

The Degree of Inter-relatedness of Kaonde, Tonga Nyanja and Soli Languages: A Lexicostatistical Survey

Avinat M. Chitebeta
Rusangu University, Zambia

John Lubinda
University of Zambia

Abstract

The degree of inter-relatedness between Kaonde, Tonga, Nyanja, and Soli, is the study based on a lexicostatistical survey of the two languages. Tonga being the language used for literacy and as a school subject in the Kaonde speaking areas along the boundaries of North-Western Province and Central Province of Zambia, has not been investigated to establish the degree of its inter-relatedness to Kaonde. Nyanja is the language used for literacy and a school subject in the area where (Soli) one of the languages belonging to the Bantu Botatwe group is spoken. It is, therefore, the purpose of this study to conduct a lexicostatistical analysis to establish the degree inter-relatedness between Kaonde and Tonga; Nyanja, and Soli languages and further provide additional knowledge to comparative Bantu linguistics.

The basis for comparison was 'the Swedish list' of the two hundred (200) vocabulary items. From each language, three translators (Informants) were carefully chosen utilizing purposeful sampling.

Collected data were analyzed using the lexicostatistical method and the presentation of the results was made using tables and pie charts. Coding was applied using a plus (+) sign for cognates and a minus (-) sign for non-cognates.

The study used the view from historical and comparative linguistics and lexicostatistics analytical framework.

The study established that the degree of inter-relatedness between Kaonde and Tonga is 33 percent. The Researcher concludes that Kaonde and Tonga are two distinct languages and there is low mutual intelligibility based on vocabulary and lexicostatistical. Therefore, the researcher suggests that the use of Tonga for literacy in the Kaonde speaking areas in Mumbwa District be reviewed in the future.

Keywords: Kaonde, Nyanja, Swadesh List, Lexicostatistical and analysis.

Introduction and Background

Kaonde is one of the three regional lingua francas used for radio broadcasting, literacy, and as a school subject in North Western Province, particularly in Solwezi. The other two languages used within the Province are Lunda and Luvale. However, these two languages namely Lunda and Luvale are not part of this study. The purpose of this paper is to establish the degree of inter-relatedness between Kaonde and Tonga, which is the language used for literacy as well as a school subject in the Kaonde speaking area of Chief Mumba, Mumbwa.

Guthrie (1948) classified the Kaonde language under the Niger-Congo language phylum, under the Bantu languages in Zone L40. He says that this group is an off-shoot of the Luba people of Congo, and is thus sometimes referred to as the Kaonde-Luba. From Congo, Kaonde people settled in some parts of the north-western and central parts of Zambia. In the North-Western Province, they occupied Solwezi, Kasempa, and Mufumbwe Districts while in Central Province they settled along the borders of Central and North-western Provinces in Mumbwa District. In the Central Province, the language shares its linguistic boundaries with Ila and Lenje within Mumbwa District. The Zambian map in Appendix E shows that in between Kaonde and Ila, there is a dialect of Kaonde language called Kaonde-Ila.

Few linguistic texts have been written on Kaonde these include the first bilingual English-Kaonde Dictionary written by Boroghall (1995) using Kasempa dialect which is considered to be standard according to Mambwe (2008). The other text is English-Kaonde vocabulary authored by Wright (1985).

Few literature books have been published in and on Kaonde such as '*Kyapusana*' written by Mutembakyalo in 1988. The author named his book after the main character that went through life challenges.

According to the Census on Population and Housing report of 2010, Kaonde is largely spoken in North-Western Province by 29.6 percent out of 596,860 people in the province, 0.7 percent out of 1,741,192 people in the Copperbelt Province, 0.9 percent out of 1,098,142 people in Central Province, 0.2 percent out of 1,926,022 people in Lusaka Province, 0.3percent out of 737,287 people in Western Province and 0.1 percent out of 1,338,649 people in Southern Province. However, out of the total population of Zambia (13,092,666) in the year 2010, there was 1.9 percent of people using Kaonde as their predominant language of communication by province. This translates into 248,761 speakers.

