

Lexicalization of concepts of time in naming sequences of days in Tanzanian Bantu

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The conceptualization of time-frames in African societies, as represented by speakers of Tanzanian Bantu languages, was presumed to bear elaborate abstract past that connects to ancestors and a short and narrow future that links to the present time. I argue against this claim and establish that both pasts and futures are elaborate in Tanzanian Bantu languages. I used names of sequences of days which discretize the actual events into eight time-frames, equally four on both sides beyond the speech time. These lexical entries are a retention of the Proto-Bantu forms, innovations from cosmological bodies mainly STAR and SUN, and semantic extensions of existing lexical entries such as NIGHT. I offer evidence to substantiate that points C and D on both sides of the Reichenbach linear model involve the retention and innovation of names of days.

Keywords: innovation, linear model, lexicalization, Tanzanian Bantu, temporal adverbs, time-frame

1. Introduction

The contribution of this paper surrounds the mechanisms employed to express names of the days in a week in selected Bantu languages spoken in Tanzania. The motivation for this kind of research emanates from the claim advanced by Mbiti (1969) that the conception of time for eternity is vague in African societies. In this paper, I argue against Mbiti's (1969) claim that the African perception of future time is narrow.

In the course of the presentation and analysis of data, I shall argue that speakers of African languages, represented by selected Bantu languages in Tanzania, developed mechanisms to express remote past and future using both formatives for specific time-frames (Hewson et al. 2000; Nurse 2008) and adverbial expressions that discrete time-points in real life (Beidelman 1963; Kgolo 2018; Lusekelo 2010). In line with Nurse (2008), I argue that names of days extend to the pastness and futurity in the same fashion. Thus, none of the time frames is narrow.

To advance my argument properly, after the introduction, I organize the paper in the following manner. Section 2 deals with the review of the literature on the adverbial mechanisms of situating time-frame in real life in an African setting. Since adverbs of time occur in tandem with formatives of time, the review provides brief accounts of how the two relate. Section 3 introduces the theoretical framework employed to account for the data. It provides principles available in Reichenbach's (1947) linear model of conceptualization of time. Section 4 is dedicated to the methods of data collection,

which had been the extraction of names from dictionaries and elicitation from elite speakers of the languages studied. Section 5 is dedicated to the findings of the study. Time-frames are split into pastness dealt with in section 5.1 and futurity covered in section 5.2. Section 6 revisits the literature offered in the paper and presents facts from data available in Tanzanian Bantu. I argue that the perception of time in Africa, as represented by speakers of Tanzanian Bantu, is elaborate. The conclusion is given in section 7.

2. Literature review

Mbiti (1969) postulated that the African perception of time is conceived in line with actual events experienced by an individual person in each society rather than being abstract and linear as in Western world. As a result, the African perception of time bears a very short non-abstract future because it is not lived but has an extended, elaborate and abstract past because it is lived far back to ancestors of the clan. Mbiti (1969) hinges his postulation on utility of two temporal adverbs of *sasa* ‘(right) now’ and *zamani* ‘long (ago)’ in Swahili. *Zamani* helps to account for the presence of an abstract and elaborate past time linked to the present. *Sasa* accounts for an elaborate present time that swallows even the brief future time. It is unfortunate that both adverbs *sasa* ‘(right) now’ and *zamani* ‘long (ago)’ were borrowed words from Arabic into Swahili (TUKI 2014), a language that has great influence on Swahili culture (Schadeberg 2009). For instance, Krumm (1940: 187) lists the source word *zaman* ‘time, times’ as Arabic. Now what remains to be accounted for would be the conceptualization of time by the Mijikenda, the ancient Swahili speakers (Nurse & Spear 1985), who did not make use of the two concepts. Therefore, the following questions have to be answered: (1) “How did Mijikenda speakers of Swahili express time frame?” and (2) “Can we see the longer abstract past and shorter non- abstract future in the lexis of contemporary Tanzanian Bantu as had been postulated by Mbiti (1969)?” To answer both questions, I elicited temporal frames as they unfold in the linguistic (lexical) materials that discretize time across Tanzanian Bantu languages.

The traditional way to look at concepts of time (in the past and future) had been through presence or absence of formatives in the verbal paradigms of Bantu languages. Nurse (2008) postulated that some Bantu languages extend up to four pasts and four futures using different formatives. To my knowledge, since formatives for pasts and futures are numerous in Bantu languages, the postulation that African people construe a brief future time (Mbiti 1969) becomes difficult to conceive. In addition, for Bantu languages without formatives for far past and remote future, actualization of the numerous pasts and futures is achieved through utility of temporal adverbs which collocates with time frames (Kgolo 2018; Lusekelo 2010; Nurse 2008; Simeo 2018). In this short paper, I invoke the linear model by Reichenbach (1947) to account for the manner in which speakers of Bantu languages of Tanzania express time span using lexical adverbial expressions. Since the formatives for marking time spans in Tanzanian Bantu appeared in many publications (see Hewson et al. 2000; Mreta 1998; Nurse 2008; Nurse & Philippson 2006; Kanijo 2019; Walker 2013, among others), I articulate the mechanisms used by speakers to extend time frames in the pasts and futures using lexical items, which are characterized as temporal adverbs.

