Is the Tanzanian Ngoni Language threatened? A Survey of Lexical Borrowing from Swahili

Introduction
Lexical borrowing is only possible in a language contact situation. Therefore, it is crucial to take the socio-cultural setting of the contact situation into consideration and not only the outcome. Even if the contact is between individual speakers of the languages, in a bilingual situation the borrowing pattern and the actual linguistic performance reflect the general community exposure to the other language. The result of the language contact additionally reflects the status of the borrowing language and what the process of borrowing implies, not only to individual speakers but also to the language community. Some lexical borrowing, cultural gap-filling borrowing and also just-for-prestige borrowing, may naturally be attributed to individual exposure for instance through travelling, education and incoming people from other language communities. However, borrowing in the basic vocabulary is always the result of pervasive cultural contact between speakers of the two languages, regardless of individual social contacts. With this as a point of departure, a pilot study of lexical borrowing from Swahili into Ngoni speech, with a special focus on nouns, was conducted.

As Tanzania’s post-independence language policy promoted Swahili as a means of achieving national and linguistic unity, Swahili has today permeated communication all over Tanzania, even in rural and remote areas, far from the coastal area where Swahili is the dominant language in most domains. Other Tanzanian languages have not been allocated any status or use. Due to this language situation the present study aimed at identifying core borrowing in the basic vocabulary to establish the vitality of the language Ngoni which is one of these Tanzanian languages. A new elicitation method using photos depicting the local community instead of questionnaires, written translation of wordlists or sentences and introspection, which a majority of earlier research of borrowing in the African context has relied on, was used.

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1 The prominence of Swahili however naturally dates further back to the German colonial rule long before the British took over the Protectorate in 1919 (Buchert, 1994).
2 We would like to thank Dr. Christina Thornell for sharing her ideas regarding using photos for elicitation and the Costech, Sida and Wotro-financed TASENE project for making this study possible.
The data of such an elicitation method are less hampered with interference from the translated language and medium of communication (here Swahili). The photos let the informants talk rather freely about the concepts in the photos and how these items are used, after a short introduction in Ngoni by a native speaker. Data treatment of such an elicitation is more time consuming compared to more traditional methods and also harder to control. However, as the terms for the concepts shown in the photos are produced within a more natural speech, the data are more reliable, in addition to the information on prosody and stress patterns which is provided.

The data are mirrored with socio-demographic metadata about the informants and their social situation. In doing so, the results are believed to contribute to the understanding of what the process of borrowing implies to the Ngoni in Tanzania. The present study examined the extent to which the Ngoni language is affected due to contact, combined with a study of the sociolinguistic conditions of the language Ngoni. The results of this give an indication of the vitality of Ngoni as a language. This paper gives mainly a quantitative account of the data, with some examples of loanword adaptation to the Ngoni noun class system. The statistics focus on differences between age groups and other socio-demographic variables (rural vs. urban settings, sex) and frequency of loans totally and in the basic vocabulary, using the Leipzig-Jakarta wordlist and the Swadesh list.

Heavy lexical borrowing is believed to be linked to low esteem of the borrowing language and low esteem is often related to processes of language death and loss (Appel & Muysken, 2006:174). Thus lexical stability is seen as a sign of cultural importance attached to concepts. First a short account of the background will be given, starting with the setting of the Ngoni in southwestern Tanzania. This part is followed by a theoretical discussion and an overview of the assumption this study is built on. Subsequently, the methods of the study are accounted for as well as some metadata about the informants. The results are discussed before the last part which sums up the results of the study.

Background
The study was conducted in the Songea Rural District, east of Lake Nyasa in the Ruvuma Region in southwestern Tanzania in November-December 2012. Songea Rural District is situated in the geographically middle of the Ngoni speaking area. See Figure 1, showing an approximation of the area where Ngoni is spoken.

The data were collected in two linguistically and socioeconomically different contexts, Peramiho and Mhepai. Peramiho is a semi-urban centre, situated 24 kilometers northwest of Songea town. The area is also home to German Benedictine Catholic missionaries who settled in the area more than 130 years ago. In Peramiho there is a big hospital, a church, banks, a police station, a printing press and artisan workshops. The people in the area are involved in activities ranging from formal employment, farming and petty businesses. People who live in Peramiho are relatively more educated than people from other locations around the district. Mhepai is a small village 33 km further northwest of Peramiho, 62 kilometers from Songea town. The place is remote with only one primary school. Additionally, due to the nature of the place, interaction with the rest of the Songea Region and also the rest of Tanzania is limited. Only recently a mini-bus started to ply the route, and only once a day. The introduction of Chinese motorbikes has recently made the village a bit more accessible. Exposure to mass

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3 This more free elicitation method resulted in a varying number of data entries produced by the informants. Ideally the number of terms would be at least 24 for each informant and concept as there were 24 informants, but the analysis showed that some informants failed to target all concepts.
media is very limited due to lack of electricity. Most people in the place are small scale farmers, and are also involved in small scale animal husbandry and poultry, basically for domestic consumption.
Ngoni (N12, autonym Kingoni, Chingoni), is a Bantu (Niger-Congo) language which belongs to the Bantu N10 Manda group in Guthrie’s classification (Guthrie, 1948, 1971). Ethnologue (Lewis, 2009) gives the alternative names Angoni, Chingoni, Kingoni, Kisutu and Sutu. The latter terms are also used in the old sources which were used for comparison (Ebner, 1939, 1953; Johnston, 1919; Spiss, 1904). Tanzania has more than 150 languages or dialects (Muzale & Rugemalira, 2008:80). Of these, Swahili is the national language and co-official language, alongside English, and is used within education and other formal domains and as a language of wider communication.

The Ngoni are said to have emigrated from today’s South Africa and settled in the Songea District at the beginning of the 19th century. Assimilation with other peoples (war captives and people from areas where the Ngoni passed) led to a language distinct from the Nguni languages of South Africa (Miti, 1996; Moser, 1983; Ngonyani, 2003; Nurse, 1988; Spiss, 1904).