Ohannessian and Kashoki (1978:401) show that "Nyanja is a regional lingua franca used in Eastern and Lusaka Provinces." According to Miti (1988), Chewa, Chinsenga and Chingoni are the three varieties referred to collectively as Zambian 'Chinyanja.' However, Ngalande (2007) argues that there is no language called Nyanja or a speech community referred to as Nyanja. What is known as Nyanja, referred to and spelt as 'Cinyanja,' is Chewa, a native language of the Chewa people of Katete District whose Paramount Chief is Gawa Undi. Ngalande (2007) further

notes that a section of speakers in Lusaka speak some form of a lingua franca that has a reasonable vocabulary from Chewa and is called 'Cinyanja'. Nyanja is also spoken in other districts in the Eastern Province; these include the districts neighboring Katete, namely, Mambwe and Chipata. Others are Petauke, Lundazi and Chadidza. Nyanja is also spoken in some of Zambia's neighboring countries, for example, Malawi where it is officially termed 'Chewa;' Mozambique, Tanzania and Zimbabwe. While Ngalande argues that there is no speech community referred to as Nyanja, it is a known fact that among the seven Zambian languages used for literacy in schools, Nyanja is one of them.

According to Guthrie's (1948) classification of Bantu languages, Nyanja falls under Zone N, which is made up of four groups, namely 10, 20, 30 and 40. Nyanja belongs to Zone N, Group 30 as a dialect cluster called N31. According to Guthrie (1948), Zone N comprises three dialects, namely Nyanja, Cewa, and Manganja identified as N31a, and N31b, and N31c respectively. Zambia has radio and television broadcasts in Nyanja. There was also a monthly publication called *Tsopano* which is currently out of circulation, while Malawi has radio broadcasts in Chewa and a publication called '*Boma Latha*', a Chichewa Daily.

According to the 2010 Census on Population and Housing report, Nyanja is the second predominant language of communication by residents in Zambia. Out of the total population of 13,092,666 in the year 2010, at least 14.8 percent of the population in Zambia, which translates into 1,937,715, spoke Nyanja also the greatest number of second-language speakers.

During the discussions between the researcher and Mr. Mundia Mwendende of the Department of Languages at the Curriculum Development Center in March 2011, it was confirmed that Nyanja is used for literacy and as a subject in schools in Lusaka Province, comprised of Chongwe District, Kafue District, Lusaka District, and Luangwa District. This means that Soli children in Chongwe District are learning in Nyanja, which is not their mother tongue, for their literacy programs at school. This motivates including Nyanja in the current study to discover its degree of inter-relatedness with Soli. It is hoped that the results of this study will motivate other researchers to carry out further studies on whether the established degree of inter-relatedness between these two languages has on the use of Nyanja for literacy in Chongwe District.

This article has been motivated by the linguistic study that the research undertook at the MA level that dealt with the Lenje and Tonga noun phrases with a focus on the syntactic structures of the two languages.

Methodology Research Design

This paper applied a qualitative design supplemented by quantitative data. It was qualitative because the researcher used narrative or textual descriptions of the phenomenon under study. The inventory of basic vocabulary of the five languages which was used for the analysis to establish their degree of inter-relatedness was verified by native speakers of each language through face to face interviews, for translation, verification, and clarification of the data. The study was partly quantitative in the sense that it applied some statistical figures such as percentages of inter-

relatedness for the five languages under study, for conclusions and interpretations. According to Bynon (1977), the Lexicostatistical method is a mathematical or statistical study of the basic vocabulary of two or more languages. This paper describes the vocabulary of the five languages in a systematic way to clearly show the lexicostatistical percentages.

Study Location

The research was carried out in the following areas within Zambia: Chief Mumba's Palace, Mumbwa and the surrounding villages; Rusangu University, Monze; it was largely desk research also because dictionaries, grammars and other written materials on the languages under study were used to verify the vocabulary items.

Study Population

The study population is divided into two: firstly, the researcher targeted the native speakers of Kaonde and Toga, from different parts of the country. In particular, these people were in the age group of 45 years of age and above, chosen on account of their level of competence in their particular languages.

Sampling Techniques

The study employed purposive sampling, where the researcher purposely chooses people, who are considered to be relevant to the research topic. Thus, the researcher purposively chose to interview competent native speakers of the languages under investigation because they could provide information relevant to the research topic. The researcher targeted both males and females of 45 years and above for translation of the Swadesh list because they are believed to have purer forms of the vocabulary in their native languages. Most of the young people in urban areas have lived in a mixed environment that makes it difficult to know, use and maintain proper forms of their native languages. Some do not even use their native languages at home and have lost the pure forms of their native languages due to urbanization.

