

**A Comparative Reconstruction  
of Sister Languages:  
Oruhaya, Oluganda and Kiswahili**

*JLLE*

Vol 18(1) 123–131

© The Publisher

DOI:10.56279/jlle.v18i1.8

*Alfredina Fredinand<sup>1</sup>*

**Abstract**

*The study investigates the comparative reconstruction of three sister languages, namely Oruhaya, Oluganda and Kiswahili. Specifically, it analyzes lexical verbs, nouns, adjectives and adverbs using the phonetic plausibility principle. The study was conducted in Missenyi District, Kagera Region, where the three languages are spoken. Data were obtained by interviewing three native speakers of Oruhaya and Oluganda, and five teachers who teach Kiswahili in public primary schools. Additional data was obtained from the Oruhaya dictionary, Oruhaya riddles, proverbs and songs, as well from the Luganda-English dictionary and a dictionary of Swahili proverbs and their usage. The study found that most Bantu language words have sound correspondence, since they share a parent, that is, proto-Bantu. The sounds of the three sister languages have the same status and undergo change. The recommendation and suggestions of this study are that similar studies of comparative reconstruction in other Bantu and non-Bantu languages should be conducted to obtain an overall description of the phenomenon under study.*

**Keywords:** *Sound correspondence, cognates, language reconstruction, sister languages, parent language*

**Introduction**

This paper is based on a comparative reconstruction of three sister languages, namely Oruhaya (glottolog Haya 1250' JE22) Oluganda (glottolog 'Ganda 1255' JE15) and Kiswahili (Swahil1254' G42) Maho, 2009), It attempts to establish the relatedness of these languages that originated in one parent language, namely proto- Bantu. The study reconstructed a list of word pairs from the three languages and examined the sound correspondence. Kondra (2002) explains that, after deciding that languages are related, words with similar meanings are placed side by side so that the pairs that exhibit some phonological similarity is identified as putative cognates.

The comparative reconstruction done in other languages (Fox, 1995) focused on the sounds of two languages, English and German sounds /t/ and /s/. With a series of native words, which are not loans, one can see that where English has /t/ German has /s/: *water: Wasser, better: besser, foot: Fuss*. It is obvious here that the English /t/ corresponds to the German /s/ in the non-initial position.

---

<sup>1</sup> **Corresponding author:**

Alfredina Fredinand, Department of Adult Education and Continuing Studies, Institute of Adult Education, Tanzania. E-mail: [afredinand@iae.ac.tz](mailto:afredinand@iae.ac.tz)

The comparative method is important in language classification, in linguistic prehistory, in research on distant genetic relationships, and in other areas. Languages, which belong to the same language family, are *genetically related* to one another. This means that these related languages came from (that is, 'descend' from) a single original language, called a *proto-language*, as can be seen from the way languages are classified. We speak of linguistic relationships in terms of kinship; we talk about 'sister languages', 'daughter languages', 'parent language' and 'language families'. If reconstruction is successful, it shows the assumption that certain languages are related (Campbell, 1999).

These sister languages (Oluganda, Oruhaya and Kiswahili), spoken in East Africa (Uganda and Tanzania), have relations in lexicon. However, most speakers cannot recognize these relations. Therefore, this study will be much useful to the people speaking these languages to understand and recognize the relationship of these languages, especially in sound correspondence. The comparative reconstruction in these sister languages has not received explanatory attention from other scholars. Hence, this study bridges the gap by assembling the cognates of the languages, establishing sound correspondence, reconstructing the proto-sounds of the sister languages and determining the status of similar correspondence sets.

### **Theoretical Framework**

This paper was guided by the phonetic plausibility principle; this is a principle for judging the acceptable phonological change that a sound underwent from the proto-sound (original sound in proto-forms before the change). In this principle, any change or explanation to account for differences between the sounds in the same position must be phonetically plausible. In other words, the change should be explained on the basis of the phonological rules available. In using this principle in language reconstruction, cognates have to be gathered and their pronunciation given. Thereafter, sound correspondence, which exists between sounds in the same position, is determined in all the words in each cognate set. Their differences have to be ascertained based on phonological rules (Campbell 1999).