There are 258,218 Ngoni speakers (LOT, 2009). This might seem a large number which would guarantee the vitality of the language. However, in a language contact situation other factors such as intergenerational transmission and attitudes have more impact. A recent study by Mapunda clearly demonstrated that the attitude of the Ngoni speakers towards their language is ambivalent (Mapunda, 2013). Additionally, Tanzania’s language policy does not designate any other Tanzanian languages than Swahili for use in formal domains of society. This situation has undermined both the status and use of these languages, including Ngoni.

Theoretical Background and Assumptions
This study examines borrowing, i.e. the process where words are introduced from one language into another, in a language contact situation. Influence on language through language contact must necessarily involve the socio-cultural setting (Weinreich, 1953:4). The sociolinguistic situation thus influences the degree of linguistic outcome or change in such a contact situation. Different semantic fields are also assumed to show different proportions of loanwords (Appel & Muysken, 1987; Haugen, 1950, 1959; Muysken, 2008; Tadmor, Haspelmath, & Taylor, 2010; Thomason & Kaufman, 1988).

A borrowing hierarchy exists where certain lexical items are more likely to be borrowed than others. Nouns are e.g. found to be more borrowable than adjectives or verbs and content words are more borrowable than function words etc. Additionally, some semantic fields are more easily borrowed. The borrowing process may affect both basic and non-basic (peripheral) vocabulary. Cultural borrowing, i.e. borrowing of words for new objects and concepts (Myers-Scotton, 2002:239 ff), fills a lexical gap. Core borrowing takes place when already existing words are reduplicated. As cultural borrowing fills a gap in the lexicon, this is a more frequent process than core borrowing, which according to Myers-Scotton (ibid.:239) is introduced through the process of code-switching (CS). Core borrowing is defined as loanwords that duplicate or replace existing native words (Haspelmath, 2009:48). Core borrowing occurs due to prestige or ‘cultural pressure’ (Thomason & Kaufman, 1988:77), or when there is a lack of vitality of the recipient language (Myers-Scotton, 2006:215). The basic vocabulary, the lexical concepts that are believed to be the most resistant to

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4 The exact number of languages is not easily established, as many of these so-called languages refer to glossonyms belonging to a dialect continuum.
5 Ethnologue (Lewis, 2009) gives the number 170 000. Generally speaking, numbers are often not accurate, as they frequently reflect ethnic identification and not language competence.
6 The term ‘core vocabulary’ is often used to describe this basic vocabulary. In this paper the term ‘basic vocabulary’ is instead used to avoid a confusion with the term ‘core borrowing’.
replacement, refers to the most common and universal elements of human experience. In this study, twelve of the totally 63 chosen concepts were basic vocabulary (see Appendix 1 and table 3). Five lexical concepts found in the new 100-item list of basic vocabulary, the Leipzig-Jakarta list, which contains the 100 items proven to be most resistant to borrowing (Haspelmath, 2009; Haspelmath & Tadmor, 2009b; Tadmor et al., 2010), were included in the study, in addition to seven items from the Swadesh list (Swadesh, 1952). Borrowing within the basic vocabulary is in this study seen as an indicator of severe pressure on the Ngoni language. As frequency of word use is seen as an inhibiting factor for borrowing, the basic vocabulary is additionally assumed to be high-frequent items and therefore more resistant to change. Intensity of contact is used as the explanatory factor (Thomason & Kaufman, 1988). Additionally the Thomason and Kaufman borrowing scale (1988:50, 74-76) and Batibo’s phase model (2005:90-91) provides a classification of the state of Ngoni under the present and past heavy Swahili influence.

Code-switching, which here is regarded as a sort of nonce borrowing (Haspelmath, 2009), is in this paper differentiated from borrowing. Singly occurring embedded language forms showing phonological or morpho-syntactic integration are considered as borrowings, while the occurrence of constituents of the more prestigious language, without morphological adaptation, called “embedded language islands” by Myers-Scotton (2002), are considered as code-switching. The term code-switching is thus here used both to describe single switches (often called code-mixing) and alternation which involve larger constituents between the codes. Appel and Muysken (2006:173), citing Casagrande (1954/5 and Poplack and Sankoff 1984), point out that adaptation and integration of borrowings may be a rather long and gradual process. Using this criterion may therefore be problematic in identifying individual cases of code-switching from not yet integrated borrowings. It may be argued that code-switching and loans are on a diachronic continuum and that code-switches gradually become loanwords (Gardner-Chloros, 2009). We support this view. This said, code-switching nevertheless is distinguished from borrowing on the basis of morphological and phonological adaptation in addition to diachronic stability (see below). A term that at some point came into the language by transfer from another language, i.e. is transferred from the donor or source language to the recipient language (Haspelmath, 2009:37) and which is more or less integrated is thus considered a loanword.

To verify diachronic stability, old sources from the beginning of the 20th century (Ebner, 1939, 1953; Johnston, 1919; Spiss, 1904) were consulted. As the setting of the study is typically bilingual in Ngoni and Swahili it was not possible to find monolingual informants for comparison.

A set of assumptions underpin the present study. Massive borrowing from Swahili was expected to be found. Where there is widespread bilingualism it is more efficient to borrow words instead of creating words for new concepts (e.g. neologisms or meaning extensions). This “can be overridden if there is a strong cultural convention in the community to use one’s language as a marker of identity” (Haspelmath, 2009:47). Therefore, extensive borrowing found in the data would indicate that there is a weak urge for identity within the Ngoni culture. As the basic vocabulary is much less susceptible to borrowing than non-basic, cultural or peripheric vocabulary (Greenberg, 1957:39), cited by Tadmor (2009:65), it was

7 Sources for diachronic comparison are very few and are mostly word lists containing a limited number of items written by non-linguists. Nevertheless these sources provide a needed reference when differentiating recent borrowing and code-switching from old cognates. The few documents by early missionaries and others are thus mostly used for comparison with today’s Ngoni. Ngoni has no literary tradition.
expected that peripheral vocabulary would be more frequently borrowed than basic vocabulary and that gap-filling borrowing would be more frequent than core borrowing, which duplicate or replace existing native terms. Core borrowings are associated with prestige, social identity and cultural pressure (Thomason & Kaufman, 1988:77) or “loss of vitality (of recipient language)” (Myers-Scotton, 2006:215), cited in Haspelmath (2009:48). A substantial part of core borrowing affecting basic vocabulary is thus regarded as indicating a serious threat to the vitality of the Ngoni language. The intense contact with Swahili also suggests that the Ngoni language would be found to have reached further than stage 2 of the Thomason and Kaufman (1988) scale of language maintenance situations.

