

**A SYSTEMATIC RECONSTRUCTION OF THE PHONOLOGY OF PROTO-LUYIA: A  
COMPARATIVE ANALYSIS.**

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**C50/11870/2018**

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF ARTS,  
DEPARTMENT OF LINGUISTICS AND LANGUAGES, FACULTY OF ARTS,  
UNIVERSITY OF NAIROBI**

**2020**

## DECLARATION

This thesis is my original work and has not been submitted for the purpose of the award of a degree in any other University.

Signature  Date: 9<sup>th</sup> November 2020

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This thesis has been submitted for examination with our approval as university supervisors.

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## **DEDICATION**

This research is dedicated to;

My wonderful parents,

Duncan Okore Osotsi and Josephine Atieno Osotsi

Thank you for always believing in me and pushing me to be better.

## ACKNOWLEDGEMENTS

First and foremost, I thank the Almighty God for according me the guidance, strength, determination and perseverance throughout the duration of my studies. Were it not for His hand, I doubt I would have made it this far on my own.

Secondly, I wish to extend my gratitude to my supervisors: Prof. Jane Akinyi Ngala Odour and Dr. Silvano Murithi. Your input to my research is unquantifiable. Thank you so much for your patience, reliable insights, direction, uplifting and inspiring comments. I am also grateful to the lecturers at the University of Nairobi's Department of Linguistics and languages for your support. Special thanks to: Prof. Helga Schröder, Dr. Alfred Buregeya, Prof. John Habwe, Dr. Basilio Mungania, Dr. Gideon Marete, Dr. Zipporah Otiso, Dr. Alfred Atoh, Dr. Isaiah Mwaniki, and Mr. Robert Ochieng'. Thank you for shaping my academic life. May you all be blessed immensely.

Thirdly, I appreciate my family and friends for the support you offered me in the course of my studies. To my dad, Duncan, and mum, Josephine, I will always cherish your constant motivation and unwavering support. I will never forget the sacrifices you have made to ensure I completed my studies successfully. To my siblings: Brian, William and Grace, I say thank you so much for your encouragement and always cheering me on. To all my friends, despite having to bear with my absence, thank you for continuously encouraging me and wishing me well.

In addition, to my classmates, thank you for your teamwork and cooperation. Special thanks to Brian Walumbe, Abdirasak Sulub, Janice Makena, Mercy Soy, Milka Muigai amongst others. You made class of 2018 - 2020 not only memorable but also bearable. I wish you the best in all your future endeavours.

## **ABSTRACT**

The main goal of this research was to undertake a reconstruction of the phonology of Proto-Luyia, the earlier parent stage in the Luyia dialects, within the comparative method framework. This study outlined and analyzed the sound inventory of Lunyore, Lulogooli, Lunyala, Lubukusu, Luwanga, Lwidakho and Lusamia with the aim of establishing their phonological relatedness and subsequently reconstructing the sound system of their protolanguage. The research also endeavoured to identify the phonological retentions and innovations within the reconstructed Proto-Luyia and its dialects and afterwards, highlight the phonological processes and rules that may have motivated the variations in sound between the parent language and its daughter languages spoken today. The data was collected through online structured interviews on Google Meet and Zoom. This study found that Lunyore, Lulogooli, Lunyala, Lubukusu, Luwanga, Lwidakho and Lusamia were phonologically related based on the close resemblance that exists in their phonemic inventory. The numerous similarities and minimal variations in their phonemes indicated the presence of a genetic relationship between the dialects having descended from a similar parent language. This research established that the phonemes of Proto-Luyia comprise twenty-four consonant sounds and seven vowel sounds. The present research also established that some of the dialects of Luyia had undergone lenition and fortition processes during their historical development which explained the variations in their sound system from that of their parent language.

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## LIST OF SYMBOLS AND ABBREVIATIONS

+ATR - Advanced Tongue Root

-ATR - Retracted Tongue Root

PPF - Proto-Luyia Form

\* - Reconstructed form

// - Enclose an autonomous phonemic transcription



# CHAPTER ONE

## INTRODUCTION

### 1.1 Introduction

The current chapter of this study generally discusses the Luyia language and its dialects in the background to the study. It also highlights the statement to the research problem, the research questions and research objectives this study aims to investigate. In addition, it also looks at the justification to the study as well as the study's scope and limitations. Besides that, this chapter also analyses the conceptual framework employed by this research. Additionally, the literature review for this study has also been explored. Lastly, this chapter discusses the techniques this research employed in its data collection and analysis.

### 1.2 Background to the Study

Luyia<sup>1</sup> is one of the Bantu languages spoken in the Western part of Kenya, East Africa. Bendor-Samuel (2017) postulates that Bantu languages (estimated to be 500 in number) fall into the “Bantoid subgroup of the Benue-Congo branch of the Niger-Congo language family. Bantu belongs to the southern branch of the Bantoid subgroup alongside 10 other members (Bendor-Samuel 2000). Blench (1987) as quoted in Lwangale (2018) asserts that the issue of the descent of Bantu continues to be one of the most contentious and disputed discussions within African Ethnography. This, he adds, arises from the contradictory information that many scholars continue to put forward.

However, it is the monumental work of Guthrie (1967-71) that has attempted to put to rest most of these controversies. Guthrie studies established that an area to the southeast of the Congo Basin was the ancestral home of Bantu. It is believed that it is from this point “situated in the Grassfields region in the borderland between current-day Nigeria and Cameroon” that Bantu dispersed eastwards and southwards through Africa (Bostoen 2018).

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<sup>1</sup> The terms Luhya, Luyia, Oluluyia and Oluluhya are closely related. Although, Luhya is mostly used to refer to the speech community of speakers of the language and sometimes used to refer to the language of spoken, the other terms are completely used in reference to the Language spoken by the speech community. This research uses Luyia to refer to the language spoken by the speech community.

Guthrie (1967-71) has also been accredited for the classification of Bantu languages. He categorized Bantu languages “into 15 zones based on a geographical and linguistic criteria labeled A-S”. He further assigned a three (at times four) character code to every language he classified. This included an upper-case letter specifying a regional zone, followed by two numerals that indicated language group and language number and finally a lower-case letter indicating dialect. For instance, the Mvita dialect of Swahili was coded as G42b which indicated Zone G, Group 40, language 2, dialect b. However, Maho (2009:6) notes that many scholars are of the opinion that the Guthrie coding system thrived as a referential classification but was limited as a linguistic-genetic statement and therefore had to undergo some modification. The updated classification categorizes Luyia dialects into JE30 and JE40. These dialects include: Bukusu [JE31c], Tachoni [JE31E], Wanga [JE32a], Tsotso [JE32b], Marama [JE32C], Kisa [JE32D], Kabras [JE32E], Nyala East [JE32F], Nyore [JE33], Samia [JE34], Khayo [JE341], Marachi [JE342], Logooli [JE41], Idakho [JE411], Isukha [JE412] and Tiriki [JE413] (Maho 2009:61-62).

Speakers of Luyia dialects reside in the Western region of Kenya. They are spread out across the present-day Kenyan counties of Busia, Bungoma, Kakamega, Vihiga and parts of Trans Nzoia. Wagner 1949 as quoted in Lwangale (2018:2) asserts that the first approximation of the population of Luhya dialects’ speakers was done in 1937 and indicated that at that point in time roughly 350,000 people spoke Luyia. More recent statistics indicate that the population of speakers of Luyia had increased considerably. The Kenya Population and Housing Census of 2009 indicated that the population of the Luhya speech community stood at roughly 5,400,000 speakers. Those by the Kenya Population and Housing Census of 2019 estimated that this number had greatly escalated and currently stood at 6,823, 842 speakers<sup>2</sup>. This statistic ranks speakers of Luyia as the second largest ethnic group in Kenya, coming in second after the speakers of Kikuyu. Luyia comprises 17 dialects whose speakers understand each other mutually. The level of mutual intelligibility differs depending on the closeness of the dialects on the dialect continuum. According to Trudgill (2000), dialects near each other have a higher degree of intelligibility than those far from each other. For instance, the Lwisukha dialect and its

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<sup>2</sup> The Kenya Population and Housing Census of 2019 estimates the population of the speakers of Luyia to be 6,823,842 speakers. However, only 3,994,257 speakers of Luyia stated their ethnicity because the census made it optional for participants to state their ethnic affiliations.

neighboring Lwidakho have a higher degree of intelligibility as compared to Lwisukha and Lusamia dialects which are far apart on the dialect continuum.



**Map 1.1: Luhya Dialect Map (Marlo 2009:2)**

The existing literature indicates that some attempts have been made to try and show that the dialects of Luyia have a hereditary relationship. David Lwangale, a Kenyan linguist, pioneered this attempts. In his research, Lwangale (2018) carried out a comparative study to analyze the lexicon of sixteen dialects of Luyia in specific chosen fields in a bid to establish their relatedness. His research discovered a lot of similarities in the vocabulary he analyzed and he therefore, concluded that the many lexical similarities encountered were as a result of a shared hereditary relationship between the dialect and not out of mere chance or lexical borrowing. Trask (2000) suggests that the primary goal of a comparative genetic study of languages is to establish their shared Proto-language. Having determined the shared ancestry of the Luhya dialects, as a next step, Lwangale (2018) reconstructed the earlier parent forms of the vocabulary

in specific chosen fields he analyzed using the comparative method. Hockett (1958) states that the comparative method is applicable to instances “when dealing with two or more clearly distinct languages which are related or appear as though they might be”. Lwangale (2018) termed these reconstructed words and syntactic structures Proto-Luyia language.

It is the lexical similarity and genetic relationship established in the analysis of the lexicon of the 17 dialects of Luyia that sparked the curiosity as to whether the dialects also shared a similar phonological resemblance and relatedness. This current study sought to analyze the phonological relationship that may exist between the dialects of Luyia. It undertook a comparative phonological analysis of Luyia dialects to try and prove their phonological relatedness and subsequently reconstruct the would-be consonant and vowel phonemes of their earlier parent language. The reconstructed phonemes will be termed the phonemes of Proto-Luyia.

Luyia dialects are grouped into three classes. These are: northern dialects, central dialects and southern dialects (Kasaya 1992, Wamalwa 1996 & Angogo 1996). The northern dialects include: Lubukusu, Lusamia, Lukhayo, Lunyala East and Lunyala west. The central dialects comprise: Luwanga, Lumarama, Lutsotso, Lukisa, Lunyore, Lutachoni, Lukabras whereas the southern dialects include: Lwidakho, Lwisukha, Lutiriki and Lulogooli. Dialects categorized in the same class are geographically situated near each other and are characterized by a high degree of mutual intelligibility. This study analyzed seven distinct dialects of Luyia derived from each of the regional clusters of Luyia and are representative of the entire seventeen dialects. These dialects include: Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

Lunyore is one of the central dialects of Luyia. Lunyore is closely related to the Lunyole language spoken in Uganda<sup>3</sup>. According to Lewis, Gary & Charles (2015), Lunyore and Lunyole share a 61% lexical similarity. Lunyore is spoken in the Luanda and Emuhaya sub-counties of Vihiga county in western Kenya. The updated Guthrie classification classifies Lunyore as JE33 (Maho 2009). The Kenya Population and Housing Census of 2009 approximated the population of Lunyore speakers to be roughly 311,000<sup>4</sup>.

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<sup>3</sup> Lunyore spoken in Kenya and Lunyole spoken in Uganda are closely related. However, this study focusses on Lunyore spoken in Kenya.

<sup>4</sup> The Kenya population and Housing census of 2019 reports the population of Lunyore speakers to be 154,553 speakers. This figure is way lower than the statistics provided by the census of 2009 since it was made optional to

Lulogooli is one of the southern dialect of Luyia spoken in the western region of Kenya. According to Anindo (2016), a speaker of Lulogooli is referred to as Mulogooli /Valogooli (plural) whereas the place the Valogooli inhabit is referred to as Vologooli. The population of Valogooli is projected to be 620,000<sup>5</sup>. The Lulogooli dialect is the second largest dialect of Luyia after the Lubukusu. The updated Guthrie classification system classifies Lulogooli as JE41 (Maho 2009).

Lunyala East is one of the northern dialects of Luyia. Lunyala East has been classified by the Guthrie updated classification classifies as JE32F (Maho 2009). It is spoken by a speech community referred to as Banyala who inhabit Kakamega county of western Kenya. Lunyala East is closely related to Lunyala west that is spoken in Busia county of Western Kenya. Statistics by the Kenya Housing and Population Census of 2009 projected that roughly 273, 200 people speak Lunyala East<sup>6</sup>.

Lubukusu is one of the northern dialects of Luyia. It is spoken by a speech community referred to as Ababukusu. The Kenya Population and Housing Census of 2009 projected that the population of Lubukusu speakers is roughly 1,500,000<sup>7</sup>. This statistic makes Lubukusu the dialect of Luhya with the largest number of Speakers. Ababukusu people are located at the most northern point of the Luhya sub-nations in Bungoma County and parts of Trans Nzoia county (Watulo 2018). The updated Guthrie classification classifies it as JE31c (Maho 2009). Watulo (2018) observes that minor variations occur in the Lubukusu spoken in Bumula (believed to be the heartland of Lubukusu) and that spoken in Kimilili and Webuye. The differences in tone,

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divulge ethnic information and hence fewer participants provided this information. This research uses the statistics from the census of 2009 which give a clearer picture of things on the ground.

<sup>5</sup> The Kenya population and Housing census of 2019 reported the population of Valogooli to be 334,926 speakers. This figure is way lower than the statistics provided by the census of 2009 since it was made optional for participants to provide ethnic information and hence fewer participants provided this information. This research uses the statistics from the census of 2009 which give a clearer picture of things on the ground.

<sup>6</sup> The Kenya Population and Housing census of 2019 reported the population of Banyala to be 227,165. It was not clear whether this figure represented speakers of Lunyala East or Lunyala west or a combination of both. Therefore, this study used the figures from the census of 2009 which are more clear.

<sup>7</sup> Since the Kenya Population and Housing census of 2019 made it not mandatory to provide ethnic information, only 1,188,963 participants choose to state their ethnic affiliations to Lubukusu and hence, this study uses the statistics from the census of 2009 which appear to be more accurate and reliable.

pronunciation and diction, note Mutonyi (2000) and Masika (2017), arise from their interaction with speakers of other neighboring Luhya dialects and other languages.

Luwanga is one of the central dialects of Luyia. The Guthrie updated classification classifies it as JE32a (Maho 2009). It is spoken around Mumias of Kakamega county, Kenya. It is spoken by people referred to as Muwanga ((singular) or Bawanga (plural)) (Akidah 2000:2). According to Odhiambo (1977:62) as quoted in Akidah (2000: 1-2), “the Luhya migrated from an eastward movement from Uganda, as did the founders of what was to become the Wanga kingdom, a group of Bahima people who moved from western Uganda to Imanga hill, six kilometres from the present township of Mumias. Their king, the Nabongo brought together five different clans in this area and the first ruler was called Wanga, after whom the Kingdom was named”. The Kenya Population and Housing Census of 2009 projected the population of the Bawanga speech community to be approximately 310,000 people<sup>8</sup>.

Lwidakho is one of the southern dialects of Luyia. According to Shidiavai (2015), speakers of Lwidakho are spread out across the Lugari, Likuyani, Navakholo, Malava, Lurambi, Ikolomani, Shinyalu, Mumias, Mumias East, Matungu and Butere sub-counties of Kakamega county, western Kenya. Lwidakho is closely related to the neighboring Lwisukha and Lutiriki dialects (Lewis et. al. 2015). The Kenya Population and Housing Census of 2009 estimated speakers of Lwidakho to be 170,000 in number<sup>9</sup>. The Guthrie updated classification classifies it as JE411 (Maho 2009).

Lusamia is a northern dialect of Luyia spoken by a speech community referred to as Abasamia. Abasamia people are found in Busia county in the western region of Kenya. The updated Guthrie classification classifies Lusamia as JE34(Maho 2009). The Kenya Population and Housing Census of 2009 approximated the population of Lusamia speakers to be roughly 480,000<sup>10</sup>.

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<sup>8</sup> The Kenya Population and Housing census of 2019 reported the population of Abawanga to be 94,190. This figure is way lower than that provided by the census of 2009 as it was made optional to state ethnic demographics. Therefore, this study chose to use the statistics from the 2009 census which are more accurate and representative of the state of affairs on the ground.

<sup>9</sup> Having been made optional to divulge ethnic information, only 54,661 participants stated their affiliation to Lwidakho in the Kenya Population and Housing census of 2009. Thus, this research used statistics from the census of 2009 which were more reliable.

<sup>10</sup> The Kenyan census of 2019 reported the population of Lusamia speakers to be 84, 828, a figure extremely low compared to the statistics given by the census of 2009. Fewer participants stated their ethnicity since the census had made it optional to do so. Therefore, this study uses the figure from the Kenya Housing and Population census of 2009 which are more accurate and representative of the real state of affairs.

### **1.3 Statement of the Research Problem**

A protolanguage is a hypothetical ancestral language reconstructed by working backwards from today's dialects or varieties of language to their earlier parentage stages (Campbell 1998: 108). Reconstruction of earlier stages in the language is aided by dialects or varieties of language spoken today through the comparative method.

The existing literature indicates that a reconstruction of Proto-Luyia language has been attempted. Lwangale (2018) carried out a genealogical reconstruction of Proto-Luyia vocabulary in a number of areas. His research also proved the lexical relatedness of the Luyia dialects. Based on data from the seventeen dialects of Luyia, Lwangale (2018) reconstructed Proto-Luyia vocabulary in the domains of systems of naming, parts of the human body, names of domestic animals, days of the week and some other common syntactic structures. He used the majority principle in his reconstruction whereby the most frequently used word in each segment automatically became the Proto-form.

Lwangale (2018) research did not, however, explicitly delve into the reconstruction of the phonology of Proto-Luyia yet it is one of the main areas of content in the Luyia dialects that calls for a systematic reconstruction. It is this gap that the current study endeavoured to bridge. The Luyia dialects seem to be so similar in terms of their phonologies that it is highly suspected that they could have one parent language yet no systematic investigation has been carried out to establish this in the dialects under investigation. This current study strives to demonstrate the phonological relatedness of the Luyia dialects, reconstruct the vowel and consonant phonemes of Proto-luhya and establish the phonological processes and rules that motivated the phonological variations from the parent language to the current dialects of Luyia. This knowledge will be useful in the fields of phonology and historical linguistics.

### **1.4 Research Questions**

The study strives to answer the following questions:

- i. What are the phonological similarities of the Luyia dialects and their relatedness?
- ii. What constitutes the phonology of the reconstructed Proto-Luyia?
- iii. What are the phonological retentions and innovations within Proto-Luyia by the Luyia dialects?

- iv. What phonological processes and rules motivated the phonological variations between Proto-Luyia and the varieties/dialects of Luyia?

### **1.5 Objectives of the Study**

The primary goal of this research is to conduct an analysis of select Luyia dialects with the objective of undertaking a comparative reconstruction of Proto-Luyia. The research aims to achieve the following objectives:

- i. To explain the phonological resemblance of the Luyia dialects and their relatedness.
- ii. To reconstruct the vowel and consonant phonemes of Proto-Luyia
- iii. To identify the phonological retentions and innovations within Proto-Luyia by the current dialects of Luyia.
- iv. To describe the phonological processes and rules that may have motivated the phonological variations between Proto-Luyia and the current varieties/dialects of Luyia language.

### **1.6 Justification of the Study**

This research presents the phonemic inventory of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia. It also reconstructs and presents the phonemes of Proto-Luyia language within the comparative method framework. This research also highlights the phonemic retentions and innovations within Proto-Luyia language by the dialects of Luyia spoken today and tries to explain the phonological processes that might have motivated the observed innovations. First and foremost, this study helps in the documentation of the sound system of the Luyia dialects and that of Proto-Luyia language for future generations of linguists and language enthusiasts. Secondly, it contributes to the body of knowledge in phonology, sociolinguistics, and historical and comparative linguistics. This knowledge will be helpful to students of Linguistics and languages. It will also be helpful to linguistics and researchers who intend to study the phonology of the Luyia dialects, those who intend to reconstruct the Protolanguage of other genetically related languages and those who wish to study sound change in other languages and motivates it.

In addition, this research will assist lexicographers working on the dictionaries of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia to come up with accurate pronunciations of word in each of the respective dialects as it highlights the phonemes that occur



in these dialects. The speakers of the dialects of Luyia will also benefit from this research by learning more about the origin, changes and developments that have occurred in their dialects over time.

### **1.7 Scope and Limitations of the Study**

This study centred on the reconstruction of the phonology of Proto-Luyia aided by the comparative method. It sought to establish the phonological relatedness of the dialects, reconstruct the phonemes of Proto-Luyia and describe the phonological processes that motivated the variations between Proto-Luyia and the dialects of Luyia under study.

Phonology comprises segmental and supra-segmental features, both of which are very important in phonological analysis. This study, however, confined itself to the segmental features of the dialects of Luyia under study.

The Luyia language boasts of seventeen dialects spread out across the Busia, Bungoma, Kakamega and Vihiga counties in western Kenya. All the seventeen dialects are rich in linguistic data worthy of being studied. However, due to limitations in time and resources, this study focused on only seven dialects of Luyia. These seven dialects have been carefully chosen and are representative of the other seventeen dialects within the Luyia language.

### **1.8 Definition of Concepts**

The terms below are defined based on how they have been comprehended by the study.

1. **Cognate sets:** Lexical roots of words that exhibit form-meaning similarities.
2. **Comparative linguistics:** It is the field that linguistics that studies languages that have a genetic and historical relationship.
3. **Daughter language:** A language or variety of language that originated from a particular parent language but has developed considerable variations to be an independent language in its own right.
4. **Dialects:** A variety of language that has minimal distinctions in phonology, lexicon and grammar from other varieties of the same language.
5. **Genetic relationship:** Languages that descended from the same parent language.
6. **Lexical items:** Words of a particular language or variety of language.
7. **Hypothetical language:** A reconstructed language that may no longer be spoken.

8. **Mutual intelligibility:** The linguistic understanding between speakers of two or more language or varieties of language.
9. **Native speaker:** A person who uses a language as their mother tongue or first language.
10. **Parent language:** An original ancestor language from which other languages descended and developed some variations to become distinct languages.
11. **Proto-Bantu:** The reconstructed Proto-Language of Bantu languages.
12. **Protolanguage:** A hypothetical reconstructed language that may no longer be spoken but is believed to be the ancestral language from which current varieties of languages originated.
13. **Proto-Luhya:** The reconstructed protolanguage of the dialects of Luhya.
14. **Proto-form:** An item such a sound segment or word that is reconstructed and is presumed to belong to belong to an original ancestor language.
15. **Sound correspondence:** Sounds that are found in the same position within related cognate sets.
16. **Swadesh list:** A list of core vocabulary by Morris Swadesh that occur in all languages used by comparative linguists to collect lexicostatistic data for purposes of comparative reconstruction.
17. **Variation:** Distinctions that occur within related items such as words or sounds.

## **1.9 Literature Review**

Lwangale (2018) studied the lexical relatedness of all the 17 dialects of the Luyia language with the aim of reconstructing the dialects protolanguage. His study analyzed data of the vocabulary in the domains of systems of naming, parts of the human body, domestic animals, days of the week and common day-to-day syntactic structures collected from all the 17 dialects of Luyia. The analysis of this vocabulary indicated a high degree of similarity in the cognate among the dialects. These numerous instances of similarity could not be attributed to chance or borrowing. They revealed that the dialects shared a common ancestry and were thus genealogically related. As a next step, Lwangale (2018) undertook a reconstruction of the earlier forms of the vocabulary aided by the comparative method and labelled them Proto-Luyia language. The Lwangale (2018) is of great importance to this current research. Its findings that the 17 dialects of Luyia are lexically related and they thus share a common origin are valid to the current

research that seeks to determine that the dialects of Luhya are phonologically related and subsequently reconstruct the phonemes of Proto-Luyia.

Lwangale (2007) studied the relatedness of Lubukusu, a dialect of Luyia spoken in Kenya and Lugisu and Lumasaba spoken in Uganda. This study arose out of a common folktale which has been told for generations within the three speech communities of Ababukusu, Abagisu and Abamasaba. The myth has it that Ababukusu, Abagisu and Abamasaba people descended from the same fore father referred to as “Mundu”. The myth claims that Mundu, together with his three sons Mubukusu, Mugisu and Mumasaba resided in Jinja, Uganda and that the family was unified by the one common language they spoke. However, the family was torn apart as a result of historical migration. Mubukusu dispersed eastwards further into western Kenya while his brothers Mugisu and Mumasaba were scattered across Uganda. The myth has it that Mubukusu became the forefather of the Lubukusu speakers in Kenya. The study analyzed vocabulary in Kinship terminology, human anatomy, time reference and animals from the three languages and established semantic and phonological similarities which insinuated a shared historical origin. The study is relevant to the current research that aims to establish the phonological relatedness of Lubukusu and other dialects of Luyia and subsequently reconstruct the proto-phonemes of Luyia.