Jand and Joseph (2003) note that there are three steps that are to be followed in comparing the sounds of languages. These are assembling the cognates, as done in this study, where a list of basic vocabulary items of Oruhaya, Oluganda and Kiswahili such as body parts, close kinship terms, low numbers and basic geographical terms were assembled. The second step is to establish sound correspondences/phonological reconstruction. In this study, sound correspondence was established by comparing sounds on all levels. The third step is to reconstruct the proto-sound. In this study, the proto-sound reconstructed by postulating what sound in the proto-language was on the basis of the phonetic properties of the descendant sounds in the three languages. Thus, different sounds (one for each language compared) in the sound correspondence set reflect a single sound of the proto-language, which is inherited by the different daughter languages. The fourth step is to determine the status of similar sound correspondence, as done in this study.

The theory was very useful in this study, as its steps were used as guidelines in assembling cognates of the three languages, establishing sound correspondence, reconstructing proto-sounds and determining the status of similar correspondence in the three sister languages. Hence, this study will help speakers to understand each other.

**Related Studies**

Lusekelo (2010) studied four Tanzanian Bantu languages, namely Mashami, Nyambo, Swahili and Nyakyusa. He discovered that the detailed description of the packaging patterns of the elements of motion events were the coding of the core-schema (the path of motion), the coding of the co-event (the manner of motion) and the number of grounds elements per verb and clause. Through this study, it is recognized that most Bantu languages are correlated in different aspects.

Monteanu (2022) carried out a comparative reconstruction probabilistically. He examined the role of inventory and phonotactics in three sister languages, that is, English, Latin and Romanian. He concluded that comparative reconstruction from a mother language (proto-language) estimated the probability that a random daughter language merits a reconstruction of the same size as the next daughter of the same status.

Some sound changes, particularly conditioned sounds, can result in a proto-sound being associated with more than one correspondence set. These must be done to achieve an accurate reconstruction (Campbell, 1999). See Table 1.

**Table 1: Additional Romance Cognate Sets**

Italian	Spanish	Portuguese	French	Latin	Gloss
Colore	Color	Cor	Couler	Colore	Colour
Costare	Costar	Costar	Couter	Co(n)stare	To cost
Correre	Correr	Corer	Courir	Currere	To run

**Source:** Campbell (1999)

Based on the forms in Table 1, we set up a sound correspondence for the initial sound in these forms: *Sound correspondence:* Italian *k*: Spanish *k*: Portuguese *k*: French *k*. Since all the languages have the same sound *k*, we would naturally reconstruct *\*k*. The proto-Bantu words in Table 2 show a similar thing.

**Table 2: Proto-Bantu Words**

Kiswahili	Kizinja	Kihaya	Luganda	Kisukuma	Kikerewe	Kihangaza	Gloss
M-guu	Ku-gulu	Ku-gulu	Ku-gulu	Ku-gulu	Ku-gulu	Ku-gulu	Leg

In Table 2 above, the /g/ sound seems to be the same. Since all the languages have the same sound /g/, we should naturally reconstruct *\*g* as the proto-sound.

**The Comparative Method in Linguistics**

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 work of reconstruction usually begins with phonology, with an attempt to reconstruct the sound system; this leads in turn to reconstruction of the vocabulary and grammar of the proto-language (Campbell, 1999). As can be seen from the way languages are classified, we speak of linguistic relationships in terms of kinship; we talk

about 'sister languages', 'daughter languages', 'parent language' and 'language families'. If reconstruction is successful, it shows that the assumption that the languages are related is warranted. This is much useful in the current study that the comparative method is shown from proto-language which is Bantu and its daughter languages (Oruhaya, Oluganda and Kiswahili).

### **Methodology**

The present study is qualitative; the data analyzed is in the form of words and descriptions. major concepts were identified by perusing the collected data. Then a coding system was developed on the basis of samples of the data.