Perhaps Mbiti (1969) used sample Bantu languages (i.e. Kamba, Gikuyu and Swahili) whose verbal structures exhibit few formatives for pasts and futures as compared to other Eastern Bantu languages (e.g. Kuria, Logooli, Nyamwezi, Ruhaya, Runyambo etc.) which contain many formatives for pasts and futures (Batibo 2005; Hewson et al. 2000; Kanijo 2019; Muzale 1998; Walker 2013). For instance, compare the study by Johnson (1980) that describes two pasts in Gikuyu verbs, namely remote past marked by *-a-* and near past marked by *-ra-* with the study by Hewson et al. (2000) that discusses six tenses in Ruhaya (here indicated as A to F in (1)). The time frames split equally into two

pasts, two presents and two futures.

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|-----|----|-----------------------|--------------------------|
| (1) | A. | Far past: | time before yesterday |
| | B. | Near past: | yesterday |
| | C. | Memorial present: | earlier today |
| | D. | Experiential present: | a vast, extended present |
| | E. | Near future: | later today and tomorrow |
| | F. | Far future: | time after tomorrow |

This means that both far past and far future times are equally realized with formatives which occur within the verb paradigm, as illustrated in (2) (Hewson et al.2000: 34). Thus, as far as Ruhaya is concerned, both pasts and futures constitute two equal points in time, contrary to Mbiti (1969) who postulated that future time overlap with present time as a result the future time is brief while the past time is elaborate and extended.

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|-----|----|-----------------------------------------------------------------------|----------|
| (2) | a. | Tú- ka -gur-a
SM2-P ₃ -buy-FV
'We bought.' | [Ruhaya] |
| | b. | Tu-∅-gur-îre
SM2-P ₂ -buy-PFV
'We bought.' | |
| | c. | Tu- áá -gur-a
SM2-P ₂ -buy-FV
'We bought.' | |
| | d. | Tu-∅-gúr-a
SM2-PRS-buy-FV
'We buy.' | |
| | e. | Tu- raa -gúr-a
SM2-F ₁ -buy-FV
'We will buy.' | |
| | f. | Tu- rí -gúr-a
SM2-P ₃ -buy-FV
'We will buy.' | |

I argue in this paper that both the pasts and futures unfold equally across Bantu languages. This is evident in further comparison of future and past time frames appearing in Nurse and Philippson (2006). In this section, I want to hint that the three formatives for future tenses (*-ka-* remote future tense, *-laa-* near future tense, *na-* common future tense) tend to tally with the lexical entries for the expression of time in the past. Similarly, the three formatives for past time frames (*-ka-* remote past tense, *-raa-* middle past tense, *-a(a)-* near past tense) tend to be similar to temporal adverbs for the three time-frames. Therefore, both pasts and futures appear to equally contain three time-frames. Also, both 'today' past and 'today' future could be swallowed in the present tense.

I am also aware that other Bantu languages contain formatives for four futures in verbal paradigm (see Batibo 2005; Kanijo 2019; Nurse 2008; Walker 2013). An example is Logooli, which

constitutes four futures, as exemplified in (3) (Batibo 2005: 3). This linguistic mechanism allows the Logooli speakers to express an elaborate, extended, and abstract future time, as quite the opposite of the explanation offered by Mbiti (1969).

- (3) a. Ku-**ra**-gur-a [Logooli]
SM2-F₁-buy-FV
'We will buy (Near future).'
- b. Na-ku-gur-i
F₂-SM2-buy-PFV
'We will buy (Middle future).'
- c. Ku-**ri.ka**-gur-a
SM2-F₃-buy-FV
'We will buy (Far future).'
- d. Ku-**ri**-gúr-a
SM2-F₄-buy-FV
'We will buy (Uncertain future).'

It is unfortunate that the example (3c) is not good because it apparently constitutes a combination of the auxiliary verb *ri* 'be' and the formative *-ka-* 'future'. Although a combination of formatives allows to express remote future in Logooli (and other Bantu languages), only three futures are attested in Bantu languages (Nurse 2008; Kanijo 2019; Walker 2013). For instance, Walker (2013) offers these formatives of three futures in Mara Bantu of Tanzania: '*-ri-* or *ree-* 'remote future (time after tomorrow)', '*-aka-* or *-kaa-* hordienal future (time later today)', and '*-ra-* or *-raa-* 'immediate future (at the beginning of event). Walker (2013) hints that even though the formatives for remote and near future look alike (e.g. *-ra-* for near and remote future tense in Kuria), the adverbs of time do separate the actual time frames. This is the main motivation for the investigation of the conceptualization of time-frames in Tanzanian Bantu languages.