Guthrie (1967-1971) studied Bantu languages in a bid to classify them. The study established the ancestral home of Bantu languages to be an area southeast of the Congo-Basin, a point from which they dispersed eastwards and southwards though Africa. The study also classified Bantu languages into geographical zones using character codes. This included an upper-case letter specifying a regional zone, proceeded by two numerals that indicated language group and language number and finally a lower-case letter indicating dialect. The classification classified dialects of Luhya into Zone E30 and E40 which was later updated Zone JE30 and JE40 in Maho (2009). In due course, based on their relatedness, the study reconstructed Proto-Bantu language. The study is therefore relevant to the current research as it flourished on the premise of the shared historical origin of the Bantu languages, a group to which dialects of Luhya belong to. Shared historical ancestry is the lifeblood of comparative linguistic studies and is therefore significant to the current comparative phonological analysis of Luyia dialects.

Malanda (2005) studied the major phonological processes of the consonantal system of the Lunyore and Lutachoni Luyia dialects. The study used the Natural Generative phonology.

Malanda (2015) highlighted the underlying phoneme inventory of Lunyore and Lutachoni. The study also intensively discussed the rules and phonological processes that underlie their realization which included the homorganic nasal assimilation, continuant strengthening, voice assimilation, Ganda law and nasal palatalization. The study is of significance to the current research. The inventory of Lunyore phonemes highlighted will be useful during the explaining of the phonological relatedness of Lunyore and the other dialects of Luyia. The phonological processes discussed may also be applicable during the discussion of the phonological processes and rules that caused the variations in the phonemes of Proto-Luyia and those of the Luyia dialects under study.

Nguti (2006) studied the phonological variations of standard Lubukusu language and its varieties. The study used Natural Generative Phonology as a framework of analysis. It tried to dig into the segmental and supra-segmental phonology features that are present in Lubukusu. Nguti (2006) identified both the vowel and consonant phonemes of Lubukusu. The study discussed the phonological processes that occur between the standard Lubukusu and other varieties that exist. The phoneme inventory of Lubukusu highlighted in the study will be of significance to the current research during the explaining of the similarities and relatedness of Lubukusu phonemes and the other dialects of Luhya. The phonological processes discussed will also be relevant to the description of the phonological processes and rules and rules that caused the phonological shift between Proto-Luyia phonemes and the Luyia dialects under study.

Shidiavai (2015) studied Lwidakho loanwords borrowed from Swahili and English. The study was phonological in nature and analyzed the loanwords using the optimality theory. Shidiavai (2015) enquired into the constraints that caused the structured adaptation into Lwidakho of Swahili and English consonant segments and syllable structure. The study is of significance to the current research since it gives as an insight into the phonology of Lwidakho, one of the dialects of Luyia which is being investigated for phonological similarity and relatedness with the other dialects of Luyia.

Ingonga (1991) studied the phonological, lexical and Morphosyntactic structures of Lulogooli, Lwidakho and Ekegusi. The study was synchronic in nature effecting a linguistic classification. Data for the study was collected though lexicostatistic word lists and analyzed using phonemic ratios, cognate percentages and spread cognate percentages. The study found Lulogooli and

Lwidakho to have many similarities to each other and their closer than Ekegusi. The study indicates the close similarity in phonology and vocabulary between Lulogooli and Lwidakho, a relationship which is of much significance to the current phonological comparative analysis of dialects of Luhya of which Lulogooli and Lwidakho are members.

Akidah (2000) studied the morphophonology of Luwanga dialect of Luyia. The study used the Natural Generative Phonology Theory. He described the morphophonemic processes and rules that occurred in Luwanga in various environments. The study introduces us to the phonemes of Luwanga and is therefore relevant to the current study. The phonemes will be useful in the current research during the description of the phonological similarity and relatedness of the dialects of Luyia inclusive of Luwanga.

### **1.10 Theoretical Framework**

The present study employed the comparative method to carry out the systematic reconstruction of the vowel and consonant phonemes of the earlier parent form of the Luyia dialects. The main aim of comparative reconstruction is to compare the daughters of a language in an effort to recover as much as possible of their parent language. Besides these, the comparative method, according to Campbell (1998:108), is also useful in: classifying languages, in language prehistory, in distant linguistic hereditary relationships amongst other. He adds that:

...languages [or varieties of language] which belong to the same language family are genetically related to one another: this means that these related languages derive from ... a single original language, called a proto-language. In time, dialects of the proto-language develop through linguistic changes in different regions where the language ...[is] spoken and then later through further changes the dialects become distinct languages. (Campbell 1998:108)

Usually, the first step in comparative reconstruction is the reconstruction of the phonemic inventory, which is then followed by reconstruction of the morphology and syntax of the protolanguage. This research, however, will restrict itself to the reconstruction of the sound system of Proto-Luyia.

#### **1.10.1 The Comparative Method**

According to Dimmendaal (2011:4), scholars believe that the development of the comparative method was initiated by Sir William Jones, a Briton who was based in the British colony in

Calcutta, India. Dimmendaal (2011: 4,14) states that it is Jones’ research on the “systematic relation between Sanskrit and the better known languages Latin and Greek in terms of their lexicon and grammar” that constituted the foundation on which Neogrammarian developed the comparative method.

Yule (2005: 184) postulates that the primary objective of the comparative method is to “reconstruct what must have been the original or ‘proto’ form in the common ancestral language.” This approach simply works backwards from today’s spoken languages to their earlier undocumented forms. Fromkin et al. (2014) argues that this procedure is suitable in the reconstruction of proto-forms particularly in instances whereby distinct languages or varieties of language show resemblance in their fundamental vocabulary which cannot be attributed to chance or borrowing but rather to a shared parentage.

Campbell (1998:108-9) opines that “the aim of reconstruction by the comparative method is to recover as much as possible of the ancestor language (the proto-language) from a comparison of the descendant languages, and to determine what changes have taken place in the various languages that developed from the proto-language”. The comparative method is premised on some general tenets which include: the majority principle, the most natural development principle amongst others. According to Campbell (1998:112-115) and Dimmendaal (2011:13), steps that constitute the comparative method have been highlighted:

- i. The first step in the comparative method is to prove that the languages or varieties of languages under study have a shared ancestry. This conceptual framework is only applicable in cases where evidence of a genetic relationship among languages exists.
- ii. The second step in the comparative method is to analyze the data of transcribed words and assemble the cognate forms. For example, table 1.1 captures the cognate sets of Lunyala, Luwanga and Lulogooli.

**Table 1.1: Cognate sets of Lunyala East, Luwanga and Lulogooli**

Gloss	Lunyala	Luwanga	Lulogooli
Knee	/risikamo/	/risikamo/	/risigamo/
Saliva	/kamaree/	/amaree/	/matee/
father	/papa/	/papa/	/baba/

Source: Survey data (2020)

- iii. The third step in the comparative method is to establish sound correspondence and set up regular sound correspondence sets from the sets of cognates selected as illustrated in table 1.2. It is important to begin with the explicit instances with similar sounds in cognates. For the cognates with variations in sound units, indicate the positioning of the phonemes under comparison (whether initial, medial or root final). This may be useful in the conditioning of particular sound changes. It is also mandatory to arrange the sound correspondence sets into paradigms of phonetic and phonological similarity. For example:

**Table 1.2: Sound correspondence sets of Lunyala East, Luwanga and Lulogooli**

Gloss	Lunyala	Luwanga	Lulogooli
Knee	-k-	-k-	-g-
Saliva	-r-	-r-	-t-
father	p-	p-	b-

**Source: Survey data (2020).**

- iv. The final step in the comparative method is to reconstruct the proto-sounds. For example, the would-be proto forms for the sounds in these particular positions in Lunyala, Luwanga and Lulogooli have been reconstructed as captured by table 3 aided by the majority rule. The sounds /k/, /r/ and /p/ have been reconstructed as earlier forms in the Proto-language of Lunyala, Luwanga and Lulogooli.

**Table 1.3: Reconstructed proto phonemes of Lunyala East, Luwanga and Lulogooli**

Gloss	Lunyala	Luwanga	Lulogooli	Proto*
Knee	-k-	-k-	-g-	<b>-k*-</b>
Saliva	-r-	-r-	-t-	<b>-r*-</b>
father	p-	p-	b-	<b>-p*-</b>

**Source: Survey data (2020).**

### 1.10.2 Cognates

Fromkin et. al 2014: 364 defines cognates as “words in related languages that developed from the same ancestral root”. For instance, the Lunyala words kamaree (saliva), kamasika (tears) and kumukongo (back) are cognates of the Luwanga words amaree, amasika and omukongo.

Cognates usually indicate a similarity in form and meaning. Cognates are useful in comparative

studies since it is from them that sound correspondences are determined and from them sound correspondences changes inferred. Present of numerous cognates also indicate that languages share a common ancestor and are that are, therefore, genetically related (Yule 2006). This research analyzed the cognates of the dialects of Luhya and establish that they are descendants of the same parent language.

### **1.10.3 The Majority Principle**

The majority principle states that “if, in a cognate set, three words begin with [p] sound and one word begins with a [b] sound, then our best guess is that the majority has retained the original sound (i.e. [p]) and the minority has changed a little through time” (Yule 2006: 184). It is applicable to instances where only a few of the varieties of language diverge. The majority rule is important in comparative reconstruction to establish the proto forms.

### **1.10.4 The Most Natural Development Principle**

According to Yule (2006:184), the most natural development principle thrives on the assumption that “certain types of sound changes are very common whereas others are extremely unlikely”.

This principle proposes recurrent, natural sound changes such as:

- i. Final vowel deletion (disappearance)
- ii. Voicing of voiceless consonant sounds intervocalic
- iii. Stops becoming fricatives (consonantal weakening)
- iv. Voiced consonant sounds becoming voiceless word finally.

### **1.10.5 Retention and Innovation**

Dimmendaal (2011) states that retention refers to an instance where a language represents its more archaic stages whereas innovation refers to instances where the language gains features lacking in its more archaic stage.

## **1.11 Methodology**

This section provides information on how the data for this comparative study of Luyia dialects’ phonology was collected and analyzed.

### **1.11.1 Data Collection**

This research relied on primary data of one hundred and fifty fundamental vocabulary terminology that were gathered from Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia. The data collected consisted of one hundred and fifty essential



vocabulary words selected from the two hundred word Swadesh's (1971:283) list of core vocabulary. The Swadesh's list provides words that are most likely present in all languages and includes terms such as: name of body parts, names of animals, kinship terminology, natural geographical features, common pronouns, common verbs amongst others.

This study used a sample size of 21 respondents with each of the 7 dialects under study represented by 3 respondents. This was meant to ensure that the data collected was consistent, verifiable and therefore reliable. The respondents were male and female adults aged between 25-60 years who are literate and fluent in their respective dialects. This ensured that gender bias was eliminated in the data elicited and that the data was accurate having been provided by competent speakers of the dialects. The study selected literate respondents since they were most likely familiar with or could be easily be trained to use the video conferencing platforms this research employed in data collection. The literacy of the respondents was also significant because they were required to read the word list provided to them in English and give the corresponding words in their dialects. The respondents were sampled from the target population through snowball sampling. According to Goodman (1961), in snowball sampling, study subjects help identify other study subjects from their acquaintances. The researcher knew at least one respondent from each of the dialects under study who in turn recommended other respondents from their acquaintances who fitted the researcher's requirements.

The respondents from each of the dialects under study were presented with a copy of the one hundred and fifty-word list of core vocabulary beforehand. This list was in English to which they provided the corresponding words in their dialect and sent back to the researcher. Afterwards, each of the respondents read out the words they had elicited aloud online through the Google meet video conferencing platform in approximately thirty minute sessions each, as the researcher listened carefully to verify the words in normal orthography and noted down the phonemic transcription of the words on a copy of the word list.

### **1.11.2 Data Analysis**

The collected data of the one hundred and fifty transcribed core vocabulary words from all the seven dialects of Luyia under study were analyzed using the principles and presuppositions of the comparative method. The comparative method is premised on the hypothesis that a genetic relationship exists amongst languages or varieties of language under study. Having been proven that a Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia have a

shared ancestry, the next step was to compare to the data collected to identify the cognate sets. The cognate forms that were identified from all the dialects were selected and tabulated. These cognates were then analyzed to identify regular sound correspondences. This was followed by the arrangement of regular sound correspondences into paradigms of phonetic and phonological similarity. These sounds were then reconstructed for each position using the majority principle. The reconstructed phonemes constituted the phonemic inventory of Proto-Luyia.

### **1.12 Conclusion**

The topic under study, which is, a systematic reconstruction of Proto-Luyia phonology has been introduced in this chapter. This chapter discusses the background of the Luyia language and that of its dialects under study which include; Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia. The goals of this research and its significance have also been highlighted. This chapter also introduced and demonstrated how the conceptual framework of the comparative method aids the reconstruction of the sound system of Proto-Luyia. This chapter also covered the literature review and the techniques these research employed in data collection and analysis.

## CHAPTER TWO

### PHONEMIC INVENTORY OF LUNYORE, LULOGOOLI, LUNYALA EAST, LUBUKUSU, LUWANGA, LWIDAKHO AND LUSAMIA

#### 2.1 Introduction

A basic understanding of the phonemic inventory of the dialects of Luyia is of great importance for one to reconstruct the protolanguage of Luyia and to fully comprehend the phonological similarities, variations and phonological processes that occurred between the various dialects of Luyia and their protolanguage: Proto-Luyia. This chapter highlights and discusses the phonemic inventory of seven dialects of Luyia. These dialects are: Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia. These seven regional dialects have been carefully selected and are representative of the all the seventeen dialects of Luyia. This chapter goes ahead to analyze and establish the similarities and variations within the consonant and vowel phonemic inventory of the seven dialects of Luyia under study in an effort to arrive at their phonological relatedness. Finally, the last section contains a summary of the whole chapter and concluding remarks.

#### 2.2 Description and categorization of consonant sounds

Katamba (1989:4) postulates that human speech sounds are produced when an airstream is constricted within the vocal tract. To generate consonant sounds, the airflow in the vocal tract is interfered with in some way. Katamba (1989: 8) adds that consonant sounds are described based on three parameters: place of articulation, manner of articulation and the state of the glottis. According to the place of articulation, sounds can be categorized as: bilabials, labio-dentals, dentals, alveolars, palato-alveolars, palatals, velars, uvular, pharyngeals and glottals. Basing on the manner of articulation, sounds can be categorized as: nasals, stops (plosives), affricates, fricatives, glides, liquids and pre-nasalized consonants. Based on state of the glottis, sounds can either be voiced or voiceless.

##### 2.2.1 Lunyore consonants

The phonemic inventory of Lunyore comprises twenty-two consonant sounds. These inventory consists of eighteen pure consonants and four prenasalized consonants as shown in table 2.1. First, Lunyore has four nasal sounds. Ladefoged and Johnson (2011:14) states that nasal sounds are produced when the velum is lowered, blocking off the oral cavity and allowing airflow to escape

through the nasal cavity. The nasals of Lunyore include: /m/, /n/, /ɲ/ and /ŋ/. Besides the nasals, Lunyore has three stops (plosives) which are /p/, /t/ and /k/. These stops are purely voiceless in nature. Voiced stops are conspicuously absent from the phonemic inventory of Lunyore. In addition, the voiceless phonemes /ts/ and /tʃ/ make up the affricates of Lunyore. Other than that, the fricatives of Lunyore are /β/, /f/, /s/, /x/ and /h/. With the exception of the voiced bilabial fricative /β/, the rest of the fricatives are voiceless in nature. Additionally, Lunyore has only two glides /w/ and /j/ and two liquids /r/ and /ɾ/. Lastly, Lunyore has four prenasalized stops. Katamba (1989:171) states that pre-nasalized consonants are a complex combination of phonemes which display sequential arrangement of features at the sub-segmental level. Pre-nasalized stops consist of a non-nasal sound segment proceeding a nasal sound segment. The pre-nasalized stops of Lunyore include: /mb/, /nd/, /ɲʃ/ and /ŋɣ/. The prenasalized consonants of Lunyore are made up of a combination of nasals and voiced stops.

**Table 2.1: Summary of the phonemic inventory of Lunyore**

	<b>Bilabial</b>	<b>Labio-dental</b>	<b>Alveolar</b>	<b>Palato-Alveolar</b>	<b>Palatal</b>	<b>Velar</b>	<b>Glottal</b>
<b>Nasals</b>	m		n		ɲ	ŋ	
<b>Plosives</b>	p		t			k	
<b>Affricates</b>			ts	tʃ			
<b>Fricatives</b>	β	f	s			x	h
<b>Glides</b>	w				j		
<b>Trills</b>			r				
<b>Flaps</b>			ɾ				
<b>Lateral</b>							
<b>Pre-nasalized consonants</b>	mb		nd		ɲʃ	ŋɣ	

Source: Survey data (2020)

### 2.2.2 Lulogooli consonants

There are twenty-five consonants in the phonemic inventory of Lulogooli. These sounds consist of twenty-one pure consonants and four prenasalized consonants as shown in table 2.2. First, the consonants sounds /m/, /n/, /ɲ/ and /ŋ/ make up the nasals of Lulogooli. Secondly, Lulogooli has

voiced stop sounds most of which are accompanied by their voiceless counterparts. According to Katamba (1989:6), stop sounds are produced when the articulators come together to cut off the airflow and then suddenly separate. The stops of Lulogooli are: /b/, /t/, /d/, /k/. Besides the stops, Lulogooli has only two affricates which are the voiceless palato-alveolar affricate /tʃ/ and its voiced counterpart /dʒ/. Additionally, the phonemes /v/, /s/, /z/, /ʃ/, /x/, /ɣ/ and /h/ constitute the fricatives of Lulogooli. These sounds consist of voiceless and voiced phonemes. Apart from that, Lulogooli has two glides /w/ and /j/ and two liquids /r/ and /l/. Finally, Lulogooli has four prenasalized consonants which are /mb/, /nd/, /nz/ and /ŋɣ/. These consonants are made up of a combination of nasals and voiced stops.

**Table 2.2: Summary of phonemic inventory of Lulogooli consonants**

	<b>Bilabial</b>	<b>Labio-dental</b>	<b>Alveolar</b>	<b>Palato-Alveolar</b>	<b>Palatal</b>	<b>Velar</b>	<b>Glottal</b>
<b>Nasals</b>	m		n		ɲ	ŋ	
<b>Plosives</b>	b		t d			k	
<b>Affricates</b>				tʃ dʒ			
<b>Fricatives</b>		v	s z	ʃ		x γ	h
<b>Glides</b>	w				j		
<b>Trills</b>			r				
<b>Flaps</b>			r				
<b>Lateral</b>							
<b>Pre-nasalized Consonants</b>	mb		nd nz			ŋɣ	

**Source: Survey data (2020)**

### 2.2.3 Lunyala East consonants

Lunyala East has twenty-four consonants in its phonemic inventory. Out of these, nineteen are pure consonants whereas five are prenasalized consonants. The nasals of Lunyala East are /m/, /n/, /ɲ/ and /ŋ/ as shown in table 2.3. Besides the nasals, Lunyala East has only three stops which are /p/, /t/ and /k/. These stops are all voiceless in nature. Lunyala East has two voiceless affricates. Affricates are basically a combination of stops preceded by fricatives. According to Katamba (1989:6), affricates are produced when the articulators come together cutting off the airstream and then slowly separate. The affricates of Lulogooli are: /tʃ/ and /tʃ/. In addition, the sounds /β/, /f/, /s/,

/ʃ/, /x/ and /h/ constitute the fricatives of Lunyala East. With the exception of the voiced bilabial fricative /β/, the other fricatives of Lunyala East are all voiceless in nature. Furthermore, the glides and liquids of Lunyala East are four and include; /w/, /j/, /r/ and /r/ respectively. Lastly, the five prenasalized consonants that constitute the phonemic inventory of Lunyala East include /mb/, /nd/, /nz/, /ɲʃ/ and /ŋɣ/. These prenasalized stops are made up of nasal sounds combined with voiced stops and fricatives.

**Table 2.3: Summary of phonemic inventory of Lunyala East consonants**

	Bilabial	Labio-dental	Alveolar	Palato-Alveolar	Palatal	Velar	Glottal
Nasals	m		n		ɲ	ŋ	
Plosives	p		t			k	
Affricates			ts	tʃ			
Fricatives	β	f	s	ʃ		x	h
Glides	w				j		
Trills			r				
Flaps			ɾ				
Lateral							
Pre-nasalized consonants	mb		nd nz		ɲʃ	ŋɣ	

Source: Survey data (2020)

#### 2.2.4 Lubukusu consonants

The phonemic inventory of Lubukusu is constituted of twenty-one consonant sounds as captured in table 2.4. These sounds consist of seventeen pure consonants and four prenasalized consonants. Lubukusu has four nasals which are /m/, /n/, /ɲ/ and /ŋ/. Additionally, the stops of Lubukusu are primarily voiceless in nature and consist of the three phonemes /p/, /t/ and /k/. The voiceless consonant sound /tʃ/ is the only affricate of Lubukusu. Similarly, with the exception of voiced bilabial fricative /β/, the other fricatives of Lubukusu are voiceless in nature. They include: /f/, /s/, /x/ and /h/. Besides the fricatives, the glides and liquids of Lubukusu include: /w/, /j/, /r/ and /r/. Finally, the prenasalized consonants of Lubukusu include; /mb/, /nd/, /ɲʃ/ and /ŋɣ/. These are made of a combination of nasals with voiced stops and fricatives.

**Table 2.4: Summary of phonemic inventory of Lubukusu consonants**

	<b>Bilabial</b>	<b>Labio-dental</b>	<b>Alveolar</b>	<b>Palato-Alveolar</b>	<b>Palatal</b>	<b>Velar</b>	<b>Glottal</b>
<b>Nasals</b>	m		n		ɲ	ŋ	
<b>Plosives</b>	p		t			k	
<b>Affricates</b>				tʃ			
<b>Fricatives</b>	β	f	s			x	h
<b>Glides</b>	w				j		
<b>Trills</b>			r				
<b>Flaps</b>			ɾ				
<b>Lateral</b>							
<b>Pre-nasalized consonants</b>	mb		nd		ɲʃ	ŋɣ	

Source: Survey data (2020)

### 2.2.5 Luwanga consonants

Luwanga has twenty-five consonants in its inventory consisting of twenty pure consonants and five prenasalized consonants as captured in table 2.5. The nasals of Luwanga are /m/, /n/, /ɲ/ and /ŋ/. The stops of Luwanga are primarily voiceless in nature and include; /p/, /t/ and /k/. Besides the nasals and stops, Luwanga also has affricates. These affricates are also voiceless and consist of /ts/ and /tʃ/. In addition, the consonants /β/, /f/, /s/, /ʃ/, /x/ and /h/ constitute the fricatives of Luwanga. Except for the voiced bilabial fricative /β/, the rest of the fricatives are voiceless in nature. Luwanga has two glides which are /w/ and /j/. Additionally, Luwanga has three liquids. Liquids consist of trills, flaps and Laterals. Katamba (1989:7) opines that whereas a trill sound is produced when the active and passive articulators come into contact severally, flaps are produced when the active articulator strikes the passive articulator only ones. Katamba adds that laterals, on the other hand, are produced when the tongue obstructs an airstream at some point along the mouth's centre though the sides of the mouth are left low for the escape of the airflow. The liquids of Luwanga include: the trill /r/, the flap /ɾ/ and the lateral /l/. Finally, five prenasalized consonants constitute the phonemic inventory of Luwanga. They are made up of nasal sounds accompanied by either stops and fricatives and include /mb/, /nd/, /nz/, /ɲʃ/ and /ŋɣ/.

**Table 2.5: Summary of the phonemic inventory of Luwanga consonants**

	<b>Bilabial</b>	<b>Labio-dental</b>	<b>Alveolar</b>	<b>Palato-Alveolar</b>	<b>Palatal</b>	<b>Velar</b>	<b>Glottal</b>
<b>Nasals</b>	m		n		ɲ	ŋ	
<b>Plosives</b>	p		t			k	
<b>Affricates</b>			ts	tʃ			
<b>Fricatives</b>	β	f	s	ʃ		x	h
<b>Glides</b>	w				j		
<b>Trills</b>			r				
<b>Flaps</b>			ɾ				
<b>Laterals</b>			l				
<b>Pre-nasalized consonants</b>	mb		nd nz		ɲʃ	ŋɣ	

Source: Survey data (2020)

### 2.2.6 Lwidakho consonants

Lwidakho consonants are twenty-four in number as shown in table 2.6. The Lwidakho phonemic inventory consists of nineteen pure consonants and five prenasalized consonants. The nasals of Lwidakho include: /m/, /n/, /ɲ/ and /ŋ/. The phonemes /p/, /t/ and /k/ constitute the stops of Lwidakho. It should be noted that they are predominantly voiceless in nature. Besides the nasals and stops, Lwidakho also has affricates. These affricates include: /ts/ and /tʃ/. In addition, the fricatives of Lwidakho are: /β/, /f/, /s/, /ʃ/, /x/ and /h/. It should be noted that with the exception of /β/, the fricatives of Lwidakho are voiceless. In addition, glides also called approximants are present in Lwidakho. According to Ladefoged & Johnson (2011: 15), glides are produced when articulators are brought close to one another with a fairly large gap left between them to allow the airstream to escape freely without friction. Lwidakho has two glides which are: /w/ and /j/. Lwidakho also has liquids which consist of the trill /r/ and the flap /ɾ/. The prenasalized consonants of Lwidakho include: /mb/, /nd/, /nz/, /ɲʃ/ and /ŋɣ/. The five prenasalized stops are formed by combining nasal sounds with either stops or fricatives.