### ***Interview***

Both structured and unstructured interviews were used in this study. The researcher interviewed five native speakers of Oluganda, five native speakers of Oruhaya and five teachers of Kiswahili working in primary schools in the three selected schools in Missenyi District, Kagera Region. The researcher interviewed these informants to obtain the wordlist used in this study. Five interview questions were posed to the informants so as to meet the demands of this study. The researcher chose only five native speakers from each language and five teachers because they could give valid and reliable data related to this study.

### ***Document Review***

The researcher reviewed different documents in standard Luganda, Kiswahili and Oruhaya, including 500 Haya riddles by Nestory (1994), Oruhaya religious songs (Empoya) and an unpublished Article on Oruhaya 202 proverbs by Kalokola (2014), Luganda-English Dictionary by Murphy (1972), Luganda-English Dictionary and Grammar by Seguya and Sternfed (2015), Luganda Bible (Old and New Testament by Kasule (2014) as well as a dictionary of Swahili proverbs and their usage (Kamusi ya Methali za Kiswahili) by King'ei & Ndalu (2009). Based on the introspective knowledge of the researcher as multilingual speaker of Oruhaya, Oluganda and Kiswahili, it was possible to make a comparison of the three sister languages.

### **Findings and Discussion**

The main concern in this study was a comparative reconstruction of three sister languages (Oruhaya, Oluganda and Kiswahili) using the phonetic plausibility principle. In making the comparison, the words on the list were divided into lexical words (verbs, nouns, adjectives and adverbs).

#### **First step: Assembling the cognates of three sister languages and reconstructing the proto-sound**

From the documents reviewed and the interview conducted, the following cognates were assembled to obtain sound correspondence from the three languages. One of the native speakers of Oluganda declared that most Luganda words in the initial position start with the sound /o/ in nouns indicate singularity and the sound /a/ indicate plurality. This is the same for Oruhaya; the native speakers interviewed stated in the singularity and plurality of nouns, the sounds /o/ and /a/ are used, but Kiswahili uses noun classes to indicate singularity and plurality. This is shown in Table 3 below.

**Table 3: Noun Cognates of Three Sister Languages**

<b>Kiswahili</b>	<b>Oruhaya</b>	<b>Oluganda</b>	<b>Gloss</b>
Mtu/watu (mu-wa)	Omuntu/abantu (o-a)	Omuntu-abantu (o-a)	Person
Kichwa/vichwa (ki-vi)	Omutwe/emitwe(o-e)	Omutwe/emitwe	Head
Mtoto/watoto (mu-wa)	Omwana/abaana(o-a)	Omwana/abaana(o-a)	Child
Mkono/mikono(u-i)	Omukono/emikono (o-e)	Omukono/emikono(o-e)	Hand
Muhogo/mihogo(u-i)	Ekilibwa/ebilibwa (ki-bi)	Muwogo	Cassava
Mguu/miguu(u-i)	Okugulu/amagulu (o-a)	Okugulu/amagulu (o-a)	Leg

Table 3 shows nouns and their classes in the three sister languages, where Kiswahili differs from the other two, as shown in first column. For example, the noun *mtoto* (singular) becomes *watoto* (plural); hence the noun class pair is that of MU-WA. Oruhaya and Oluganda have the same word *omwana* (singular) and *abaana* (plural), so the noun class pair is of O-A.

