages /dialects in Kenya. For example, Akwala (2008) investigates morpho-phonological nativisation of Dholuo borrowed words into Lumarachi in view of a rule-based theory (Natural Generative Phonology theory) while Watera (2014) undertakes a morpho-phonological analysis of the nativisation of borrowed words from English to Lubukusu using the same theory. Shidiavai (2015) studies the phonological adaptation of Kiswahili and English words in Lwidakho using the Optimality theory (a constraint – based theory). To the best of my knowledge, not much research has been done on Oluwanga, in particular on morpho-phonological nativisation of loanwords in view of the Optimality theory. The present study intends to fill this research gap.

Though Oluwanga borrows from other languages like English and Kiswahili, this study focuses mainly on Dholuo loans. This is because Dholuo has been documented as one of the linguistically powerful indigenous languages in Kenya (Whiteley, 1974; Shivachi, 2002 & Kebeya, 2008). It has phonological and morphological features that are different from Oluwanga and in the event of infusion of its features into Oluwanga, this will in the long run be mistaken for Oluwanga features, if morphological and phonological behaviour that relate to adaptation of loans is not documented. This study hopes to preserve how Oluwanga deals with incoming vocabulary for future references.

Lastly, many studies on contact have tended to focus on an official/national and one or more indigenous languages. This study will dwell on contact between two unofficial indigenous languages in Kenya. It is hoped that this will add knowledge to lexical borrowing in relation to indigenous languages.

1.7 Scope and Limitations

This study intends to undertake a morpho-phonological analysis of loanwords from Boro-Ukwala dialect of Dholuo to Oluwanga dialect of Luhya using the Optimality theory. Other indigenous dialects' lexical items are outside the scope of this study.

Secondly, the study confines itself to the speech of Wanga native speakers who are in constant interaction with the Luo thereby, Oluwanga/ Luo contact. Therefore, the speech of other Luyha dialect speaking groups is beyond the expectations of this study.

1.8 Summary of Section One

This section has discussed the background to the study, foregrounded the statement of the problem, outlined the research objectives, the research questions and research assumptions. The justification for the study as well as the scope and limitations of the study have been presented. The next section reviews relevant literature.

SECTION TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.0 Introduction

This section covers literature on sound adaptations in loanwords, phonological processes that influence sound patterns in loanwords, language phonotactics that constrain borrowing and, morphological adaptations and morphotactics that constrain borrowing. Then, Optimality and Generalized Alignment theories are discussed.

2.1 Literature Review

A critical review of related literature is presented in this section. It comprises sound adaptations in loanwords, phonological processes that influence sound patterns in loanwords, language phonotactics that constrain borrowing and, morphological adaptations and morphotactics that constrain borrowing. This review will hopefully help the researcher to identify gaps that this study hopes to fill.

2.1.1 Sound Adaptations in Loanwords.

Research on phoneme adaptation in loanwords reveal that foreign sounds are nativised to fit into the borrowing language's sound system. The literature review presented herein examines the adaptation at the phoneme level in an attempt to situate a linguistic gap this study seeks to fill.

Miao (2005) undertakes a study on loanword adaptations into modern Mandarin Chinese, based on a corpus of borrowings from English, German and Italian. He focuses on how foreign consonants are adapted into Mandarin using Optimality theory. A total of 2423 loanwords from websites, commodity displays and print materials are used. He establishes

that on phoneme mapping patterns, the articulatory features of consonants show differential changeability (patterns of feature change) with manner features more likely to be maintained than others like place and voice/ aspiration. In this regard, he notes both faithful and deviant mappings. Thus the German alveolar nasal /**n**/ is adapted as a velar nasal /**ŋ**/ while the English plosive **/d**/ is realized as an affricate/**ts**/.On application of Optimality theory, he ranks the constraints as: IDENT(manner)>> IDENT(place)>>IDENT(voice)/Asp.

Miao's study benefits the current one in two ways. First, with respect to the adaptation of consonants and processes. Second, the application of the Optimality theory. However, the current study is different because other than investigating the consonant mappings alone, the study hopes to do the same for vowels and analyze their adaptation processes as well. Besides, the current researcher hopes to analyze oral data which will hopefully give a real picture of the phoneme adaptations in relation to the dialect under study.