**Table 2.6: Summary of phonemic inventory of Lwidakho consonants**

	<b>Bilabial</b>	<b>Labio-dental</b>	<b>Alveolar</b>	<b>Palato-Alveolar</b>	<b>Palatal</b>	<b>Velar</b>	<b>Glottal</b>
<b>Nasals</b>	m		n		ɲ	ŋ	



<b>Plosives</b>	p		t			k	
<b>Affricates</b>			ts	tʃ			
<b>Fricatives</b>	β	f	s	ʃ		x	h
<b>Glides</b>	w				j		
<b>Trills</b>			r				
<b>Flaps</b>			ɾ				
<b>Laterals</b>							
<b>Pre-nasalized consonants</b>	mb		nd nz		ɲʃ	ŋɣ	

Source: Shidiavai (2015: 22)

### 2.2.7 Lusamia consonants

Lusamia has twenty-two consonants in its phonemic inventory as shown in table 2.7. These phonemes consist of eighteen pure consonants and four prenasalized consonants. The prenasalized consonants of Lusamia are made up of nasal sounds followed by stops (plosives). The phonemes /mb/, /nd/, /ɲʃ/ and /ŋɣ/ constitute the prenasalized consonants of Lusamia. Lusamia has three stops (plosives). The plosives of Lusamia include: /p/, /t/, /d/ and /k. They are voiceless in nature with the exception of /d/ which is voiced. Similarly, the fricatives of Lusamia are also voiceless with the exception of one - the voiced bilabial fricative /β/. The other fricatives of Lusamia include: /f/, /s/, /x/ and h/. Additionally, Lusamia has one affricate which is /tʃ/. Besides the affricate, Lusamia has two glides which include: /w/ and /j/ and two liquids which include: /r/ and /ɾ/ in its consonant phonemic inventory.

**Table 2.7: Summary of phonemic inventory of Lusamia consonants**

	<b>Bilabial</b>	<b>Labio-dental</b>	<b>Alveolar</b>	<b>Palato-Alveolar</b>	<b>Palatal</b>	<b>Velar</b>	<b>Glottal</b>
<b>Nasals</b>	m		n		ɲ	ŋ	
<b>Plosives</b>	p		t d			k	
<b>Affricates</b>				tʃ			
<b>Fricatives</b>	β	f	s			x	h
<b>Glides</b>	w				j		
<b>Trills</b>			r				
<b>Flaps</b>			ɾ				

<b>Laterals</b>							
<b>Pre-nasalized consonants</b>	mb		nd		ɲʃ	ŋɣ	

Source: Survey data (2020)

### 2.3 Description and categorization of vowel sounds

Unlike the consonant sounds, there is minimal interference of the airstream during the production of vowel sounds and thus its passage is unrestricted (Fromkin et. al, 2014: 205). Fromkin et. al, (2014:205) postulates that vowel quality is dependent on the shape of the vocal tract as the airstream flows through it. Parts of the tongue may be raised or lowered, the lips may be rounded or unrounded, the soft palate may be raised or lowered. The parameters used to describe consonant sounds are not applicable in the analysis of vowel sounds. Nonetheless, vowel sounds are produced and described based on: tongue height, tongue position, lip shape and the tongue root position.

Katamba (1989: 9) posits that “vowels produced with the highest point of the hump in the tongue close to the roof of the mouth are said to be HIGH and those produced with the highest point of the hump in the tongue barely rising above the floor of the mouth are said to be LOW; the intermediate position is referred to as MID.” Examples of high vowels are: /i/, /ɪ/, /u/ and /ʊ/. Some mid vowel sounds include: /e/, /ɛ/, /o/ and /ɔ/. Low vowel sounds include: /a/, /æ/, /ɒ/, et. cetera.

Apart from the vertical height of the tongue, vowel sounds can also be described based on the horizontal location of the tongue that they are produced with. According to this parameter, vowel sounds may be front such as /i/ and /ɛ/, central such as /a/ or back such as /u/ and /ɔ/. The position of the tongue root may, therefore, also describe and distinguish vowel sounds. To produce +ATR sounds like /e/ and /u/, the tongue root moves forward. A neutral or retracted position tongue root produces –ATR segments such as /ɛ/, /ɔ/, /ɪ/, et. cetera (Katamba, 1989:47).

Vowel sounds also differ based on whether the lips are rounded or spread during their articulation. Katamba, (1989:10) opines that the shape of the lips has an effect on the quality of the vowel sounds articulated. “Lip rounding results in an elongated resonating chamber while lip spreading or unrounding ... does not” (Katamba, 1989:10). Vowel sounds produced with the lips rounded or

parsed are called rounded vowels and include vowels like: /u/, /ɔ/, /o/ and /ɪ/. Those produced with the lips spread are called unrounded vowels and include: /i/, /ε/, /ʊ/ and /a/.

### 2.3.1 Lunyore vowels

Lunyore is a seven vowel language like many other Bantu languages. The vowels of Lunyore are: /i/, /e/, /ε/, /a/, /u/, /o/ and /ɔ/ as displayed in table 2.8. The front vowel /i/ is produced with the tongue tip raised close to the roof of the mouth whereas the other front vowels /e/ and /ε/ are produced with the tongue in an intermediate position in the mouth. However, while /e/ is produced with the tongue root advanced, /ε/ is produced with the tongue root in a retracted position. The front vowel /a/ is produced with the tongue resting on the floor of the mouth. Similarly, the back vowel /u/ is produced the tongue blade raised close to the roof of the mouth while the other back vowels /o/ and /ɔ/ are produced with the tongue in the middle of the mouth. However, whereas /o/ is produced with the tongue root in an advanced position, /ɔ/ is produced with the tongue root in a retracted position.

**Table 2.8: Summary of phonemic inventory of Lunyore vowels**

	Front	Back
<b>High</b>	i	u
<b>Mid</b>	e    ε	o    ɔ
<b>Low</b>	a	

**Source: Survey data (2020)**

### 2.3.2 Lulogooli vowels

Lulogooli has seven vowels which include: /i/, /ɪ/, /e/, /a/, /u/, /ʊ/ and /o/ as shown in table 2.9. The front vowels /i/ and /ɪ/ are produced with the tongue tip raised to towards the roof of the mouth. Although /i/ is articulated with the tongue root in an advanced position, /ɪ/ is produced with the tongue root pulled back. The other front vowel /e/ is produced with the tongue positioned in the middle of the mouth. /a/ is the only front vowel in Lulogooli articulated with the tongue resting on the floor of the mouth. The back vowels /u/ and /ʊ/ are produced with the back of the tongue raised





vowels /i/ and /e/, the back vowels /u/ and /o/ are articulated with the tongue root advanced whereas the front vowels /a/, /ɪ/ and /ɛ/ produced with the tongue root retracted.

**Table 2.13: Summary of phonemic inventory of Lwidakho vowels**

	Front	Back
<b>High</b>	i    ɪ	u
<b>Mid</b>	e    ɛ	o
<b>Low</b>		a

Source: Shidiavai (2015: 23)

### 2.3.7 Lusamia vowels

Lusamia has seven vowels which include: /i/, /e/, /ɛ/, /a/, /u/, /o/ and /ɔ/ as illustrated in table 2.14. The high vowels /i/ and /u/ are produced with the tongue root in an advanced position. Among the mid vowels, /e/ and /o/ are produced with the tongue root in an advanced position whereas /ɛ/ and /ɔ/ are produced with the tongue root retracted. /a/ is the only sound in Lusamia produced with the tongue resting on the floor of the mouth and the tongue root retracted.

**Table 2.14: Summary of phonemic inventory of Lusamia vowels**

	Front	Back
<b>High</b>	i	u
<b>Mid</b>	e    ɛ	o    ɔ
<b>Low</b>		a

Source: Survey data (2020)

## 2.4 Phonological similarities and relatedness

The phonemic inventories of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia presented above indicate a great number of phonological similarities among the seven dialects of Luhya. Table 2.15 captures these similarities and differences.

**Table 2.15: Phonemes of the seven dialects and examples of words**

Phoneme	Grapheme	Lunyore	Lulogooli	Lunyala East	Lubukusu	Luwanga	Lwidakho	Lusamia
m	Mm	Omukhasi /omuxasi/	Kilumi /kɪromi/	Mnyama /mɲama/	Bumali /βumari /	Omunyiri/ omuniri/	Mukhali /muxari/	Omwana /omwana/
n	Nn	Mbwena /mbwena/	Nindi /nindi/	Enyuni /ɛɲuni /	Omwana /omwana /	Liyoni /rijɔni/	Lina /rɪna/	Nende /nende/
ɲ	NYny	Inyanja /iɲaɲʒa/	Kunywa /kɔɲwa/	Enyomu /ɛɲomu/	Enyuni /ɛɲuni/	Inyama /iɲama/	Shinyele /ʃɪɲere/	Enyama /ɛɲama/
ŋ	NG'ng'	Ing'ining'i ni /iɲiniɲini/	Keng'ele /keɲere/	Eng'eni /ɛɲeni/	Eng'ienesi/ ɛɲɪɛnesi /	Ing'ining'i ni /iɲiniɲini/	Khung'wa/ xuɲwa/	Eng'eni /ɛɲeni/
P	Pp	Papa /papa/	-	Khupasua /xupasua/	Khupara /xupara /	Okhupana /oxupana/	Khupangus a /xupaɲɣusa/	Esipape /esipape/
b	Bb	-	Baba /baba/	-	-	-	-	-
t	Tt	Tawe /tawe/	Ukwita /okwita/	Etunda /etunda/	Kumuti /kumuti/	Bitaru /βitaru/	Khutuya /xutuɟa/	Erita /erita/
d	Dd	-	Vudiku /vodiku/	-	-	-	-	Esidete /esidete/
k	Kk	Kukhu /Kuxu/	Kukina /kokina/	Ekosi /ekosi/	Khukona /xukona/	kukhu /kuxu/	Shikali /ʃikari /	Ekosi /ekosi /
ɣ	Gg	-	Gugu /ɣɔɣɔ/	-	-	-	-	
ts	TSts	Amatsi /amatsi/	-	Musatsa /musatsa /	-	Tsirano /tsirano/	Khwitsa /xwitsa/	-
ɟʒ	Jj	-	Ejumbi /ɛɟumbi/	-	-	-	-	
ʧ	CHch	Khocha /xɔʧa/	Chigila /ʧɪɣira/	Chirano /ʧirano/	Khwicha /xwiʧa /	Shichila /ʃiʧira /	Khuchenda /xuʧenda/	Amachi /amaʧi/

β	Bb	Bitaru /βitaru/	-	Eloba /erɔβa/	Sifuba / sifuβa /	Ebinji /eβinji/	Liloba /lɪrɔβa /	Chibili /tʃiβiri/
f	Ff	Ifwe /ifwe/	-	Endafu /endafu/	Kamafusi /kamafusi/	Obulafu /oβulafu/	Buchafu /βuʃafu/	Esilifu /esirifu/
v	Vv	-	Dave /dave/	-	-	-	-	-
s	Ss	Esitere /esitere/	Voosi /voosi/	Esio /esio /	Sikele /sikere/	Omwosi /omwosi/	Sikulu /sikuru/	Esisito /esisito/
z	Zz	-	Kukuza /kukuza/	-	-	-	-	-
ʃ	SHsh	-	Ashimbi /aʃimbi/	Shina /ʃina/	-	Eshilo /eʃilo/	Shitere /ʃitere/	-
x	KHkh	Okhukwa /oxukwa/	Khoza /xoza/	Khukwa /xukwa/	Khubona /xuβona/	Inzokha /inzoxa /	Khupara /xupara/	Okhuosa /oxuosa/
h	Hh	Hena /hena/	Ehale /ehare/	Hano / /hano /	Habo /haβo/	Hena /hena/	Hena /hena/	Haba /haβa/
w	Ww	Okhwemba /oxwemba/	Imbwa /imbwa/	Khwicha /xwifʃa/	Ewanga /ewangʃa /	Okhwosia /oxwosia/	Liswi /lɪswi /	Efwe /efwe/
j	Yy	Omukoye /omukoje/	Omwoyo /omwojo/	Vulayi /vuraji/	Mayi /maji /	Omukoye/ omukoje/	Khuyeka /xujeka/	Eyale /ejare/
r	Rr	Okhupara /oxupara/	Rivuyu /rivoju/	Khuria /xuria/	Chitaru /tʃitaru/	Karie /karie/	Ling'ori /lɪŋʊri/	Esiroo /esiroo/
r	Ll	Elino /erino/	Kuria /koria/	Vivili /viviri/	Lubaa / /ruβaa/	Eliuba /eriuβa/	Lisambu /lɪsambu/	Sila /sira/
l	Ll	-	-	-	-	Shilala /ʃilala/	-	-
mb	MBmb	Mbwena /mbwena/	Ashimbi /aʃimbi/	Khwimba /xwimba /	Haembi /haembi /	Imbwa /imbwa/	Hayimbi /hajimbi/	Okhwimba a /oxwimba/
nd	NDnd	Omundu /omundu/	Kugenda /koyenda/	Khukenda/ xukenda/	Litunda /ritunda/	Eshindi /eshindi/	Mundu /mundu/	Esindi /esindi/
nz	NZnz	-	Enyanza /epanza/	Enyanza /epanza /	-	Inyanza /ipanza/	Inyanza /ipanza/	-



ɲʃ	NJnj	Injokha /ɪɲʃɔxa/	-	Enjukha /ɛɲʃuxa/	Injokha /ɪɲʃɔxa/	Eshilenje/ ɛʃɪɾɛɲʃɛ/	Shilenje /ʃɪɾɛɲʃɛ/	Enjukha /ɛɲʃuxa/
ŋɣ	NGng	Omukongo /omukɔŋɣɔ/	Vinyingi /vɪɲɪŋɪ/	Engali /ɛŋɣari /	Khusinga /xusiŋɣa /	Omukong o /omukɔŋɣ ɔ /	Mukongo /mukɔŋɣo/	Abangi / aβaŋɪ /
i	Ii	Ise /ise/	Risu /risu/	Enyingi /ɛɲɪŋɪ /	Lina /rina/	Esie /esie /	Khati /xati/	Efwiri /ɛfwiri/
ɪ	Ii	-	Inzi /ɪnzi/	-	-	-	Lino /ɾɪno/	-
e	Ee	Omwesi /omwesi/	Ehale /ehare/	Esafu /esafu/	Efwe /ɛfwe /	Karie /karie/	Muchela /muʃɛra/	Ese /ese/
ɛ	Ee	Inyelele /ɪɲɛɾɛɾɛ/	-	Khuhera /xuhɛra/	Waena /waɛna/	Hena /hɛna/	Mukoye /mukɔjɛ /	Okhwema /oxwɛma/
a	Aa	Silala /sirara/	Kutia /kotia/	Khuhana /xuhana/	Tawe /tawe/	Papa /papa/	Munwa /munwa /	Okhuima/ oxuima/
u	Uu	Mukali /mukari/	Isuze /ɪsuze/	Kukhu /kuxu /	Nanu /nanu/	Omusi /omusi /	Muli /muri/	Omusii /omusii/
ɔ	Uu	-	Umweli /omwɛɾi/	-	-	-	-	-
o	Oo	Hano /hano/	Koseka /Koseka/	Omwalo /omwaro/	Habo /haβo/	Amolu /amolɔ/	Mwoshi /mwɔʃi/	Elino /ɛɾino/
ɔ	Oo	Omukhono /omuxɔno/	-	Khochha /xɔʃa/	Hao /haɔ/	Khotsa /xɔʃsa/	-	Likokhe /ɾikɔxɛ/

**Source: Survey data (2020)**

Table 2.15 shows the Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia all have four nasal sounds. These nasal sounds are: /m/, /n/, /ɲ/ and /ŋ/. In addition, all the dialects of Luyia under study with the exception of Lulogooli and Lusamia have only voiceless stops consisting of: /p/, /t/ and /k/. However, Lulogooli has the voiceless stops /t/ and /k/ and their voiced counterparts /d/ and /g/ and an additional voiced stop /b/ whereas Lusamia has the voiceless stops /p/, /t/, /k/ and the voiced stop /d/.

To add on that, Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia have only one voiced fricative /β/ while the rest of the fricatives are voiceless in nature. Whereas the voiceless

fricatives of Lunyore, Lubukusu and Lusamia are: /f/, /s/, /x/ and /h/ those of Lunyala, Luwanga and Lwidakho are: /f/, /s/, /ʃ/, /x/ and /h/. On the other hand, the inventory of Lulogooli comprises both voiceless and voiced fricatives and includes: /v/, /s/, /z/ and /h/.

As far as glides and liquids are concerned, all the seven dialects under study have the approximants /w/ and /j/, the trill /r/ and the flap /ɾ/. The lateral sound /l/ is only available in Luwanga and is missing in Lunyore, Lulogooli, Lunyala East, Lubukusu, Lwidakho and Lusamia.

Additionally, affricates are present in all the seven dialects under study. Lunyala East, Lubukusu, Luwanga, Lwidakho have both the voiceless alveolar affricate /ts/ and the voiceless palato-alveolar affricate /tʃ/ while Lulogooli has the voiceless affricates /tʃ/ and its voiced counterpart /dʒ/. Lunyore and Lusamia on the other hand only have the voiceless palato-alveolar affricate /tʃ/.

Besides the nasals, stops, affricates, fricatives, glides and liquids, pre-nasalized consonants are also present in the seven dialects of Luyia under study. These are made up of a combination of nasal sounds and either stops or fricatives. Lunyala East, Luwanga and Lwidakho have five pre-nasalized consonants which are: /mb/, /nd/, /nz/, /ɲʃ/ and /ŋɣ/. Lulogooli has four prenasalized consonants /mb/, /nd/, /nz/ and /ŋɣ/ whereas /mb/, /nd/, /ɲʃ/ and /ŋɣ/ constitute the pre-nasalized consonants of Lubukusu, Lusamia and Lunyore.

In addition, all the seven dialects of Luyia under study have seven vowel sounds. They all have the front vowels and back vowels /i/, /e/, /u/ and /o/ which are produced with an advanced tongue root and /a/ produced with a retracted tongue root. Additionally, Lunyore, Lunyala East, Lubukusu, Luwanga and Lusamia have two additional vowels; the front vowel /ɛ/ and the back vowel /ɔ/ which are articulated with a retracted tongue root. Lwidakho has the additional vowel front vowels /ɪ/ and /ɛ/ while Lulogooli has the front vowel /ɪ/ and back vowel /ʊ/ all of which are also produced with a retracted tongue root.

Finally, the numerous similarities shown in the consonant and vowel phoneme inventory of the seven dialects of Luhya indicate that the seven dialects, which have been carefully chosen and are representative of all the seventeen dialects of Luhya, are phonologically related.

## **2.5 Conclusion**

This chapter has discussed the description of consonant and vowel sounds followed by the presentation of the consonant and vowel phonemic inventory of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia. This chapter has also undertaken a comparative

analysis of the seven dialects of Luhya which has shown that the dialects share numerous similarities in terms of their phonology with some minimal variations here and there.

This chapter has established that all the seven dialects under study subscribe to the seven vowel system that characterizes many Bantu languages. These consist of four vowels produced with an advanced tongue root and three vowels produced with a retracted tongue root. Lunyore, Lunyala, Lubukusu, Luwanga and Lusamia all have a similar vowel inventory with some variations noted in Lwidakho and Lulogooli.

As far as consonants are concerned, it was noted that the phoneme inventory of the seven dialects of Luyia under study consists of between twenty-one and twenty-five consonant sounds. Lubukusu has twenty-one consonant sounds, Lunyore and Lusamia have twenty-two consonant sounds each, Lunyala and Lwidakho have twenty-four consonants each while Lulogooli and Luwanga have twenty-five consonant sounds each in their phonemic inventory. These sounds comprise both pure consonants and pre-nasalized consonants sounds. The seven dialects have between four to five pre-nasalized consonants made up of a combination of both nasals and either stops or fricatives. Lunyore, Lunyala East, Lubukusu, Luwanga and Lwidakho have only voiceless stops (plosives), Lusamia had voiceless stops and one voiced stop, while Lulogooli has voiced stops and the alternating voiceless stops for most of them. All the dialects under study except for Lulogooli have only one voiced fricative while the rest of the fricatives are voiceless. Lulogooli on the other hand has both voiced fricatives and the alternating voiceless stops for most of them. For the affricates, Lunyore, Lunyala, Lubukusu, Luwanga, Lwidakho and Lusamia have either the voiceless alveolar affricate only or both the voiceless alveolar affricate and the voiceless palato-alveolar affricate. However, Lulogooli has both the voiceless and voiced palato-alveolar affricates. In addition, all the seven dialects have similar nasal sounds, glides, trills and flaps in their phoneme inventory.

Conclusively, this chapter demonstrates that Lunyore, Lulogooli, Lunyala, Lubukusu, Luwanga, Lwidakho and Lusamia have numerous notable similarities in terms of their consonant and vowel inventories. Some minimal distinctions were also noted especially in Lulogooli which has a number of voiced segments lacking in the other dialects. Considering the close resemblance in their phoneme inventory, we can come to a conclusion that a genetic relationship exists among the seven dialects of Luyia under study and that they have a shared ancestry. These dialects are phonologically related and they originate from a common ancestor: Proto-Luyia. The seven dialects under study have been carefully selected and are representative of all the regional dialects

of Luyia. The next chapter attempts to systematically reconstruct the phonemes of Proto-Luyia: the parent languages the dialects of Luyia.

## CHAPTER THREE

### A SYSTEMATIC RECONSTRUCTION OF THE CONSONANT AND VOWEL PHONEMES OF PROTO-LUYIA

#### 3.1 Introduction

The previous chapter highlighted the phonemes of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia. It went ahead to establish the phonological resemblance that exists among the seven dialects of Luyia under study. Based on the numerous similarities noted in their phoneme inventories, it came to a conclusion that the seven dialects had a shared ancestry. This phonological evidence indicated that the dialects of Luyia are genetically related and backed a previous study by Lwangale (2018) that showed that the high degree of mutual intelligibility observed in the dialects of Luyia was not out of chance or borrowing but was as a result of the genetic relationship between the dialects. The dialects under study are daughter languages of a common parent language, also referred to as a protolanguage, known as Proto-Luyia. Employing the tenets and presuppositions of the comparative method, this chapter aspires to systematically reconstruct the consonant and vowel phonemes of Proto-Luyia. It also aims to identify the phonological retentions and innovations within Proto-Luyia, the protolanguage of the Luyia dialects, by some of its daughter languages spoken today.

#### 3.2 Identifying Cognate forms

Languages that share a genetic relationship have a near-identical resemblance in numerous sets of words. These kinds of words are referred to as cognates. Yule (2005: 184) posits that “a cognate of a word in one language ... is a word in another language ... that has a similar form and is or was used with a similar meaning”. Dimmendaal (2011: 10) backs this view and defines cognates as “items with identical or similar shape and meaning, identified in particular through a comparison of basic vocabulary.” For instance, the words Khoza /xoza/, khocha /xɔʃa/ and Khotsa /xɔtsa/ are cognates. These are words in Lulogooli, Lunyala East and Luwanga respectively referring to uncle. They have a close similarity in their form and they all point to the same meaning.

Tables 3.1 indicates the cognate forms collected from the list of basic vocabulary of the seven dialects under study.

**Table 3.1: Cognate referring to Kinship ties**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
---------	-----------	---------	----------	---------	----------	---------	-------

omwana	omwana	omwana	omwana	omwana	mwana	omwana	Child
omusatsa	omusaza	-	-	omusatsa	-	omusaf̥a	Husband
omusatsa	mosaza	musatsa	omusef̥a	omusatsa	musatsa	omusaf̥a	Man
omuxasi	-	omuxasi	omuxasi	omuxasi	muxari	omuxasi	Wife
omuxasi	mokari	omuxasi	omuxasi	omuxasi	muxari	omuxasi	Woman
omundu	omundu	omundu	omundu	omundu	mundu	omundu	Person
papa	baba	papa	papa	papa	tata	rata	Father
xot̥fa	xoza	xot̥fa	xot̥fa	xot̥sa	xot̥sa	xot̥fa	Uncle
kuxu	ḡoḡo	kuxu	kuxu	kuxu	kuxu	ḡguxwa	Grand mother
mama	mama	maji	maji	mama	muf̥iere	mama	Mother

**Source: Survey data (2020)**

The following observations were made from the list of cognates provided in table 3.1:

1. The voiced alveolar fricative sound /z/ is present in Lulogooli in word like ‘xoza’ (uncle) and ‘mosaza’ (man) but is absent in Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.
2. Word initial vowel sounds are absent in Lwidakho words. More data is required to confirm this.