In addition, tone contributes to marking of time frames (Kanijo 2019; Nurse 2008). For instance, Runyambo has the formatives in (4) for four future times, which is opposed to Ruhaya case offered in (2) above. The expression of future time begins from the speech point, which is construed from the time frame of today. Example (4a) bears the marker *-ku-* which indicates present tense. Then the formative *-raa-* occurs for the near and middle future, as in examples (4b-c). It is tone that contributes to the differentiation of near and middle futures. In example (4b), the formative *-raa-* contains low tone and marks near future, while example (4c), it contains high tone and marks middle future. All this has implications to the postulation that future time is brief across Bantu family (Mbiti 1969; Nurse 2008). Rather Tanzanian Bantu exhibit numerous futures, which entails that time frames for future are extended and elaborate.

- (4) a. Tu-**ku**-ku-twec-er-á [Runyambo]
SM2-PRS-OM2-send-APPL-FV
'We will send you something.' ('Today' time frame)
- b. Tu-**raa**-ku-twec-er-á
SM2-FUT₁-OM2-send-APPL-FV
'We will send you something.' (Near Future)

- c. Tu-**ráá**-ku-twec-er-á
SM2-FUT₂-OM2-send-APPL-FV
'We will send you something.' (Middle Future)
- d. Tu-**ri**-ku-twec-er-á
SM2-FUT₃-OM2-send-APPL-FV
'We will send you something.' (Remote Future)

I am aware also that Bantu languages extend up to four past tenses (see also Kanijo 2019; Muzale 1998; Nurse 2008; Walker 2013). This is possible once the analysis and interpretation combine tenses and aspects. In the combination, tone also comes into play. For example, Nyamwezi offers a combination of formatives for four past tenses, as illustrated in (5) (Kanijo 2019: 38). Notice also that the past time is also swallowed in two time-frames by the present time, contrary to Mbiti (1969) who assumed that only the future is narrow.

- (5) a. Wa-**áá**-mál-**a** [Nyamwezi]
SM1-P₁-buy-FV
'She finished (just now).'
(‘Today’ time frame, Immediate past)
- b. Wa-**áá**-mál-**ag**-**a**
SM1-P₂-buy-HAB-FV
'She finished (earlier today).'
(‘Today’ time frame, Near past)
- c. Wa-**áá**-mál-**ilé**
SM1-P₃-buy-PFV
'She finished (yesterday or before).'
(Time-frame, Middle past)
- d. Wa-**aa**-mal-**á**
SM1-P₄-buy-FV
'She finished (long ago).'
(Time-frame, Remote past)

The combinations unfold as follows. The immediate future is realized by the verbal prefix *-áá-* and suffix *-a* (5a), while the near future is realized by the prefix *-áá-* and suffix *-ag-* (5b). For the middle past, speakers use the combination *-áá-* and *-ilé* (5c), while the remote past is realized by the combination *-aa-* and *-á* (5d). It is obvious here that low tone in the verbal prefix occurs only for the remote past.

In cases when few pasts and futures existed as in Swahili and Nyakyusa (perhaps also Gikuyu and Kamba), Bantu languages also develop new formatives over time. For instance, Nurse (2008: 113) reports of changes that occurred over a period of time as follows: “Matumbi (P13) has developed a system with two pasts and two futures, where the contrast between the near past/future and the remote past/future involves null and *-a-*, respectively, the verbs having identical tonal profiles.”

Since languages change as innovations occur, I investigate the adverbs¹ of time for Tanzanian Bantu as they are used in the contemporary time. Then I look into the proto-forms² so as to try to evaluate how far the time frames go back. It is my assumption that in so doing I will unearth the construe and extension of the time frames of the speakers.

3. Theoretical underpinnings

The analysis of the data in this paper is based on the construe of time-frames in linear model proposed by Reichenbach (1947), as illustrated in (6). Based on tense formatives, the literature on the mechanisms to express time-frames in days across Bantu languages appear to bring to the surface different number of strategies for each language (Nurse 2008). For instance, based on Hewson et al. (2000) for Ruhaya and my data for Runyambo, the two languages will have the points as in (7). But the realization of the remote future, say the hypothetical and abstract future life of eternity (Mbiti 1969), does not seem to have a specified formative in Ruhaya verbal paradigm. Speakers of Runyambo, however, pointed out the utility of tone in the indication of remote future. Similarly, Walker (2013) found that demarcation of remote future (F₃) and far future (F₄) is expressed by the same strategy in Mara Bantu, except that the actualization of time frame is achieved through utility of temporal adverbs.