Similarly, Shidiavai (2015) investigates phonological adaptation of Kiswahili and English loanwords into Lwidakho using Optimality theory. She uses observation and introspection techniques in data collection.

The findings are similar with Miao's (2005) since she notes that consonants from these donor languages are adapted in two ways. First, through the faithful adaptation in which case, there is preservation of the input phonemes as far as manner features are concerned (input and output share manner features). Thus, the velar nasal /**ŋ**/ in English is adapted in Lwidakho as a palatal nasal /**ɲ**/.In relation to the second way of adaptation, she observes that there is the unfaithful way through substitution whereby, the input phonemes undergo changes as far as manner features are concerned. For instance, the voiceless bilabial plosive **/p/** in English is adapted as the voiced bilabial fricative /**β**/ in Lwidakho.

The current study benefits from this study in relation to consonantal sound adaptation and processes, application of theory and methodology. Nonetheless, it is different because other than hoping to analyze consonantal sound adaptations, the present study will endeavor to do the same for vowels. Another point of departure is that borrowing is from a native, non-official dialect unlike from a foreign, official language in Shidiavai's study.

2.1.2 Phonological Processes that influence Sound Patterns in Loanwords

Studies show that loanword adaptation at the phonological level is governed by sound system and syllable well-formedness in the recipient languages. As such, there are phonological processes that loanwords undergo during adaptation to fit into the sound system and syllable structures of the borrowing languages. The literature discussed herein entails such processes during the adaptations of sounds and syllables in an attempt to identify the linguistic gap this study hopes to fill.

Mwita (2009) sought to analyze how Kiswahili language repairs syllables from borrowed Arabic words using Optimality theory. His findings reveal that Kiswahili, being a characteristic Bantu language with an open syllable, uses vowel epenthesis, consonant deletion, cluster tolerance and feature change to repair the nonconforming syllables of the borrowed words to fit into the Kiswahili syllable structures. He notes further that Kiswahili although is Bantu, it is susceptible to consonant cluster tolerance within syllables due to its long contact with non Bantu languages like Arabic. He accounts for these processes using Optimality theory by coming up with the well-formedness constraints governing Kiswahili syllable structures in which the constraint; *COMPLEX (no complex margins) dominates all other well-formedness and faithfulness constraints. Mwita's study will inform this study in three aspects: syllable structure adaptations and processes as well as on the application of

theory. It will be interesting to see whether Oluwanga will tolerate consonant clusters within syllables since this as noted above, is not typical of Bantu languages.

In the same vein, Guba (2016) examines how English consonants and vowels are mapped onto Ammani Arabic (AA) dialect besides, seeking to account for the syllable structure of the AA loanwords and the phonological processes that AA borrowers adopt to optimize syllable structure. He uses pictures to elicit the pronunciation of loanwords. Optimality model is used. The findings reveal that the adaptation process of English segments is mainly phonological through substitution, deletion, vowel lengthening and shortening, vowel harmony and monophthongisation. Syllablewise, he notes that deletion, syncope and epenthesis processes are responsible for the maximal syllable in AA which is bimoraic and the optimal onset and coda are simple.

AA is different from Oluwanga hence, there is need to establish whether Oluwanga will present the same phonological processes when adapting Luo borrowed words. The present study, however, stands to benefit from application of theory with respect to these processes.

Bahumaid (2015) investigates the phonological processes during lexical borrowing from English to Hadhrami Arabic dialect. He gathers oral data and employs participant observation.

He concludes that consonants undergo substitution, assimilation, pharyngealization, germination, metathesis and devoicing processes during their adaptation while vowels get adapted through; lengthening of short vowels and substitution. This study guides the present one on phonological processes on sound adaptations. However, it is different since the current study intends to analyze these processes using the Optimality theory unlike Bahumaid (2015) who does not use any theory. Equally, Iribe and Karuru (2012) explore the various

phonological strategies used by Gi-Gichugu dialect of Gikuyu language in borrowing words from Kiswahili using the Source Similarity Correspondence Model. Their findings indicate that Gi-Gichugu employs deletion, preservation, substitution and importation strategies in the adaptation of consonants. With respect to vowel adaptations, insertion, preservation and substitution processes are used.