**Table 3.2: Cognates referring to Human body parts**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
omukot̥ḡo	omuyot̥ḡo	omukot̥ḡo	kumukot̥ḡo	omukot̥ḡo	mukot̥ḡo	omukot̥ḡo	Back
-	ot̥uvombo	esombo	risombo	oluf̥ombo	-	-	Belly
amatsai	masai	-	-	-	musaji	-	Blood
esikumba	ḡikumba	ef̥ikumba	sikumba	ef̥ikumba	f̥ikumba	esikuma	Bone
esirifu	kiritu	esirifu	-	f̥irifu	f̥iriru	esirifu	Chest
imoni	emoni	emoni	emoni	imoni	imoni	emoni	Eye
esireḡe	kereḡe	-	-	ef̥ireḡe	f̥ireḡe	-	Foot
riswi	risu	-	-	riswi	r̥iswi	-	Hair
omuxono	omukono	omuxono	kumuxono	omuxono	muxono	omuxono	Hand
omurwe	mtwi	omuf̥we	kumurwe	omurwe	murwe	omutwe	Head

omwojo	omwojo	omwɔjɔ	kumojɔ	omwɔjo	-	omwojɔ	Heart
esireŋʒe	kereŋye	-	-	eʃireŋʒe	ʃireŋʒe	-	Leg
orurimi	orrimi	orurimi	rurimi	olulimi	rurimi	orurimi	Tongue
erino	irinu	erino	erino	erino	rino	erino	Tooth
omunwa	umɔpwa	munwa	kumunwa	omunwa	munwa	omwana	Mouth
rikɔsi	iriyoti	ekɔsi	rikɔsi	rikɔsi	rɪŋori	ekɔsi	Neck
amoru	moru	amoru	kamoru	amolu	moru	amoru	Nose

**Source: Survey data (2020)**

The following observations were made from the list of cognates provided in table 3.2:

1. The word initial voiceless velar stop /k/ occurs in Lubukusu in words like ‘kumuxɔno’ (hand), ‘kumunwa’ (mouth), ‘kamoru’ (nose) et. cetera. This is not observed in Lunyore, Lulogooli, Lunyala East, Luwanga, Lwidakho and Lusamia.
2. Germinates sounds are present in Lulogooli in words such as ‘orrimi’ (tongue). More data is required to prove whether these phenomena occurs in the other dialects.

**Table 3.3: Cognates referring to Geographical features**

Lunyore	Lulogool	Lunyala	Lubukusu	Luwanga	Lwidakh	Lusamia	Gloss
	<b>i</b>				<b>o</b>		
erirumbes i	riresi	riresi	kamaresi	rilumbesi	riresi	riresi	Cloud
oβunifu	kiziru	-	-	omupiri	ʃɪnifu	-	Cold
mmbasu	mubasu	-	-	-	mmbasu	-	Daytime
riroβa	rirova	erɔβa	riroβa	xwirɔβa	rɪroβa	erɔβa	Soil
ɪŋaŋʒa	eŋanza	eŋanza	eŋaŋʒa	ɪnanza	ɪnanza	ɪŋaŋʒa	Lake
esikuru	ekryuru	eʃikuru	sikuru	eʃikulu	sikuru	orukuru	Mountain
omwesi	omweri	omwesi	kumwesi	omwesi	mwerɪ	omwesi	Moon
-	-	musiro	siro	eʃiro	-	esiroo	Night
ɪŋiniŋini	-	eŋiniŋini	-	ɪŋiniŋini	ɪŋiniŋini	eŋiniŋini	Star
amatsi	amanzi	amaʃi	kameʃi	amatsi	matsi	amaʃi	Water

**Source: Survey data (2020)**

The following observations were made from the list of cognates provided in table 3.3:

1. The voiced labio-dental fricative sound /v/ is present in Lulogooli in word like ‘rirɔva’ (soil) but is absent in Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.
2. The voiceless palato-alveolar fricative /ʃ/ is present in Lunyala, Luwanga and Lwidakho in word like ‘eʃikuru’ (mountain), ‘eʃikulu’ (mountain) and ‘ʃɪnifu’ (cold), respectively. This sound was not observed in the words in Lunyore, Lulogooli, Lubukusu and Lusamia.

**Table 3.4: Cognates referring to animals and their parts**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
ɪɲamaɲa ma	omɔɲama	mɲama	-	-	mɲama	-	Animal
ɾɪɲɔɲɪ	ɾɪɲɔɲɪ	-	-	ɾɪɲɔɲɪ	ɾɪɲɔɲɪ	erioni	Bird
imbwa	imbwa	embwa	embwa	imbwa	ɪsɪmbwa	embwa	Dog
ɾɪβɔɟu	ɾivoɟu	eβɔɟu	-	ɾɪβɔɟu	ɾɪβɔɟu	eβɔɟu	Egg
-	-	eɲeni	eɲeni	ɪɲeni	-	eɲeni	Fish
ɪɲama	ɪɲama	eɲama	eɲama	ɪɲama	ɪɲama	eɲama	Meat
ɪɲɔɟɔxɔ	enzokɔ	eɲɔɟɔxɔ	-	ɪnzoxɔ	ɪnzuxɔ	eɲɔɟɔxɔ	Snake
oɾuβɔhɔ	uɾoβɔhɔ	eβɔɔ	ɾuβɔɔ	oɾuβɔhɔ	ɾɪβɔhɔ	oɾuβɔhɔ	Wing
omusɪɾɔ	omukɪɾɔ	omuxɪɾɔ	kumuhɪɲɔ	omufɪɾɔ	mufɪɾɔ	omuxɪɲɔ	Tail
amafurɔ	mɔɲutɔ	mɔfufɔ	-	amafurɔ	mɔkurɔ	amafurɔ	Fat

**Source: Survey data (2020)**

The following observations were made from the list of cognates provided in table 3.4:

1. The consonant sounds changed in the words across the languages. For example, the words ‘amafurɔ/mɔɲutɔ/mɔfufɔ/mɔkura’ (fat) in Lunyore, Lulogooli, Lunyala East and Lwidakho, respectively.
2. The voiced labio-dental fricative sound /v/ is present in Lulogooli in word like ‘ɾivoɟu’ (egg) but is absent in Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

**Table 3.5: Cognates referring to plants and their parts**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
ɾiuwɔ	erɪwɔ	ewuwɔ	ɾiuwɔ	ɾiuwɔ	ɾɪwɔ	eua	Flower
ɾɪtundɔ	ɾɪtundɔ	etundɔ	ɾɪtundɔ	ɾɪtundɔ	ɾɪtundɔ	ɾɪtundɔ	Fruit
omusɪ	omurɪ	omusɪɪ	kumusɪ	omusɪ	murɪ	omusɪɪ	Root



omusara	omusara	omusara	-	omusaala	musara	omusara	Tree
risafu	erituu	esafu	risafu	risafu	risambu	esafu	Leaf

**Source: Survey data (2020)**

The following observations were made from the list of cognates provided in table 3.5:

1. The voiced alveolar lateral approximant /l/ is present in Luwanga in a word like ‘omusaala’ (tree) but is absent in Lunyore, Lulogooli, Lunyala East, Lubukusu, Lwidakho and Lusamia.
2. Word initial vowel sounds are absent in Lwidakho words. More data is required to confirm this.

**Table 3.6: Cognates referring to numbers**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
sirara	kirra	endara	ndara	ʃilala	rurara	ndara	One
tʃiβiri	vviri	βiβiri	tʃiβiri	βiri	βiβiri	tʃiβiri	Two
βitaru	-	βitaʃu	tʃitaru	βitaru	xupara	Kidatu	Three
kane	vinne	βinne	tʃine	βine	βinne	tʃinee	Four
xarano	vitano	tʃirano	tʃirano	tsirano	βiranu	kitano	Five

**Source: Survey data (2020)**

The following observations were made from the list of cognates provided in table 3.6:

1. Germinates sounds are present in Lulogooli in words such as ‘kirra’ (one) and ‘vviri’ (two). More data is required to prove whether these phenomena occurs in the other dialects.
2. The voiced labio-dental fricative sound /v/ occurs in Lulogooli in word like ‘vinne’ (egg) in an environment where the voiced bilabial fricative /β/ or voiceless palato-alveolar affricate /tʃ/ occurs in words in Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

**Table 3.7: Cognates referring to common adjectives**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
Imbi	kivi	embi	riβi	eʃiβii	ʃipi	esiβii	Bad
esikari	-	eŋɣari	-	-	ʃikari	-	Big
oβutʃafu	kitʃafu	utʃafu	βutʃafu	esiʃafu	βutʃafu	oβutʃafu	Dirty
esiomu	-	eŋomu	eŋomu	eʃiomu	ʃiumu	esiomu	Dry

oβurai	borai	βuraji	βurai	oβulai	βuraji	esirai	Good
oβusiro	kirito	esitfo	risiro	eβisiro	βuritoho	esisito	Heavy
ip̄erere	kenjere	ēnerere	-	oβuperere	ip̄erere	esīnerere	Narrow
oβwimbiki ti	eβimbi	-	ēnimbi	ip̄imbikiti	βimbi	esimbikiti	Short
eβititi	k̄idii	xatiti	xatiti	eβititi	xati	esididi	Small
βurup̄ji	bur̄oŋyi	βurup̄ji	-	βirup̄ji	βurup̄ji	βurup̄ji	Straight
oβup̄ifu	kinziru	ēnifu	βup̄ifu	obup̄ifu	xup̄ira	obup̄ifu	Wet
Indafu	kiravu	endafu	-	oβulafu	βiraβu	-	White
omurup̄ji	mur̄oŋyi	-	-	-	murup̄ji	omur̄oŋyi	Right
ahare	ehare	ararei	-	ehare	ihare	ejare	Far
esindi	k̄indi	ēindi	v̄indi	eβ̄indi	β̄indi	esindi	Other
ahembi	aβ̄imbi	awambi	haembi	ahambi	haj̄imbi	ambii	Near

**Source: Survey data (2020)**

The following observations were made from the list of cognates provided in table 3.7:

1. The voiced bilabial stop sound /b/ is present in Lulogooli in word like ‘bur̄oŋyi’ (straight) but is absent in Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.
2. The voiced alveolar stop sound /d/ is present in word like ‘k̄idii’ and ‘esididi’ (small) in Lulogooli and Lusamia respectively but is absent in Lunyore, Lunyala East, Lubukusu, Luwanga and Lwidakho.

**Table 3.8: Cognates referring to common nouns**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
rikox̄e	er̄yoke	ek̄ox̄e	rik̄ox̄e	rik̄ox̄e	rik̄ox̄e	rik̄ox̄e	Ashes
omurro	umuru	mur̄iro	kumur̄iro	omur̄iro	mur̄iru	omur̄iro	Fire
erira	rieta	er̄it̄fa	risina	erira	r̄ira	erita	Name
omukoje	om̄uȳoje	omuk̄oje	kumuk̄oje	omuk̄oje	mukoje	omuk̄oje	Rope
eβ̄fumbi	eβ̄zumbi	eβ̄fumbi	eβ̄fumbi	it̄fumbi	it̄fumbi	eβ̄fumbi	Salt
omwosi	omwozi	-	-	omw̄osi	mwoβ̄i	omwosi	Smoke
esisara	k̄isaara	β̄isara	rusara	olusala	β̄isara	orusara	Stick
erit̄fina	er̄iyina	ēŋyina	-	r̄it̄fina	r̄it̄fina	ekina	Stone

**Source: Survey data (2020)**

The following observations were made from the list of cognates provided in table 3.8:

1. The voiced palato-alveolar affricate /dʒ/ is present in Lulogooli in word like ‘edʒumbi’ (salt) but is absent in Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.
2. The voiced alveolar fricative /z/ is present in Lulogooli in word like ‘omwozi’ (smoke) but is absent in Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

**Table 3.9: Cognates referring to common pronouns**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
ise	-	ese	ese	esie	-	ese	I
ifwe	-	efwe	efwe	efwe	-	efwe	We
βoosi	voosi	βoosi	βoosi	βoosi	βoosi	βoosi	All
eβijɪ	vɪɲɪɲɪ	eɲɪɲɪ	-	eβijɪ	βɪɲɪɪ	aβaɲɪ	Many
wina	wina	wina	-	wina	wina	wina	Who

**Source: Survey data (2020)**

The following observations were made from the list of cognates provided in table 3.9:

1. The voiced labio-dental fricative /v/ occurs in Lulogooli in word like ‘voosi’ (all) in an environment where the voiced bilabial fricative /β/ occurs in a word like ‘βoosi’ (all) in Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.
2. The word initial front close-mid unrounded vowel /e/ in the word ‘ese’ (I) in Lunyala, Lubukusu, Luwanga and Lusamia is raised to become the front close unrounded vowel /i/ in the word ‘ise’ in Lunyore.

**Table 3.10: Cognates referring to conjunctions**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
nende	nindɪ	nende	nende	nende	nende	nende	And
nende	-	nende	nende	nende	nende	-	With

**Source: Survey data (2020)**

The following observation was made from the list of cognates provided in table 3.10:

1. The front close-mid unrounded vowel /e/ in the word ‘nende’ (and) in Lunyore, Lunyala East, Lubukusu, Luwanga and Lusamia is raised to become the front close unrounded vowel /i/ in the word ‘nindɪ’ in Lulogooli.

**Table 3.11: Cognates referring to adverbs**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
sikira	ʃiyira	ʃikira	sikira	ʃiʃira	ʃitsira	sikira	Because
hano	-	hano	hano	hano	hanu	hano	Here
tawe	dave	tawe	tawe	tawe	tawe	-	Not
sira	kira	-	-	ʃiria	-	sira	That
hara	hara	-	-	aria	-	ara	There
sina	-	ʃina	sina	ʃina	ʃina	sina	What
rina	rina	rina	rina	rina	rina	rina	When
hena	-	hena	waena	hena	hena	hena	Where

Source: Survey data (2020)

The following observation was made from the list of cognates provided in table 3.11:

1. The voiced alveolar stop sound /d/ is present in Lulogooli in word like ‘dave’ (not) but is absent in Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

**Table 3.12: Cognates referring to prepositions**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
mukari	muyati	mkari	-	Mukari	-	mukatii	In

Source: Survey data (2020)

The following observation was made from the list of cognates provided in table 3.12:

1. The voiced velar fricative sound /ɣ/ is present in Lulogooli in word like ‘muyati’ (in) but is absent in Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

**Table 3.13: Cognates referring to common verbs**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
oxurumak a	kirumi	xuruma	xuruma	oxuluma	xuruma	oxuruma	To bite
oxuherana	koherana	xuhera	xuera	oxujera	xwesesa	oxujera	To breathe
oxusamba	kusamba	xusamba	xusamba	oxusamba	xusamba	oxusamb a	To burn
itsa	kuza	xwifʃa	xwifʃa	oxwitsa	xwitsa	oxwifʃa	To come
oxuβara	kovariza	xuβara	xuβasia	oxuβala	xuβaritsa	oxuβara	To count

oxuxaraka	-	xuxaraka	xukara	oxuxalaka	xuxaraka	-	To cut
oxufwa	-	xufwa	xufwa	oxufwa	-	oxufwa	To die
oxujaβa	-	xujeβa	xujaβa	-	xujeβa	-	To dig
oxuŋwa	kuŋwa	xuŋwa	xuŋwa	oxuŋwa	xuŋwa	oxuŋwa	To drink
oxuria	koria	xuria	xuria	oxuria	xuria	oxuria	To eat
oxukwa	kuŋywiza	xukwa	xukwa	oxukwa	kukwa	oxuxwa	To fall
oxuria	kotia	xuria	xuria	oxuria	xuria	oxutia	To fear
oxulwana	korwana	xupana	xuxupana	oxupana	kukwana	oxurwana	To fight
oxuhana	kohana	xuhana	xuhana	oxuhana	xuhana	-	To give
oxwerema	kwerema	xwerema	-	oxwerema	kwerema	-	To float
oxupuruxa	kobuka	xupuruxa	xupuruxa	oxupuruka	xupuruxa	oxupurux a	To fly
oxuhurra	kohura	xuhurira	xuurira	oxuhulira	xuhurira	oxuurira	To hear
oxutuja	koduja	-	-	oxutuja	xutuja	oxutuja	To hit
oxwira	okwita	oxwifā	xwira	oxwira	xwira	oxuita	To kill
oxumaja	komaja	xumaja	xumaja	oxumaja	xumaja	oxumaja	Know
oxutsexa	Koseka	xuŋŋexa	xuŋŋexa	okutsexa	xusexa	oxuŋŋexa	Laugh
oxutira	-	xutira	-	oxutirila	-	oxudira	Hold
oxuima	kuhima	xujitsa	-	oxujima	xujitsa	oxuima	To hunt
oxumeja	komeja	xumeja	xumeja	oxumaja	xumeja	oxumeja	Live
-	-	-	-	oxuβaja	xuβaja	oxuβaja	To play
oxuxwesa	-	xuxwesa	xuxwesa	oxuxwesa	xukwesa	oxuxwesa	To pull
oxusukuma	kosuyoma	xusukuma	xusukuma	-	-	oxusuku ma	To push
oxukwa	kokuba	xukwa	xukwa	oxukwa	xukuβa	oxukwa	To rain
oxuβoora	okoboora	xuora	-	oxuβoola	xuβora	oxuβora	Say
oxwejaka	kwijaya	xujeka	xwijakara	-	xujeka	oxwejaka	Scratch
oxurora	korora	xurora	-	oxulola	xurora	-	See
oxwemba	kwimba	xwimba	xwimba	oxwimba	xwimba	oxwimba	Sing

oxwixara	kwikara	xwixara	xwixara	oxwixala	xwixara	oxwixara	Sit
oxukona	koyona	xukona	xukona	oxukona	xukona	oxukona	Sleep
oxuhupiris ia	kohupa	xuupa	xuupira	oxuhupa	xuhupa	oxuupa	Smell
oxufutsa	kotunza	-	xufufu	oxufutsa	xusutsa	oxufufu	Spit
oxumina	komina	xumina	xumina	-	xumina	-	Squeeze
oxusijira	kosijira	-	-	oxusijira	xusijira	-	Stand
oxununa	konuna	xununa	xuxuna	oxununa	xununa	oxununa	To suck
oxusimba	kobimba	xubimba	xuvimba	oxufimba	xubimba	oxufwim ba	To swell
oxupara	-	xupara	xupara	oxupara	xupara	oxupara	To think
oxuβoja	kovoha	xuvoja	xuβoa	oxuβoja	xuβoha	oxuβoja	To tie
oxusara	kuroka	xurusa	xusara	oxusala	xusara	oxusara	To vomit
oxutfenda	koyenda	xukenda	xukenda	oxutfenda	xutfenda	oxukenda	To walk
-	kuoyinza	-	-	oxwosia	xwokitsa	oxuosa	To wash
oxupaŋyus a	kobaŋyus a	xupaŋyus a	xupaŋyusia	oxupaŋyus ia	xupaŋyusa	oxupaŋyu sia	Wipe

**Source: Survey data (2020)**

The following observations were made from the list of cognates provided in table 3.13:

1. Word initial vowel sounds are absent in Lwidakho words. More data is required to confirm this.
2. The voiced velar fricative /ɣ/ is present in Lulogooli in word like ‘koyenda’ (to walk) but is absent in Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.
3. The voiceless velar stop /k/ occurs in Lulogooli in word like ‘kovoha’ (to tie) in an environment where the voiceless velar fricative /x/ occurs in a words in Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

### **3.3 Sound correspondence sets and comparative reconstruction**

Sound correspondence in the various positions within the cognates is key while undertaking comparative reconstruction of the phonemes. Comparative reconstruction primarily employs the

majority principle which is quite straightforward. Yule (2005:184-186) asserts that in a certain position with a cognate set, if “three words begin with a [p] sound and one word begins with a [b] sound, then our best guess is that the majority have retained the original sound (i.e. [p]) and the minority have changed a little through time”. In this current study that aims to reconstruct the phonemes of proto-Luyia from the seven dialects of Luyia, it would require at least four dialects or more to have a particular sound in its cognates for this sound to constitute the proto-Luyia form. Any sound that occurs in only three or less dialects’ cognates cannot constitute the reconstructed proto-Luyia form (PLF).

### 3.3.1 Nasals

Table 3.14 shows the occurrence of the voiced bilabial nasal /m/ in the cognates of the Luyia dialects under study.

**Table 3.14: Words with the voiced bilabial nasal**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
omukonḡo	omuyonḡo	omukonḡo	kumukonḡo	omukonḡo	mukonḡo	omukonḡo	Back
omwana	omwana	omwana	omwana	omwana	mwana	omwana	Child
imoni	emoni	emoni	emoni	imoni	imoni	emoni	Eye
omusi	omuri	omusii	kumusi	omusi	muri	omusii	Root

**Source: Survey data (2020)**

The cognate sets presented in table 3.14 shows that the voiced bilabial nasal /m/ occurs in the words for ‘back’, ‘child’, ‘eye’ and ‘root’ in Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

**Table 3.15: Sound correspondence set for m/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-m-	-m-	-m-	-m-	-m-	m-	-m-	<b>*m</b>
-m-	-m-	-m-	-m-	-m-	m-	-m-	<b>*m</b>
-m-	-m-	-m-	-m-	-m-	-m-	-m-	<b>*m</b>
-m-	-m-	-m-	-m-	-m-	m-	-m-	<b>*m</b>

**Source: Survey data (2020)**

The sound correspondence sets in table 3.15 shows that the bilabial nasal /m/ exists in all the cognates of the Luyia dialects under study in either the word initial position or the word medial position. Campbell (1998: 117) postulates that, “unless there is evidence to the contrary, we tend

to pick for our reconstructed proto-sound the particular sound in the correspondence set which shows up in the greatest number of daughter languages”. The majority principle is applicable in this case since the voiced bilabial nasal /m/ exists in all the daughter languages of Luyia under study. Therefore, the proto-sound \*/m/ is reconstructed into the phonemic inventory of Proto-Luyia. The asterisk (\*) indicates a reconstructed proto-sound.

The voiced alveolar nasal /n/ appears in the cognates of Luyia dialects as captured by table 3.16.

**Table 3.16: Words with the voiced alveolar nasal**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
Nende	nindir	nende	nende	nende	nende	nende	And
Omwana	omwana	omwana	omwana	omwana	mwana	omwana	Child
Imoni	emoni	emoni	emoni	imoni	imoni	emoni	Eye
Xarano	vitano	ʃirano	ʃirano	tsirano	βirano	kitano	Five

**Source: Survey data (2020)**

The cognate sets in table 3.16 indicates that the voiced alveolar nasal /n/ appears in the words for ‘and’, ‘child’, ‘eye’ and ‘five’ in Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

**Table 3.17: Sound correspondence set for /n/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
n-	n-	n-	n-	n-	n-	n-	*n
-n-	-n-	-n-	-n-	-n-	-n-	-n-	*n
-n-	-n-	-n-	-n-	-n-	-n-	-n-	*n
-n-	-n-	-n-	-n-	-n-	-n-	-n-	*n

**Source: Survey data (2020)**

The sound correspondence sets exhibited in table 3.17 points out that the voiced alveolar nasal exists in cognates in the word initial and word medial positions in all the dialects of Luyia under study. Therefore, the principle is applicable in the reconstruction of the proto-sound \*/n/ into the phonemic inventory of Proto-Luyia since it occurs in all the dialects under study.

Evidence in table 3.18 demonstrates that the voiced palatal nasal /ɲ/ is present in the dialects under study.

**Table 3.18: Words with the voiced palatal nasal**



Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
ɪɲama	ɪɲama	eɲama	eɲama	ɪɲama	ɪɲama	eɲama	Meat
oxɪɲwa	kɔɲwa	xɪɲwa	xɪɲwa	oxɪɲwa	-	-	To drink
ɪɲaɲʃa	eɲanza	eɲanza	eɲaɲʃa	ɪɲanza	ɪɲanza	ɪɲaɲʃa	Lake
oxumeɲa	komeɲa	xumeɲa	xumeɲa	oxumaɲa	xumeɲa	oxumeɲa	To live

**Source: Survey data (2020)**

The cognate sets in table 3.18 reveal that the voiced palatal nasal /ɲ/ is present in all the words for ‘meat’, ‘lake’ and ‘to live’ in Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia. The sound is also present in the word for ‘to drink’ in all the dialects under study except for Lwidakho and Lusamia.

**Table 3.19: Sound correspondence set for /ɲ/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-ɲ-	-ɲ-	-ɲ-	-ɲ-	-ɲ-	-ɲ-	-ɲ-	*ɲ
-ɲ-	-ɲ-	-ɲ-	-ɲ-	-ɲ-	-	-	*ɲ
-ɲ-	-ɲ-	-ɲ-	-ɲ-	-ɲ-	-ɲ-	-ɲ-	*ɲ
-ɲ-	-ɲ-	-ɲ-	-ɲ-	-ɲ-	-ɲ-	-ɲ-	*ɲ

**Source: Survey data (2020)**

The sound correspondence sets displayed in table 3.19 show that the voiced palatal nasal /ɲ/ is evident in all the dialects of Luyia under study in word medial positions. Guided by the majority principle, it therefore qualifies to be reconstructed into the sound system of Proto-Luyia as the proto-sound \*/ɲ/.

Table 3.20 indicates that the voiced velar nasal /ŋ/ occurs in the dialects of Luyia under study.