As there is widespread bilingualism in the area, it does not matter which word you use - it will be understood anyway (Haspelmath, 2009:48). Code-switching was thus expected to be frequent and reinforce the process of borrowing in the area, which is expected to be ongoing and increasing. A higher frequency of borrowed words was expected to be found in the two younger age groups than among the oldest informants. When core borrowing occurs, this is additionally expected to be found more frequently among the young, and likewise more in urban and semi-urban areas than in rural settings. Due to genealogical relatedness (McMahon, 1994:204) between Swahili and Ngoni and the massive exposure to Swahili through the long-time establishment of Swahili as a national language in Tanzania, it is more likely that Ngoni borrows from Swahili than from English which both are high status languages. A high percentage of borrowed nouns from Swahili, and less from English, was therefore expected to be found.

Finally, frequent code-switching was expected, especially among the young who have been more exposed to Swahili due to schooling and possibly travel. The above assumptions were underlying the study. To be able to test these ideas and theories about the present state of Ngoni in a contact situation, empirical fieldwork in the Songea area was conducted. In the following part the methods of data collection and analyse are explained.

Methods
Sixty-three (63) concepts were chosen to establish the frequency of loanwords in the noun corpus (spoken elicited Ngoni). To produce reliable quantitative data without interference from translations from Swahili, a new method for this kind of elicitation was created and is introduced here. Four photos, covering three scenarios in well-known settings for the informants were produced. The first photo was a farming scene. The photo showed a farmer in a field surrounded by traditional and rural familiar tools, crops and produce, with a total of 18 concepts which were expected to be identified when the informants were talking about the activities in the photo. The second photo was an outdoor kitchen scene which showed a traditional cooking situation with a selection of tools and food, representing a total of 21 concepts. The third theme was modern living. Here two photos with a total of 24 concepts were produced, one showing an outdoor situation with people, pupils and vehicles (12 concepts). The second photo showed 11 items placed on a table, including a radio, pen,

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8 The data were collected through fieldwork in November-December 2012.
9 The four photos were printed out using a battery-operated fieldwork printer (Canon PIXMA iP100). Voice-recordings were made by the use of two Zoom Handy Recorder H4n, one with a Røde Micon 5 external microphone to produce a recording with minimal disturbance from the surroundings. The recordings were made indoors, but as there are no sound-isolating windows in the recording settings, some sounds from other activities in the neighbourhood were inevitable. However, the use of the external microphone provided good quality recordings.
newspaper, battery, comb, book, spectacles, letter, mobile phone and cigarettes.\textsuperscript{10} Traditional items were used for the scenes, if existing. However, it seems that some traditional items are no longer used, as e.g. traditional cooking pots, knives and hoes. Only one kind of rather modern brick house was found in the area, even in Mhepai, and was used in creating the elicitation photos.\textsuperscript{11}

The informants were informed about the study and instructed by the interviewer in Ngoni to describe what could be observed in the photo and to tell something about how the items were used. It was stressed that only Ngoni was to be used during the description – and if needed, the interviewer (in Ngoni) prompted the informant to continue. In several cases the interviewer even prompted speakers to remember Ngoni words. This is partly the reason why two different terms – Swahili and Ngoni sometimes were given. These instances of prompting were noted by the researchers as the terms were not given naturally without interference.

Twenty-four (24) informants were chosen for the study, 12 from Peramiho and 12 from Mhepai. Prior to the recording of the elicitation based on the photos, each informant was interviewed using a structured questionnaire to provide metadata. The metadata were, in addition to giving information about the recording situation itself, focusing on educational level, occupation, place of birth, level of multilingualism (knowledge of Swahili or other languages), where, when and with whom the informant speak Ngoni, in addition to attitudes towards Ngoni.

All the 12 informants in Mhepai village were subsistence farmers, while the Peramiho group consisted of 5 subsistence farmers, 3 teachers or former teachers and 4 manual workers. In both groups 50 per cent of the informants were men and 50 per cent women, and in both groups the informants were selected from the same age groups; in each setting four informants were in the age interval 15-30 years, four between 31-50 and the remaining four were 51 years or older.\textsuperscript{12} The educational level was a little higher in Peramiho than in Mhepai which included three teachers or former teachers who had attended school for more than 8 years.\textsuperscript{13} The metadata revealed that all informants spoke Swahili, in addition to Ngoni, which is the common pattern in the area. Generally, the interviews showed that Ngoni was used at home, in some cases mixed with Swahili, and for occasions of the Ngoni people, while Swahili was the most used language at markets, in church, at work, at meetings and at celebrations. The interviews furthermore showed some differences between the two groups. In Peramiho Swahili was more used at home and more at work than in Mhepai. The Peramiho informants for example reported not to use Ngoni with friends and neighbours (only 3 out of 12), nor when speaking with animals or when they dream. Furthermore, the Peramiho informants reported to use Swahili when talking to their children under the age of 6 as well as to their parents (8 of 12). In addition two of the respondents mixed Swahili and Ngoni in such communicative situations. This was not so frequent in Mhepai.

The concepts of the study (see appendix 1) are assigned to 24 semantic fields, - 22 based on Buck's list (1949). The remaining two fields, “The modern world” and “Function words” were

\textsuperscript{10} In addition, the concept 'hair' was elicited from this photo.

\textsuperscript{11} Due to the presence of the Catholic Church in the area, brick-making skills have been taught for more than a century and all houses are built of brick.