The present study stands to benefit from Iribe and Karuru (2012) with respect to sound adaptation processes given that both Gi-Gichugu and Oluwanga are dialects of Bantu languages. This notwithstanding, the current study seeks to use Optimality theory to account for these processes based on the interaction of markedness and faithfulness constraints.

2.1.3 Language Phonotactics that Constrain Borrowing

Studies show that native language phonotactics affect linguistic borrowing. Language phonotactics refers to the restrictions and freedoms that a language allows with respect to syllable structures and possible sound sequences (which sounds can precede and follow another). The literature review that follows is on language phonotactics and how they constrain borrowing in an effort to identify the linguistic gap this study seeks to address.

Wornyo (2016) analyses the adaptation of English loanwords into Ewe at the syllable structure level. He uses the Optimality theory. The findings show that English borrowed words having closed syllable structures are compelled to conform to Ewe's open syllable structure constraint through insertion. He thus accounts for this by ranking the constraints: -CONS (a syllable must not have CODA) >>MAX-10 (no deletion of segments) >>DEP-10 (no addition of segments). Secondly, he observes that Ewe language has restricted consonant clusters at the onset only whose sequence is 'cl' (meaning that of the two consonants, the second must be a lateral **l**) or 'cr' (where of the two consonants, the second must be a trill **r**).

Any other consonant combination is disallowed through deletion. He accounts for this by ranking the constraints as follows:-CONS>>MAX-10>>DEP-10>>*COMPLEX.

Oluwanga and Ewe are similar because both have open syllable structures. Consequently, it will be interesting to establish whether native Oluwanga's open syllabicity will constrain the adaptation of Luo loans. Moreover, the notion of restrictions of individual sounds matters their sequencing, is beneficial to the current study only that the present study will attempt to analyze the phonotactic constraints which constrain these occurrences(sequences) in relation to loan adaptation which is barely tackled in the study. The application of theory is, however, equally important to the current study.

Equally, Chang (2009) investigates the adaptation of English loanwords in Burmese with respect to Burmese phonotactics and syllable. He uses a corpus of 280 English loanwords and employs Optimality theory. The findings reveal that Burmese phonotactic restrictions apply in the adaptation of English loanwords thus; diphthongs /ai, au/ occur with coda glottal stop, a nasalized vowel followed by a coda glottal is disallowed and diphthongs /ei, ou/ are allowed in open syllable. He also notes that English coda obstruents translate into glottal stop, consonant clusters in onsets are prohibited (through vowel epenthesis) just like consonant clusters in coda which are repaired through consonant deletion. He further notes that markedness constraints dominate the faithfulness constraints. This study also shades light to the current one as far as syllable structure restrictions are concerned in loanword adaptation besides application of theory. The study hardly analyzes the phonotactics of sound segments and how they later affect borowing which the current study hopes to fill.

In the same vein, Mwaliwa (2014) examines how phonotactic constraints operate to realize the syllable structures of words borrowed from Modern Standard Arabic (MSA) to Standard

Kiswahili. She uses the Generative CV-Phonology theory. The findings reveal that phonotactic rules (Preferred syllable structure and assimilation rules) with respect to preferred syllable structures in Kiswahili are the motivation behind segment deletion, insertion, shortening, splitting, monophthongisation, substitution, reduction and metathesis phonological processes during adaptation. She notes that MSA syllables are adapted to Kiswahili syllables by making the closed syllable open, shortening the long vowel syllable, splitting the long vowel syllables, and eliminating final consonant clusters. This study is related to the current one in objective and the fact that both Kiswahili and Oluwanga are Bantu. However, the point of departure is the theory besides the fact that the current study will endeavor to analyze individual sound restrictions and consequently their impact on loanword adaptation.

2.1.4 Morphological Adaptations and Morphotactics that Constrain Borrowing

Morphological loanword integration amounts to picking a donor language surface form and applying the recipient language morphology. Literature has shown that adapted loanwords can freely undergo recipient language inflectional and derivational processes both of which are governed by the morphological structures of the borrowing language. The following literature review serves the purpose of establishing this fact in an attempt to validate the gap that this study hopes to fill.

Mose, Nandelenga and Ayieko (2020) explore morphological adaptations in Ekegusii borrowing from English. They use McCarthy and Prince's (1993a) Generalized Alignment which is within Optimality theory's constraints. The findings reveal that to a great degree, loanwords undergo inflectional adaptation compared to derivational both of which are highly constrained by Ekegusii's morphotactics. There is need to investigate the morphological

adaptations and morphotactics that constrain borrowing in Oluwanga borrowed words since, the application of the constraint based theory in borrowed words from Dholuo language remain unexplored.