**Table 3.20: Words with the voiced velar nasal**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
-	-	eŋeni	eŋeni	ɪɲeni	-	eŋeni	Fish
ɪɲiniɲini	-	eɲiniɲini	eɲienesi	ɪɲiniɲini	ɪɲiniɲini	eɲiniɲini	Star
-	keŋere	-	-	-	-	-	Narrow

**Source: Survey data (2020)**

The cognate sets displayed in table 3.20 indicate that the voiced velar nasal /ŋ/ occurs in the dialects of Luyia under study. It is present in the word for ‘fish’ in Lunyala, Lubukusu, Luwanga, Lwidakho

and Lusamia. The /ŋ/ sound is also present in the word for ‘star’ for all the dialects under study with the exception of Lulogooli. In addition, it also occurs in the word for ‘narrow’ in Lulogooli. since it occurs in all the dialects of Luyia under study.

**Table 3.21: Sound correspondence set for /ŋ/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-	-	-ŋ-	-ŋ-	-ŋ-	-	-ŋ-	*ŋ
-ŋ-	-	-ŋ-	-ŋ-	-ŋ-	-ŋ-	-ŋ-	*ŋ
-	-ŋ-	-	-	-	-	-	

**Source: Survey data (2020)**

The sound correspondence set of the cognates in table 3.21 shows that even though it lacks in some words across the dialects, the voiced velar nasal occurs in all the dialects under study in word medial positions. The proto-sound \*/ŋ/ meets the criteria for reconstruction and is therefore picked into the phonemic inventory of Proto-Luyia guided by the majority principle

### 3.3.2 Stops (Plosives)

Evidence in table 3.22 shows that the voiceless bilabial stop (plosive) /p/ exists in Lunyore, Lunyala, Lubukusu, Luwanga, Lwidakho and Lusamia.

**Table 3.22: Words with the voiceless bilabial plosive (stop)**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
oxupuruxa	-	xupuruxa	xupuruxa	oxupuruka	xupuruxa	oxupuruxa	To fly
Oxupara	-	xupara	xupara	oxupara	xupara	oxupara	To think
oxupaŋγus a	-	xupaŋγus a	xupaŋγusi a	oxupaŋγusi a	xupaŋγus a	oxupaŋγusi a	Wipe

**Source: Survey data (2020)**

The cognate sets presented in table 3.22 point out the voiceless bilabial stop /p/ is present in the word for ‘to fly’, ‘to think’ and ‘wipe’ in all the dialects under study except for Lulogooli. The phoneme is absent in the words in Lulogooli.

**Table 3.23: Sound correspondence set for /p/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-p-	-	-p-	-p-	-p-	-p-	-p-	*p
-p-	-	-p-	-p-	-p-	-p-	-p-	*p
-p-	-	-p-	-p-	-p-	-p-	-p-	*p

Source: Survey data (2020)

The sound correspondence sets indicate that the voiceless bilabial stop /p/ occurs in all the dialects of Luyia under study with the exception of Lulogooli as shown in table 3.23. The /p/ sound occurs in word medial positions. Even though the sound is absent in Lulogooli, it is present in words in all the other dialects of Luyia under study. Guided by the majority principle, the sound is reconstructed as a Proto-sound \*/p/ into the phonemic inventory of Proto-Luyia since it occurs in a greater number of dialects under study.

The voiced bilabial stop (plosive) /b/ exists in the phonemic inventory of a Luyia dialect as captured by table 3.24.

**Table 3.24: Words with the voiced bilabial plosive (stop)**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
-	baba	-	-	-	-	-	Father
-	urobaha	-	-	-	-	-	Wing

Source: Survey data (2020)

The voiced bilabial stop is evident in the words for ‘father’ and ‘wing’ as highlighted in table 3.24. However, the sound is absent in words in all the other dialects of Luyia under study.

**Table 3.25: Sound correspondence set for /b/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-	b-	-	-	-	-	-	*nil
-	-b-	-	-	-	-	-	*nil

Source: Survey data (2020)

Of all the dialects under study, the voiced bilabial stop is only present in words in Lulogooli in both the word initial and word medial position as displayed on table 3.25. Basing on the majority principle, it does not meet the threshold to be reconstructed into a proto-sound of Luyia as it occurs in only one dialect.

The voiceless alveolar stop (plosive) /t/ is present in Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia as captured in table 3.26.

**Table 3.26: Words with the voiceless alveolar plosive (stop)**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
ritunda	ritunda	etunda	ritunda	ritunda	ritunda	ritunda	Fruit
tawe	-	tawe	tawe	tawe	tawe	-	Not

Source: Survey data (2020)

The cognate sets reflected in table 3.26 show that the voiceless alveolar stop /t/ occurs in the word for ‘fruit’ in all the dialects under study. It also occurs in the word for ‘not’ in all the dialects apart from Lulogooli and Lusamia.

**Table 3.27: Sound correspondence set for /t/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-t-	-t-	-t-	-t-	-t-	-t-	-t-	*t
t-	-	t-	t-	t-	t-	-	*t

Source: Survey data (2020)

The sound correspondence set demonstrated in table 3.27 shows that the voiceless alveolar stop /t/ is evident in the cognates of all the dialects under study in both the word initial and word medial position. It is therefore reconstructed into the proto-sound \*/t/ in the sound system of Proto-Luyia as it occurs in a majority of the dialects under study.

The voiced alveolar plosive (stop) /d/ is present in a number of Luyia dialects as shown in table 3.28.

**Table 3.28: Words with the voiced alveolar plosive (stop)**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
-	koduja	-	-	-	-	-	To hit
-	kɪdii	-	-	-	-	esididi	Small
-	-	-	-	-	-	Kidatu	Three

Source: Survey data (2020)

Table 3.28 shows that the voiced alveolar stop is present in the word for ‘to hit’ in Lulogooli. It is also present in the word for small in Lulogooli and Lusamia. Besides that, it also occurs in the word for ‘three’ in Lusamia.

**Table 3.29: Sound correspondence set for /d/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
---------	-----------	---------	----------	---------	----------	---------	------

-	<b>d-</b>	-	-	-	-	-	<b>*nil</b>
-	<b>-d-</b>	-	-	-	-	<b>-d-</b>	<b>*nil</b>
-	-	-	-	-	-	<b>-d-</b>	<b>*nil</b>

**Source: Survey data (2020)**

Sound correspondence sets shown in table 3.29 show that the voiced alveolar stop is only evident in word initial and medial positions in only Lulogooli and Lusamia but lacking in all the other dialects under study. Therefore, it does not meet the criteria to warrant its reconstruction into the phonemic inventory of Proto-Luyia since it exists in only a minority of dialects.

Evidence in table 3.30 indicates that the voiceless velar stop (plosive) /k/ is present in all the dialects of Luyia under study.

**Table 3.30: Words with the voiceless velar plosive (stop)**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
rikoxe	-	ekoxe	rikoxe	rikɔje	makoje	rikoxe	Ashes
esikumba	ɣikumba	eʃikumba	sikumba	eʃikumba	ʃikumba	esikuma	Bone
oxukona	-	xukona	xukona	oxukona	xukona	oxukona	To sleep
omukoje	-	omukoje	kumukoje	omukoje	mukoje	omukoje	Rope

**Source: Survey data (2020)**

The cognate sets in table 3.30 show that all the dialects have the voiceless velar stops /k/ in their word for ‘bone’. With the exception of Lulogooli, all the other dialects also have the sound /k/ in the word for ‘ashes’, ‘to sleep’ and ‘rope’.

**Table 3.31: Sound correspondence set for /k/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	<b>*PLF</b>
-k-	-	-k-	-k-	-k-	-k-	-k-	<b>*k</b>
-k-	-k-	-k-	-k-	-k-	-k-	-k-	<b>*k</b>
-k-	-	-k-	-k-	-k-	-k-	-k-	<b>*k</b>
-k-	-	-k-	-k-	-k-	-k-	-k-	<b>*k</b>

**Source: Survey data (2020)**

The sound correspondence sets shown in table 3.31 indicate that the all the dialects have the voiceless velar stop /k/. Under the guidance of the majority principle, the sound is reconstructed

into the phonemic inventory of Proto-Luyia as a proto-sound \*/k/ because it occurs in all the dialects under study.

### 3.3.3 Affricates

The voiceless alveolar affricate /tʃ/ occurs in Lunyore, Luwanga and Lwidakho as shown in table 3.32.

**Table 3.32: Words with the voiceless alveolar affricate**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
itsa	-	-	-	oxwitsa	xwitsa	-	To come
isutse	-	-	-	-	isutse	-	Fish
omusatsa	-	-	-	omusatsa	-	-	Husband
oxutsexa	-	-	-	okutsexa	-	-	To laugh

**Source: Survey data (2020)**

The cognate sets in table 3.32 show that the voiceless alveolar affricate is present in words for ‘to come’ in Lunyore, Luwanga and Lwidakho. It also occurs in the word for ‘fish’ in Lunyore and Luwanga. In addition, it exists in the words for ‘husband’ and ‘to laugh’ in Lunyore and Luwanga.

**Table 3.33: Sound correspondence set for /tʃ/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-tʃ-	-	-	-	-tʃ-	-tʃ-	-	*nil
-tʃ-	-	-	-	-	-tʃ-	-	*nil
-tʃ-	-	-	-	-tʃ-	-	-	*nil
-tʃ-	-	-	-	-tʃ-	-	-	*nil

**Source: Survey data (2020)**

The sound correspondence sets displayed in table 3.33 show that the voiceless alveolar affricate is only present in three dialects of Luyia under study in the word medial position. The phoneme /tʃ/ does not qualify to be reconstructed as a proto-sound for Luyia as it occurs in a minority of the dialects under study.

The affricate /tʃ/ is evident in Lunyore, Lulogooli, Lunyala East, Lubukusu and Lwidakho as shown in table 3.34.

**Table 3.34: Words with the voiceless palato-alveolar affricate**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
---------	-----------	---------	----------	---------	----------	---------	-------

xɔtʃa	-	xɔtʃa	xɔtʃa	-	-	xɔtʃa	Uncle
-	tʃɪyira	-	-	-	-	-	Because

**Source: Survey data (2020)**

The cognate sets exhibited in table 3.34 show that the voiceless palato-alveolar affricate /tʃ/ is present in the word for ‘uncle’ in Lunyore, Lunyala East, Lubukusu and Lusamia. It is also present in the word for ‘because’ in Lulogooli. However, it is lacking in any word in Luwanga and Lwidakho.

**Table 3.35: Sound correspondence set for /tʃ/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-tʃ-	-	-tʃ-	-tʃ-	-	-	-tʃ-	*tʃ
-	tʃ-	-	-	-	-	-	

**Source: Survey data (2020)**

The sound correspondence set in table 3.35 indicates that the voiceless palato-alveolar affricate /tʃ/ is present in Lunyore, Lulogooli, Lunyala East, Lubukusu and Lusamia in the word medial position. These five dialects constitute a majority out of the seven dialects under study and hence the proto-sound \*/tʃ/ is reconstructed.

The voiced palato-alveolar affricate /dʒ/ is present in Lulogooli as captured in table 3.36.

**Table 3.36: Words with the voiced palato-alveolar affricate**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
-	edʒumbi	-	-	-	-	-	Salt

**Source: Survey data (2020)**

Table 3.36 shows that the voiced palato-alveolar affricate /dʒ/ is present in the word for ‘salt’ in Lulogooli. However, it is absent in all the other dialects under study.

**Table 3.37: Sound correspondence set for /dʒ/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-	-dʒ-	-	-	-	-	-	*nil

**Source: Survey data (2020)**

The voiced-palato alveolar affricate /dʒ/ occurs only occurs in Lulogooli in the word medial position but is absent in all the other dialects under study as shown in table 3.37. Basing on the majority principle, it does not qualify for reconstruction as a proto-sound of Luyia.

### 3.3.4 Fricatives

The voiced bilabial fricative /β/ is present in the Luyia dialects as captured in table 3.38.

**Table 3.38: Words with the voiced bilabial fricative**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
βoosi	-	βoosi	βoosi	βoosi	βoosi	βoosi	All
oxuβara	-	xuβara	xuβasia	oxuβala	xuβaritsa	oxuβara	To count
riroβa	-	erβa	riroβa	xwirβa	riroβa	erβa	Soil

Source: Survey data (2020)

The cognate sets in table 3.38 demonstrates that the voiced bilabial fricative /β/ occurs in Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia in the words for ‘all’, ‘to count’ and ‘soil’. It is, however, absent in Lulogooli.

**Table 3.39: Sound correspondence set for /β/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
β-	-	β-	β-	β-	β-	β-	*β
-β-	-	-β	-β-	-β-	-β-	-β-	*β
-β-	-	-β-	-β-	-β-	-β-	-β-	*β

Source: Survey data (2020)

Sound correspondence sets in table 3.39 show the voiced bilabial fricative is present in all the dialects under study except for Lulogooli in the word initial and word final position. Therefore, the sound is reconstructed into the phonemic inventory of Proto-Luyia as the Proto-sound \*/β/ since it occurs in a greater number of dialects and hence meets the criteria for reconstruction as guided by the majority principle.

The voiceless labio-dental fricative /f/ exists the Luyia dialects under study as illustrated in table 3.40.

**Table 3.40: Words with the voiceless labio-dental fricative**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
Ifwe	-	efwe	efwe	efwe	xutsi	efwe	We
esirifu	-	esirifu	-	ʃirifu	ʃirru	esirifu	Chest
risafu	-	esafu	risafu	risafu	risambu	esafu	Leaf

Source: Survey data (2020).



The cognates sets in table 3.40 reveal that the voiceless labio-dental fricative is present in the words for ‘we’ and ‘leaf’ in Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia. It is also occurring in the word for ‘chest’ in Lunyore, Lunyala East, Luwanga, Lwidakho and Lusamia.

**Table 3.41: Sound correspondence set for /f/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-f-	-	-f-	-f-	-f-	-f-	-f-	*f
-f-	-	-f-	-	-f-	-f-	-f-	*f
-f-	-	-f-	-f-	-f-	-f-	-f-	*f

Source: Survey data (2020)

The sound correspondence set illustrated in table 3.41 shows that the voiceless labio-dental fricative exists in all the dialects under study except for Lulogooli in the word medial position. It exists in a greater number of the dialects under study and hence is reconstructed into the proto-sound \*/f/ for proto-Luyia as provided by the majority principle.

The voiced labio-dental fricative /v/ is present in one of the dialects of Luyia shown illustrated in table 3.42.

**Table 3.42: Words with the voiced labio-dental fricative**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
-	dave	-	-	-	-	-	Not
-	vviri	-	-	-	-	-	Two
-	vinjyi	-	-	-	-	-	Many

Source: Survey data (2020)

The voiced labio-dental fricative /v/ occurs in only the words for ‘not’, ‘two’ and ‘many’ in Lulogooli as indicated in table 3.42. It is absent in all the other dialects of Luyia under study.

**Table 3.43: Sound correspondence set for /v/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-	-v-	-	-	-	-	-	*nil
-	v-	-	-	-	-	-	*nil
-	v-	-	-	-	-	-	*nil

Source: Survey data (2020)

The voiced labio-dental fricative /v/ occurs in the word initial and word medial position in Lulogooli only and is missing out in all the other dialects under study as indicated in table 3.43. Therefore, it is present in a minority of the dialects as thus does not meet the threshold for reconstruction into the phonemic inventory of Proto-Luyia.

The voiceless alveolar fricative /s/ exists in Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia as shown in table 3.44.

**Table 3.44: Words with the voiceless alveolar fricative**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
βoosi	-	βoosi	βoosi	βoosi	βoosi	βoosi	All
oxusamba	kosamba	xusamba	xusamba	oxusamba	xusamba	oxusamba	To burn
omusara	omusara	omusara	-	omusaala	musara	omusara	Tree

**Source: Survey data (2020)**

The cognate sets in table 3.44 show that the voiceless alveolar fricative occurs in the word for ‘all’ in all the dialects under study except for Lulogooli. It is also present in the word for ‘to burn’ in all the dialects under study. Additionally, the sound also exists in the word for ‘tree’ in all the words under study except for Lubukusu.

**Table 3.45: Sound correspondence set for /s/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-s-	-	-s-	-s-	-s-	-s-	-s-	*s
-s-	-s-	-s-	-s-	-s-	-s-	-s-	*s
-s-	-s-	-s-	-	-s-	-s-	-s-	*s

**Source: Survey data (2020)**

The sound correspondence set in table 3.45 shows that the voiceless alveolar fricative occurs in the word medial position in all the dialects under study. It exists in a greater number of dialects and is therefore reconstructed into the proto-sound \*/s/ for Proto-Luyia as prescribed by the majority principle.

The voiced alveolar fricative /z/ exists in Luyia as shown in table 3.46.

**Table 3.46: Words with the voiced alveolar fricative**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
---------	-----------	---------	----------	---------	----------	---------	-------

-	koza	-	-	-	-	-	To come
-	kojywiza	-	-	-	-	-	To fall
-	isuze	-	-	-	-	-	Fish

Source: Survey data (2020)

The voiced alveolar fricative is present in the Lulogooli word for ‘to come’, ‘to fall’ and ‘fish’ as displayed on table 3.46 It is however absent in all the other dialects of Luyia under study.

**Table 3.47: Sound correspondence set for /z/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-	-z-	-	-	-	-	-	*nil
-	-z-	-	-	-	-	-	*nil
-	-z-	-	-	-	-	-	*nil

Source: Survey data (2020)

Table 3.47 shows that the voiced alveolar fricative only exists in Lulogooli in the word initial position but is missing in all the other dialects of Luyia under study. It is present in only a minority of the dialects under study and therefore does not meet the criteria to warrant its reconstruction into the phonemic inventory of Proto-Luyia.

The voiceless palato-alveolar fricative /ʃ/ occurs in the dialects of Luyia as evident in table 3.48.

**Table 3.48: Words with the voiceless palato-alveolar fricative**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
-	aʃimbrɪ	-	-	-	-	-	Near
-	-	ʃina	-	ʃina	ʃina	-	What

Source: Survey data (2020)

The cognate sets in table 3.48 show that the voiceless palato-alveolar fricative occurs in the word for ‘near’ in Lulogooli. The phoneme also exists in the word for ‘what’ in Lunyala, Luwanga and Lwidakho.

**Table 3.49: Sound correspondence set for /ʃ/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-	-ʃ-	-	-	-	-	-	
-	-	ʃ-	-	ʃ-	ʃ-	-	*ʃ

Source: Survey data (2020)

The sound correspondence set in table 3.49 reveals that the voiceless palato-alveolar fricative occurs in Lulogooli, Lunyala East, Luwanga and Lwidakho. The four dialects constitute a majority of the dialects under study and therefore the proto-sound \*/ʃ/ is reconstructed as guided by the majority principle.

The voiceless velar fricative /x/ is present in the dialects under study as captured in table 3.50.

**Table 3.50: Words with the voiceless velar fricative /x/**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
oxupara	-	xupara	xupara	oxupara	xupara	oxupara	To think
xɔʃa	xoza	xɔʃa	xɔʃa	xɔtsa	xotsa	xɔʃa	Uncle
omuxasi	-	muxasi	omuxasi	omuxasi	muxaɾɪ	omuxasi	Woman
oxununa	-	xununa	xuxuna	oxununa	xununa	oxununa	To suck

Source: Survey data (2020)

The cognate sets exhibited in table 3.50 show that the voiceless velar fricative is present in the word for ‘to think’, ‘uncle’, ‘woman’ and ‘to suck’ in Lunyore, Lulogoli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

**Table 3.51: Sound correspondence set for /x/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-x-	-	x-	x-	-x-	x-	-x-	* <b>x</b>
x-	x-	x-	x-	x-	x-	x-	* <b>x</b>
-x-	-	-x-	-x-	-x-	-x-	-x-	* <b>x</b>
-x-	-	x-	x-	-x-	x-	-x-	* <b>x</b>

Source: Survey data (2020)

The sound correspondence sets reflected in table 3.51 shows that the voiceless velar fricative is present in all the dialects under study in both the word initial and word final position. The phoneme exists in a majority of the dialects under study and it thus qualifies to be reconstructed to the proto-sound \*/x/ for Proto-Luyia as prescribed by the majority principle.

The voiced velar fricative /ɣ/ is also present in the dialects of Luyia as indicated in table 3.52.

**Table 3.52: Words with the voiced velar fricative**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
-	γυγυ	-	-	-	-	-	Grandmother

-	koyenda	-	-	-	-	-	To walk
-	eriyima	-	-	-	-	-	Stone
-	koyona	-	-	-	-	-	To sleep

**Source: Survey data (2020)**

The voiced velar fricative is present in only Lulogooli in the words for ‘grandmother’, ‘to walk’, ‘stone’, ‘to sleep’ as illustrated on table 3.52. It is absent in all the other dialects under study.

**Table 3.53: Sound correspondence set for /ɣ/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-	ɣ-	-	-	-	-	-	*nil
-	-ɣ-	-	-	-	-	-	*nil
-	-ɣ-	-	-	-	-	-	*nil
-	-ɣ-	-	-	-	-	-	*nil

**Source: Survey data (2020)**

Table 3.53 indicates that the voiced velar fricative/ɣ/ is present in only Lulogooli in the word initial position and word final position but is missing out in all the other dialects under study. It occurs in a minority of dialects and hence does not meet the cut to be reconstructed as the proto-sound of the Luyia dialects.

Table 3.54 demonstrates that the voiceless glottal fricative /h/ is present in the dialects under study.

**Table 3.54: Words with the voiceless glottal fricative /h/**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
hena	-	hena	-	hena	hena	hena	Where
ahare	ehare	-	-	ehare	ihare	-	Far

**Source: Survey data (2020)**

The sound correspondence set in table 3.54 shows that the voiceless alveolar fricative is present in the word for ‘where’ in Lunyore, Lunyala East, Luwanga, Lwidakho and Lusamia. It is also present in the word for ‘far’ in Lunyore, Lulogooli, Luwanga and Lwidakho.

**Table 3.55: Sound correspondence set for /h/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
h-	-	h-	-	h-	h-	h-	*h
-h-	-h-	-	-	-h-	-h-	-	*h

**Source: Survey data (2020)**

The voiceless glottal fricative /h/ is present in Lunyore, Lulogooli, Lunyala East, Luwanga, Lwidakho and Lusamia as illustrated by the sound correspondence set in table 3.55. It is only absent in Lubukusu. The sound is reconstructed into the proto-sound \*/h/ for proto-Luyia since it appears in a greater number of dialects and thus meets the requirement for reconstruction provided by the majority principle.

**3.3.5 Approximants**

The voiced labio-velar approximant /w/ is present in the dialects of Luyia as illustrated in table 3.56.

**Table 3.56: Words with the voiced labio-velar approximant**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
omwana	omwana	omwana	omwana	omwana	mwana	omwana	Child
imbwa	imbwa	embwa	embwa	imbwa	isimbwa	embwa	Dog
oxukwa	koŋywiza	xukwa	xukwa	oxukwa	kukwa	oxuxwa	To fall

**Source: Survey data (2020)**

The cognate sets displayed in table 3.56 point out that the voiced labio-velar approximant is present in the words for ‘child’, ‘dog’ and ‘to fall’ in all the dialects under study.

**Table 3.57: Sound correspondence set for /w/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-w-	-w-	-w-	-w-	-w-	-w-	-w-	*w
-w-	-w-	-w-	-w-	-w-	-w-	-w-	*w
-w-	-w-	-w-	-w-	-w-	-w-	-w-	*w

**Source: Survey data (2020)**

The sound correspondence displayed in table 3.57 shows that the voiced labio-velar approximant is present in all the dialects under study in the word medial position. The phoneme meets the criteria provided by the majority principle for reconstruction as it occurs in all the dialects under study and hence, it is reconstructed as the proto-sound \*/w/ for Proto-Luyia.

The voiced palatal approximant /j/ is exists in the dialects under study as shown in table 3.58.

**Table 3.58: Words with the voiced palatal approximant**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
---------	-----------	---------	----------	---------	----------	---------	-------

omwojo	omwojo	omwəjɔ	kumojɔ	omwəjɔ	-	omwojɔ	Heart
oxutuja	kɔduja	xukɔŋɣa	-	oxutuja	xutuja	oxutuja	To hit

**Source: Survey data (2020)**

The cognate sets in table 3.58 indicates that the voiced palatal approximant occurs in the word for ‘heart’ in Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga and Lusamia. It is also present in the word for ‘to hit’ in Lunyore, Lulogooli, Lunyala East, Luwanga, Lwidakho and Lusamia.

**Table 3.59: Sound correspondence set for /j/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-j-	-j-	-j-	-j-	-j-	-	-j-	*j
-j-	-j-	-j-	-	-j-	-j-	-j-	*j

**Source: Survey data (2020)**

The sound correspondence set in table 3.59 points out that the voiced palatal approximant /j/ is present in all the dialects under study in the word medial position. It appears in all the dialects under study and it is therefore reconstructed as the proto-sound \*/j/ of Proto-Luyia as guided by the majority principle.

### 3.3.6 Trills

Table 3.60 illustrates that the voiced alveolar trill /r/ is present in the dialects under study.

**Table 3.60: Words with the voiced alveolar trill**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
oxupara	-	xupara	xupara	oxupara	xupara	oxupara	To think
oxuria	-	xuria	xuria	oxuria	xuria	-	To fear
-	risu	-	-	-	-	-	Hair

**Source: Survey data (2020)**

The cognate sets presented in table 3.60 indicate that the voiced alveolar trill occurs in the words for ‘to think’ in Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia. The sound is also present in the word for ‘to fear’ in Lunyore, Lunyala East, Lubukusu, Luwanga and Lwidakho. In addition, it also occurs in the word for ‘hair’ in Lulogooli.

