The Spread of Kiswahili Lexis into the Interior Bantu: The Case of Names of New World Cereals and Tubers in Tanzanian Bantu

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Abstract

The paper articulates incorporation of Kiswahili names of New World crops into Tanzanian Bantu languages. The paper wants to testify that names of these crops portray a case of contact between Kiswahili, Arabic, Portuguese and interior Bantu. Findings demonstrated that Mt. Kilimanjaro Bantu (Kimeru, Kimachame, Kipare etc.) and Lake Victoria Bantu (e.g. Kinyambo, Kijita, Kiruuri etc.) have massive borrowings from Kiswahili: liyalage [<maharage] 'beans' muchere [<mchele] 'rice/paddy', mwookô [<mihogo] 'cassava' etc. The Lake Corridor Languages (Kinyamwanga, Kinyakyusa, Kindali etc.) borrowed from Zambian and Malawian Bantu languages: amasyabala 'peanuts', chilemba 'beans', chilombe 'maize' etc. Alternatively, semantic adjustment of names occurred, e.g. itama = maize plant, -emba = sorghum, liligwa = maize, cassava etc.

Ikisiri

Makala hii inaelezea namna majina ya Kiswahili ya mazao yanavyotoholewa katika lugha mbalimbali za Kibantu nchini Tanzania. Makala hii inathibitisha kuwa majina ya mazao haya yanasaidia kuthibitisha mwingiliano baina ya Kiswahili, Kiarabu, Kireno na lugha nyingine za Kibantu. Utafiti unaonesha kuwa lugha za ukanda wa mlima Kilimanjaro (mfano, Kimeru, Kimachame, Kipare) na lugha za ukanda wa Ziwa Viktoria (mfano Kinyambo, Kijita, Kiruuri nk.) zimetohoa majina ya Kiswahili kama vile liyalage [<maharage] 'maharage' muchere [<mchele] 'mchele/mpunga', mwookô [<mihogo] 'mihogo' nk. Lugha za Ukanda wa Maziwa¹ (mfano Kinyamwanga, Kinyakyusa, Kindali) zimetohoa kutoka lugha za Zambia and Malawi: amasyabala 'karanga', chilemba 'beans', chilombe 'mahindi' n.k. Wakati mwingine, mabadiliko ya kisemantiki ya maneno asilia yanatokea ili kubeba dhana ya majina ya mazao mapya kama vile *itama* = mahindi, -emba = mtama, *liligwa* = mahindi, mihogo n.k.

1.0 Introduction

The lexicons of Tanzanian Bantu languages demonstrate Kiswahili-oriented plantnames. Dictionaries have Swahili-oriented entries such as maharage~mchele 'beans~rice' as in Kiruuri: liyarage~muchele (Massamba, 2005), Kipare²: harage~mchere (Mreta 2008a), Kigogo: ihalaji~muchele (Rugemalira, 2009), etc. This is a testimony that Kiswahili impacts on the names of the New World crops in the interior of Tanzania. This paper articulates the historicity of plant-names in Bantu languages of Tanzania. This contribution builds on the previous findings on

¹ Reference is made to the Bantu languages spoken in an area between Lake Rukwa, Lake Nyasa and Lake Tanganyika.

² To serve space, the nominal prefix Ki- is used in-text but dropped in tables of data. Also, notice that the analysis of the singular and plural distinctions of the borrowed words is ignored in this paper.

the historicity of indigenous plant-names in Zambia (Bostoen, 2007), spread of maize in Sub-Sahara Africa (McCain, 2001) and spread of New World crops in Africa (Blench, 2006; Ehret, 2011). In the existing literature, much attention is on the Atlantic Coast (Blench, 2006; Bostoen, 2007). The motivation for the current research on Bantu languages in the Indian Coast is four-fold.

Firstly, studies about contacts in Eastern Bantu zones require illumination. Speculations such as the name *pemba* 'maize' derived from islands (McCann, 2001) and Kiswahili exerts pressure on nomenclature of crops in Tanzania (Iliffe, 2007; Ehret, 2011) require more and widely spread data to substantiate. Therefore, this paper contributes to our understanding of historical linguistics based on Bantu nomenclature of crops in Tanzania. This is in line with Bostoen (2007) who argues that comparative study of plant names enhances our understanding of the language history.

Secondly, New World crops (Table 1) came in Africa from America (Blench, 2006; Bostoen, 2007) or Asia (McCann, 2001; Ehret, 2011). Probably new names for these crops spread into the interior of Tanzania between 1500s and 1800s, when the Bantu settled in their hinterlands (Charsley, 1969; Batibo & Rottland, 2001; Mapunda, 2009). However, literature indicates three waves of contact between African societies and people from foreign countries: (i) trade contacts with Persians and Arabs from the 7th century to about 1500 (Nurse & Spear, 1985), (ii) the domination of the East African coast by the Portuguese between 1500 and 1650 (Iliffe, 1969), and (iii) intrusion of missionaries and colonial administrators in Eastern Africa in the 18th century (Charsley, 1969; Iliffe, 1969). This research wants to affirm how contacts between Persian, Arabic, Portuguese and Kiswahili allowed loanwords to penetrate into Kiswahili lexicon during the first and second waves of contact (Lodhi, 2000). The paper argues that names of the New World cereals and tubers were later borrowed by Bantu languages spoken in the interior of Tanzania during the second and third waves of contact.

Table 1: Selected New World Cereals and Tubers

Common name	Botanical name	Portuguese	Arabic	Kiswahili
maize, corn	Zea mays	milho	zurha	mahindi
bean	Phaseolus spp.	soja, feijao	fehusurian	maharage
rice	Oryza spp.	arroz	oris	mpunga, mchele
potato	I. batatas	batata	botatos	viazi
peanut	Arachis spp.	amendoim	fustuuk	karanga
cassava	Manihot esculenta	mandioca	kasafa	mihogo

Thirdly, African communities practiced crop cultivation before contact with the external world. Schoenbrun (1993), Sutton (1993) and Iliffe (2007) agree that ancient indigenous crops in Bantu communities included yams, finger and pearl millet, sorghum, groundnuts and a variety of beans. The lexicons of Bantu languages have names of these crops (Table 2). Research on the penetration and incorporation of new names (beans³, potatoes, rice, maize, peanut and cassava) is yet to be explored fully. This is the third linguistic lacuna which this paper aims to fill.