\textsuperscript{12} Even if the oldest age category was set to above 50 years, the age of the informants ranged from 57 to 94 years, with an average age of 71 years.

\textsuperscript{13} It was not possible to make a clear sampling for education and occupation in this relatively remote area. Since there are no industries or sizable businesses all inhabitants in the area are small scale farmers, including school teachers.
propose by the Loanword Typology project (Haspelmath & Tadmor, 2009a:6). Of the 63 selected concepts in the photos used for elicitation, twelve were basic concepts, taken from the Leipzig-Jakarta list, the 100 concepts found to be most resistant to borrowing (Haspelmath & Tadmor, 2009b), and the Swadesh' 100-word list (Swadesh, 1952). The Swadesh list and the Leipzig-Jakarta list partly overlap. These primarily belonged to the following semantic fields: The physical world (6), Agriculture and vegetation (2), Kinship (2), Food and drink (1) and The body (1) (Buck, 1949; Haspelmath & Tadmor, 2009b).

To be able to separate Bantu cognates from more recent borrowings we have, as a part of the data classification process, used Proto Bantu (PB) reconstructions (Bastin, Coupé, Mumba, & Schadeberg, 2002; Guthrie, 1967, 1970a, 1970b, 1971) and studies of the spirantization process, as described by a large number of scholars (e.g. Bostoen, 2005; Schadeberg, 1995). In addition, Janson (2007) and Hinnebusch, Nurse, and Mould (1981) who have specifically explained and exemplified sound changes due to spirantization in the Rufiji-Ruvuma region were consulted to establish cognates. Some examples of these processes are given below in the discussion of the results. The terms which could be traced to PB, or when it was not possible to verify the development through sound rules, were in this study assumed to be Ngoni words and classified as such.

The oral elicitation was first transcribed using the orthography proposed by Ngonyani (2003). All occurrences of the 63 selected concepts were then transcribed orthographically and phonologically and classified according to the definitions of borrowing and code-switching which were given above. Additionally, native speakers of Ngoni were consulted for a verification of the classification. The data were subsequently quantified and compared with the metadata of the study.

**Results**

Before discussing the data, a short description of the Ngoni structure is given as a background. Ngoni is a 5 vowel Bantu language. The consonant system comprises 24 phonemes. The orthography proposed by Ngonyani (2003) follows Swahili orthography except in one item, the syllabic nasal which is written with an apostrophe. The orthography in this study follows Ngonyani. Ngoni has two pitch levels, high and low, but no lexical tone. The basic pattern assigns high tone to the antepenultimate syllable. This pattern is now frequently violated due to influences of other languages (ibid:13). The four syllable structures are vowel (V), consonant followed by vowel (CV), consonant followed by glide and vowel (CGV) and nasal (N). Ngoni has a traditional Bantu noun class system with 19 classes, most with singular and plural pairings (Ngonyani, 2003).

Totally 1121 terms describing the 63 targeted concepts were given by the informants through elicitation from the photos. Every term for the identified concept which was produced by each informant was counted. Thus even synonyms to the expected term were included, but not multiple occurrences of the same term and form within the elicitation. For instance, all forms of ‘firewood’ which is sagala (cl 11-10) in Ngoni and kuni in Swahili were counted, even tusagara which means ‘many small pieces of firewood’ (class 13, diminutive), and lusagala (cl 11, singular).

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14 Two of the targeted concepts were not produced by the informants during the elicitation,- ‘farmer’ and ‘tree trunk’. Thus the total of the calculations was based on 61 concepts.
As mentioned above, old cognates may be hard to separate from more recent borrowings. The historical sound changes e.g. the spirantization process in the area, in addition to old sources, has provided a support for the categorization of some of the terms, exemplified in the quantitative summaries which follow. The concept ‘oil’, for instance, is mafuta in Swahili and mahuta in Ngoni. Regarding what Hinnebusch et al. (1981) calls the “Rufiji, Ruvuma and Tanzanian Ngoni area” it is argued that the Proto Bantu (PB) stops *p, t, k, B, l and G which have occurred before the first degree vowels have undergone four stages: Spirantization has yielded /f, s, v, z/ in stage 1. In stage 2, the spirants have been devoiced resulting in /f, s/ and in stage 3 there is a spirant-weakening where /f, s/ becomes the voiceless fricative /h/. In some languages in eastern Tanzania the process continues with a fourth stage where /h/ becomes /ø/. Hinnebusch et al. states that most of the languages in this region have /ø/ as their reflexes, but that in some case /s/ and /h/ are found as well: “Stages 3 and 4 are supported internally by lexical variation e.g. / s -h / variation in Ngoni” (Hinnebusch et al., 1981:38). Guthrie (1970a) gives the Proto Bantu *-gútà which through spirantization has become mafuta (as in Swahili today) and later mahuta in Ngoni. The process supports the idea that mahuta is the Ngoni term for ‘oil’ and that mafuta is the Swahili term. This was additionally verified by interviews with old persons and the term listed by Spiss (1904). Contrarily, ‘cooking stones’ mafiga is classified as a cognate with the same present form developed from PB *-pigà (Guthrie, 1970b:63). Mafiga is the old term of the Ngoni variant called Kisutu by Spiss (1904), and is thus not here regarded as a borrowing from Swahili.

43.4% (486) of the terms produced by the informants were classified as Ngoni terms, 31.4% (352) as Swahili code-switches (non-adapted Swahili terms) and 25.2% (283) were borrowings from Swahili (including loans from English via Swahili). The high frequency of code-switches is highly interesting, as the code-switches were produced in a setting where the informants were told to only speak Ngoni. Using Gardner-Chloros’ suggestion (Gardner-Chloros, 2009) that code-switching and loans are on a diachronic continuum and that code-switches gradually become loanwords, the frequent code-switching in such an elicitation situation underscores the heavy influence of Swahili in the area.