Watera (2014) investigates the morphological changes of borrowed words from English to Lubukusu dialect of Luhya using the Natural Generative Phonology theory. The findings reveal that no single loanword was found to maintain its original morphological structure when adapted from English to Lubukusu both in singular and plural forms. He thus established morphological rules that account for these changes. Similarly, Akwala (2008) undertakes a study on the morphological nativisation of Dholuo borrowed words into Lumarachi dialect of Luhya using the Natural Generative Phonology theory. He too finds out that the adapted loanwords change their morphological shapes both in singular and plural forms hence, establishing morphological rules that explain these changes. Both studies shade light to the current one with respect to how adapted loanwords fit into the singular and plural forms (inflectional morphology) in Luhya borrowing. There is, however, a gap to address morphological adaptations in Luhya borrowing within a constraint based theory hence this study.

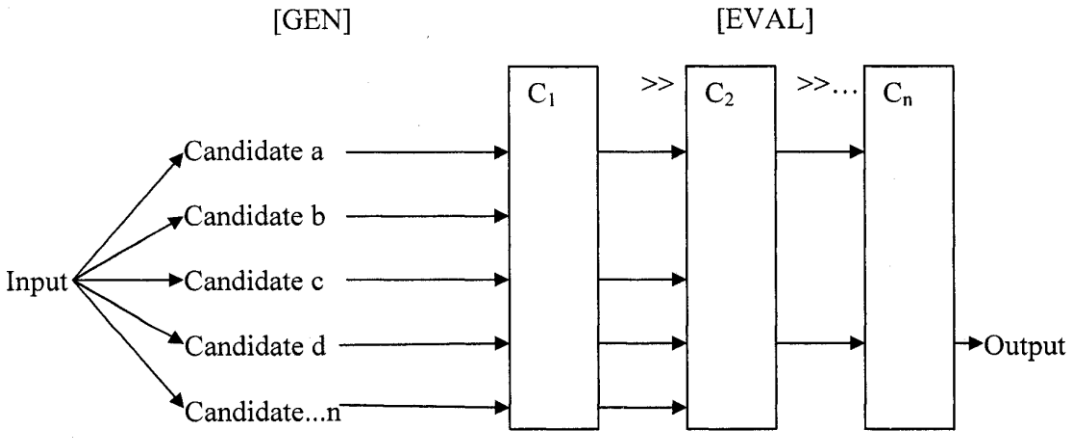
2.2 Theoretical Framework

This study will adopt two theories. First, Optimality theory will be employed because of its concept of constraint interaction whereby, the constraints interact to select optimal forms depending on how a particular language ranks them. Thus, it will hopefully be suitable in accounting for phonological adaptations of Luo loanwords into Oluwanga. Equally, the Generalized Alignment model, a subset of Optimality theory, will be used to account for morphological adaptations.

2.2.1 Optimality Theory

Optimality theory henceforth referred as O.T, was propounded by Prince and Smolensky (1993 &2004).This theory posits that language and specifically the grammar of a language is a system of conflicting constraints (which are universal) each of which makes a requirement about some aspect of grammatical output forms. Whereas markedness constraints evaluate output forms in relation to whether they conform to the structural well-formedness of a particular languages's grammar or not, faithfulness constraints require that output forms resemble its input. Thus the central tenet of O.T is that surface outputs result from the interaction of markedness constraints(which are against disfavoured structures) and faithfulness constraints(which are against departures from the input), with the form of the ultimate output depending on how well it satisfies the most important (highest ranking) constraints in the phonology. Violation of a highest-ranked constraint is considered more serious than the violation of a lower- ranked one. The figure below illustrates this input-output mechanism.

Figure 2.1 Input-Output Mechanism



(Kager1999: 8)

From figure 2.1 above, GEN generates a set of candidate output forms (**a….n**) that are possible candidate output options from any given input. In this study, the input will be Luo unadapted words. GEN passes them over to EVAL, which selects an optimal output form **(d).** This is through evaluating them using some constraint hierarchy encompassing markedness and faithfulness constraints hence candidate **d** above has incurred the least serious violations of these hierarchically ranked constraints.