Table 2: Some Indigenous Cereals and Tubers in Tanzanian Languages⁴

Common name	Botanical name	Kiswahili	Kiruuri	Kigogo	Kindali
yams	Dioscorea spp.	viazi vikuu		mandolo	ifitugo
finger millet	Eleusine coracana	ulezi	obureero	uhemba	amaleshi
sorghum	Sorghum bicolor	mtama	oburo	uhemba	ichipila
palm oil	Elaeis guineensis	mawese		ifuta	amabwese

Lastly, various mechanisms of incorporation are adopted in different languages. This is connected with the fact that crops from Asia entered East Africa through the Indian Ocean (McCann, 2001; Ehret 2011) and/or Trans-Saharan trade routes (Rockel, 1997; Mapunda, 2009). Since Bantu people permit agricultural innovations and civilizations (Bostoen, 2007), crops spread across Bantu-speaking communities due to contact. Evidence is found in the vocabulary of the crops in interior languages, e.g. *dolo for cereal (cf. McCann, 2001; Blench, 2006). However, languages tend to borrow terms differently by either innovating existing terms to accommodate new concepts (Lusekelo, 2013), borrowing from neighbouring communities (Batibo & Rottland, 2001) or incorporating new terms from superior languages (Swilla, 2000; Lusekelo, 2014). Such differences in borrowing warrant investigation in the way names for New World crops are incorporated into Bantu-speaking communities in Tanzania.

³ Although cow pea (Vigna unguiculata) and African rice (Oryza glaberrima) are indigenous to Africa (Blench 2006), soya bean (Glycine max), varieties of beans (Phaseolus spp.) and Asian rice (Oryza sativa) are alien to Africa.

⁴ Sources: Schoenbrun (1993), TUKI (2001), Massamba (2005), Bostoen (2007), Botne (2008) and Rugemalira (2009).

2. The Historicity of Onomastics in Tanzanian Bantu: Literature Review **2.1 Settlements of Bantu People**⁵

Bantu-speaking communities settled in their territories between 7th century and 1650 (Wilson, 1958; Charsley, 1969; Nurse & Spear, 1985; Rockel, 1997). Most communities cultivated vams, sorghum and millet (Schoenbrun, 1993; Mapunda, 2009). Their contacts with foreigners occurred at different intervals.

The speakers of the Lakes Corridor languages (Kinyakyusa, Kindali, Kinyiha and Kinyamwanga) settled in the territory from the northern edge of Lake Nyasa to the foothills of Mount Rungwe between 1550 and 1650 (Wilson, 1958; Charsley, 1969; Kalinga, 1983). Wilson (1958: 15) claims that "the main food crops were bananas and plantains, beans, cow-peas, ground-nuts coco-yams, maize, sweet potatoes, and pumpkins." Fingermillet used for beer was planted on new lands (ibid). The invasions of foreigners (Kisangu and Kingoni speakers) and Europeans (Livingstone Missionaries from Britain and Berlin Missionary from Germany) began in the 1880s (Charsley 1969). Mwamfupe (1998) found out that Kinyakyusa speakers in Rungwe district cultivate maize, sweet potatoes, bananas, beans, coffee, tea, and vegetables while those in Kyela district grow rice, maize, Irish potatoes, sweet potatoes, cassava, cocoa, bananas, beans, and vegetables. Since Irish potatoes, rice, cassava and beans are not mentioned by Wilson (1958) but included by Mwamfupe (1998), perhaps such crops were introduced recently. In this area, contacts with Malawian and Zambian languages existed (Kalinga, 1983; Ehret, 2011). The paper articulates incorporations of their names in the Lake Corridor Bantu languages.

The history of the settlement in the Lake Victoria area begins with the second wave of the Bantu expansion into the present-day habitations (Schoenbrun, 1993; Sutton, 1993; Ehret, 2011). The first wave involved movement of the original Bantu from Cameroun to the Great Lakes (Interlacustrine) area (Vansina, 1995). Then the present day communities (Haya, Nyambo, Jita and Ruuri) settled in the southern parts of the lake perhaps between 1500s and 1600s (Schoenbrun, 1993; Sutton, 1993; Mapunda, 2009). Murdock (1960) and Mapunda (2009) claim that yams, sweet potatoes, sorghum and pearl millet were important crops in Karagwe and Buhaya areas. It is also shown that "bananas, plantains and maize which dominate today are late comers" (Mapunda, 2009: 98). Recently, Kashaga (2013: 53) found out that the speakers of Kihaya have local systems of utilizing their land through: (i) ekibanja, i.e. "coffee-banana farming together with other seasonal crops like beans and maize in the same family homestead", (ii) kikamba which is for annual crop cultivation, e.g. cassava "bilibwa", sweet potatoes "mfuma", millet "mugusha", yams "kashuli"

⁵ Areas of study: Lake Victoria (Interlacustrine) (Schoenbrun, 1993; Sutton, 1993), Lake Corridor (South Western Tanzania) (Wilson, 1958), Mount Kilimanjaro (Chaggaland) (Rockel, 1997), Central Tanzania (Rockel, 1997), and Coastal Bantu (Nurse & Spear, 1985).

etc., and (iii) an open communally-owned grassland used to cultivate crops such as nuts "nshoro". The spread of the names of these new crops is examined.

Moreover, people of the Interlacustrine area came into contacts with outside world probably late in the 18th century (Rockel, 1997; Mapunda, 2009). Mapunda (2009: 101) contends that "Karagwe must have started interacting with the coast earlier than 18th century, [...] the earliest date we have for the arrival of Arabs in Karagwe is approximately the late 1830s and early 1840s". The contacts with Europeans (missionaries and colonial administrators) were after the caravan routes, perhaps as from 1890s. It is shown that the White Fathers resided in the region in 1892 and brought about Christianity (Iliffe, 1969). He specifically shows that "Roman Catholic missionaries were active in Kiziba from 1891 and while Kyamtwara was forced to accept them in 1892" (Iliffe, 1969: 173).