To underscore the influence of Swahili demonstrated through these quantitative data some examples well illuminate the processes which are involved. The concept ‘knife’ with the Ngoni term chipula may serve as a rather typical example. 19 terms for the concept were recorded. Of these only 2 were the Ngoni term chipula. The Swahili term kisu was produced 6 times and the borrowed and adapted form chisu [cisu], that is with a palatal voiceless stop instead of a velar as in Swahili, was used by 11 informants. Two informants additionally used two different forms within the same elicitation, e.g. kisu [kisu], and chisu [cisu], (young male informant in Peramiho) and chisu [cisu], and chipula [cipula], (middle aged female informant in Peramiho).

283 Swahili terms were morpho-phonologically adapted into Ngoni. This involved adaptation to the Ngoni noun class system. Frequently, the borrowed words were attributed to the same noun class (NC) as in Swahili. Most of the loans were incorporated into NC 5/6 and 9/10, which are common NCs for loans in Bantu languages (Maho, 1999:87). To illustrate the morphological adaptation a few examples are given below. For example, the noun class prefix (NCP) li- was added for singular nouns for the concept ‘newspaper,’ making the noun correspond to the Ngoni noun class 5/6, which has the class prefix pairing li-/ma-:
The terms ligazeti and magazeti were used by all but one informant, who used the code-switch gazeti, and thus appears to be solidly integrated into the Ngoni NC 5/6. The same applied for the concept ‘car’ which was both morphologically adapted to the Ngoni NC system (ligali/ligari) and used without adaptation gari, i.e. as a code-switch. Ligari/ligali was the most used term. The expected term mutuka [mutuka] was only produced after prompting.

Likewise ‘shirt’, shati in Swahili (NC 5/6) is adapted to Ngoni NC 5/6, as indicated by the form lishati which was used frequently, alongside the Ngoni terms ligwanda and lijalisi (only used 3 times). The code-switch shati was used by three informants from all three age groups, both sexes and both villages. Other modern concepts were less integrated into the NC system, for instance the concept ‘battery’ with only one instance of libeteri (including forms as beterii,betli), but most informants used the Ngoni term liganga or the code-switch betri.

This morphological integration by adding a proper Ngoni noun prefix and not only integrating into a zero prefix NCs or a noun class by phonological analogy or reanalysis of initial CV-syllable as a NC prefix, which is a more common borrowing strategy in Bantu languages (Schadeberg, 2009), is an indication of language transfer in a context of strong bilingualism. Bostoen and Donzo (forthcoming 2013) discuss this in a historical Bantu-Cushitic language contact situation and the origin of labial-velar stops in Lingombe (C41) in DCR. That specific linguistic changes may be observed in this study of Ngoni, where the social factors and sociolinguistic circumstances involved are known, makes the observations interesting and may additionally be relevant for the study of historical changes.

An examination of the concept ‘tree’ may well illustrate how the Swahili term is adapted morphologically. ‘Tree’, mti in Swahili and libihi/libiki in Ngoni, is NC 3/4 in Swahili. When borrowed and morphologically adapted into Ngoni, (i.e. 6 instances of limuti) the words are transferred into the NC for the term in Ngoni, as for instance (NC5/6, li-, ma) for ‘three’. This might indicate a situation of ‘paralexification’, defined by Mous (2001:114) as the addition of a word form which is on a par with existing lexical entry, as also discussed by (Bostoen & Donzo, forthcoming 2013).

Paralexification occurs in language loss situations as a transitional stage in replacive borrowing (Mous, 2001:117). During the process when a more prestigious language, in this case Swahili, is replacing terms in the recipient language, both terms may exist side by side. The data obtained through this pilot study suggest that Swahili terms are replacing Ngoni lexicon, even basic vocabulary. Additionally, terms with identical meaning share the same morphological characteristic such as class membership, as the example ‘tree’ with limuti and libihi/libiki shows.
If the parallel use of both Swahili and Ngoni terms is considered paralexification, it is a case of borrowing which reflects a positive attitude to the donor language and not a negative attitude to the recipient language or avoidance out of respect (Mous, 2001:121).

While the morphological and phonological adaptation processes and mechanics involved will be described in more detail in forthcoming papers, some examples showing trends are summarized in the following. As seen above, the palatal voiceless stop replaces the Swahili velar in the concept ‘knife’ (in Swahili [kisu]). The most common Ngoni term for ‘knife’ was thus chisu [cisu]. Likewise, the most common term for ‘book’ was chitabu [citabu] and the term for ‘tree stump’ kisiki was by some informants pronounced as chisiki [cisiki].

In Ngoni /t/ and /l/ are allophones, but the liquid [l] is the most common (Ngonyani, 2003). Thus (li)gali (‘car’, Sw. gari) was common in the data, as well as sufuria as an adaptation of Swahili sufuria (‘pot’). ‘Cigarette’ sigara [siɡa] was by some informants adapted to Ngoni as sigala [siɡala], even though the majority used the Swahili term sigara. The same adaptation mechanism was attested for the Swahili term redio, [ledi, ledi]. Even vowel insertion was common in the adaptations, e.g. in flampeni which was borrowed from Swahili as falampeni in addition to the outcomes flapeni, fompeni, and frapeni. Sketi ‘shirt’ was adapted as siketi.

From a socio-demographic point of view some striking tendencies were noted. Interestingly, there were no significant differences regarding sex and code-switching. Male and female informants used non-adapted Swahili terms to approximately the same degree, 49.4% and 50.6% respectively. Female respondents borrowed, i.e. morpho-phonologically adapted Swahili words, slightly more (53.7%) than male respondents (46.3%).

As mentioned above, some age-related differences were found in the data. Table 1 below shows that there is a tendency for the older informants to use more Ngoni terms than both other age categories and that young informants both code-switched slightly more, and more frequently employed borrowed terms than older informants. Even if the differences between the three age groups were not remarkable, the trend is clear: Older informants employ fewer borrowed terms and code-switch less. Table 1 shows the distribution of the selected concepts in the photos within each age group.