2.2.2 Generalized Alignment Theory

This theory, henceforth referred to as G.A, is an "edge based" theory that was proposed/adopted by McCarthy and Prince (1993a) into O.T (Kager, 1999). These proponents claim that the prosody-morphology interface should be defined purely in terms of alignment constraints which serve to match edges of morphological and prosodic categories. Thus G.A posits that edges of morphological (grammatical) category should align with the edges of prosodic (phonological) category. The morphological category entails the grammatical word, stem, root and affix while the prosodic one has the prosodic word, syllable, foot and mora.

The general format (schema) for the edge alignment constraints provides a guide for constraints that refer to the edges of constituents in which alignment constraints demand that the constituent edges coincide (Kager, 1999). Such a schema by Green (2002) is as shown below:

2.1 'Align (K, E; λ ,E^1)'

In the schema 2.1 above, K and λ are prosodic or morphological categories and E and E^1 are edges [left or right]. An element standing at the edge of any K also stands at the edge of some λ. Thus, the alignment constraint 2.1 above states that for every K, there is some λ such that the E edge of K is aligned with the E^1 edge of λ. Kager (1999) observes that the format of

alignment constraints is universal and it imposes limitations on what elements specific constraints can refer to (edges of morphological or prosodic categories). There is an asymmetrical relation between both categories in this format; the order in which both categories appear in the constraint statement is not random (Kager1999). The first category mentioned (K) is generally connected with a universal quantifier and the second (λ) with an existential quantifier meaning that for each **'K'** there is some **'λ'**. Consider the following alignment constraints.

2.2 (i) Align (Stem, R, σ,R)

(ii) Align (σ, R, Stem, R)

The first alignment constraint (2.2 (i)) states that for every stem, there must be some syllable such that the right edge of the stem matches the right edge of the syllable. This constraint is violated by any stem whose right edge fails to align with the right edge of some syllable. The second alignment constraint (2.2 (ii)) states that for every syllable, there must be some stem such that the right edge of the syllable matches the right edge of the stem. This constraint is violated by any syllable whose right edge fails to coincide with the right edge of some stem).

Kager (1999) notes that in G.A, morphology depends on prosody of the output whereby, constraints of morphological well-formedness (alignment constraints) are ranked in a single hierarchy together with constraints of well-formedness and faithfulness of O.T in evaluating the same candidate set of which a single candidate is selected as optimal. He further notes that alignment constraints may assume the function of designating an affix as either a prefix or suffix depending on the edge of the word (left, right) with which it aligns. G.A will thus enable this study to establish how Oluwanga adapts Luo loans in terms of alignment whether it involves prefixation or suffixation.

2.3 Summary of Section Two

This chapter has attempted to review literature related to this study and identified gaps that the study hopes to fill. It has also outlined the theories that will be used in the study.

SECTION THREE

THE RESEARCH METHODOLOGY

3.0 Introduction

This section outlines the research design that is to be used in the present study to achieve the study's objectives; the site of the study where the research is to be conducted is described, the target population, the sample size and the sampling procedures to be adopted in the study are provided. The research instruments are outlined as well as data collection and analysis techniques. Finally, the ethical considerations that the research will take into account are discussed.

3.1 Research Design.

This study will employ a descriptive linguistic fieldwork design which entails investigating the structure of a language through gathering first hand data where the researcher interacts with adult proficient speakers (Chelliah & Reuse, 2011). This study is a morpho-phonological analysis of borrowed words in Oluwanga. Creswell (2003) too notes that this design involves discovery that occurs in a natural setting that enables the researcher to develop a level of detail from involvement in the actual experiences. Therefore, this design is applicable in this study since the researcher hopes to examine borrowing of Luo words as it naturally occurs into Oluwanga through interacting with the native speakers.

3.2 The Site of the Study.

The present study will be carried out in Kakamega County, one of the 47 counties of Kenya, particularly in Musanda Ward of Mumias West Sub-county. This region is unique because it

is a border point that separates Kakamega and Siaya Counties. As such, the Luhya (Bawanga) and Luo people interact on daily basis. Consequently, their languages are intensely in contact.