Since cassava and maize are not listed in historical works such as Murdock (1960), this paper assumes that they were introduced in these communities later. Ehret (2011) argues that the diffusions of maize into Lake Victoria area between 1500 and 1800 seem to originate from northern parts of Congo. The diffusions of beans, peanuts and cassava in the late 19th century came from the Eastern coast through central Tanzania. In order to show the proper history of these crops, probably investigation of the nomenclature will help to shed some light.

The Chagga communities of Mount Kilimaniaro settled in the slopes of Mt. Kilimanjaro around 1500. Soini (2002: 2) opines that Chagga people "began to settle on Mt. Kilimanjaro in successive waves of migration starting at least five or six hundred years ago, possibly much earlier." Banana, maize, cassava and sweet potatoes came from the Portuguese traders and sugar cane from Asia via the Arab traders, perhaps in the 16th century (Murdock, 1960; Soini, 2002). Today the Chagga home garden includes banana, beans (Phaseolus vulgaris), cow pea (Vigna unguiculata), maize (Zea mays), potato (Solanum tuberosum), sweet potato (Ipomoea batatas) and arid yam (Dioscorea spp.) (Fernandes et al., 1985). The spread of New World crops into Mt. Kilimanjaro area seems to come from the Eastern coast by caravan trade routes (Rockel, 1997; Ehret, 2011). This occurred between 1500 and 1800 (Ibid). Since these crops came from the Indian coast, an investigation of Kiswahili loanwords in Mt. Kilimanjaro languages is interesting.

2.2 Penetration of New World Crops

Rockel (1997: 6) argues that "porters were at the leading edge of innovation in nineteenth century Africa. They introduced foreign crops and agricultural techniques to their home regions." First, rice was domesticated in East African Coast earlier than recorded. Murdock (1960: 538) argues that "rice was introduced from Southern Asia in the early centuries of the Christian era." Second, rice seems to have been brought in the coast of East Africa from Asian and Indonesian territories through Indian Ocean trades earlier before the tenth century. Nurse and Spear (1985) argue that contacts between Swahili-speaking people and people from the Persian Gulf and Arab-land began sometime in the 7th and 8th century. If rice was introduced by Persians and Arabs, it would be during this period. Even Murdock (1960: 538) shows that "Muslim Arabs introduced wet or paddy cultivation" in Madagascar and "were also the first to establish rice on the adjacent continent". Third, rice appears to have brought to the coast of East Africa from Asia, Indonesia and India through Indian Ocean trades after the tenth century. Blench (2006: 131) says "in the 13th and 14th centuries, rice is reported on the East African coast, although the names for rice in Swahili link it with India rather than the Arabs". Ehret (2011) also argues that rice came into East Africa this time.

An important point to consider here is the establishment of rice farms in the coast of East Africa and its spread into the interior of the present day Tanzania later. Coastal Bantu-speaking communities (speakers of Kimakonde, Kidigo and Kiswahili) must have obtained vocabularies for the nomenclature of rice first and then transferred the terms into the Bantu-speaking communities inhabiting the interior territories. It becomes significant to investigate the spread of rice from the coast to the interior by examining names of rice in the selected Bantu-speaking communities in the country.

Blench (2006: 133) says that maize or corn (Zea mays) "is the most important cereal staple in Eastern and Southern Africa today, and is increasingly dominating crop repertoires in West Africa". In Tanzania maize is grown almost in all regions and it is the major food crop. Maghimbi (2007: 74) says that "since the turn of the 19th century, maize has slowly replaced millet and sorghum as the principal grain". The history of maize in Africa is divided into three phases.

Firstly, maize is believed to have been introduced in all coasts of Africa by Portuguese (Blench, 2006; Bostoen, 2007). Its name in Portuguese is mahiz 'maize' (Blench, 2006) or burro or aburro (McCann, 2001). These words were borrowed as zaburro 'maize' in Mozambique or aburo 'maize' in Akan of Ghana (Ibid). This might entail that Portuguese occupation of Tanzanian coast around 1500s (Nurse & Spear, 1985; McCann 2001) marked the introduction of maize. Secondly, it seems the actual trace of the importation of maize to the interior of Africa is not really traceable until the mid of 17th century (McCann, 2001) when various communities

had adopted the crop and the split of the nomenclature for this crop had been enormous. McCann (2001) reports that African communities named maize differently but with similar notion, that it is a crop from the coast, e.g. chimanga 'crop from the coast' in Chichewa of Malawi and mahindi 'grain of India' in Swahili. However, McCann (2001) treats erroneously the term pemba used in Mt. Kilimanjaro area as originating from the coast. In section 4.1, this paper offers a proper source of the name pemba. Thirdly, other sources suggest that maize was introduced in Sub-Saharan Africa through Trans Saharan trade (e.g. Murdock, 1960). In addition, some sources such as Mapunda (2009) show that the introduction of the current staple food crops, namely cassava and maize (from South America) and rice (from Asia) being around by 18th century.

The foregoing discussion warrants research on the incorporation of the various foreign names of maize into Bantu communities in Tanzania. In addition, it is argued that 'many sorghum terms are now applied to maize, which has replaced it as a staple in many areas' (Blench, 2006: 126). This claim also warrants investigation of the names for maize in the selected Bantu languages.

Cassava (Manihot esculenta) was introduced in Africa, perhaps from its original land of America (Murdock, 1960), by Portuguese as a cheap staple to feed slaves (Blench, 2006; Bostoen, 2007). Barratt et al. (2006) suggest that cassava arrived in Central Africa (Zambia, Malawi) from its original land (Americas) about 300 years ago. Perhaps Arabs and Portuguese brought cassava to the coast of East Africa because it appeared in Portuguese controlled territories such as Gabon and Angola in the 1600s. The suggestion that cassava was brought by the Portuguese appears in the literature. For instance, Blench (2006: 140) claims that "along the Atlantic coast of Africa, evidence of an introduction by the Portuguese is clear, since many coastal languages borrow from Portuguese mandioca." In Tanzania, cassava is traditionally grown in many places (Murdock, 1960: 523). Thus, cassava is a significant tuber in many communities. However, cassava is a strange⁶ crop in Mt. Kilimaniaro zone (Murdock, 1960: 329; Fernandes et al., 1985; Soini, 2002). This calls for research on the name for cassava across Bantu-speaking communities in Mt. Kilimanjaro area.