**Table 4: Verb Cognates of Three Sister Languages**

<b>Kiswahili</b>	<b>Oruhaya</b>	<b>Oluganda</b>	<b>Gloss</b>
Kula	Lya	Lya	Eat
Lia	Lila	Kaaba	Cry
Soma	Shoma	Soma	Read
Cheka	Sheka	Seka	Laugh
Lala	Nyaama	kwebaka	Sleep
Fagia	Yeya	Yela	Sweep
Pika	Chumba	Ffumba	Cook
Enda	Genda	Genda	Go
Sema	Gamba	Yogela	Speak
Jenga	Yombeka	Zzimba	Build
Kata	Tema	Tema	Cut
Pika	Chumba	Ffuumba	Cook
Andika	Andika	Wandiika	Write
Pima	Pima	Pima	Measure
Uliza	Baza	Buuza	Ask
Meza	Mila	Mila	swallow

In Table 4 are verb cognates of the three sister languages. They were obtained from the documents and through the interviews held with the native speakers and teachers. On the above verb-list there is a sound correspondence; the vowel /a/ is found in all the verbs in all the languages. This proves that most of Bantu verbs end with the vowel /a/.

**Table 5: Adjective Cognates of Three Sister Languages**

<b>Kiswahili</b>	<b>Oruhaya</b>	<b>Oluganda</b>	<b>Gloss</b>
Zuri	Kilungi	kilungi	Beauty

Nyeupe	Eikwela	Enjelu	White
Pole	Mpola	mpola	slow
Vivu	Nafu	Naffu	Lazy
Furaha	Amashemelelwa	essanyu	Happiness
Ndefu	Endanda	wanvu	Long
Nyembamba	Enke	entono	Slim

The data in Table 5 indicates the adjective cognates of the three languages in this study. It seems to be different as each language has the proto-sound, except the word pole (slow) (Kiswahili) mpola (Oruhaya) and mpola (Oluganda). The vowel /o/ appear in all three languages, and so does the vowel /e/ in the word nyeupe (white) in Kiswahili, eikwela in Oruhaya and enjelu in Oluganda.

**Table 6: Adverb Cognates of Three Sister Languages**

Kiswahili	Oruhaya	Oluganda	Gloss
Haswa	Nikwo	Ddala	Exactly
Ugenini	Mahanga	Emitala	abroad
Pekee	Yonka	Yokka	Alone
Polepole	Mpolampola	Kasoobo	Slowly
Juzi	Ijo	-gyo	A day after yesterday
Jana	Nyeigolo	Egulo	Yesterday
Haraka	Bwangu	Mangu	fast

The data in Table 6 shows adverb cognates. The sounds in most of the verbs resemble, but others do not. For example, the Kiswahili word ugenini (abroad) and the Luganda word emitala share the vowels /e/ and /i/. The story is different for the Ruhaya word mahanga, which shares only the vowel /a/ with the Luganda word.

### **Second step: Establishing sound correspondences/phonological reconstruction**

From the above cognates, sound correspondence can be seen in the following: Kiswahili /l/ and /k/ in the Kiswahili word kula (eat), Oluganda /l/ in the word kulya and Oruhaya /l/ in the word *kulya* (eat). Since all the languages have the same sounds, the researcher has reconstructed \*l and \*k as the proto-Bantu sounds. Also, the sound /e/ in the word nenda (go) in Kiswahili, Oluganda genda and Oruhaya genda. Therefore, the sound /e/ is for sound correspondence.

The sound /a/ in the word jua (sun) in Kiswahili, mushana in Oruhaya and mussana in Oluganda creates a sound correspondence in the three languages; hence \*a is reconstructed as the proto-Bantu sound. Also, \*m, \*a and \*o appear in words like macho (eyes) in Kiswahili, maisho in Oruhaya and masso in Oluganda.

A study made by Kawalya et al (2018), who made a comparative analysis of the West Nyanza Bantu cluster (Luganda, Lusoga, Runyankore, Rutooro, Kihaya, Kinyambo, Kizinza and Kikerewe), discovered that all these languages have at least modal auxiliaries that cover the entire domain of possibility.

**Third step: Reconstructing the proto-sound**

In this study, the proto-sound was reconstructed by postulating what sound in the proto-language was on the basis of the phonetic properties of the descendant sounds in the languages in the correspondence set. The different sounds (one for each language) in the sound correspondence set reflect a single sound of the proto-language which is inherited in the daughter languages; sometimes a sound remains unchanged in some daughters, though often it will have undergone sound changes in some (or even all) of the daughter languages which make it different from the original proto-sound. This is shown in Table 7 below.