3.3 The Target Population

Bowern (2008) describes a population suitable for a phonetic analysis as follows: it should have native speakers of the language under study, have all their own teeth, should not have any speech disorders and should not be too young or too old. This study thus hopes to target Oluwanga native speakers who fit Bowern's description not only for the phonological analysis but also the morphological one. This is because native speakers are presumed to have inherent native speaker competence which makes them adapt a foreign word to conform to the native language's morphological and phonological constraints.

3.4 Sampling Techniques and Sample Size

Field (2005) and Johnson (2008) note that samples are representations of an entire population and that a good sample should be large enough. Indeed Milroy and Gordon (2003) observe that very large samples tend not to be necessary for linguistic surveys. Therefore, the researcher intends to carry out sampling in two phases. First, the researcher will purposively sample thirty six adult respondents (eighteen males and eighteen females) for group discussions and interviews who are native Oluwanga speakers and live in Musanda area. The researcher's choice of purposive sampling technique is informed by David and Sutton (2011) who note that this kind of sampling enables a researcher to select characters whom s/he thinks will be appropriate. In this regard, the researcher's choice of adults (respondents aged between twenty and sixty years) is informed by Andersen (2001) who observes that a great deal of growth occurs in many aspects of language during adolescence and that beyond adolescence, one's speech is presupposed to have fully developed. Likewise, Bowern (2008)

notes that too old individuals have less or no control over their articulators hence the upper age limit for this study is sixty years.

Secondly, the choice of informants who are native speakers of Oluwanga is intended for the researcher to achieve suitable data. This is because Ladefoged (2004) notes that native speakers are competent in the language thus significant for data involving any forms of adaptation for which this study is concerned. Informants who live in Musanda are necessary for the attainment of Luo borrowed words. Lastly, the sample size of thirty six informants who are half male and female is considered appropriate for Ladefoged (2004) also suggests that when conducting a phonetic analysis of sounds, the choice of between 24 and 40 speakers who are half male and female is ideal. The above noted sample will be identified through social network approach.

Secondly, the researcher hopes to purposively collect 200 tokens of Oluwanga loanwords for analyses.

3.5 The Research Instruments

An instrument makes it easy to collect relevant data (Kasomo, 2006).The current study will use the following instruments: tape recorder, pictures, field notes and unstructured interview schedule. A tape recorder will be used to record group discussions based on pictures as shown in appendix A1, that depict objects which Oluwanga speakers often refer to using Luo adapted words and respondents' responses during interviews. Spolsky (1998) observes that pictures elicit naming of objects thus the researcher hopes that when respondents will be doing so in the process of discussing them, she too will elicit natural data on sound and morphological adaptations on the same objects. In addition, the study will use field notes which Newbury (2001) indicates are an objective record of observations made in a particular

setting. The researcher will therefore note down Oluwanga loanwords from her involvement in the buying and selling of goods at the local market and during day-to-day interactions with the native speakers of Oluwanga.

3.6 Data Collection Procedures.

Data collection allows a researcher to systematically gather information about the area of study within a particular setting (Yin, 2011). Thus oral data in this study will be gathered from group discussions/conversations and interviews of the thirty six respondents which will be recorded as follows. First, these respondents will be divided into nine groups each comprising four members (two males and two females). Because these members will be from the same locality, it is hoped that they know one another thus it is this familiarity that the researcher hopes will make them comfortable and free to discuss the various pictures as shown in Appendix A1, in the native Oluwanga. Each group will have a leader from amongst themselves to reduce on the effect of observer's paradox and each member of the group will have a copy of the pictures during discussions. This is hoped to prompt each one to talk freely about them. All these group conversations/discussions will be recorded each in the home of one of the group members in the afternoons. Three groups will be slated for a week so the entire process will last for three weeks.

Milroy (1987) advises that the speakers need to be informed prior the recording exercise thus they will be made aware in advance although no disclosure to the specific goals of the research will be made to avoid 'contaminating' the data (Wardaugh, 2010). The researcher will be present in all the meetings but with minimal participation.

Secondly, the researcher will conduct group interviews once the respondents' discussions about pictures is over using unstructured interview schedule as indicated in Appendix

A2.This is in line with Hardwick and Worsely (2011) who observe that interviewing is a form of exchange through dialogue which can involve speaking, either one to one with an individual respondent or with a group. The responses will be recorded.