The researcher also applied snowball sampling because the method uses initial subjects where the desired characteristics are identified using the purposive sampling technique. Snowball sampling is a type of referral sampling which uses a process of chain referral: When members of the target population are located, they are asked to provide names and addresses of other members of the target population, who are then contacted and asked to name others, and so forth. Sudman and Kalton (1986) used snowball sampling to create sampling frames and are sometimes associated with probability sampling (Goodman, 1961).

Snowball sampling is the non-representative sample, but it was an effective means of surveying people with common traits who would otherwise have been difficult to find. The advantage of snowball sampling is that it is easy to implement.

Ethics

The researcher explained the nature and purpose of the research to the informants as suggested by White (2000) and Bunns (2000). Identified participants were willing to participate. Voluntary

participation was sought and permission to use people's names was granted for those that have been named in this study.

Findings

The section discusses and analyses the 200-word list applied in the study to establish the degree of inter-relatedness between Kaonde and Tonga; Nyanja and Soli. The findings, discussions and analysis are based on the following specific objectives: Establishment of the degree of inter-relatedness between Kaonde and Tonga the language used in school in the Kaonde speaking area along the boundaries of Central North-Western Provinces of Zambia. To establish the degree of inter-relatedness between Soli and Nyanja, the language used for literacy in schools in the Soli speaking area of Chongwe District in Lusaka Province. Previous studies of Bantu languages and their criteria for determining cognates are discussed in this section.

Criteria Used for Determining Cognates

Previous scholars have used different criteria to determine cognates. According to Swadesh (1955:124-126), cognates are established from the word lists. Swadesh suggested a 200-word list of basic vocabulary, which he used in his lexicostatistical studies. For Swadesh (1955:124-126) the relatedness of any group of languages is supposed to be approximately comparable to the number of cognate words present in the words making up the list. The major reason for using the specific basic vocabulary lists instead of random words is that the basic vocabulary learned in childhood is likely to change slowly over a while.

The Swadesh list comprises names of body parts, names of some domestic and wild animals, simple verbs and nouns for everyday activities. Swadesh (1955) also suggested different guidelines to determine cognates such as universality, culture terms, and duplication. He believes that items should be universal that is, having characteristics common to all languages. For example, some items like 'ice' translated as 'kyo' in Kaonde and 'snow' translated as 'mabebe' in Kaonde may have some concepts in African languages, but the same concepts may be unfamiliar to Kaonde society because, while the item has a translation in Kaonde, there is not such item in the said society. For example, since it is not common to have freezers and fridges in some rural areas, even the term 'ice' 'kyo' in Kaonde may be unfamiliar to some societies. The term 'snow' 'mabebe' in Kaonde is alien to the Zambian society that has never experienced snow.

Swadesh (1955:24) suggests where there is a duplication of the item, only one word should be used where a concept is expressed in different ways. The item 'man/male' is expressed by one term in this study. Nevertheless, in Kaonde the item 'man' is represented by three items: 'muntu' 'mwanamulume' and 'wamulume.' The item 'woman' has two terms in Kaonde. These are 'mwanamukazhi' and 'wamukazhi.' Therefore, following the suggestion by Swadesh that there should be no duplication of items, this study has used 'wamulume' for 'man' and 'wamukaszhi' for 'woman.'

Gudschinsky (1956) suggested that any pair of equivalent morphemes may be registered as probable cognates if a minimum of three pairs of comparable phonemes or phoneme clusters are found to agree. For example, the word for 'all' displays the following numbers of phoneme: In Kaonde it is byo-onse 'all'. In Tonga, 'zyo-onse'. These have been considered as cognates in Kaonde and Tonga due to their phoneme clusters (-ns) that are found to agree in the languages. Another item is 'sing' 'kwimba.' It has phoneme clusters /-mb/ which is a stem in Kaonde and Tonga. The item qualifies to be cognate due to this. Another item that has been considered to be cognate due to phoneme cluster is 'speak' 'kwamba' in both Kaonde and Tonga. It has a phoneme cluster /-mb/. An 'ear' is 'kutwi' in Kaonde and Tonga. It has phoneme clusters /-tw/. As mentioned above, the morphemes -mba, -nse, and -twi, are comparable morphemes in the Kaonde and Tonga given as examples.