**Table 7: Proto-sound Inherited Descendent Sounds**

Kiswahili	Oruhaya	Oluganda	Gloss
Zuri	Lungi	Lungi	Beautiful
Weka	Teeka	Teeka	Put
Bichi	Bisi	Bisi	Unripe
Chafu	Chafu	Kyafu	Dirty

In the above table, some of the proto-sounds given have historically only changed in one direction. For example, the sound /t/ in the word chafu (dirty) in Oruhaya and Kiswahili changed to /k/ in Luganda. Hence, the sound has changed from an affricate to a plosive through directionality. The sound /t/ in the word bichi (unripe) in Kiswahili has changed to /s/ in Oruhaya and Luganda. The sound has changed from an affricate to a fricative through directionality. The sound /e/ from the word weka (put) in a Kiswahili has changed to /e:/ in the words in Oruhaya and Oluganda. This sound has changed from a short vowel to a long vowel through directionality, too. The vowel /u/ in the word zuri (beautiful) in Kiswahili has changed to /u:/ in word lungi in Oruhaya and Luganda through the same process.

**Fourth step: Determining the status of similar (partially overlapping) correspondence sets**

Two different hypotheses reconstruct the same phoneme in a particular position in relation to other sounds in sister languages. This is shown in Table 8 below.

**Table 8: The Status of Similar Correspondence Sets**

Kiswahili	Kihaya	Luganda	Gloss
Mguu	Kugulu	Kugulu	Leg
Tokosa	Togosa	Tokosa	Boil
umba	Bumba	Wumba	Mould

In Table 5, some of the sounds have similar correspondence in the sister languages. For example, the sounds /u/ and /g/ are similar and are in the same position in word mguu (leg) in Kiswahili, and kgulu in Oruhaya and Oluganda. The sounds /o/ and /s/ are similar in all three sister languages and are also in the same position, as the word tokosa (boil) in the above table shows. The sounds /u/ and /b/ are similar in all sister languages, as the word umba (mold) shows.

The study has found that most Bantu languages have some linguistic commonness. The proto-sounds in most of the cognates of the three sister languages resemble, especially the vowel sounds. Also, the verbs end with the vowel /a/. This is very useful to Bantu speakers as it helps them to recognize loanwords from other languages.

Two sister languages, namely Oruhaya and Oluganda, resemble in sound correspondence. This is because the languages are spoken in neighbouring areas in Uganda and Tanzania. The speakers interact in social, economic and cultural matters. During the interviews, two native speakers of Oluganda stated that they were from Uganda in the districts of Rakai, Kyotera and Masaka, and that they came to Tanzania in 1979 because of Idd Amin Dada's war. The resemblance of the two languages has enabled the people in Missenyi District, Kagera Region, to listen to each other and cooperate in different community activities. For example, during a burial, both the Haya and Ganda speakers say 'kugenda kuziika'.

### **Conclusion**

Generally, this study has done a comparative reconstruction of three sister languages namely Oruhaya, Oluganda and Kiswahili, which are spoken in East Africa. The study has analysed the data using the phonetic plausible principle. The results show that words in the languages have sound correspondence, since they come from one parent, Bantu. The sounds of the three sister languages share the same status, and some of the sounds of have undergone some changes. The verbs of the three sister languages and with the vowel /a/, which helps Bantu speakers to recognize loanwords. The similarities also help Bantu speakers to understand one another during interaction irrespective of the differences in where they come from.

### **Recommendations and Suggestions for Further Studies**

On the findings and conclusions drawn in this paper, it is recommended that a comparative be conducted in other Bantu and non-Bantu languages, since there are more than 200 Bantu languages and non-Bantu languages spoken in East Africa.

### **Declaration of conflicting interests**

The author(s) declared no conflict of interest(s) with respect to the research, authorship and/or publication of this paper.

### **Funding**

The researcher declared that she did not receive any financial support for the research.