On the history of potatoes, Blench (2006: 138) claims that sweet potatoes (*Ipomoea batatas*) were "known in Europe in the 16th century and were transported to Africa at the same time". They appeared in African coast around the 1600s, which is the era of Portuguese invasion of the continent. The lexical borrowing of the word -batata 'potato' supports that the Portuguese introduced this crop. This is because "the Portuguese name batata, which is incorporated in the scientific name, was later applied to the Irish potato, Solanum tuberosum, and became English 'potato'"

⁶ I use the word "strange" because the Chagga people do not treat "cassava" as food crop.

(Blench, 2006: 138). He argues further that African communities use traditional names such as dolo to refer to potato as he says "the form *-dolo, found along the edge of the rainforest in Eastern and Southern Africa" (Blench, 2006: 138). This evidence supports the idea that Bantu communities adopted new names of potatoes. Therefore, it motivated the current research.

Beans (Phaseolus spp. or Phaseolus vulgaris) is an origin Indian and Asian crop (Blench, 2006). It is a common crop all over the world, America, Europe, Africa and Asia. The main producing countries include Brazil and Tanzania (McCann, 2001). It seems that *Phaseolus lunatus 'lima bean'* is the common specie available in Tanzania (Maghimbi, 2007). Peanuts (groundnuts) (Arachis hypogaea) is also claimed to be a foreign crop in Africa. For example, Blench (2006: 146) claims that "the American groundnut (or peanut) was introduced by the Portuguese". This crop is grown along the coast and in the interior of Tanzania. Thus, an examination of the similarities and differences of the names of beans and peanuts remains a potential contribution to make.

The Bantu-speaking communities are known for agricultural practices (Vansina, 1995; Bostoen, 2007). Thus, perhaps some of these cereals and tubers are typical Bantu in origin. Guthrie (1971) provides the reconstructed entries to the Proto-Bantu for the crops (Table 3). The equivalent proto-forms are offered herein because previous studies such as Bostoen (2007) found that *cángú may also mean 'maize' in some Bantu languages.

Table 3: Proto-forms for Bantu Names of Crops

Crop	Proto-Bantu	Equivalent Proto-Bantu
Maize		*cango 'maize, small seeds', *pemba 'millet'
bean		*konde 'bean'
Rice	*poŋga 'rice'	
potato		*kva 'yam'
peanut		*bido 'cola nut', *jogo, *joko, *nju 'groundnut'
cassava		

3.0 The Methodological Procedures and Rationale for Choice of Bantu Zones

The main data for this paper were obtained from published dictionaries and lexicons of 20 Bantu languages (Table 4). Supplementary data of crop names were elicited from elderly and young native speakers⁷ of Bantu languages of Tanzania, namely

⁷ I am grateful to students of Dar es Salaam University College of Education who provided data for Kimeru, Kinyamwanga, Kinyiha and Kisukuma. I am indebted to elderly speakers for Kisukuma, Kikagulu, Kigogo, Kikuria and Kindali who provided supplementary data.

Sukuma, Kuria and Kagulu. Data from these speakers supplement the shortfalls found in dictionaries and lexicons.

Table 4: Sampled Bantu Languages of Tanzania

Bantu area	Languages ⁸					
Lake Victoria	Kinyambo	Kizinza	Kijita	Kiruuri	Kiikizo	Kisimbiti
Mt. Kilimanjaro	Kimachame	Kipare	Kigweno	Kimeru	Kikahe	
Lake Corridor Coastal	Kinyakyusa	Kindali	Kinyamwanga	Kinyiha		
Languages	Kiswahili	Kimakonde	Kidigo			
Central languages	Kisukuma	Kigogo				

Six Tanzanian Bantu languages investigated are of Lake Victoria (Interlacustrine) area. The rationale for this choice is their settlement in the Great Lakes area which is suggested to take place earlier (Schoenbrun, 1993; Ehret, 2011). Ehret (2011) suggests that diffusion of crops into Lake Victoria zone first came from the North (in the second wave of Bantu expansion) and then from the East Coast through trade. The assumption is that such Bantu settlements might have caused twice-diffusion of the nomenclature of the crops into other communities in the territory. The study of the names of the New World crops will help to ascertain this assumption.

Secondly, the Lake Corridor languages opened contacts to the South and was penetrated lately by the foreigners (Wilson, 1958; Charsley, 1969). Two assumptions are apparent here. On the one hand this might entail that cereals and tubers might have reached the area through the penetration of the European missionaries and administrators in the 1880s. On the other hand, names from other ethnic communities might have been incorporated into the Lake Corridor language. Thus, the intention of this choice was to examine what names were borrowed and incorporated into the Lake Corridor (South Western) Bantu-speaking communities.

Thirdly, the coast of the present day Tanzania remains an important convergence zone because most foreign innovations from outside arrived there. Blench (2006) accepts that Arabs and Portuguese settled in the coast of East Africa earlier. Ehret (2011) says that most crops diffused from the coast to the interior of the country. The implication here is that incorporated loanwords in coastal languages (Kiswahili, Kidigo and Kimakonde) might have been transferred into interior languages in the territory during caravan trade (Rockel, 1997; Mapunda, 2009). Due

⁸ Sources of data: Kinyakyusa (Felberg, 1996), Kinyambo (Rugemalira, 2002), Kiruuri (Massamba, 2005), Kizinza (Rubanza, 2008), Kijita (Mdee, 2008), Kiikiizo (Sewangi, 2008a), Kipare (Mreta, 2008a), Kindali (Botne, 2008), Kikahe (Kahigi, 2008), Kimachame (Rugemalira, 2008), Kisimbiti (Mreta, 2008b), Kigweno (Sewangi, 2008b) and Kigogo (Rugemalira, 2009). My own data are for Kisukuma, Kinyamwanga, Kinyiha and Kimeru.

to availability of resources (dictionaries and lexicons) and limited data from young speakers, three Coastal Bantu languages are selected randomly, e.g. Kimakonde (Rugemalira, 2013), Kidigo (Nicolle et al., 2004), and Kiswahili (TUKI, 2001).