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<th>AGE GROUP</th>
<th>15-30 years</th>
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<td>Number</td>
</tr>
<tr>
<td>Ngoni terms</td>
<td>156</td>
<td>40.5%</td>
<td>173</td>
</tr>
<tr>
<td>Swahili terms (code-switches)</td>
<td>123</td>
<td>32.0%</td>
<td>127</td>
</tr>
<tr>
<td>Loanwords from Swahili or English</td>
<td>106</td>
<td>27.5%</td>
<td>102</td>
</tr>
<tr>
<td>Total number of produced terms for the selected concepts</td>
<td>385</td>
<td>100%</td>
<td>402</td>
</tr>
</tbody>
</table>

Although the result confirms the assumption/hypothesis given earlier in the section Theoretical background and assumptions, the correspondence between age and borrowing is less striking than might have been expected. Some examples which may shed further light on borrowing and
age are given in the following.

As seen, the data from the elicitations indicate that even persons from the oldest category of informants substitute Ngoni words with Swahili loanwords. The concept ‘Irish potatoes’ from the photo elicitations may serve as a typical example. The Swahili term is *kiazi* while the Ngoni term is *matosani*. The Swahili term was used by approximately the same number of informant in each age category: 4 informants from the youngest age group (15-30 years), 3 from the age group 31-50 years and 3 from the oldest age group, 51 years or older. Sometimes, the Ngoni term is mentioned only after prompting by the interviewer. This was observed not only regarding young informants, but likewise with older persons. For example, 3 informants of the age group 15-30 years used the Swahili term *mkaa* for charcoal and 1 from the oldest age group. The Ngoni term *makisila* was only given after prompting by one of the younger informants – but also by an older person who preferred the Swahili term. However, in some cases the Ngoni term is only used by old persons. For example, the Swahili term *muwa* ’sugarcane’, which has a Ngoni term *mlungulungu*, is used by almost all informants. Only three out of 24 mentioned the Ngoni word, one middle aged person and two informants from the oldest category.

The same trend, that there were hardly any differences between younger and older informants, was also observed regarding core borrowing.

Regarding the concept ‘tree’ exemplified above, no coherent age pattern for borrowing was possible to establish. The morphological adaptations were made by all age categories; 2 younger, 2 middle aged and 4 from the oldest age category used a morphologically adapted Swahili term.

The results of the study were also examined as to regarding differences which can be attributed to the setting of the informants. As described in the introduction, the data were collected in two linguistically and socio-economically different contexts; Peramiho (semi-urban) and Mhepai (remote village). The demographic differences between the two settings are reflected in the results, as seen in table 2 below.

**Table 2: Quantitative distribution of elicited words and geographical setting**

<table>
<thead>
<tr>
<th></th>
<th>Mhepai</th>
<th>Peramiho</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ngoni terms</strong></td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>227</td>
<td>44.0%</td>
</tr>
<tr>
<td>Swahili terms (code-switches)</td>
<td>170</td>
<td>32.8%</td>
</tr>
<tr>
<td>Loanwords from Swahili or English</td>
<td>120</td>
<td>23.2%</td>
</tr>
<tr>
<td><strong>Total number of produced terms for the selected concepts</strong></td>
<td>517</td>
<td>100%</td>
</tr>
</tbody>
</table>

The data elicited from these two locations reveal a quite similar picture of the linguistic situations. However, percentage wise, slightly more Ngoni words were used in Mhepai than in Peramiho. This was expected, due to the differences in the settings.

What was unexpected was to discover that relatively more Swahili code-switches were found in the corpus of the Mhepai informants than in the data from Peramiho. Our assumption that code-switching and loans are on a diachronic continuum and that code-switches gradually become loanwords may explain these figures.
Most of the borrowed terms can, not unexpectedly, be attributed to the ‘Modern world’ semantic field (Buck, 1949; Haspelmath & Tadmor, 2009b). More surprisingly, some borrowed items were found in the field ‘Agriculture and vegetation’ (sugar cane, branch, pumpkin, tree) and ‘The physical world’ (‘fire’). Additionally, some of the terms in the field ‘Food and drink’ which have a Ngoni term were not used at all, e.g., ‘oil’ (in Ngoni mahuta) and chili pepper (in Ngoni sobola or kawoli).

The basic vocabulary was expected to be less susceptible to borrowing than non-basic vocabulary. Below, the basic concepts which were included in the elicitation photos and their frequency in the data are given. In addition to the concept, the theme of the photo used for elicitation (photo scene), semantic field according to Buck/the Loanword Typology project, and number of non-adapted Swahili terms (CS, code-switches) found in the data as well as number of borrowings (LW, adapted instances of the selected concepts) are given. The last column gives the number of Ngoni terms given for each concept during the elicitations. The total number for each term is shown within parentheses.

Table 3: Quantitative distribution of borrowing in basic vocabulary

<table>
<thead>
<tr>
<th>CONCEPT</th>
<th>Photo scene</th>
<th>Semantic field (no)</th>
<th>CS (of total)</th>
<th>LW (of total)</th>
<th>Ngoni term</th>
</tr>
</thead>
<tbody>
<tr>
<td>tree</td>
<td>Agriculture</td>
<td>Agriculture and vegetation (8)</td>
<td>0 (26)</td>
<td>6 (26)</td>
<td>20 (26)</td>
</tr>
<tr>
<td>bark</td>
<td>Agriculture</td>
<td>Agriculture and vegetation (8)</td>
<td>1 (16)</td>
<td>1 (16)</td>
<td>14 (16)</td>
</tr>
<tr>
<td>soil*</td>
<td>Agriculture</td>
<td>The physical world (1)</td>
<td>4 (11)</td>
<td>0 (11)</td>
<td>7 (11)</td>
</tr>
<tr>
<td>fire</td>
<td>Kitchen</td>
<td>The physical world (1)</td>
<td>0 (19)</td>
<td>0 (19)</td>
<td>19 (19)</td>
</tr>
<tr>
<td>smoke</td>
<td>Kitchen</td>
<td>The physical world (1)</td>
<td>0 (18)</td>
<td>0 (18)</td>
<td>18 (18)</td>
</tr>
<tr>
<td>ash</td>
<td>Kitchen</td>
<td>The physical world (1)</td>
<td>0 (18)</td>
<td>0 (18)</td>
<td>18 (18)</td>
</tr>
<tr>
<td>firewood</td>
<td>Kitchen</td>
<td>The physical world (1)</td>
<td>0 (23)</td>
<td>0 (23)</td>
<td>23 (23)</td>
</tr>
<tr>
<td>meat</td>
<td>Kitchen</td>
<td>Food and drink (5)</td>
<td>0 (21)</td>
<td>0 (21)</td>
<td>21 (21)</td>
</tr>
<tr>
<td>house</td>
<td>Modern living 1</td>
<td>The house (7)</td>
<td>0 (18)</td>
<td>0 (18)</td>
<td>18 (18)</td>
</tr>
<tr>
<td>man</td>
<td>Modern living 1</td>
<td>Kinship (2)</td>
<td>2 (11)</td>
<td>0 (11)</td>
<td>9 (11)</td>
</tr>
<tr>
<td>woman</td>
<td>Modern living 1</td>
<td>Kinship (2)</td>
<td>3 (11)</td>
<td>0 (11)</td>
<td>8 (11)</td>
</tr>
<tr>
<td>hair</td>
<td>Modern living 2</td>
<td>The body (4)</td>
<td>11 (13)</td>
<td>1 (13)</td>
<td>1 (13)</td>
</tr>
</tbody>
</table>