**Table 3.61: Sound correspondence set for /r/ and reconstructed proto-form**

Lunyore	Lulogoli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-r-	-	-r-	-r-	-r-	-r-	-r-	*r

-r-	-	-r-	-r-	-r-	-r-	-	*r
-	r-	-	-	-	-	-	

**Source: Survey data (2020)**

The sound correspondence sets displayed in table 3.61 indicate that the voiced alveolar trill /r/ exists in all the dialects of Luyia under in the word initial position and the word medial position. The majority principle is applicable in this case since the phoneme is available in all the dialects under study and hence the phoneme is reconstructed into the phonemic inventory of Proto-Luyia as the proto-sound \*/r/.

### 3.3.7 Flaps

The voiced alveolar flap /r/ exists in the dialects of Luyia as shown in table 3.62.

**Table 3.62: Words with the voiced alveolar flap**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
erino	-	erino	erino	erino	rino	erino	Tooth
oruβaha	urobaha	-	ruβaa	-	riβaha	oruβaha	Wing
omusara	omusara	omusara	-	-	musara	omusara	Tree

**Source: Survey data (2020)**

The cognate sets in table 3.62 indicates that the voiced alveolar flap is present in the word for ‘tooth’ in Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia. It also occurs in the word for ‘wing’ in Lunyore, Lulogooli, Lubukusu, Lwidakho and Lusamia. Additionally, it occurs in the word for ‘tree’ in Lunyore, Lulogooli, Lunyala, Lwidakho and Lusamia.

**Table 3.63: Sound correspondence set for /r/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-r-	-	-r-	-r-	-r-	r-	-r-	*r
-r-	-r	-	r-	-	r-	-r-	*r
-r-	-r-	-r-	-	-	-r-	-r-	*r

**Source: Survey data (2020)**

The sound correspondence sets displayed in table 3.63 point out that the voiced alveolar flap is present in all the dialects under study in the word initial and word final position. The phoneme is reconstructed as the proto-sound \*/r/ for proto-Luyia as it exists in all the dialects of Luyia under study thus meeting the requirement for reconstruction provided by the comparative method.



### 3.3.8 Laterals

The voiced alveolar lateral approximant /l/ is present in the Luyia as shown in the table 3.64.

**Table 3.64: Words with the voiced alveolar lateral approximant**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
-	-	-	-	oxuβala	-	-	To count
-	-	-	-	oβulai	-	-	Good

Source: Survey data (2020)

Table 3.64 shows that the voiced alveolar lateral approximant is present in the word for ‘to count’ and ‘good’ in Luwanga. It is, however, absent in all the other dialects of Luyia.

**Table 3.65: Sound correspondence set for /l/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-	-	-	-	-l-	-	-	*nil
-	-	-	-	-l-	-	-	*nil

Source: Survey data (2020)

The sound correspondence set highlighted in table 3.65 shows that the voiced alveolar lateral approximant only occurs in Luwanga but is absent in all the other dialects under study. Basing on the majority principle, it cannot be reconstructed into a proto-sound for Luyia since it occurs in a minority of the dialects of Luyia under study.

### 3.3.9 Pre-nasalized consonants sounds

Table 3.66 illustrates that the pre-nasalized voiced bilabial stop (plosive) /mb/ exists in the Luyia dialects.

**Table 3.66: Words with the voiced pre-nasalized bilabial stop (plosive)**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
esikumba	ɣikumba	eʃikumba	sikumba	eʃikumba	ʃikumba	esikuma	Bone
oxusamba	kʊsamba	xusamba	xusamba	oxusamba	xusamba	oxusamba	To burn
imbwa	imbwa	embwa	embwa	imbwa	isimbwa	embwa	Dog
oxwemba	kwimba	xwimba	xwimba	oxwimba	xwimba	oxwimba	To sing

Source: Survey data (2020)

The cognate sets demonstrated in table 3.66 reveal that pre-nasalized voiced bilabial stop /mb/ is present in the words for ‘bone’, ‘to burn’, ‘dog’ and ‘to sing’ in Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

**Table 3.67: Sound correspondence set for /mb/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-mb-	-mb-	-mb-	-mb-	-mb-	-mb-	-mb-	<b>*mb</b>
-mb-	-mb-	-mb-	-mb-	-mb-	-mb-	-mb-	<b>*mb</b>
-mb-	-mb-	-mb-	-mb-	-mb-	-mb-	-mb-	<b>*mb</b>
-mb-	-mb-	-mb-	-mb-	-mb-	-mb-	-mb-	<b>*mb</b>

**Source: Survey data (2020)**

The sound correspondence displayed in table 3.67 points out that the pre-nasalized consonant sound /mb/ is present in all the dialects under study in the word medial position. Basing on the majority principle, the sound appears in all the dialects under study and thus meets the criteria for reconstruction into the proto-sound \*/mb/ for Proto-Luyia.

The pre-nasalized voiced alveolar stop (plosive) /nd/ occurs in the dialects under study as illustrated by table 3.68.

**Table 3.68: Words with the voiced pre-nasalized alveolar stop (plosive)**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
omundu	omundu	omundu	omundu	omundu	mundu	omundu	Person
nende	nindi	nende	nende	nende	nende	nende	And
ritunda	ritunda	etunda	ritunda	ritunda	ritunda	ritunda	Fruit
esindi	kindi	eindi	vindi	eshindi	ʃindefo	esindi	Other

**Source: Survey data (2020)**

The cognate sets displayed in table 3.68 show the prenasalized voiced alveolar stop /nd/ is present in the word for ‘person’, ‘and’, fruit’ and ‘other’ in Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

**Table 3.69: Sound correspondence set for /nd/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-nd-	-nd-	-nd-	-nd-	-nd-	-nd-	-nd-	<b>*nd</b>
-nd-	-nd-	-nd-	-nd-	-nd-	-nd-	-nd-	<b>*nd</b>

-nd-	-nd-	-nd-	-nd-	-nd-	-nd-	-nd-	<b>*nd</b>
-nd-	-nd-	-nd-	-nd-	-nd-	-nd-	-nd-	<b>*nd</b>

**Source: Survey data (2020)**

The pre-nasalized consonant /nd/ is present in the word medial position in all the dialects under study as indicated by the sound correspondence sets in table 3.69. The phoneme qualifies for reconstruction into the phonemic inventory of Proto-Luyia as the proto-sound \*/nd/ as it appears in all the dialects under study as required by the majority principle.

The voiced pre-nasalized alveolar fricative /nz/ is also present in the dialects under study as captured by table 3.70.

**Table 3.70: Words with the pre-nasalized alveolar fricative**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
-	epanza	epanza	-	ipanza	ipanza	-	Lake

**Source: Survey data (2020)**

The pre-nasalized consonant sound /nz/ occurs in the word for ‘lake’ in Lulogooli, Lunyala East, Luwanga and Lwidakho as indicated by the cognate set in table 3.70. However, it is absent in Lulogooli, Lubukusu and Lusamia.

**Table 3.71: Sound correspondence set for /nz/ and reconstructed proto-form**

Lunyore	Lulogoli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	<b>*PLF</b>
-	-nz-	-nz-	-	-nz-	-nz-	-	<b>*nz</b>

**Source: Survey data (2020)**

The sound correspondence set in table 3.71 shows that the voiced pre-nasalized alveolar fricative /nz/ occurs in Lulogooli, Lunyala East, Luwanga and Lwidakho in the word medial position. The four dialects constitute a greater number out of the dialects under study and hence, the phoneme is reconstructed into the Proto-sound \*nz for Proto-Luyia as guided by the majority principle.

The voiced pre-nasalized palatal stop (plosive) /ɲʃ/ occurs in the dialects under study as shown in table 3.72.

**Table 3.72: Words with the voiced pre-nasalized palatal stop (plosive)**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
esireɲʃe	-	-	-	eʃireɲʃe	ʃireɲʃe	-	Leg
ipɲɔɲʃa	-	-	epɲɔɲʃa	-	-	ipɲɔɲʃa	Lake

**Source: Survey data (2020)**

The pre-nasalized consonant /ɲʃ/ occurs in the word for ‘leg’ in Lunyore, Luwanga and Lwidakho as displayed in the cognate sets in table 3.72. It also occurs in the word for ‘lake’ in Lunyore, Lubukusu and Lusamia as shown.

**Table 3.73: Sound correspondence set for /ɲʃ/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-ɲʃ-	-	-	-	-ɲʃ-	-ɲʃ-	-	
-ɲʃ-	-	-	-ɲʃ-	-	-	-ɲʃ-	* ɲʃ

Source: Survey data (2020)

The sound correspondence sets captured in table 3.73 shows that the voiced pre-nasalized palatal stop is present in the word medial position in Lunyore, Lubukusu, Luwanga, Lwidakho and Lusamia. These five dialects constitute a majority of the dialects under study and hence, the phoneme meets threshold provided by the majority principle to be reconstructed into the proto-sound \*/ɲʃ/ for Proto-Luyia.

The voiced pre-nasalized velar fricative /ŋɣ/ is present in the dialects under study as highlighted in table 3.74.

**Table 3.74: Words with the voiced pre-nasalized velar fricative**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
omukonɣɔ	omuyonɣo	omukonɣɔ	kumukonɣɔ	omukonɣɔ	mukonɣo	omukonɣɔ	Back
oxupanɣusa	kubanɣosa	xupanɣyusa	xupanɣyusia	oxupanɣyusia	xupanɣyusa	oxupanɣyusia	Wipe

Source: Survey data (2020)

The cognate sets exhibited in table 3.74 points out that the voiced pre-nasalized velar fricative is present in the words for ‘black’ and ‘wipe’ in Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

**Table 3.75: Sound correspondence set for /ŋɣ/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-ŋɣ-	-ŋɣ-	-ŋɣ-	-ŋɣ-	-ŋɣ-	-ŋɣ-	-ŋɣ-	*ŋɣ
-ŋɣ-	-ŋɣ-	-ŋɣ-	-ŋɣ-	-ŋɣ-	-ŋɣ-	-ŋɣ-	*ŋɣ

Source: Survey data (2020)

The sound correspondence sets displayed in table 3.75 indicates that the voiced pre-nasalized velar fricative /ŋɣ/ is occurring in all the dialects under study in the word medial position. The phoneme

appears in all the dialects under study and hence meets the criteria for reconstruction into the phonemic inventory of Proto-Luyia as the proto-sound \*/ɨy/ as guided by the majority principle.

### 3.3.10 Front vowels

The close front unrounded vowel /i/ is present in the dialects under study as captured in table 3.76.

**Table 3.76: Words with the close front unrounded vowel**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
imbi	kɪvi	embi	ɾiβi	eʃiβii	ʃipi	esiβii	Bad
sikira	ʃɪyira	ʃikira	sikira	ʃiʃira	ʃitsira	sikira	Because
omusira	omukira	omuxira	kumuhiŋga	omuʃira	muʃira	omuxiŋya	Tail

Source: Survey data (2020)

The cognate sets shown in table 3.76 point out that the unrounded close front vowel is present in the words for ‘bad,’ ‘because’ and ‘tail’ in Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

**Table 3.77: Sound correspondence set for /i/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-i	-i	-i	-i	-i	-i	-i	*i
-i-	-i	-i-	-i-	-i-	-i-	-i-	*i
-i-	-i-	-i-	-i-	-i-	-i-	-i-	*i

Source: Survey data (2020)

The front vowel /i/ is present in all the dialects under study in the word medial and word final position as indicated by the sound correspondence sets in table 3.77. Guided by the majority principle, the phoneme is therefore reconstructed into the phonemic inventory of Proto-Luyia as the proto-sound \*/i/ since it exists in all the dialects of Luyia under study.

The near-close near-front unrounded vowel /ɨ/ exists in the inventory of the dialects under study as indicated in table 3.78.

**Table 3.78: Words with the near-close near-front unrounded vowel /ɨ/**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
-	ɪnzi	-	-	-	ɪnzi	-	I
-	ɪɾiŋɔɾɪ	-	-	-	ɾiŋɔɾɪ	-	Bird
-	ɪsuze	-	-	-	ɪsutse	-	Fish

**Source: Survey data (2020)**

The cognate set highlighted in table 3.78 indicates that the near-close near-front unrounded vowel /ɪ/ exists in the word for ‘I’, ‘bird’ and ‘fish’ in Lulogooli and Lwidakho. However, it is absent in all the other dialects under study.

**Table 3.79: Sound correspondence set for /ɪ/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-	ɪ-	-	-	-	ɪ-	-	*nil
-	ɪ-	-	-	-	-ɪ-	-	*nil
-	ɪ-	-	-	-	ɪ-	-	*nil

**Source: Survey data (2020)**

The sound correspondence set displayed in table 3.79 indicates that the vowel sound /ɪ/ is present in the word initial and medial position in Lulogooli and Lwidakho only. However, it is missing out in all the other five dialects under study. The phoneme occurs in a minority of the dialects under study and therefore does not qualify to be reconstructed into the sound system of Proto-Luyia as guided by the majority principle.

Table 3.80 indicates that the close-mid front unrounded vowel /e/ occurs in the dialects of Luyia under study.

**Table 3.80: Words with the close-mid front unrounded vowel**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
omwesi	omweri	omwesi	kumwesi	omwesi	mwerɪ	omwesi	Moon
ahare	ehare	ararei	-	ehare	ihare	ejare	Far
Kane	vinne	βinne	ʃine	βine	βinne	chinee	Four

**Source: Survey data (2020)**

The cognate sets reflected in table 3.80 points out that the close-mid front unrounded vowel /e/ exists in the words for ‘moon’ and ‘four’ in all the dialects under study. It also occurs in the word for ‘far’ in all the dialects under study with the exception of Lubukusu.

**Table 3.81: Sound correspondence set for /e/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-e-	-e-	-e-	-e-	-e-	-e-	-e-	*e
-e	-e	-e	-	-e	-e	-e	*e

-e	-e	-e	-e	-e	-e	-e	*e
----	----	----	----	----	----	----	----

**Source: Survey data (2020)**

The front vowel sound /e/ occurs in all the dialects under study as shown in the sound correspondence sets in table 3.81. The phoneme is reconstructed as the proto-sound \*/e/ for Proto-Luyia as it meets the criteria provided by the majority principle to warrant reconstruction.

The open-mid near-front unrounded vowel /ɛ/ is present in the dialects under study as indicated in table 3.82

**Table 3.82: Words with the open-mid near-front unrounded vowel**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
rikoxɛ	-	ekoxɛ	rikoxɛ	-	-	rikoxɛ	Ashes
hena	-	hena	waɛna	hena	hena	hena	Where
ijɛrere	-	ɛjɛrere	-	oβujɛrere	ijɛrere	esiɛrere	Narrow

**Source: Survey data (2020)**

The cognate sets captured in table 3.82 indicates that the phoneme /ɛ/ is present in the word for ‘ashes’ in Lunyore, Lunyala, Lubukusu and Lusamia. It also occurs in the word for ‘where’ in Lunyore, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia. Additionally, it also occurs in the word for ‘narrow’ in Lunyore, Lunyala East, Luwanga, Lwidakho and Lusamia.

**Table 3.83: Sound correspondence set for /ɛ/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-ɛ	-	-ɛ	-ɛ	-	-	-ɛ	*ɛ
-ɛ-	-	-ɛ-	-ɛ-	-ɛ-	-ɛ-	-ɛ-	*ɛ
-ɛ-	-	-ɛ-	-	-ɛ-	-ɛ-	-ɛ-	*ɛ

**Source: Survey data (2020)**

The sound correspondence sets highlighted in table 3.83 reveals that the front vowel sound /ɛ/ is present in all the dialects under study with the exception of Lulogooli. It occurs in a greater number of dialects under study in the word medial position and hence is reconstructed to the proto-sound \*/ɛ/ for Proto-Luyia as guided by the majority principle.

The front open unrounded vowel /a/ is also present in the phonemic inventory of the dialects of under study as indicated by table 3.84.

**Table 3.84: Words with the open central unrounded vowel**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
rina	rina	rina	rina	rina	rina	rina	When
omuxasi	mokari	muxasi	omuxasi	omuxasi	muxari	omuxasi	Woman
oxumina	kõmina	xumina	xumina	oxufiɲa	xumina	oxufiɲa	To squeeze

**Source: Survey data (2020)**

The cognate sets evident in table 3.84 reveal that the open front unrounded vowel /a/ occurs in the words for ‘when’, ‘woman’ and ‘to squeeze’ in Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

**Table 3.85: Sound correspondence set for /a/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-a	-a	-a	-a	-a	-a	-a	*a
-a-	-a-	-a-	-a-	-a-	-a-	-a-	*a
-a-	-a	-a	-a	-a	-a	-a	*a

**Source: Survey data (2020)**

The sound correspondence sets captured in table 3.85 indicates that the phoneme /a/ exists in all the dialects under study. Basing on the majority principle, it is therefore reconstructed to the phonemic inventory of Proto-Luyia as it appears in all the dialects and thus, it meets the threshold for reconstruction provided by the majority principle.

### 3.3.11 Back vowels

Evidence presented in table 3.86 indicate that the close back rounded vowel /u/ occurs in the dialects under study.

**Table 3.86: Words with the close back rounded vowel**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
omusi	omuri	omusii	kumusi	omusi	muri	omusii	Root
esikumba	ɣikumba	efikumba	sikumba	efikumba	ʃikumba	esikuma	Bone
etʃumbi	edʒumbi	etʃumbi	etʃumbi	itʃumbi	itʃumbi	etʃumbi	Salt

**Source: Survey data (2020)**

The cognate sets presented in table 3.86 show that the close back rounded vowel /u/ exists in the words for ‘root’, ‘bone’ and ‘salt’ in Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.



**Table 3.87: Sound correspondence set for /u/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-u-	-u-	-u-	-u-	-u-	-u-	-u-	*u
-u-	-u-	-u-	-u-	-u-	-u-	-u-	*u
-u-	-u-	-u-	-u-	-u-	-u-	-u-	*u

Source: Survey data (2020)

The sound correspondence set displayed in table 3.87 shows that the back vowel sound /u/ is present in all the dialects under study. The phoneme exists in all the dialects of Luyia under study hence, it is reconstructed into the phonemic inventory of Proto-Luyia as guided by the majority principle.

The near-close near-back rounded vowel /ʊ/ occurs in the dialects under study as evident in table 3.88.

**Table 3.88: Words with the near-close near-back rounded vowel**

Lunyor	Lulogool	Lunyal	Lubukus	Luwang	Lwidakh	Lusami	Gloss
e	i	a	u	a	o	a	
-	mokari	-	-	-	-	-	Woman
-	γογο	-	-	-	-	-	Grandmother
-	urobaha	-	-	-	-	-	Wing

Source: Survey data (2020)

Table 3.88 indicates that the near-close near-back unrounded vowel /ʊ/ occurs in the words for ‘woman’, ‘grandmother’ and ‘wing’ in Lulogooli alone. It is, however, absent in all the other dialects under study.

**Table 3.89: Sound correspondence set for /ʊ/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-	-ʊ-	-	-	-	-	-	*nil
-	-ʊ-	-	-	-	-	-	*nil
-	-ʊ	-	-	-	-	-	*nil

Source: Survey data (2020)

Table 3.89 indicates that the back vowel /ʊ/ only occurs in Lulogooli but is missing out in all the other dialects. The phoneme is present in a minority of the dialects under study and hence does not

meet the criteria prescribed by the majority principle to warrant its reconstruction into the phonemic inventory of Proto-Luyia.

The close-mid back rounded vowel /o/ occurs in the dialects under study as indicated in table 3.90.

**Table 3.90: Words with the close-mid back rounded vowel**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
oxurora	korora	xurora	xuβona	oxulola	xurora	oxuβona	To see
βoosi	voosi	βoosi	βoosi	βoosi	βoosi	βoosi	All
amoru	moru	amoru	kamoru	amolu	moru	amoru	Nose

Source: Survey data (2020)

The cognate sets highlighted in table 3.90 points out that the back vowel /o/ occurs in the words for ‘to see’, ‘all’ and ‘nose’ in Lunyore, Lulogooli, Lunyala East, Lubukusu, Lwidakho and Lusamia.

**Table 3.91: Sound correspondence set for /o/ and reconstructed proto-form**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-o-	-o-	-o-	-o-	-o-	-o-	-o-	* <b>o</b>
-o-	-o-	-o-	-o-	-o-	-o-	-o-	* <b>o</b>
-o-	-o-	-o-	-o-	-o-	-o-	-o-	* <b>o</b>

Source: Survey data (2020)

The sound correspondence set captured in table 3.91 indicates that the sound /o/ exists in all the dialects of Luyia under study in the word medial position. Therefore, the phoneme is reconstructed into the proto-sound \*/o/ for Proto-Luyia under the guidance of the majority principle.

The open-mid back rounded vowel /ɔ/ exists in the dialects of Luyia under study as captured in table 3.92.

**Table 3.92: Words with the open-mid back rounded vowel**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
xɔtʃa	xoza	xɔtʃa	xɔtʃa	xɔtsa	xotsa	xɔtʃa	Uncle
oxukɔna	koyona	xukɔna	xukɔna	oxukɔna	xukona	oxukɔna	To sleep
rikɔsi	iriyoti	ekɔsi	rikɔsi	rikɔsi	rɪŋori	ekɔsi	Neck

Source: Survey data (2020)

The cognate sets displayed in table 3.92 show that the back vowel sound /ɔ/ occurs in the words for ‘uncle’, ‘to sleep’ and ‘neck’ as in Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

**Table 3.93: Sound correspondence set for /ɔ/ and reconstructed protoform**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	*PLF
-ɔ-	-	-ɔ-	-ɔ-	-ɔ-	-	-ɔ-	*ɔ
-ɔ-	-	-ɔ-	-ɔ-	-ɔ-	-	-ɔ-	*ɔ
-ɔ-	-	-ɔ-	-ɔ-	-ɔ-	-	-ɔ-	*ɔ

**Source: Survey data (2020)**

Table 3.93 shows that the open-mid back rounded vowel is present in all the dialects under study with the exception of Lulogooli and Lwidakho. The sound qualifies for reconstruction into the proto-sound \*/ɔ/ for Proto-Luyia since it is present in a greater number of dialects under study as required by the majority principle.

### 3.4 Proto-Luyia phonemes

This section presents the consonant and vowel phonemes of Proto-Luyia that were reconstructed through the comparative method.

#### 3.4.1 Consonant Sounds

The phonemic inventory of the reconstructed Proto-Luyia consists of twenty-three consonant sounds. These consist of eighteen pure consonants and five prenasalized consonants. Proto-Luyia had four nasal sounds. These nasals included: /m/, /n/, /ɲ/ and /ŋ/. Besides the nasals, Proto-Luyia had three stops (plosives) which were /p/, /t/ and /k/. These stops were primarily voiceless. The phoneme /tʃ/ was the only affricate in proto-Luyia. Other than that, the fricatives of proto-Luyia were /β/, /f/, /s/, /x/ and /h/. With the exception of the voiced bilabial fricative /β/, the rest of the fricatives were voiceless. In addition, proto-Luyia had only two approximants: /w/ and /j/, one trill /r/ and a flap /ɾ/. Lastly, proto-Luyia had five pre-nasalized stops. They included: /mb/, /nd/, /nz/, /ɲɲ/ and /ŋɲ/. Table 3.94 captures a summary of the reconstructed consonant phonemes of proto-Luyia.

**Table 3.94: Summary of the reconstructed consonant sounds of Proto-Luyia**

	Bilabial	Labio-dental	Alveolar	Palato-Alveolar	Palatal	Velar	Glottal

<b>Nasals</b>	m		n		ɲ	ŋ	
<b>Plosives</b>	p		t			k	
<b>Affricates</b>				tʃ			
<b>Fricatives</b>	β	f	s	ʃ		x	h
<b>Glides</b>	w				j		
<b>Trills</b>			r				
<b>Flaps</b>			ɾ				
<b>Laterals</b>							
<b>Pre-nasalized Consonants</b>	mb		nd nz		ɲʃ	ŋɣ	

Source: Survey data (2020)

### 3.4.2 Vowel sounds

The reconstructed Proto-Luyia has seven vowel sounds. The high vowel /i/, mid vowels /e/ and /ɛ/ and the low vowel /a/ constitute the front vowels of proto-Luyia. The back vowels of Proto-Luyia consisted of the high vowel /u/ and the mid vowels /o/ and /ɔ./ Table 3.95 highlights a summary of the reconstructed vowel phonemes of proto-Luyia.

**Table 3.95: Summary of the reconstructed vowel sounds of Proto-Luyia**

	Front	Back
<b>High</b>	i	u
<b>Mid</b>	e                                  ε	o                                  ɔ
<b>Low</b>	a	

Source: Survey data (2020)

### 3.5 Conclusion

The main goal of this chapter was to reconstruct the consonant and vowel phonemes of Proto-Luyia. This study used data of one hundred and fifty words from each of the seven dialects under study. These words consisted of basic core vocabulary provided by the Morris Swadesh list.