### **References**

- Atchison, J. (2001). *Language Change: Progress or Decay?* Cambridge: Cambridge University Press.
- Campbell, L. (1999). *Historical Linguistics: An Introduction*. Massachusetts: The MIT Press.
- Chomsky, N. (1986). *Knowledge of Language: Its Nature, Origin and Use*. New York: Bloomsbury Academic Press.
- Collins, B., Mees, I. & Carley, P. (2019). *Practical Phonetic and Phonology* (4<sup>th</sup> ed.) London & New York: Routledge.
- Crowley, T. & Bowern, C. (2010). *An Introduction to Historical Linguistics* (4<sup>th</sup> ed.) Oxford: Oxford University Press.



- Fox, A. (1995). *Linguistic Reconstruction: An Introduction to Theory and Methods*. Oxford: Oxford University Press.
- Hamilton, A., Mukasa, P., Hamilton, N. Sewanyana, D. Ssentooogo, C. Kabuye, C. & Mukasa, P. (2016). *Luganda-English & English-Luganda Dictionary with Notes on Luganda Grammar*. Surrey: Alan Hamilton Publisher.
- Hock, H. & Joseph, B. (2009). *Language History, Language Change and Language Relationship*. (2<sup>nd</sup> ed.) Berlin: Mouton de Gruyter.
- Hoenswald, H. (1960). *Language Change and Linguistic Reconstruction*. Chicago University.
- Janda, B. & Joseph, R. (2003). *The Handbook of Historical Linguistics*. Oxford: Blackwell Publishing Ltd.
- Kalokola, D. K. (2014). 202 *Haya Riddles*. Retrieved from <http://taulatamaduni.blogspot.com/>
- Kawalya, D., Schrvyer, G. M & Bostoan, K. (2018). Reconstructing the Origins of the Luganda Modal Auxiliaries: Comparative Study across the West Nyanza Bantu Cluster. *South African Journal of African Languages*, 38(1)
- King'ei, K. & Ndal, H. (2009). *Kamusi ya Methali za Kiswahili*. (Toleo jipya). Nairobi: East Africa Publishers.
- Kondrak, G. (2002). *Algorithms for Language Reconstruction*. Unpublished PhD Thesis, University of Toronto.
- Kothari, C.R. (2004). *Research Methodology: Methods and Techniques*. (2<sup>nd</sup> ed.) New Delhi: New Delhi International Publisher.
- Lusekelo, A (2010). Comparative Study of the Motion Domain in Tanzanian Bantu Languages. *Kiswahili*, 73(10): 11-17.
- Maho, J. F. (2009). *The Online Version of the New Update Guthrie List a Referential Classification of Bantu Languages*. Retrieved from NUGL Online-Brill.
- Munteanu, A. (2022) Comparative Reconstruction Probabilistically: The Role of Inventory and Phonotactics. Retrieved from <https://doi.org/10.3765/amp.v9i0.5168>
- Murphy, J. (1972) *Luganda-English Dictionary*. The Catholic University of America Press.
- Muzale, A. (2009). *Ruhaya-English-Swahili dictionary*. University of Dar es salaam: LOT Publications.
- Nestory, H. B. (1994). *500 Haya Proverbs*. (2<sup>nd</sup> ed). North Western Publishers.
- Robbeets, M. (2018) *Comparative Reconstruction in Linguistics*. Oxford Bibliographies. Retrieved from DOI:10.1093/OBO/97801-0215
- Yule, G. (2010). *The study of language*. New York. Cambridge University Press.

### **Author Biography**

**Alfredina Fredinand** is an Assistant Lecturer in the Department of Adult and Continuing Education Studies at the Institute of Adult Education (IAE), Mwanza Campus, Tanzania. Her research interests are in Morphology, Phonology, Grammar, and Historical and Comparative Linguistics as well as Communication Skills in Bantu and non-Bantu languages. She facilitates the basics of English grammar, communication skills and misingi ya isimu na sarufi ya lugha ya Kiswahili.