The fourth choice was determined by the penetration and domination of cereals such as maize and rice and tubers such as potatoes and cassava into Bantucommunities practicing banana culture. Anthropological studies such as Soini (2002), Maghimbi (2007) and Myhre (2009) maintain that Chagga communities practiced home garden farming and crops grown in the area were mainly coffee, banana, beans, maize, sunflowers, and groundnuts. Maghimbi (2007) contends that cereals such as beans and maize were mainly cultivated by villagers from Rufiji delta to Zanzibar in the 1870s. Then contacts between the Coastal and Interior communities occurred (Iliffe, 1969; Rockel 1997). It is important to examine how contacts with the Coastal languages and missionaries from Europe vielded loanwords for cereals and tubers in the Mount Kilimanjaro area. Therefore, a sample of five Bantu languages was purposefully selected from Mt. Kilimanjaro zone.

Lastly, most of the caravan routes, which are claimed to pass crops into the interior of the present day Tanzania (Rockel, 1997; Ehret, 2011), passed through Gogoland and Sukumaland. It is significant to examine how such interior communities incorporated the vocabularies of such new crops. Therefore, in this paper, Kigogo (Rugemalira, 2009) and Kisukuma (my current data) are also investigated. The rationale for their inclusion is their location in central Tanzania through which caravan trade occurred hence possibilities of contacts.

4.0 Lexis of New World Crops in Tanzanian Bantu Languages

4.1 Maize (Zea mays)

Table 5 provides the names of maize. Data from Tanzanian Bantu suggest four hypotheses based on the nomenclature of maize.

Table 5: Bantu Names for Maize

Bantu languages	Maize	Usages of lexical item(s)
Lake Victoria ⁹		
Nyambo	cicóori, citiritiri	maize product, maize cob
Simbiti	risóri	maize plant
Jita	liliingwa	maize product (seed)
Ikiizo	ridoma	maize product (seed)
Ruuri	lijoori, liguunja	maize product, maize cob

⁹ The Kizinza word for MAIZE is not listed in the primary source, namely Rubanza (2008) hence it is ignored

Lake Corridor:

Ndali cilombe, cikungwe maize plant and product, maize cob Nyakyusa filombe, fikungwe maize plant and product, maize cob

Nyamwanga visaka maize plant and product Nyiha amangagu maize plant and product

Mount Kilimanjaro:

Kahe maemba maize plant and product Mashami memba maize plant and product Gweno iemba maize cob, maize plant Meru memba maize cob, maize plant Pare¹⁰ mahemba maize cob, maize plant

Coastal Bantu:

Makonde lilombe maize plant and product

Swahili mahindi maize plant and product, maize cob

maize, cob of maize Digo matsere, guguta

Central Tanzania

Gogo itama maize plant

Sukuma mandege maize cob, maize plant

The first hypothesis surrounds semantic adjustment which has to do with names cassava and maize in Lake Victoria area. In Kijita the word *liliingwa* means maize product (seeds), a term which is used by other ethnic communities in the Lake Victoria area to refer to cassava (manioc), e.g. Kikerewe: *liligwa* and Kikuria: *lilibu*. Thus, Kijita adopted a vocabulary used for another sense [cassava] to mean, in this regard, maize.

The second hypothesis revolves around the nomenclature for **maize** in Mt. Kilimanjaro zone whereby the word *maemba/memba* is prolifically used for 'maize'. McCann (2001: 251) erroneously argues that pemba is borrowed from "the name of the island on which 16th century Portuguese planters began to raise foodstuffs, including maize, to supply their coastal garrison." Therefore, most Kilimanjaro communities such as Chagga, Taita Samburu etc. refer to it as a coastal product. It is obvious that maize penetrated into the present day Tanzania by caravan routes (Rockel, 1997) but the word pemba does not relate to Pemba island of Tanzanian coast.

¹⁰ Kipare and Chasu refer to one language. I opted for Kipare in this paper.

Perhaps the best approach to the term **pemba** is revisiting reconstructed forms. In the Proto-Bantu forms in Guthrie (1971), *pemba is provided for 'millet' (see Table 3 above). Ehret (2011) provides the form *pemba as a word referring to maize in northeastern Tanzania. This entails that due to similarities of the plants. Bantuspeaking communities around Mt. Kilimanjaro area have modified the meaning of *pemba to mean 'maize'. This hypothesis seems more plausible because Bantu communities borrow existing crop names and assign them new senses. Ehret (2011) provides proto-forms *-pemba 'maize' and *-tama 'sorghum'.

Semantic adjustment of the existing names of crops to accommodate new crops is another alternative found in Bantu languages (Lusekelo, 2013; 2014). This is the case of names for **maize** and **sorghum**. The maize plant is called *itama/mtama* in Kigogo and Kikagulu, a name borrowed from Kiswahili name for sorghum, i.e. mtama. Also, in Kikagulu and Kigogo sorghum is called *uhemba* which is similar to a name of maize, i.e. -emba in Mt. Kilimanjaro communities. This is an indication that the essences of maize and sorghum were first borrowed and then underwent semantic changes: mainly from words mtama 'sorghum' to itama 'maize' and pemba 'maize' to *uhemba* 'sorghum'. This supports the idea that in accommodating new concepts and names in Tanzanian Bantu, existing words are modified to incorporate new senses.