Cognate sets were identified from the basic vocabulary terminology from each of the dialects under study. From the cognates, sound correspondences were set-up. This was then followed by the reconstruction of the phonemes of Proto-Luyia. The reconstruction was guided by the majority principle. Finally, all the reconstructed Proto-Luyia phonemes were then highlighted and presented in tabular form.

## **CHAPTER 4**

### **SOUND CHANGE AND SOUND CHANGE PROCESSES**

#### **4.1 Introduction**

The previous chapter of this research undertook a systematic reconstruction of what may have been the consonant and vowel phonemes of Proto-Luyia. A comparative analysis of the reconstructed phonemes of Proto-Luyia and those of its seven daughter languages under study indicated so many retentions in their phonemic inventories. However, some innovations were also noted. This chapter aims to discuss the phonological retentions, phonological innovations and the phonological processes that may have motivated the sound changes in Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia from their parent language - Proto-Luyia language.

#### **4.2 Phonological retentions and innovations of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia**

According to Dimmendaal (2011:12) retentions reflect a more archaic stage in a language. Retentions constitute the features that were present in an original mother language and have been retained in the daughter languages as they develop over time. These features are historically predictable. On the other hand, innovations point to the new features that lacked in the parent language that have been adopted by daughter languages as a result of the linguistic changes they experience in the course of their development.

##### **4.2.1 Consonantal retentions and Innovations**

The phonemic inventory of Proto-Luyia boasted of twenty-three consonant sounds which consisted of both pure consonants and pre-nasalized consonant sound. The sound system of the dialects of Luyia under study each consists of between twenty-one and twenty-five sounds. This subsection discusses the retentions and innovations that have been observed in the consonantal phonemic inventory of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

###### **4.2.1.1 Nasals**

The nasal sounds: /m/, /n/, /ɲ/ and /ŋ/ present in Lunyore, Lulogooli, Lunyala, Lubukusu, Luwanga, Lwidakho and Lusamia as captured in table 4.1 are all retentions of Proto-Luyia language.

**Table 4.1: Nasals of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho, Lusamia and Proto-Luyia**

	<b>Bilabial</b>	<b>Alveolar</b>	<b>Palatal</b>	<b>Velar</b>
<b>Lunyore</b>	m	n	ɲ	ŋ
<b>Lulogooli</b>	m	n	ɲ	ŋ
<b>Lunyala</b>	m	n	ɲ	ŋ
<b>Lubukusu</b>	m	n	ɲ	ŋ
<b>Luwanga</b>	m	n	ɲ	ŋ
<b>Lwidakho</b>	m	n	ɲ	ŋ
<b>Lusamia</b>	m	n	ɲ	ŋ
<b>Proto-Luyia</b>	m	n	ɲ	ŋ

**Source: Survey data (2020)**

The nasal sounds (/m/, /n/, /ɲ/ and /ŋ/) were present in the phonemic inventory of Proto-Luyia language. These sounds were inherited by the daughter languages of Luyia during their development. Campbell (1998:108) states that languages and varieties of language are constantly undergoing changes. However, the linguistic changes that Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia underwent during their historical development did not affect their nasal sounds. Therefore, these sounds were retained in the dialects under study just as they were in Proto-Luyia language.

#### **4.2.1.2 Stops (Plosives)**

Lunyore, Lunyala East, Lubukusu, Luwanga and Lwidakho have three stop sounds in their inventory. These include: /p/, /t/ and /k/. Both Lulogooli and Lusamia have four stops each. The stops of Lulogooli are: /b/, /t/, /d/ and /k/. Those of Lusamia include: /p/, /t/, /d/ and /k/. The stops /p/, /t/ and /k/ are retentions of Proto-Luyia while /b/ and /d/ are innovations. Table 4.2 captures these stop sounds.

**Table 4.2: Stops of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho, Lusamia and Proto-Luyia**

	<b>Bilabial</b>		<b>Alveolar</b>		<b>Velar</b>
	<b>Voiced</b>	<b>Voiceless</b>	<b>Voiced</b>	<b>Voiceless</b>	
<b>Lunyore</b>	p	-	t	-	k
<b>Lulogooli</b>	-	b	t	d	k
<b>Lunyala East</b>	p	-	t	-	k

<b>Lubukusu</b>	p	-	t	-	k
<b>Luwanga</b>	p	-	t	-	k
<b>Lwidakho</b>	p	-	t	-	k
<b>Lusamia</b>	p	-	t	d	k
<b>Proto-Luyia</b>	p	-	t	-	k

**Source: Survey data (2020)**

The stops of Proto-Luyia consisted of the proto-sounds: \*/p/, \*/t/ and \*/k/. During their development, Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia inherited their stop sounds from Proto-Luyia. According to Campbell (1998:108), “dialects of the proto-language develop through linguistic changes in different regions where the language was spoken”. The stops of the dialects under study underwent linguistic changes during their development. The voiceless velar stop /k/ in all the dialects under study retained the archaic form of their parent language after undergoing language change. It remained unchanged in all the dialects. The voiceless alveolar stop /t/ was also remained unchanged in Lunyore, Lunyala East, Lubukusu, Luwanga and Lwidakho. However, in both Lulogooli and Lusamia, it underwent linguistic changes resulting in a split into two phonemes which were the archaic form /t/ and an innovation- the voiced alveolar stop /d/. The voiceless bilabial stop /p/ in Lunyore, Lunyala East, Lubukusu, Lwidakho and Lusamia retained the original form of their parent language after undergoing linguistic change. However, the sound /p/ in Lulogooli underwent linguistic changes to become a completely different segment- the voiced bilabial stop /b/.

#### **4.2.1.3 Affricates**

The affricates of Proto-Luyia consisted of the proto-sounds \*/ts/ and \*/tʃ/ as shown in table 4.3. Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia inherited these sound segments from their parent language. Later, these dialects underwent linguistic changes during their historical development and in the process, some of their affricates remained unchanged, some underwent some changes while others were completely lost from their phonemic inventory. The voiceless palato-alveolar affricate /tʃ/ was retained as it were in the original archaic form in all the dialects under study except for Lulogooli where it split resulting into an additional sound segment the voiced palato-alveolar affricate /dʒ/. The voiceless alveolar affricate /ts/ was retained in its original form in Lunyore, Lunyala East, Luwanga and Lwidakho. However, it was lost in Lulogooli, Lubukusu and Lusamia.



**Table 4.3: Affricates of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho, Lusamia and Proto-Luyia**

	Alveolar	Palato-Alveolar	
		Voiced	Voiceless
<b>Lunyore</b>	ts	tʃ	-
<b>Lulogooli</b>	-	tʃ	dʒ
<b>Lunyala East</b>	ts	tʃ	-
<b>Lubukusu</b>	-	tʃ	-
<b>Luwanga</b>	ts	tʃ	-
<b>Lwidakho</b>	ts	tʃ	-
<b>Lusamia</b>	-	tʃ	-
<b>Proto-Luyia</b>	ts	tʃ	-

Source: Survey data (2020)

#### 4.2.1.4 Fricatives

The fricatives of Proto-Luyia language consisted of the proto-sounds: \*/β/, \*/f/, \*/s/, \*/ʃ/, \*/x/ and \*/h/. Its daughter languages inherited all these sound segments from it. According to Campbell (1998: 108), languages are continuously encountering change. As Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia underwent historical development, they were subjected to linguistic changes in the various regions in which they were spoken. These experience resulted in some sound segments changing, some were completely lost, while others were unaffected by the changes that occurred as shown in table 4.4.

**Table 4.4: Fricatives of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho, Lusamia and Proto-Luyia**

	Bilabia l	Labio-dental		Alveolar		Palato- Alveola r	Velar		Glotta l
		voiced	Voice less	voiced	Voice less		voiced	Voice less	
<b>Lunyore</b>	β	f	-	s	-	-	x	-	h
<b>Lulogooli</b>	β	f	v	s	z	ʃ	x	ɣ	h
<b>Lunyala</b>	β	f	-	s	-	ʃ	x	-	h

<b>Lubukusu</b>	β	f	-	s	-	-	x	-	h
<b>Luwanga</b>	β	f	-	s	-	ʃ	x	-	h
<b>Lwidakho</b>	β	f	-	s	-	ʃ	x		h
<b>Lusamia</b>	β	f	-	s	-	-	x		h
<b>Proto-Luyia</b>	β	f	-	s	-	ʃ	x		h

Source: Survey data (2020)

The original forms of voiced bilabial fricative /β/ and the voiceless glottal fricative /h/ were retained in all the dialects of Luyia under study. The voiceless palato-alveolar fricative was also retained in Lulogooli, Lunyala East, Luwanga and Lwidakho. However, it was lost in Lunyore, Lubukusu and Lusamia. The voiceless labio-dental fricative /f/, the voiceless alveolar fricative /s/ and the voiceless velar fricative /x/ were also retained in all the dialects under study with the exception of Lulogooli. In Lulogooli, these sound segments were split up resulting in additional sounds in its phonemic inventory. These sounds include: the voiced labio-dental fricative /v/, the voiced alveolar fricative /z/ and the voiced velar fricative /ɣ/.

#### 4.2.1.5 Glides and Liquids

The voiced labio-velar approximant /w/, the voiced palatal approximant /j/, the voiced alveolar trill /r/ and the voiced alveolar flap /ɾ/ all occur in Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia. These phonemes were also present in the phonemic inventory of Proto-Luyia language as highlighted in table 4.5. However, the voiced alveolar lateral approximant /l/ only exists in the sound system of Luwanga and is an innovation within Proto-Luyia language. All the dialects under study inherited the sounds /w/, /j/, /r/ and /ɾ/ from their parent language-Proto-Luyia. During the development of the dialects under study, these sounds were unaffected by the linguistic changes that the dialects underwent and they thus retained their original archaic form.

**Table 4.5: Glides and Liquids of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho, Lusamia and Proto-Luyia**

	Labio-velar	Palatal	Alveolar		
			Trill	Flap	Lateral

<b>Lunyore</b>	w	j	r	ɾ	-
<b>Lulogooli</b>	w	j	r	ɾ	-
<b>Lunyala East</b>	w	j	r	ɾ	-
<b>Lubukusu</b>	w	j	r	ɾ	-
<b>Luwanga</b>	w	j	r	ɾ	l
<b>Lwidakho</b>	w	j	r	ɾ	-
<b>Lusamia</b>	w	j	r	ɾ	-
<b>Proto-Luyia</b>	w	j	r	ɾ	-

**Source: Survey data (2020)**

The voiced alveolar lateral approximant /l/ is only present in the phonemic inventory of Luwanga and absent in all the other dialects under study as displayed in table 4.5. The phoneme is an innovation within Proto-Luyia since it does not occur in the phonemic inventory of the protolanguage. In addition, neither does this lateral sound occur in the sound system of any of the other dialects of Luyia under study. It is most likely that Luwanga adopted the /l/ sound from the interaction with its neighboring speech communities. Abawanga speakers are neighbored to the North by the Ababukusu and Abanyala, to the South by the Abamarama, to the east and west by the Abatsotso and Amabarachi respectively and to the South West by the Luo. In my view, it is most likely that Luwanga borrowed the voiced alveolar lateral approximant into its phonemic inventory from their interaction with the speakers of Luo who neighbor them to the South West.

#### **4.2.1.9 Pre-nasalized consonants**

The pre-nasalized consonants of Proto Luyia consisted of the proto- sounds \*/mb/, \*/nd/, \*/nz/, \*/ɲɲ/ and \*/ŋɲ/. Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia inherited all these complex sound segments from their protolanguage.

**Table 4.6: Pre-nasalized consonants of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho, Lusamia and Proto-Luyia**

	<b>Bilabial</b>	<b>Alveolar</b>		<b>Palatal</b>	<b>Velar</b>
<b>Lunyore</b>	mb	nd	-	ɲɲ	ŋɲ
<b>Lulogooli</b>	mb	nd	nz	-	ŋɲ
<b>Lunyala</b>	mb	nd	nz	ɲɲ	ŋɲ
<b>Lubukusu</b>	mb	nd	-	ɲɲ	ŋɲ

<b>Luwanga</b>	mb	nd	nz	ɲʃ	ŋɣ
<b>Lwidakho</b>	mb	nd	nz	ɲʃ	ŋɣ
<b>Lusamia</b>	mb	nd	-	ɲʃ	ŋɣ
<b>Proto-Luyia</b>	mb	nd	nz	ɲʃ	ŋɣ

**Source: Survey data (2020)**

Campbell 1998:108 postulates that, “Dialects of the proto-language develop through linguistic changes in different regions where the language was spoken - all languages (and varieties of language) are constantly changing”. The dialects under study underwent linguistic changes during their historical development. During these changes, most of the pre-nasalized consonant sounds emerged unchanged while some were completely lost in the various dialects. All the pre-nasalized consonant sounds were retained in all the dialects under study, with the exception of the sound /nz/ which disappeared from the phonemic inventory of Lunyore, Lubukusu and Lusamia and the sound /ɲʃ / that was lost in Lulogooli as portrayed in table 4.6.

#### **4.2.2 Vowel retentions and innovations**

All the dialects of Luyia subscribe to the seven vowel system that characterizes majority of the Bantu languages. They adopted this system from Proto-Luyia language whose phonemic inventory consisted of the seven proto-sounds: \*/i/, \*/e/, \*/ɛ/, \*/a/, \*/u/, \*/o/, and \*/ɔ/. This subsection discusses the retentions and innovations that have been observed in the vowel phonemic inventory of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.

##### **4.2.2.1 Front vowels**

The front vowels of Proto Luyia language consisted of the proto-sounds: \*/i/, \*/e/, \*/ɛ/ and \*/a/. Lunyore, Lulogooli, Lunyala, Lubukusu, Luwanga, Lwidakho and Lusamia inherited these sounds from their parent language. In the course of their development, these dialects encountered linguistic changes which altered some of these sound segments, some were lost while others were unaffected. The front close-mid unrounded vowel /e/ and the front open unrounded vowel /a/ retained their original archaic form. The front close unrounded vowel /i/ was also retained in Lunyore, Lunyala East, Lubukusu, Luwanga and Lusamia as it were in Proto-Luyia. However, in Lulogooli and Lwidakho, its counterpart the near-front near-close unrounded vowel /ɪ/ was innovated as illustrated in table 4.7.

**Table 4.7: Front vowels of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho, Lusamia and Proto-Luyia**

	High		Mid		Low
<b>Lunyore</b>	i	-	e	ɛ	a
<b>Lulogooli</b>	i	ɪ	e	-	a
<b>Lunyala East</b>	i	-	e	ɛ	a
<b>Lubukusu</b>	i	-	e	ɛ	a
<b>Luwanga</b>	i	-	e	ɛ	a
<b>Lwidakho</b>	i	ɪ	e	ɛ	a
<b>Lusamia</b>	i	-	e	ɛ	a
<b>Proto-Luyia</b>	i	-	e	ɛ	a

Source: Survey data (2020)

The front open-mid unrounded vowel /ɛ/ was also retained its original archaic form in all the dialects of Luyia under study with the exception of Lulogooli where it was lost.

#### 4.2.2.2 Back vowels

The back vowels of Proto-Luyia included the proto-sounds: \*/u/, \*/o/ and \*/ɔ/. Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia inherited these sounds from Proto-Luyia. During the historical development of these dialects, they encountered some linguistic alterations that resulted in their loss of some sound segments, sound changes to some phonemes while others remained unaffected. The back close-mid rounded vowel /o/ remained unchanged and retained the original archaic form as it was adopted from proto-Luyia as indicated in table 4.8.

**Table 4.8: Back vowels of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho, Lusamia and Proto-Luyia**

	High		Mid	Low
<b>Lunyore</b>	u	-	o	ɔ
<b>Lulogooli</b>	u	ʊ	o	-
<b>Lunyala</b>	u	-	o	ɔ
<b>Lubukusu</b>	u	-	o	ɔ
<b>Luwanga</b>	u	-	o	ɔ
<b>Lwidakho</b>	u	-	o	-

<b>Lusamia</b>	u	-	o	ɔ
<b>Proto-Luyia</b>	u	-	o	ɔ

Source: Survey data (2020)

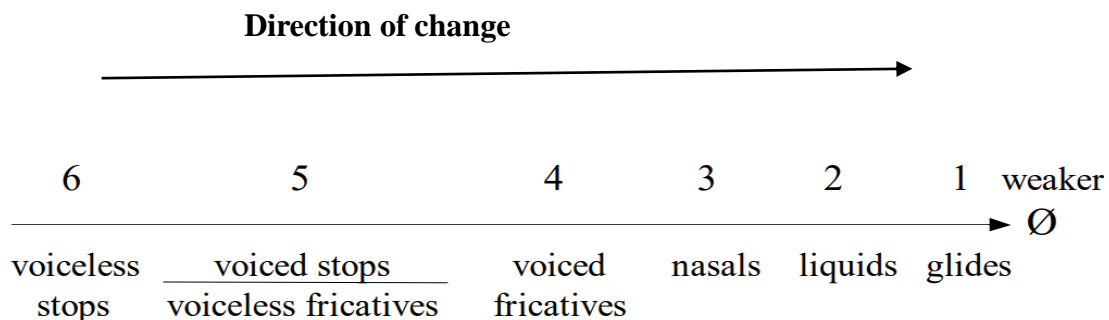
The back open-mid rounded vowel /ɔ/ was also retained in Lunyore, Lunyala East, Lubukusu, Luwanga and Lusamia as it were in Proto-Luyia.

### 4.3 Phonological processes

Change is a constant occurrence within languages. This section discusses some of the predominant sound change processes that occurred during the development of the dialects of Luyia into autonomous varieties from Proto-Luyia language.

#### 4.3.1 Lenition

The process of lenition is one of the main sources of sound change across many languages. Lenition alters consonant sounds. Dimmendaal (2011: 24) asserts that lenition is a form of consonantal weakening that is “well attested cross-linguistically as a “natural” sound change.” Lenition is one of the unconditioned sounds changes which according to Campbell (1998: 18), “modify the sound in all contexts in which it occurs, regardless of what other sounds may be found in words containing the changing sound, that is, the change happens irrespective of the phonological context in which the sound that changes may be found”. According to Trask (2000:190), any sound changes marked by a shift on the consonant strength scale from left to right may be considered as lenition as illustrated in diagram 4.1.



**Fig 4.1: Consonant strength scale showing lenition (Trask 2000:190)**

Lenition manifests itself in many ways. One way in which lenition occurs is through voicing of voiceless sound segments (Campbell 1998: 41). For instance, the voiceless alveolar stop /t/ present

in Proto-Luyia language underwent lenition during its historical development in Lulogooli and Lusamia to become the voiced alveolar stop /d/ as shown in (1) and (2):

(1) \*t > d Lulogooli

The voiceless alveolar stop \*/t/ inherited from Proto-Luyia underwent weakening in Lulogooli to become the voiced alveolar stop /d/. The sound segment shifted towards the right on the consonant strength scale displayed in figure 4.1 from the stronger stage 6 to the less strong stage 5.

(2) \*t > d Lusamia

Just like in (1) above, the voiceless alveolar stop \*/t/ inherited from Proto-Luyia underwent lenition in Lusamia to become the voiced alveolar stop /d/. The phoneme shifted towards the right on the consonant strength scale displayed in figure 4.1 from the stronger stage 6 to the less strong stage 5.

Additionally, the voiceless labio-dental fricative /f/ and the voiceless alveolar fricative /s/ in Proto-Luyia also underwent lenition in their historical development in Lulogooli to become the voiced labio-dental fricative /v/ and the voiced alveolar fricative /z/.

(3) \*f > v Lulogooli

The voiceless labio-dental fricative \*/f/ inherited from Proto-Luyia underwent weakening in Lulogooli to become the voiced labio-dental fricative /v/. The sound segment shifted towards the right on the consonant strength scale displayed in figure 4.1 from the stronger stage 5 to the less strong stage 4.

(4) \*s > z Lulogooli

The voiceless alveolar fricative \*/s/ adopted from Proto-Luyia underwent lenition in Lulogooli to become the voiced alveolar fricative /z/. The sound segment shifted rightwards on the consonant strength scale displayed in figure 4.1 from the stronger stage 5 sound to the less strong stage 4 sound.

Another way in which lenition occurs involves “a change in manner of articulation from total occlusion to friction, because the two articulators become separated; this, in turn may be followed

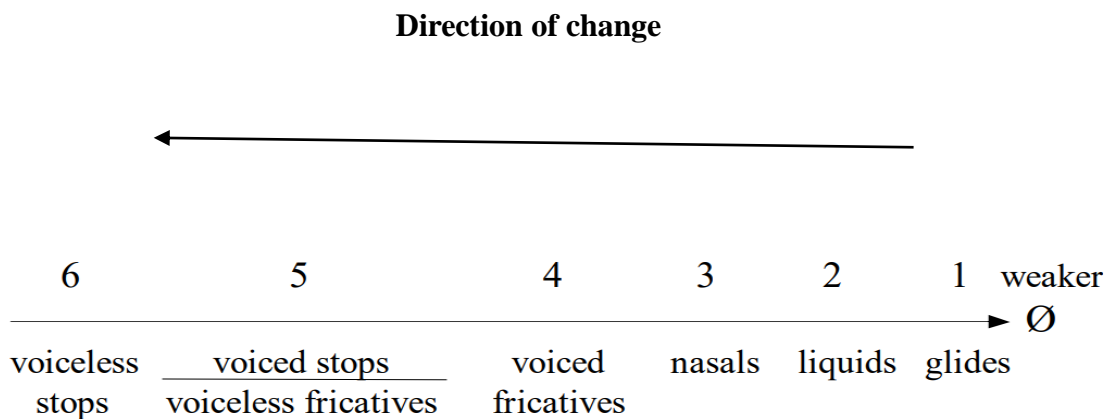
by further distancing between the two articulators” (Dimmendaal 2011: 24). Simply put, lenition may involve sound change from a stop to a fricative and even further to an approximant. The voiceless velar stop /k/ in Proto-Luyia underwent lenition during its historical development in Lulogooli to become the voiced velar fricative /ɣ/. It underwent weakening by having its manner of articulation change from total occlusion (stop) to friction (fricative).

(5) \*k >ɣ Lulogooli

The voiceless velar stop \*/k/ inherited from Proto-Luyia underwent weakening in Lulogooli to become the voiced velar fricative /ɣ/. The sound segment shifted towards the right on the consonant strength scale displayed in figure 4.1 from the stronger stage 6 segment to the less strong stage 4 segment.

### 4.3.2 Fortition

Fortition is yet another phonological process. Just like lenition, Fortition is also “widely attested cross-linguistically” (Dimmendaal 2011: 25) and is also unconditioned sound change. Whereas lenition involves consonantal weakening, Fortition deals with the reverse process. Dimmendaal (2011: 25) postulates that Fortition involves consonantal strengthening. Fortition involves the movement of sound segments leftwards on the consonant strength scale as shown in figure 4.2.



**Figure 4.2: Consonant strength scale showing fortition (Trask 2000: 190)**

Fortition may involve change in manner of articulation from friction to total occlusion. Fricatives change to stops. For instance, Proto-Luyia has the voiced bilabial fricative /β/. Its daughter



language Lulogooli lacks the voiced bilabial fricative but instead has the voiced bilabial stop /b/. Fortition process occurred where the weaker sound segment, the voiced bilabial fricative /β/, in Proto-Luyia underwent strengthening during its historical development in Lulogooli to become a stronger sound segment, the voiced bilabial stop.

(7) \*β > b Lulogooli

The voiced bilabial fricative \*/β/ inherited from Proto-Luyia underwent Fortition in Lulogooli to become the voiced bilabial stop /b/. The sound segment shifted leftwards on the consonant strength scale displayed in figure 4.2 from the weaker stage 4 sound to the stronger stage 5 sound.

#### **4.4 Conclusion**

This chapter undertook a comparative analysis of the consonant and vowel phonemes of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho, Lusamia and their protolanguage-Proto-Luyia in the various places and manner of articulations. For each position, the retentions of Proto-Luyia as well as the innovations within the phonemic inventory of Proto-Luyia were highlighted. This chapter went ahead to attempt to explain some sound change processes that may have motivated the sound changes in some of the dialects of Luyia under study from what was observed in the phonemic inventory of Proto-Luyia. This chapter established that lenition and fortition were predominate phonological process that necessitated the sound changes between Proto-Luyia language and its daughter languages under study.

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary of findings of this research on the reconstruction of proto-Luyia phonology. This chapter also provides concluding remarks and gives recommendations for further study.

#### **5.2 Summary of Findings**

The second chapter discussed the first objective of this research. This chapter endeavoured to investigate the phonological resemblance of the dialects of Luyia and their relatedness. The chapter probed into the phonemic inventory of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia dialects of Luyia. This analysis showed that the seven dialects under study had numerous similarities in terms of their phonemes. However, some variations in their phonemic inventory were also observed. It was noted that each of the seven dialects under study had both pure and pre-nasalized consonant sounds. The research observed that Lubukusu had the least number of consonant sounds at twenty-one. Both Lunyore and Lusamia had twenty-two consonant sounds each. Lunyala East and Lwidakho had had twenty-four consonant sounds each while Luwanga and Lulogooli had twenty-five consonants sounds each. This chapter also observed that all the seven dialects under study had a seven vowel system that characterizes many Bantu languages. This chapter arrived at the conclusion that a genetic relationship exists among Lunyore, Lulogooli, Lunyala, Lubukusu, Luwanga, Lwidakho and Lusamia. This conclusion was based on the fact that these seven dialects had numerous similarities in their phonemic inventory with only minimal variations here and there. These dialects had a shared ancestry having originated from a common parent language referred to as Proto-Luyia.