* Some informants used other terms, e.g. ‘land’ instead of ‘soil’ in the elicited recordings. Swahili terms, even if not exactly referring to the same concept, are nevertheless accounted for here.

The table demonstrates that even regarding basic concepts, both code-switching and borrowing is occurring. Only for four of the 12 basic concepts was the Ngoni term used by all informants, the concepts ‘smoke’, ‘firewood’, ‘meat’ and ‘house’. Similar to the non-basic concepts, some of the basic concepts were only given in Ngoni after prompting by the researcher, e.g. the terms ‘man’ mgosi and ‘woman’ mdala. It is rather surprising that the Ngoni term njwili for ‘hair’ has almost completely disappeared (only produced by one informant, an old man) and is replaced by the Swahili term nywele. It is possible that the fact that this term was elicited from one of the photos containing items related to modern life may

15 All production of crops in the area, except maize which during good seasons may be sold, is for consumption and not for sale at markets. It is thus more surprising that heavy borrowing was found when talking about traditional activities and not only regarding concepts related to modern life.
have influenced language use. However, additional interviews which were conducted showed that the explanation is to be found in lifestyle changes and new hair fashions for women. The old term for ‘hair’ described a different kind of hair and was therefore replaced by the Swahili term.

Age-wise, no consistent pattern was possible to establish regarding these terms, ‘man’ and ‘woman’. Both old and young informants, living in both the investigated settings, used the Swahili terms.

Regarding the remaining basic concepts, it may be concluded that among the terms that did not display a concordant pattern where all informants used either a Swahili loan or all used a Ngoni term, mostly middle-aged and older persons code-switched instead of using the existing Ngoni term. For example, all but one of the eight informants who used a loanword for the basic concept ‘tree’ were middle aged or from the oldest age group. The same partly applied to the concept ‘soil’ where only middle-aged informants used the Swahili term. Half of the informants who used the Swahili term for the basic concept ‘tree’ had more than 8 years of education. Generally, education does not seem to be a determinant regarding borrowing.

Most of the loans which have an English origin are loans which have entered Ngoni indirectly via Swahili, as for instance ‘skirt’, in Swahili *sketi* and in Ngoni [skéti, sikéti], ‘uniform’ which in Swahili is *yunifomu* and in Ngoni has different pronunciations and show various degrees of adaptation, e.g. [yunifomu, winifomu], the concept ‘radio’ which in Swahili is *redio* and in Ngoni for instance is given as [lediju] and ‘bicycle’ *baisikeli* - in Ngoni given as e.g. [basikéli, baskéli]. Only a few loanwords from English were found. One instance of [libósła] for the concept ‘bottle’ was established, used by a middle aged informant from Peramiho. The loanword was adapted to Ngoni NC 5/6. Most of the informants used a Swahili term, e.g. [cúpa] or [likópá]. The concept ‘pen’ gave some examples of borrowing from English directly. The Swahili term *kalamu* was used 7 times and *peni*, which is a borrowing from English via Swahili, 6 times. Furthermore there were 9 instances of *bíki* [bíki] in the data. *Bíki* is probably a direct borrowing from English and comes from the brand ‘Bic’ which earlier was the most used pen in the area. The informants who used this term were mostly young (6 persons) and middle aged (3). They lived both in Mhepai (5) and in Peramiho (4). Even the term *bolpeni* [bolpéní] or *bolupeni* [bolupéní] was used by 3 informants, all from Mhepai and middle aged or from the oldest age group. This borrowing has probably come into use a long time ago from the term ‘ballpoint pen’.

**Conclusions**

The study of borrowing from Swahili in the Ngoni lexicon indicates that borrowing is solidly established not only among the young, but that the replacement of Ngoni words by Swahili synonyms is made even by older persons within the Ngoni community – and additionally in typically rural settings, among subsistence farmers where Swahili is found to be penetrating deeply into oral communication. Generally, educational level seems not to play an important role regarding borrowing. As everyone regardless of age or geographical setting has an everyday exposure to Swahili and as the educational system uses Swahili as a medium of education from grade one on, higher education only marginally affects code-switching and borrowing from Swahili.

That extensive code-switching and use of borrowed Swahili terms in a situation where it was stressed that the informants should speak Ngoni only, thus not in an authentic speech event, additionally suggests that recordings of natural speech would give even less Ngoni terms. The
extensive code-switching furthermore indicates that borrowing will increase in the future, as these code-switches probably are a first step of a borrowing process. However, only a diachronic study would definitely answer this question. Language use is rather unstable and both Ngoni terms and Swahili terms exist side by side, possibly as a paralexification. It is possible that this merely is a transition stage before the Ngoni term is abandoned. Furthermore, non-adapted code-switches may be masking a loss of the language. Inclusion of frequency and a semantic analysis as next steps of the analysis will bring more information about the ongoing borrowing process.