The third hypothesis deals with historical analysis of the terms -lombe and coori used in Lake Corridor and Lake Victoria zones respective yields a contradictory hypothesis. The name *lombe* which is attested in Kinyakyusa and Kindali does not support contact situation apparent in the Lake Corridor. Ehret (2011) and Lusekelo (2014) hold that speakers of Kinyakyusa and Kindali contacted people from the South, e.g. Kitumbuka, Kinyanja and Kibemba speakers from Malawi and Zambia. This is because words for maize in these communities are chingoma, chimanga and nyanje (Vermeullen, 1979; McCann, 2001; Sendama (2012) respectively. These terms support the proposition that maize is equated to the "product of the coast" (McCann 2001). Thus, for maize, Lake Corridor Bantu languages have neither incorporated crop-names from Malawi and Zambia nor from Coastal Bantu languages.

The fourth hypothesis relates to the domination of Kiswahili over other Bantu languages in terms of vocabulary for cereals and tubers. It is argued that mahindi (maize) originates from Persian Arabic (Lodhi, 2000). Some coastal languages use the term mahindi 'the Indian (grain)' (Ehret, 2011: 230) which is borrowed from Kiswahili. Data used herein does not support this claim.

4.2 Beans (*Phaseolus vulgaris* or *Lima*)

As Table 6 shows, Tanzanian Bantu display a variety of nomenclatures for beans.

 Table 6: Bantu Names for Beans

Bantu languages	Beans	Use of lexical item(s)
Lake Victoria:		
Nyambo	cihûmba	plant and seed
Ruuri	liyarage	plant and seed
Ikiizo	rizoreka	plant and seed
Zinza	cijanjala	plant and seed
Jita	liyalage	plant and seed
Simbiti	rihárage	plant and seed
Lake Corridor		
Nyakyusa	indima	plant and seed
Ndali	amalima	plant and seed
Nyamwanga	chilemba	plant and seed
Nyiha	imbonzo	plant and seed
Mout Kilimanjaro:		
Kahe	mambunu, mambera	plant and seed
Mashami	maharagi	plant and seed
Pare	mang'obe, maharage	beans
Coastal Bantu:		
Swahili	maharage	plant and seed
Makonde	lihalage, mándoondo	plant and seed, cooked beans
Digo	maharagwe	type of beans
Central Tanzania		
Gogo	amahâlaji	plant and seed
Sukuma	maharage	plant and seed

It appears that beans, cultivated in Lake Corridor, come from the South because the vocabulary **lima** is attested in Kindali: amalima and Kinyakyusa: indima. Perhaps *lima* is a loanword from the South because one of the words for beans is *nzama* in Kinyanja (Vermeullen, 1979). The other languages in the Lake Corridor make use of names, Kinyamwanga: chilemba and Kinyiha: imbonzo. The name chilemba seems to have been borrowed from Zambian languages, perhaps Kibemba which has the same word *chilemba* for beans (Sendama, 2012). This supports Ehret (2011) and Lusekelo's (2014) suggestion that the route of borrowing for Kinyamwanga, Kindali and Kinyakyusa is Malawi/Zambia-Tanzania, and not the other way, i.e. Tanzania-Malawi/Zambia.

Several Bantu communities in Tanzania borrowed the Kiswahili word maharage for beans, e.g. Kimachame: maharagi, Kimakonde: lihalage, Kijita: liyalage, Kiruuri: liyarage and Kisimbiti: rihárage etc. However, TUKI (2001) does not indicate that the word maharage¹¹ is a foreign name in Kiswahili; thus, this paper assumes that the word is Bantu. This signifies that **beans** is a new crop in the Lake Victoria and Mt. Kilimanjaro areas which was introduced through the contact with the coastal Kiswahili perhaps during caravan trade (Rockel, 1997).

4.3 Peanuts or Groundnuts (*Arachis hypogaea*)

Peanuts (groundnuts) (Arachis hypogaea) appears to have been brought by foreigners through Kiswahili because several Bantu languages, except the Lake Corridor, have incorporated the Kiswahili word **karanga** (Table 7).

Table 7: Bantu Names for Peanuts

Bantu languages	Peanuts	Use of lexical item(s)
Lake Victoria:		
Nyambo	ecinyóobwa	plant and product
Ruuri	jimaande	plant and product
Ikiizo	eng'alanga	plant and product
Zinza	enkalanga, ebikaranga	plant and product
Jita	ing'alanga	plant and product
Simbiti		
Lake Corridor:		
Nyakyusa	amasyabala	plant and product
Ndali	amashabala	plant and product
Nyamwanga	mbalala	plant and product
Nyiha	imbalala	plant and product

¹¹ Further research on similarities between French names haricots and manioc and Swahili maharage 'beans' and mhogo 'cassava' is required.

Mout Kilimanjaro:

Kahe	karanga	plant and product
Mashami	kárángá	plant and product
Gweno	karanga	groundnuts
Pare	nkaranga	groundnuts
Meru	karanga	groundnuts

Coastal Bantu:

Swahili	karanga	plant and product
Makonde	ntesa, jindu	plant and product
Digo	njugu	groundnuts

Central Tanzania

Gogo	nghalanga	plant and product
Sukuma	nharanga	groundnuts

Names of peanuts in the Lake Corridor communities demonstrate a two-way diffusion pattern. On the one hand, the Malawian Kinyanja speakers refer to peanuts (groundnuts) as *nsawa*. With phonological and morphological differences, this is similar to the term *shabala/shabala* in Kindali and Kinyakyusa. This entails that Tanzania-Malawi contact existed. On the other hand, in Kibemba, *lubalala* 'groundnuts' (Sendama, 2012) is available. It means that Kinyamwanga and Kinyiha borrowed from Kibemba. Thus, this entails that Zambia-Tanzania contact existed.

4.4 Potatoes

The Kiswahili names *viazi* (*vitamu*) '(sweet) potatoes' and *viazi* (*Ulaya*) '(Irish) potatoes' are incorporated mainly for European potatoes, as evident in Kinyambo (Lake Victoria area), Kimachame (Mt. Kilimanjaro zone) and Kidigo (Coastal Bantu) (Table 8).