The third chapter covered the second objective of this research. This chapter sought to undertake a systematic reconstruction of the consonant and vowel phonemes of Proto-Luyia. This chapter employed the tenets and presuppositions of the comparative method to undertake a reconstruction of the phonemes of Proto-Luyia. The comparative method conceptual framework is always suitable in the reconstruction of proto-forms particularly in instances where distinct languages or varieties of languages show resemblance as a result of a shared parentage. Having been established that Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia are

descendants of a common parent language, the next step was to identify cognate sets. Cognate forms were collected from the one-hundred and fifty basic vocabulary terminologies that were collected from each of the dialects under the guidance of the Morris Swadesh list. Sound correspondences were then set-up from the cognate sets and organized into paradigms of phonetic and phonological similarity. The phonemes of Proto-Luyia were then reconstructed in the various positions aided by the majority principle. The phonemic inventory of the reconstructed Proto-Luyia comprised of twenty-four consonant sounds and seven vowel sounds. The twenty-four consonant sounds of Proto-Luyia language include: /m/, /n/, /ɲ/, /ŋ/, /p/, /t/, /k/, /β/, /f/, /s/, /ʃ/, /x/, /h/, /w/, /j/, /r/, /ɾ/, /mb/, /nd/, /nz/, /ɲʃ/ and /ŋɣ/. The seven vowels of Proto-Luyia language include: /i/, /e/, /ɛ/, /a/, /u/ /o/ and /ɔ/.

Chapter four discussed the third and fourth objective of this study. It set out to identify the retentions and innovations within the reconstructed Proto-Luyia phonemes by its daughter languages. This chapter undertook a comparative analysis of the consonant and vowel phonemes of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho, Lusamia and their protolanguage, i.e. Proto-Luyia in the various places and manner of articulations. For each of the positions, the retentions of Proto-Luyia as well as the innovations within Proto-Luyia were highlighted. It was observed that all the twenty-four consonant sounds and seven vowel sounds present in Proto-Luyia reconstructed from the seven dialects under investigation constituted the retentions. It was also observed that the innovations within Proto-Luyia included: the two stops /b/ and /d/; the affricate /dʒ/; the three fricatives /v/, /z/ and /ɣ/ and the lateral /l/. Among the vowel sounds, the innovations within the phonemic inventory of Proto-Luyia included: /ɪ/ and /ʊ/. This chapter also attempted to explain some sound change processes and rules that may have necessitated the sound changes noted in some of the dialects of Luyia under study from what was observed in the phonemic inventory of Proto-Luyia. The primary sound change processes established included: lenition which involved consonant sounds undergoing weakening and fortition which involved consonant sounds undergoing strengthening during their historical development.

### **5.3 Conclusion**

In conclusion, Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia are phonologically related. Having descended from the same parent language, they share so many similarities in their phonemic inventory. In addition, the comparative method and its

principles adequately aided the reconstruction of the consonant and vowel phonemes of Proto-Luyia language. Proto-Luyia is the parent language of the dialects of Luyia under study which had twenty-four consonant sounds and seven vowel sounds. Besides that, in the course of their historical development, some sound changes were observed in some of the dialects of Luyia under study. These changes were motivated by lenition and fortition processes. These phonological processes and rules necessitated the phonological innovations observed in some of the dialects of Luyia that were absent in Proto-Luyia.

#### **5.4 Recommendations for further study**

The main goal of this research was to reconstruct the consonant and vowel phonemes of Proto-Luyia. This research also set-out to identify the phonological processes and rules that may have motivated the variations noted in the seven dialects under study from what was observed in the phonemes of Proto-Luyia. This study recommends further research into the reconstruction of the phonology of Proto-Luyia with focus on the supra-segmental features and the changes that may have occurred between the protolanguage and its daughter languages spoken today. Even though phonology is at the centre stage of the comparative method, this study recommends further inquiry into the reconstruction of the morphology and syntax of Proto-Luyia. This study also recommends further study into the morphological restructuring, syntactic changes and semantic changes that may have occurred within Proto-Luyia and the dialects of Luyia spoken today.

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## APPENDICES

### APPENDIX I

**150 Basic vocabulary words of Lunyore, Lulogooli, Lunyala East, Lubukusu, Luwanga, Lwidakho and Lusamia.**

Lunyore	Lulogooli	Lunyala	Lubukusu	Luwanga	Lwidakho	Lusamia	Gloss
Biosi	Voosi	Boosi	Boosi	Boosi	Boosi	Boosi	All
Nende	Nindi	Nende	Nende	Nende	nende	Nende	And
Inyamanyama	Omunyama	Mnyama	Biayo	Isole	mnyama	Esisolo	Anima l
Likokhe	Eligoke	Ekokhe	Likokhe	Likoshe	Likoshe	Likokhe	Ashes
Omukongo	Omugongo	Omukongo	Kumukongo	Omukongo	mukongo	Omukongo	Back
Imbi	Kivi	Embi	Libi	Eshibii	shipi	Esibii	Bad
Sikila	Chigila	Shikira	Sikila	Shichila	Shitsila	Sikila	Because
Inda	Uluvumbo	Esombo	Lisombo	Olubombo	Shituli	Endaa	Belly
Esikali	Kenene	Engali	Sibofu	Eshikhongo	Shikali	Esikhongo	Big
Linyonyi	Ilinyonyi	Enyuni	Enyuni	Liyoni	Linyonyi	Elioni	Bird
Okhulumaka	Kilumi	Khuluma	Khuluma	Okhuluma	Khuluma	Okhuluma	To bite
Obumwamu	Kimwamu	Emali	Bumali	Eshimali	Bumwamu	Rateng	Black
Amatsai	Masai	Malasire	Kamafusi	Amalasire	Musayi	Amabanga	Blood
Esikumba	Gikumba	Eshikumba	Sikumba	Eshikumba	Shikumba	Esikumba	Bone
Okhuhelana	Kuhelana	Khuhera	Khuela	Okhuyela	Khwesela	okhuyela	To breathe

Okhusamba	Kusamba	Khusamba	Khusamba	Okhusamb a	Khusamb a	Okhusum ba	To burn
Omwana	Umwana	Omwana	Omwana	Omwana	Mwana	Omwana	Child
Elilumbesi	Lilesi	Lilesi	Kamalesi	Lilumbesi	Malesi	Amaresi	Cloud
Obunyifu	Kiziru	Emboo	Embeo	Omunyiri	Shinyifu	Emboo	Cold
Itsa	Kuza	Khwicha	Khwicha	Okhwitsa	Khwitsa	Okhwich a	To come
Okhubala	Kuvaliza	Khubala	Khubasia	Okhubala	Khubalits a	Okhubala	To count
Okhukhalaka	Kutema	Khukhalak a	Khukala	Okhukhala ka	Khukhala ka	Okhenga	To cut
Mmbasu	Mubasu	Msiteche	Kumusi	Eshitere	Mmbasu	Esidete	Day
Okhufwa	kukuza	Khufwa	Khufwa	Okufwa	Khukhuts a	Okhufwa	To die
Okhuyaba	Kulima	Khuyeba	khuyaba	Okhulima	Khuyeba	Okhulim a	To dig
Obuchafu	Kichafu	Uchafu	Buchafu	Esichafu	Buchafu	Obuchafu	Dirty
Imbwa	Imbwa	Embwa	Embwa	Imbwa	Isimbwa	Embwa	Dog
Okhunywa	Kunywa	Khunywa	Khunywa	Okhunywa	Khung'w a	Okhung' wa	To drink
Esiomu	Kisu	Enyomu	Enyomu	Eshiomu	Shiumu	Esiomu	Dry
Olukukhi	Uluguki	Lufuu	Lubumbi	Olufu	Lukushi	Olufuu	Dust
Esilifu	Kilitu	Esilifu	Sifuba	Shilifu	shiliru	Esilifu	Chest
Liloba	Lilova	Eloba	Liloba	Khwiloba	Liloba	Eloba	Earth
Okhulia	Kulia	Khulia	Khulia	Okhulia	Khulia	Okhulia	To eat
Libuyu	Rivuyu	Ebuyu	Liki	Libuyu	Libuyu	Ebuyu	Egg
Imoni	Emoni	Emoni	Emoni	Imoni	Imoni	Emoni	Eye
Okhukwa	Kingwiza	Khukwa	Khukwa	Okhukwa	Kukwa	Okhukwa	To fall
Ahale	Ehale	Alalei	Atayi	Ehale	Ihale	Eyale	Far
Amafura	Maguta	Mafucha	Kumunefu	Amafura	Makura	Amafura	Fat

Papa	Baba	Papa	Papa	Papa	Tata	Lata	Father
Okhuria	Kutia	Khuria	Khuria	Okhuria	Khuria	Okhutia	To fear
Okhulwana	Kulwana	Khupana	Khukhupana	Okhupana	Khukwana	Okhulwana	To fight
Omullo	Umulu	Mliro	Kumulilo	Omulilo	Mulilu	Omulilo	Fire
Isutse	Isunze	Eng'eni	Eng'eni	Inyeni	Isutse	Eng'eni	Fish
Kharano	Vitano	Chirano	Chirano	Tsirano	Biranu	Kitano	Five
Okhwelema	Kwelema	Khwelema	Khukelakela	Okhwerema	Kwelema	Okhubenga	To float
Liuwa	Eliawa	Ewuwa	Liuwa	Liuwa	Liawa	Eua	Flower
Okhupulukha	Kubuka	Khupulukha	Khupurukha	Okhupuruka	Khupulukha	Okhupulukha	To fly
Esilenje	Kerenge	Khukulu	Sikele	Eshilenje	Shilenje	Esipape	Foot
Kane	Vinne	Binne	Chine	Bine	Binne	Chinee	Four
Litunda	Litunda	Etunda	Litunda	Litunda	Litunda	Litunda	Fruit
Okhuhana	Kuhana	Khuhana	Khuhana	Okhuhana	Khuhana	Okhubelekania	To give
Obulai	Bulahi	Bulayi	Bulai	Obulai	Bulayi	Esilai	Good
Liswi	Risu	Ekhwiri	Lichune	Liswi	Liswi	Efwiri	Hair
Omukhono	Umukono	Omukhono	kumukhona	Omukhono	Mukhono	Omukhono	Hand
Omurwe	Mtwi	Omuchwe	Kumurwe	Omurwe	Omurwe	Omutwe	Head
Okhuhulla	Kuhula	Khuhulira	Khuulila	Okhuhulira	Khuhulila	Okhuulila	To hear
Omwoyo	Umwoyo	Omwoyo	Kumoyo	Omwoyo	Murima	Omwoyo	Heart
Obusiro	Kilito	Esicho	Lisiro	Eshisiro	Bulitoho	Esisito	Heavy
Hano	Yaha	Hano	Hano	Hano	Hanu	Ano	Here
Okhutuya	Kuduya	Khukonga	Khupa	Okhutuya	Khutuya	Okhutuya	To hit
Okhutula	Kugumila	Khutira	Khuamba	Okhutulila	Chimila	Okhudila	Hold

Mbwena	Ndi	Ache	Kariena	Karie	Andina	Mbwe	How
Okhuima	Kuhima	Khuyitsa	Khuaya	Okhuyima	Khuyitsa	Okhuima	To hunt
Omusatsa	Umusaza	Musakhulu	Omusakhulu	Omusatsa	Musakhu lu	Omusach a	Husband
Ise	Inzi	Ese	Ese	Esie	Inzi	Ese	I
Mukari	Mugati	Mkari	Mwi	Mukari	Yunu	Mukatii	In
Okhwira	Ukwita	Okhwicha	Khwira	Okhwira	Khwira	Okhuika	To kill
Okhumanya	Komanya	Khumanya	Khumanya	Okhumanya	Khumanya	Okhuman ya	Know
Inyanja	Enyanza	Enyanza	Enyanja	Inyanza	Inyanza	Inyanja	Lake
Okhutsekha	Koseka	Khuchekha	Khuchekha	Okutsekha	Khusekh a	Okhuche kha	To laugh
Lisafu	Elituu	Esafu	Lisafu	Lisafu	Lisambu	Esafu	Leaf
Esilenje	Kelenge	Okhukulu	Sikele	Eshilenje	Shilenje	Okhukul u	Leg
Okhumenya	Komenya	Khumenya	Khumenya	Okhumenya	Khumenya	Okhumen ya	To live
Omundu	Musaza	Musatsa	Omusecha	Omusatsa	Musatsa	Omusach a	Man
Ebinji	Vinyingi	Enyingi	Bikali	Ebinji	Binyishi	Abangi	Many
Inyama	Inyama	Enyama	Enyama	Inyama	Inyama	Enyama	Meat
Omwesi	Umweli	Omwesi	Kumwesi	Omwesi	Mweli	Omwesi	Moon
Mama	Mama	Mayi	Mayi	Mama	Mushiele	Mama	Mother
Esikulu	Ekigulu	Eshikulu	Sikulu	Eshikulu	Sikulu	Olukulu	Mountain
Omunwa	Umunywa	Munwa	Kumunwa	Omunwa	Munwa	Omwana	Mouth
Elira	lieta	Elicha	Lisina	Elira	Lira	Erita	Name

Inyelele	Keng'ele	Enyerere	Engau	Obunyerere	Inyelele	Esing'ere	Narrow
Ahembi	Ashimbi	Awambi	Haembi	Ahambi	Hayimbi	Ambii	Near
Likosi	Iligoti	Ekosi	Likosi	Likosi	Ling'ori	Ekosi	Neck
Obutukhu	Vudiku	Musiro	Silo	Eshilo	Butukhu	Esiroo	Night
Amolu	Moru	Amolu	Kamolu	Amolu	Molu	Amolu	Nose
Tawe	Dave	Tawe	Tawe	Tawe	Tawe	Haba	Not
Silala	Killa	Endala	Ndala	Shilala	Lulala	Ndala	One
Esindi	Kindi	Aiendi	Vindi	Eshindi	Shindi	Esindi	Other
Omundu	Umundu	Omundu	Omundu	Omundu	Mundu	Omundu	Person
Okhusina	Kukina	Khusola	Khwinyaa	Okhubaya	Khubaya	Okhubaya	To play
Okhukhwesa	Kung'usa	Khukhwesa	khukhwesa	Okhukhwesa	Khukwesa	Okhukwesa	To pull
Okhusukuma	Kusuguma	Khusukuma	Khusukuma	Okhulumuma	Khulumbuma	Okhusukuma	To push
Okhukwa	Kukuba	khukwa	Khukwa	Okhukwa	Khukuba	Okhukwa	To rain
Omulunji	Mulungi	Khulia	Kumusecha	Musatsa	Mulunji	Omulungi	Right
Omuchela	Kidaho	Omwalo	Luchi	Omwalo	Muchela	Omwalo	River
Omusi	Umuli	Omusii	Kumusi	Omusi	Muli	Omusii	Root
Omukoye	umugoye	Omukoye	Kumukoye	Omukoye	Mukoye	Omukoye	Rope
Echumbi	Ejumbi	Echumbi	Echumbi	Ichumbi	Ichumbi	Echumbi	Salt
Okhuboola	Okoboola	Khuola	Khuloma	Okhuboola	Khuvola	okhubola	To say
Okhweyaka	Kwiyaga	Khuyeka	Khwiyakala	Okhwiyakura	khuyeka	Okhweyakala	Scratch
Esitere	Kedete	Olwala	Lulwala	Olwala	Shitere	Enjala	Finger
Okhulola	Kolola	Khulola	Khubona	Okhulola	Khulola	Okhubona	To see

Obwimbikiti	Echimbi	Engutu	Enyimbi	Inyimbikiti	Shimbi	Esimbikit i	Short
Okhwemba	Kwimba	Khwimba	Khwimba	Okhwimba	Khwimba	Okhwim ba	To sing
Okhwikhala	Kwikala	Kwikhala	Khwikhala	Okhwikhala	Khwikhala	Okhuikha la	To sit
Okhukona	Kogona	Khukona	Khukona	Okhukona	Khukona	Okhukon a	To sleep
Ebititi	Kidii	Khatiti	Khatiti	Eshititi	Khati	Esididi	Small
Okhuhunyilia	Kuhunya	Khuunya	Khuunyila	Okhuhunya	Khuhunya	Okhuunya a	To smell
Omwosi	Omwozi	Elisi	Lisi	Omwosi	Mwoshi	Omwosi	Smoke
Injokha	Enzoka	Enjukha	Endemu	Inzokha	Inzukha	Enjukha	Snake
Okhufutsa	Kutunza	Khupasua	Khufucha	Okhufutsa	Khusutsa	Okhufuc ha	To spit
Okhumina	Kumiina	Khumina	khumina	Okhufiinya	Khumina	Okhufiny a	To squeeze
Okhusinjila	Kusingila	Khuema	Khwima	Okhusinjira	Khusinjila	Okhwem a	To stand
Ing'ining'ini	Engelosi	Eng'ining'ini	Eng'ienesi	Ing'ining'ini	Ing'ining'ini	Eng'inin g'ini	Star
Esisala	Kisaala	Shisala	Lusala	Olusala	Shisala	Olusala	Stick
Elichina	Eligina	Engina	Libale	Lichina	Lichina	Ekina	Stone
Bulunji	Bulungi	Bulunji	Engorofu	Shirunji	Bulunji	Bulunji	Straight
Okhununa	Kununa	Khununa	Khukhuna	Okhununa	Khununa	Okhunun a	To suck
Eliuba	Ommbasu	Omwumwi	Mumbasu	Eliuba	Liuba	Omubasu	Sun

Okhusimba	Kubiimba	Khubimba	Khuvimba	Okhufimba	Khubimba	Okhufwi	To swell
Omusila	Omukila	Omukhira	Kumuhinga	Omushila	Mushila	Omukhinga	Tail
Sila	Kila	Esio	Esio	Shilia	Yesho	Sila	That
Hala	Hala	Aho	Hao	Alia	Yabo	Ala	There
Obukhomefu	Kilito	shikhomefu	Habo	Eshisiro	Shibambukhu	sikhomefu	Thick
Okhupara	Nzinganagani	Khupara	Khupara	Okhupara	Shinyele	Okhupara	To think
Bitaru	Vvaga	Bitachu	Chitaru	Bitaru	Khupara	Kidatu	Three
Okhuboya	Kovoha	Khuboya	Khuboa	Okhuboya	Khuboha	Okhuboya	To tie
Olulimi	Ullimi	Olurimi	Lulimi	Olulimi	Lulimi	Olulimi	Tongue
Elino	Irinu	Elino	Elino	Elino	Lino	Elino	Tooth
Omusala	Omusala	Omusala	Kumuti	Omusala	Musala	Omusala	Tree
Chibili	Vvili	Bibili	Chibili	Bili	Bibili	Chibili	Two
Okhusala	Kuluka	Khulusa	Khusala	okhusala	Khusala	Okhusala	To vomit
Okhuchenda	Kugenda	Khukenda	Khukenda	Okhuchenda	Khuchenda	Okhuchenda	To walk
Okhusaaba	Kuoginza	Khubua	Khusinga	Okhwosia	Khwokitsa	Okhuosa	To wash
Amatsi	Amanzi	Amachi	Kamechi	Amatsi	Matsi	Amachi	Water
Ifwe	Kunyi	Efwe	Efwe	Efwe	Khutsi	Efwe	We
Obunyifu	Kinzilu	Enyifu	Bunyifu	Obunyifu	Khunyira	Obunyifu	Wet
Sina	Ki	Shina	Sina	Shina	Shina	Sina	What
Lina	Lina	Rina	Lina	Lina	Lina	Rina	When
Hena	Hai	Hena	Waena	Hena	Hena	Hena	Where

Indafu	Kilavu	Endafu	Ewanga	Obulafu	Shilabu	Rachari	White
Wina	Wina	Wina	Nanu	Wina	Vina	wina	Who
Omukhasi	Omukeele	Omukhasi	Omukhasi	Omukhasi	Mukhali	Omukhasi	Wife
Olubaha	Ulubaha	Ebaa	Lubaa	Olupapachilo	Libaha	Olubaha	Wing
Okhupangusa	Kubangusa	Khupangusa	Khupangusia	Okhupangusia	Khupangusa	Okupangusia	Wipe
Nende	Nive	Nende	Nende	Nende	Nende	Ndi	With
Omukhasi	Mukali	Mukhasi	Omukhasi	Omukhasi	Mukhali	Omukhasi	Woman
Khochha	Khoza	Khochha	Khochha	Khotsa	Khotsa	khochha	Uncle
kukhu	Gugu	kukhu	kukhu	kukhu	kukhu	Ngukhwa	Grand mother



## APPENDIX II

### Morris Swadesh list of fundamental vocabulary

	GLOSS	WORD	TRANSCRIPTION
1.	All		
2.	And		
3.	Animal		
4.	Ashes		
5.	At		
6.	Back		
7.	Bad		
8.	Bark (of a tree)		
9.	Because		
10.	Belly		
11.	Big		
12.	Bird		
13.	To bite		
14.	Black		
15.	Blood		
16.	To blow (Wind)		
17.	Bone		
18.	To breathe		
19.	To burn (Intransitive)		
20.	Child (young)		
21.	Cloud		
22.	Cold (Weather)		
23.	To come		
24.	To count		
25.	To cut		
26.	Day (Not night)		
27.	To die		
28.	To dig		
29.	Dirty		

30.	Dog		
31.	To drink		
32.	Dry (Substance)		
33.	Dull (Knife)		
34.	Dust		
35.	Year		
36.	Earth (Soil)		
37.	To eat		
38.	Egg		
39.	Eye		
40.	To fall (Drop)		
41.	Far		
42.	Fat (Substance)		
43.	Father		
44.	To fear		
45.	Feather (Large)		
46.	Few		
47.	To fight		
48.	Fire		
49.	Fish		
50.	Five		
51.	To float		
52.	To flow		
53.	Flower		
54.	To fly		
55.	Fog		
56.	Foot		
57.	Four		
58.	To freeze		
59.	Fruit		
60.	To give		
61.	Good		
62.	Grass		

63.	Green		
64.	Guts		
65.	Hair		
66.	Hand		
67.	He		
68.	Head		
69.	To hear		
70.	Heart		
71.	Heavy		
72.	Here		
73.	To hit		
74.	Hold (In hand)		
75.	How		
76.	To hunt (Game)		
77.	Husband		
78.	I		
79.	Ice		
80.	If		
81.	In		
82.	To kill		
83.	Know (Facts)		
84.	Lake		
85.	To laugh		
86.	Leaf		
87.	Left (Hand)		
88.	Leg		
89.	To lie (On side)		
90.	To live		
91.	Liver		
92.	Long		
93.	Louse		
94.	Man(Male)		
95.	Many		

96.	Meat (Flesh)		
97.	Moon		
98.	Mother		
99.	Mountain		
100.	Mouth		
101.	Name		
102.	Narrow		
103.	Near		
104.	Neck		
105.	New		
106.	Night		
107.	Nose		
108.	Not		
109.	Old		
110.	One		
111.	Other		
112.	Person		
113.	To play		
114.	To pull		
115.	To push		
116.	To rain		
117.	Red		
118.	Right (Correct)		
119.	Right (Hand)		
120.	River		
121.	Road		
122.	Root		
123.	Rope		
124.	Rotten (Log)		
125.	Rub		
126.	Salt		
127.	To say		
128.	Scratch (Itch)		

129.	Sea (Ocean)		
130.	To see		
131.	Seed		
132.	To sew		
133.	Sharp (Knife)		
134.	Short		
135.	To sing		
136.	To sit		
137.	Skin (of person)		
138.	Sky		
139.	To sleep		
140.	Small		
141.	To smell (perceive odor)		
142.	Smoke		
143.	Smooth		
144.	Snake		
145.	Snow		
146.	Some		
147.	To spit		
148.	To split		
149.	To squeeze		
150.	To stab ( or stick)		
151.	To stand		
152.	Star		
153.	Stick ( of wood)		
154.	Stone		
155.	Straight		
156.	To suck		
157.	Sun		
158.	To swell		
159.	To swim		
160.	Tail		
161.	That		

162.	There		
163.	They		
164.	Thick		
165.	Thin		
166.	To think		
167.	This		
168.	Thou/You		
169.	Three		
170.	Throw		
171.	To tie		
172.	Tongue		
173.	Tooth (Front)		
174.	Tree		
175.	To turn (Veer)		
176.	Two		
177.	To vomit		
178.	To walk		
179.	Warm (Weather)		
180.	To wash		
181.	Water		
182.	We		
183.	Wet		
184.	What		
185.	When		
186.	Where		
187.	White		
188.	Who		
189.	Wide		
190.	Wife		
191.	Wind (Breeze)		
192.	Wing		
193.	Wipe		
194.	With (Accompanying)		

195.	Woman		
196.	Woods		
197.	Worm		
198.	Ye		
199.	Year		
200.	Yellow		