In an effort to further strengthen the attainment of natural speech, participant observation method will be used. This is where the researcher will take down notes during her involvement in the buying and selling of goods at Musanda market together with engaging in the day to day conversations with the native Oluwanga speakers. This is intended to hopefully mitigate the fact that when respondents are aware of being recorded, they may tense up thus impacting on their speech (Somekh & Lewin, 2011) which is the epicentre of this study. Moreover, the researcher will employ introspection which according to Mwangi (2001) is key in data generation. This is because she is a native speaker of Oluwanga. Such data will be confirmed by other native speakers.

3.7 Data Analysis Procedures.

David and Sutton (2011) say that data analysis is the attempt to identify the presence or absence of meaningful themes, common and / or divergent ideas, beliefs and practices. It is these common ideas, beliefs and practices or otherwise, that Dey (1993) observes are established by breaking down data into small units which shed light on the characteristic elements. The researcher will first transcribe recorded conversations from all the nine group discussions and the interviews with a view to identifying Oluwanga loanwords. These loans will be identified through the researcher's native speaker intuition and coded. Notes made during interviews will be studied and loans extracted and so will be the notes from participant observation.

Secondly, the loans will be phonetically transcribed to determine sound adaptations and phonological processes. These transcriptions will be subjected to a research assistant for verification. These phonetic transcriptions will also necessitate the researcher to identify the morphological adaptations and morphological constraints that Oluwanga imposes on adapted words.

Lastly, the sounds and morphological adaptations, phonological processes and phonotactics will be analysed against the principles of Optimality theory framework by choosing the constraints and then ranking them in the tableaux and determining the optimal forms.

3.8 Data Management and Ethical Considerations.

Research ethics are defined by Bulmar (2008) as moral principles guiding research one of which is that research participants are to consent to their involvement in the research based on full and accurate information about the research to be undertaken. Consequently, the researcher intends to explain to the research participants the purpose of the research and seek their consent before engaging them in this study. Secondly, the researcher will seek permission to conduct this research from the National Commission for Science Technology and Innovation (NACOSTI).

3.9 Summary of Section Three

This section has discussed the research design intended to be used in this study, the site of the study, study population, the sampling techniques and sample size, the research instruments, data collection and analysis procedures and finally, data management and ethical considerations.

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APPENDICES

A1 PICTURED OBJECTS

Khubolekho khu buli ipicha iyili hasi hano khulunyali khwe tsipicha

(Discuss each picture in the following list of pictures)








A2 UNSTRUCTURED INTERVIEW SCHEDULE

1) Amalwale akaleena akanyala okhusirikhwa nomba akaasirikhungwa nende emisala chie eshimali?

   (What are the ailments that are/were treatable using specific traditional medicine?.)

2) Etsimbeka etsileena etsikhoyere okhulibwa nende etsilakhoyere okhulibwa khu ingokho nende isolo?

(What are the edible and non-edible parts of a chicken and an animal?)

3) Ebindu ebileena ebichira obuulisani akari wo nende abelitala lilio?.

   (What factors affect your relationship with your family members?)

4 Etsimbeka etsie inzu nie etsileena?

(What are the sections/parts of a house?).

A3 BUDGET FOR THE STUDY

Activity	**Quantity**	**Unit Cost**	**Total Ksh**
Proposal Preparation Stationery			2,000
Internet	100 GB	@100	10,000
Printing/Binding for Department Defence	60 Pages	Ksh. 3 per page for 20 copies	2,400
Revisions	4 copies	Ksh. @120	480
NACOSTI and Cyber Charges			2,500
Data Collection Expenses			30,000
Thesis 4 printing for school Défense	250 Pages	Ksh. 750 for 4 copies	3,000
Thesis Final copies printing	250 Pages	Ksh. 750 for 6 copies	4,500
Hard cover binding	6	Ksh. 125,000	750,000
PHD Fees	6 semesters	Ksh. 125,000 per semester	750,000
GRAND TOTAL			797,080

A4 TIME SCHEDULE

Phase	**Description**	**Number of quarters 2018/2019/2020/2021/2022**											
		1	2	3	1	2	3	1	2	3	1	2	3
1/2	Identification of topic and wide reading												
3	Developing concept and Defense												
1/2	Proposal writing												
3/1	Data collection												
2	Data organization and coding												
3	Data analysis												
1/2	Report writing												
3	Completion												