Table 8: *Bantu names for potatoes*

Bantu languages	Potatoes	Use of lexical item(s)
Lake Victoria:		
Nyambo	eciráazi, ecitakuri	Irish potato, sweet potato
Zinza	enumbu	Irish potatoes
Jita	inumbu	Irish potatoes
Simbiti	inumbu	potatoes

potato

Lake Corridor:

Nyakyusa indofania, imbatata Irish potato, sweet potato
Ndali indoofani, imbataata Irish potato, sweet potato
Nyiha intofania, impatata Irish potato, sweet potato
Nyamwanga visela Irish and sweet potato

Mout Kilimanjaro:

Kahe mbumba potatoes

Mashami *vitoiya, viasi* sweet potatoes, Irish potatoes
Pare *viogwe, viazi* sweet potatoes, Irish potatoes

Gweno ngumba potato

Coastal Bantu:

Swahili *viazi Ulaya*¹², *viazi vitamu* Irish potato, sweet potato

Makonde *mikambe, mandáále* Irish potato, wild potato

Digo *muyogbwe, chiazi* sweet potato, potato

Central Tanzania

Gogo mandolo sweet potato

Sukuma *nhombo* Irish potato, sweet potato

There is a two-way distinction between sweet potatoes and European potatoes in some Bantu-speaking communities and a one-way distinction in other communities¹³. In the Lake Corridor, the borrowed term *-batata* is preferred for sweet potatoes and *-tofania* is used for Irish (European) potatoes. The word *-batata* comes from the original Portuguese word and it is known that Kinyamwanga, Kinyakyusa and Kindali integrated English words (Swilla, 2000; Lusekelo, 2013, 2014).

Perhaps the Lake Corridor languages borrowed the word *tofania/ndofania* from Germanic language because Cole (2010) lists *erdapfel* 'potatoes' and *kartoffel* 'white potatoes' in German. This would be plausible if Irish potatoes were introduced in the area by German missionaries and administration around the years 1891 and 1896 (Charsley, 1969). Ehret (2011) would also support that crops spread

¹² Though the terms "viazi Ulaya", "viazi viringo" and "viazi mbatata" refer to Irish potatoes, I make use of the former herein for convenience purposes.

¹³ In Kiruuri and Kisimbiti, the word *numbu* is used to refer to potatoes.

from South to the Lake Corridor hence languages in this area might have borrowed the German word for Irish potatoes.

The Southern Bantu languages such as Kinyanja have the name *mbatata* 'sweet potatoes' (Vermeullen, 1979). This signifies a contact between Kindali and Kinyakyusa with Kinyanja. Nonetheless, Kinyanja also has a different word, i.e. kachamba 'sweet potato' (Vermeullen, 1979). Since most Kinyamwanga speakers inhabit in northern Zambia, the data confirm that the word visela is borrowed from Zambian Bantu languages.

The native term *dolo and borrowed name batata are fascinating to note here. These words are scattered all over Tanzanian Bantu. In the current data, Bantuspeaking communities in Central Tanzania use the word mandolo for potatoes. Kimakonde, a coastal language, uses the word mandáále for wild potatoes. Vermeullen (1979) lists words kadolo, kachamba, mbatata for sweet potatoes in Kinyanja. This pattern indicates that the words *dolo* and *batata* 'potatoes' are spread throughout sub-Saharan Africa.

4.5 Cassava or Manioc (*Manihot esculenta*)

Cassava is an American tuber, introduced in Central Africa in late 18th century and East Africa in early 19th century (Dahniya, 1994). The Kiswahili name mihogo is spread over a large number of Tanzanian Bantu (Table 9).

Table 9: Bantu Names for Cassava

Bantu languages	Cassava (manioc)	Use of lexical item(s)
Lake Victoria:		
Nyambo	eciríibwa	cassava plant and product
Ruuri	amaliibwa	cassava plant and product
Ikiizo	riribhwa	cassava plant and product
Zinza	ecilibwa	cassava plant and product
Jita	lilibwa	cassava plant and product
Simbiti	amarébwa	cassava plant and product
Lake Corridor:		
Nyakyusa	amajabu	cassava plant and product
Ndali	amajaabu	cassava plant and product
Nyamwanga	mihogo	cassava plant and product
Nyiha	amayabo	cassava plant and product

Mout Kilimanjaro:

Kahe cassava plant and product muhogo Mashami mwookô cassava plant and product Pare mimange cassava plant and product

Meru mioko cassava, manioc Gweno mmanga cassava, manioc

Coastal Bantu:

Swahili mihogo cassava plant and product Makonde mmogo, makopa cassava plant, cassava product

Digo manga, makopa cassava, dried cassava

Central Tanzania

Gogo ihogo cassava plant and product Sukuma maliwa cassava plant and product

All ethnic communities from Lake Victoria seem to have adopted the passivized form of the Proto-Bantu form *du 'eat' (Guthrie, 1971) for cassava. This is because these communities have names such as *maliibwa* in Kiruuri, *amarébwa* in Kisimbiti and elilibwa in Kijita. The verbal expression for 'to eat' is kulya/kurya in these communities. This supports previous suggestion that this is a kind of innovation of the verb into the nominal expression is a sign of foreign nature of the crop. The use of the term "kulya/kurya" to refer to cassava is a good indicator that the crop is a foreign one in the area. Inhabitants of the interior communities might have borrowed the existing vocabulary to make it distinct from other tubers such as potatoes which are referred to as *numbu*: e.g. *nhombo* (Kisukuma), *inumbu* (Kisimbiti).

The first indication of the diffusion of cassava into numerous Bantu-speaking communities in Tanzania is by the nomenclature of cassava which is related to the penetration of Swahili people (via caravan trade) into the interior of the territory. It is suggested that cassava (manioc) diffused from Swahili into Bantu languages because the Swahili word *muhogo* is attested in Coastal Bantu, Central Tanzania and Mt. Kilimanjaro communities, e.g. *ihogo* in Kigogo, *mwoko* in Kimeru, *mwookô* in Kimachame, and *mmogo* in Kimakonde. Some of the Lake Corridor languages have integrated the Swahili word, e.g. *mihogo* in Nyamwanga.

Two hypothetical suggestions are made here. One, similar to maize (McCann 2001), cassava (manioc) might also mean "a crop of the coast" for Mt. Kilimanjaro languages. The name manga/mange is Kipare and Kigweno might mean a coastal crop. Two, some of the Lake Corridor languages have words -jabu/-jaabu/-yabu 'cassava, manioc' which do not indicate any borrowing. In Kibemba, the word kalundwe is used (Sendama, 2012).