As seen, borrowing of both gap-filling concepts and borrowing related to new things and formal matters are frequent. Even some terms used in traditional life, like farming, are borrowed, as well as basic concepts which are considered less susceptible to borrowing, all of which are indicating language endangerment.

Most languages in Tanzania are affected by the extensive use of Swahili. Even if the influence of Swahili is even more predominant in the coastal areas of Tanzania, this study of lexical borrowing in Ngoni in southwestern Tanzania gave some alarming results, which clearly indicate that there is an ongoing borrowing from Swahili in the Ngoni noun class.

The main question of this paper was if Ngoni is threatened or not. Using the Thomason and Kaufman scale of externally motivated changes, which focuses on the intensity of language contact and the degree of bilingualism, Ngoni seems to have reached level 3 out of 5, which implies some structural changes, as for instance phonemicization of previously allophonic alternation. As this study only focuses on nouns, further data are needed to determine the state of Ngoni according to this scale and to determine whether or not there is a situation of paralexification in this specific language contact situation, where the sociolinguistic situation is known and the changes may be observed over time.

Batibo postulates a model with 5 phases on a continuum that a language goes through on its way to extinction. Using this scale, Ngoni seems to be approaching phase three or has already reached this phase which is characterized by extensive code-switching and borrowing from the more prestigious language. According to Batibo (2005) languages in this phase are highly endangered.

Even if a shift is not imminent, there is clearly today an ongoing process of Swahilization affecting Ngoni. This implies a threat to the language. Furthermore, better transport services which have recently started up, new uranium mining in the area, the growth of Songea town, the opening up of the southern corridor in general will further influence lifestyles in the Ruvuma Region. Even the increasing presence of solar panels on several roofs and consequently availability of electricity for radio and TV in the once remote areas will expose this linguistic group further to Swahili in the future and make the language even more exposed to influences from this lingua franca. It is hard to stop an ongoing process. However, efforts should be made to focus on the problem and to document Ngoni culture as well as complementing Ngonyani’s description of the Ngoni language in order to preserve it for generations to come.
REFERENCES


### APPENDIX 1: 63 concepts for photo elicitation

<table>
<thead>
<tr>
<th>SWAHILI/ENGLISH/NGONI</th>
<th>SWAHILI/ENGLISH/NGONI</th>
</tr>
</thead>
<tbody>
<tr>
<td>mkulima/farmer/mkulima</td>
<td>kiazi/potato/matosani</td>
</tr>
<tr>
<td>shamba/field/m'gunda</td>
<td>karanga/groundnut/matevele</td>
</tr>
<tr>
<td>jembe/hoe/ligela</td>
<td>mafuta/oil/mahuta</td>
</tr>
<tr>
<td>mundu/sickle or scythe/nyengu</td>
<td>pilipili/chili pepper/sobola</td>
</tr>
<tr>
<td>shoka/axe/livagu</td>
<td>pombe/alcohol/ugimbi</td>
</tr>
<tr>
<td>mahindi/maize/malombi</td>
<td>mafiga/cooking stones/mafiga</td>
</tr>
<tr>
<td>tawi/branch/lundafi</td>
<td>flampeni/frying pan/fulampeni</td>
</tr>
<tr>
<td>mti/tree/libhi/libiki</td>
<td>mfuniko/lid/mfuniku</td>
</tr>
<tr>
<td>kisiki/tree stump/chigwingi</td>
<td>nyumba/house/nyumba</td>
</tr>
<tr>
<td>shina/tree trunk(stem)/lisina</td>
<td>baisikel/bicycle/basikeli</td>
</tr>
<tr>
<td>gome/bark/libasi</td>
<td>pikipiki/motorcycle/sekeni</td>
</tr>
<tr>
<td>muwa/sugar cane/mlungulungu</td>
<td>gari/car/mutuka</td>
</tr>
<tr>
<td>ulezi/millet(sorghum)/ulehi</td>
<td>mwaname/mand/mgosi</td>
</tr>
<tr>
<td>muhogo/cassava/lyawu</td>
<td>mwananamke/woman/mdala</td>
</tr>
<tr>
<td>kibuyu/gourd/idenge</td>
<td>yunifom/uniform/winifomu</td>
</tr>
<tr>
<td>boga/pumpkin(squash)/liboga</td>
<td>shati/shirt/ligwanda</td>
</tr>
<tr>
<td>mwanzi/bamboo/mlahi</td>
<td>sketi/skirt/sketi</td>
</tr>
<tr>
<td>udongo/soil/ludaka</td>
<td>kaptula/shorts/chibudula</td>
</tr>
<tr>
<td>moto/fire/mwoto</td>
<td>kiatu/shoe/chilatu</td>
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<tr>
<td>moshi/smoke/lyohi</td>
<td>mwananfunzi/pupil/mwananfunzi</td>
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<td>jivu/ash/lyenge</td>
<td>baru/letter/balua</td>
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<td>kuni/firewood/sagala</td>
<td>betri/battery/liganga</td>
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<td>mkaa/charcoal/makisila</td>
<td>miwani/spectacles/mawani</td>
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<td>chungu/pot/chiviga</td>
<td>chupa/bottle/chupa</td>
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<td>sufuria/pot/sufulia</td>
<td>siga/cigarette/lhona</td>
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<td>mwiko/wooden spoon/mpundi</td>
<td>gazeti/newspaper/ligazeti</td>
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<td>kisu/knife/chipula</td>
<td>kalamu/pen/kalamu</td>
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<td>mkate/bread/mkati</td>
<td>kitabu/book/chitabu</td>
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<td>simu/telephone/simu</td>
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<td>redio/radio/lediyu</td>
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<tr>
<td>nyama/meat/nyama</td>
<td>chanuo/comb/chikwemula</td>
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<tr>
<td>nywele/hair/njwili</td>
<td></td>
</tr>
</tbody>
</table>