Blount and Curley (1970) considered those items where there was only one phonetic change, as cognates. For example, if a pair of items with an equal number of phonemes differed in the feature 'voice,' the pair was considered to be cognate. If the pair has got only one phonetic change, it was considered as cognate. Therefore, following Blount and Curley's (1970) criteria of cognates, the study has borrowed the criteria. For example, the item 'fire' is 'mujilo' in Kaonde and 'mulilo' in Tonga, qualify to be cognates even though the phoneme [j] is a voiced alveolar affricate in Kaonde and [l] is an alveolar lateral approximant in Tonga. Though the two phonemes are both voiced having the same place of articulation but they are different in that one is an affricate while the other is lateral approximant, the study has considered them as cognates. Other examples include:

- i. Difference in vowel lengthening -ee- such as 'kuseeka' in Kaonde and 'kuseka' in Tonga 'to laugh.' these are considered cognates.
- ii. There is vowel lengthening -aa- in 'ntaambo' for Kaonde and 'ntambo' 'rope' Tonga. This study has considered (i) and (ii) as cognates regardless of the difference in vowel length.
- iii. Cluster difference as in 'kwikala' in Kaonde and 'kukkala' in Tonga 'sit' have the same sound despite of the cluster in the phoneme [kk] in Tonga the two items have been considered cognates.
- iv. The item 'swell' 'vimba' in Kaonde 'zimba' in Tonga have the same root -mb- despite of the difference of the phoneme in the onset 'v' which is a labial dental fricative and 'z' which is a dental fricative and both are voiced, the study has considered the items as cognates.

Borrowing from Nurse and Philippson's (1980:26) criteria of taking sound correspondences into account and considered two or more items to be cognates if they were derived from the same single item in a hypothetical common ancestor language by direct oral transmission, the study has identified the following items to be cognates:

- i. The Proto Bantu -ana 'child' is *mwa-ana* in Kaonde and *mw-ana* in Tonga thus, the root is the same -ana in the two languages. Hence the two items have been recognised as cognates.

- ii. The item –joba ‘sun’ in Proto Bantu is *uba* in Kaonde and *zuba* in Tonga have been considered to be derived from the same ancestor language. Hence they are considered to be cognates.
- iii. The item –*takun* ‘chew’ in Proto Bantu is –*tafuna* in both Nyanja and Soli have been considered cognates derived from the same ancestor language even though the phoneme /f/ and /k/ are different /f/ being a labial dental fricative while the phoneme /k/ is a plosive velar affricate.

Examples (i) , (ii) and (iii) have evidence of sound correspondence derived from Proto Bantu and are regarded as cognates by being derived from single items in Proto Bantu and have been considered as cognates.

Establishing Percentages of Relatedness

The Swadesh List of 200 words of basic vocabulary was translated into Kaonde and Tonga, analysed and coded to establish the percentages of inter-relatedness between the two languages studied. For cognates, a plus (+) sign was used while a minus (-) sign was used for items not considered to be cognates. To determine the number of cognates in the two languages under study, counting of cognates was carried out after coding. The total number of cognates for each language was divided by two hundred (200) and then multiplied by one hundred (100) to establish the percentage of inter-relatedness between the languages considered in this study. The data has been exemplified using a pie chart.

The degree of inter-relatedness between Kaonde and Tonga; Nyanja and Soli were established as shown below. The study included the degree of inter-relatedness between Nyanja and Tonga due to Soli’s being part of the Bantu Botatwe group where Tonga is the main language in the group and Nyanja is not part of the Bantu Botatwe group although it is a language of literacy and is taught in schools as a school subject in the Soli speaking areas of Chongwe.

Table 1: Percentages of Inter-relatedness for Kaonde, Nyanja, Soli and Tonga

Serial No.	Details of languages	Percentages
1	Kaonde and Tonga	33%
2	Nyanja and Tonga	40.5%
3	Nyanja and Soli	45%
4	Soli and Tonga	63%

The data in Table 1 is collapsed in Figure 1:

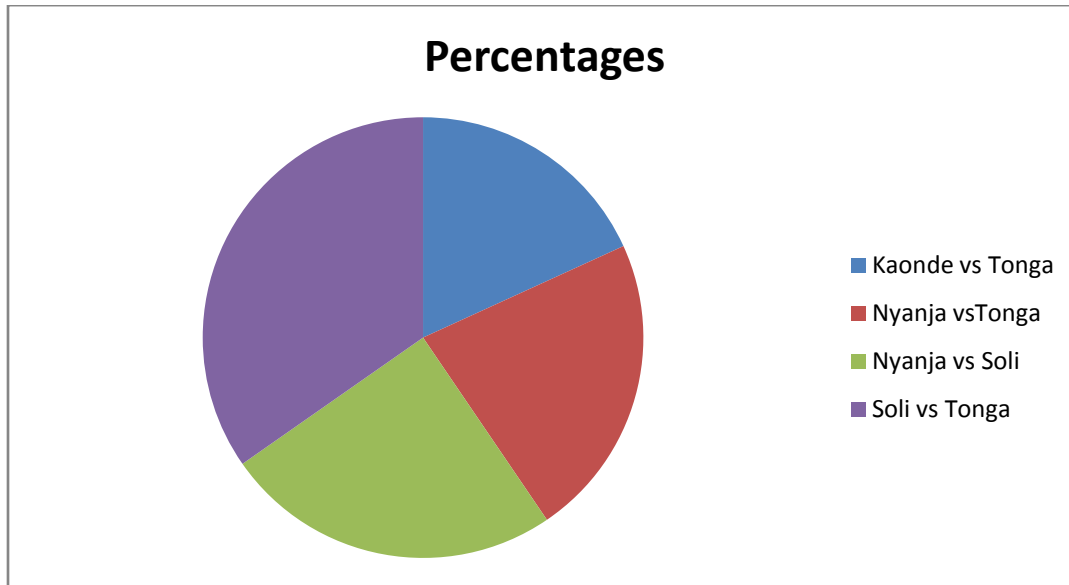


Figure 1: Percentages of Inter-relatedness for the Languages under Study

In Figure 1; the study has established that the highest degree of interrelatedness between the languages is between Soli and Tonga at 63 percent. The reason being that the two languages belong to the same group called Bantu Botatwe. The second highest is between Nyanja and Soli at 45 percent while the third is Nyanja and Tonga at 40.5 percent while the last one is Kaonde and Tonga at 33 percent.

Conclusion

It has been alluded to in the background of the study that Tonga is taught to Kaonde children in schools. The degree of relatedness between Kaonde and Tonga is 33 percent while Nyanja is taught to Soli children in school, the degree of relatedness between Nyanja and Soli is 45. Therefore, the Kaonde children may have challenges in learning Tonga; Soli children especially those in rural areas of Chongwe where the familiar spoken language is Soli, they too may have some challenges in learning Nyanja while those in Chongwe town may have no problems due to the language of communication in town which is Nyanja.

The researcher recommends that in the future, a review may be in order especially for the use of Tonga in the Kaonde speaking areas of Mumbwa.

References

- Blount, B. and Curley, R. (1970). *The Southern Luo Languages: a glottochronological reconstruction*, Journal of African Languages, 9:1-18.
- Bunns, R. B. (2000). *Introduction to Research Methods*. London: SAGE Publications.
- Bynon, T. (1977). *Historical Linguistics*. Cambridge: Cambridge University Press.
- Guthrie, M. (1948). *The Classification of the African Languages*. London: Oxford University Press.
- Gudschinsky, S. (1956). *Snowball Sampling*. Annals of Mathematical Statistics 32:148-170
- Ngalande, S. (2007). *A Logical Analysis of selected texts in Nyanja*. Unpublished M.A Dissertation, Lusaka: University of Zambia.
- Ministry of Finance. 2010, *Census Report*, Lusaka: Government Printers.
- Miti, L. M. (1988). *Tonal Variation in Zambian Chinyanja Varieties: An autosegmental Analysis*. Unpublished Ph.D. Thesis, University of London.
- Nurse, D. and Philippson, G. (1980). *The Bantu Languages of East Africa: a lexicostatistical survey*. In Polomé, E.C. and Hill, C. P. (eds.) *Language in Tanzania*, Oxford: Oxford University Press.
- Swadesh, M. (1950). *Salish International Relationships*. *International Journal of American Linguistics*.16, 157-167.
- Ohannesian, S. and Kashoki, M. E. (1978). (Eds). *Language in Zambia*. London: International African Institute.
- White, B. (2000). *Dissertation Skills for Business and Management Students*. London and New York: Continuum.