Sukuma

mchele

4.6 Asian Rice (Oryza sativa)

Asian paddy and rice (Oryza sativa) which is cultivated in the Bantu areas is investigated in this research. The spread of rice on the coast is evident in the vocabulary. The history of the nomenclature for paddy and rice in East Africa surrounds Swahili expansion into the interior of Tanganyika (Table 10).

Table 10: Bantu Names for Rice

Bantu languages	Rice	Use of lexical item(s)
Lake Victoria:		
Nyambo	omucére	rice and paddy
Ruuri	omucéle	rice and paddy
Ikiizo	umcere	rice and paddy
Zinza	umpuga	rice and paddy
Jita	umucele	rice and paddy
Simbiti	umushére	rice and paddy
Lake Corridor:		
Nyakyusa	umpunga	rice and paddy
Ndali	umupuunga	rice and paddy
Nyamwanga	umpunga	rice and paddy
Nyiha	umpunga	rice and paddy
Mout Kilimanjaro:		
Gweno	mchere	cooked rice, rice plant, unhusked rice
Pare	mhunga	rice
Meru	nchele	rice
Coastal Bantu:		
Swahili	mchele, mpunga	rice and paddy
Makonde	imânda, nnyêle	rice and paddy
Digo	mtele, mpunga, bura	uncooked rice, rice crop, paddy field
Central Tanzania		
	mucala mununga	rice and paddy
Gogo	mucele, mupunga	rice and paddy

rice and paddy

It is interesting to note that Bantu languages around Lake Victoria and Mt. Kilimanjaro borrowed either the word mtele or mchele 'uncooked rice' or mpunga 'paddy, unhusked rice' from the Coastal Bantu. Although such names differ in use in Swahili (mpunga = unhusked rice, paddy and/or plant; mchele = pulverized (husked) rice), the target Bantu languages have borrowed each term (mchele or mpunga) and use it to mean the paddy farm, rice harvests and cooked rice, as shown above. Though none of the languages examined seem to have borrowed the Swahili word wali (cooked rice).

Ethnic communities in the Lake Corridor seem to have maintained the Proto-Bantu form for rice, i.e. *ponga (see Table 3 above): Kindali umupuunga and Kinyamwanga, Kinyiha and Kinyakyusa umpunga. This might also imply that rice/paddy had been a traditional crop in the area. Even in Malawi and Zambia. Nyanja-speakers call rice mpunga. Wilson (1958) and Charsley (1969) argue that the Kinyakyusa did not come into contact with external world except missionaries and German administration who came from Karonga through Lake Nyasa as from the 1890s. Perhaps this is the reason that Kinyakyusa and Kindali still maintain the indigenous name mpunga/mpuunga for rice.

5.0 Conclusion

It is plausible to conclude that the spread of names of New World crops came in twoway traffic: Coast-Interior for Mt. Kilimanjaro and Lake Victoria Bantu and South-North for Lake Corridor Bantu, Coastal Bantu obtained these crops from Persians, Arabs and Portuguese earlier; then they transferred into Central Tanzania, Lake Victoria and Mt. Kilimanjaro areas. The amount of loanwords from Kiswahili, e.g. mihogo 'cassava', karanga 'peanuts', mchele/mchere 'rice' and maharage 'beans' is a good testimony of the diffusion of the crops into Kiswahili first then carried into the interior later. The main difference lies with the Lake Corridor communities whose nomenclatures demonstrate that they received such crops lately, from the South. Many names stand in isolation for the Lake Corridor: amasyabala 'peanuts', chilombe 'maize', chilemba 'beans' etc. This is a testimony that Lake Corridor languages have less Kiswahili-oriented loanwords for such crops (Swilla 2000; Lusekelo 2014). Thus, it is argued that the trend of the contacts were Coast-Interior for Central, Northern and Western areas and Zambia/Malawi-Tanzania for Southern areas.

On the same issue, i.e. spread of crops, the Lake Corridor communities split into two sources: Zambian source of terms such as imbalala 'peanuts' and chilemba 'beans' and Malawian source of terms such as mashabala 'peanuts'. The wave of diffusion from the South, therefore, splits into the Zambia-Tanzania and Malawi-Tanzania.

This observation answers succinctly the question paused by Swilla (2000): why Kindali and Kinyakyusa have several English loanwords as opposed to other Bantu languages spoken in Tanzania? Following Lusekelo (2014), the earlier contacts in the Lake Corridor was with Berlin missionaries and German administrators (German rule) and then with British occupation of the present day Tanzania. Borrowing should have come from German and English. Also, most contacts in the Lake Corridor were to English speaking countries, namely Zambia and Malawi hence new vocabularies either came from Nyanja and Bemba, major languages of these countries or English, the national language. In addition, this claim supports further the idea advanced by Lusekelo (2013) that languages in South-Western Tanzania borrowed much from English than Swahili.

Secondly, a semantic adjustment of the existing words is another significant alternative demonstrated by lexis of Tanzanian Bantu. Numerous names for crops have been swapped, either between Kiswahili and Bantu languages and/or within Bantu languages. Thus, crop names have obtained semantic extension.

Therefore, an important departure which needs to be analysed with caution involves integration of new crops which is associated with modification of the existing names. Some Bantu-speaking communities opted for existing words to refer to new words: e.g. *mtama* 'sorghum' in Kiswahili (= *itama* in Kigogo means maize) and -emba 'maize' in Kimachame, Kipare, Kimeru. In Kigogo uhemba is sorghum. In addition, the nomenclature of cassava is fascinating because a number of the communities in the Lake Victoria area and Central Tanzania utilize the word libwa/liwa 'cassava' which seems to be derived from the verb kulya/kurya 'to eat'. The assumption here is that such tubers might not have been eaten initially but had been accepted as staple food after the contact with other communities. Furthermore, as an indication of very late acceptance as staple food, the Mt. Kilimanjaro Bantuspeaking communities have the Swahili word -hogo being incorporated.

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