(6)	Time frames in Reichenbach linear model								
	←				X	→			
	D	C	B	A		A	B	C	D

(7)	The linear order of tense formatives in Ruhaya and Runyambo								
	←				X	→			
	-ka-	-∅-	-áá-	-∅-		-∅-	-raa-	-ráá-	-rí-

Based on the nomenclature for expression of time-frames counted by days, Bantu languages reveal differences. I mean that the names of the sequences of days (which I call time-frames) presented in (6) differ from one Bantu language to another. Some Bantu languages have lexical entries that express exactly all the points to D in past and future time-frames, while others don't extend further than five points. For instance, Kagulu reveals as many as nine sequences of names of days (Beidelman 1963) (see 8 below) as compared to Setswana whose names extend up to six points (Kgolo 2018) (see 9 below) and Shubi that reveals only five names (Simeo 2018) (see 10 below). As I pointed out in Section 1, this difference in number of sequences of days (also called time points) is a motivation to undertake a comparative investigation in the manner that different Bantu societies construe and extend time-frames within a given period of time. Specifically, I want to unearth the mechanisms used by speakers to construe such a time point D in future, which has already been stipulated to be amiss in African languages by Mbiti (1969).

(8) Names of days in Kagulu (Beidelman 1963)

¹ For detailed study of the formatives for TAM system in Bantu languages, see Nurse (2008).

² The proto-forms presented herein come from Guthrie (1971). From now on, I will avoid repetition of the citation.

dijusi dia	'three days ago'
dijusi	'the day before yesterday'
digulo	'yesterday'
diyelo	'today'
nosiku	'tomorrow'
chisindo	'day after tomorrow'
sindocho	'three days from today'
chamiagwe	'four days from today'
ifia	'five days from today'

(9) Names of days in Setswana (Kgolo 2018)

maloba	'three days from present day to about a year'
maloba a mabaane	'two days before present day'
mabaane	'yesterday'
tsatsi jeno	'today'
kamoso	'tomorrow'
kamoso yo mogwe	'day after tomorrow'

(10) Names of days in Shubi (Simeo 2018)

nyenkilo	'yesterday'
mbwenu	'today'
nyencha	'tomorrow'
bukiile	'the following day, tomorrow'
kale	'in the past'

Research has shown that the conception of time in African societies is engraved in the movement of celestial bodies (mainly the sun), socio-economic activities (mainly agriculture and animal husbandry), market and festivity days, and days of deities (Beidelman 1963; Bohannan 1953; Dundas 1926; Kgolo 2018; Matjila 2017; Mbiti 1969) which are culturally bound (Brown 1989; Widlok et al. 2021). To the best of my knowledge, no comparative investigation has been executed to evaluate the way the Bantu languages of Tanzania lexicalized words that engrave sequences of days. Mbiti (1969) has used data from only a couple of Bantu languages to conclude that the past is elaborate while the future is brief. Some existing research outputs focused on names of days and/or telling time in individual languages (Beidelman 1963; Dundas 1926; Lusekelo 2010; Mpobela 2018; Mreta 1998; Simeo 2018). I find that a comparative investigation of the manner Bantu speaker construe time-frames is a lacuna that the current research has to fill.

I want to reiterate here that time points are partly fixed (discretized) in the lexical words used to designate them (Beidelman 1963, Mbiti 1969; Mreta 1998) but the lexicalization of the temporal words varies from one language to the other because names of the days of the week are culturally bound within an individual local society (Brown 1989). Also, societies develop metaphorically different lexical items to designate temporal points depending on the socio-economic and cultural background of the society in question (Kgolo 2018; Matjila 2017). These differences offer an outstanding motivation to undertake an inventory of the lexical items used to express temporal points in Tanzanian Bantu.

4. Methods and materials

Two methodological procedures were engaged in this research. Firstly, exiting materials were used as

sources of data for some Tanzanian Bantu. With regard to Tanzanian Bantu with dictionaries, the data sets analyzed for this paper come from all Guthrie's zones available in Tanzania (Maho 2009), namely Kilimanjaro Bantu (Kahe, Mashami and Chasu), Lake Victoria Bantu (Ikizu, Ruhaya, Runyambo, Ruuri and Simbiti), Lake Corridor Bantu (Nyakyusa and Ndali), central Tanzania Bantu (Gogo), and coastal Bantu (Digo, Swahili, Makonde and Yao)³.

Secondly, elicitation from native speakers is opted for Bantu languages which have not yet been described. The premise for the adoption of the elicitation method is that it allows speakers to produce tokens of their language which become better comparative data in the languages under research (Southwood & Russell 2004). In addition, elicitation allows gathering of a relatively large sample of specified lexis for a particular purpose (Vaux & Cooper 1999). In this case, elicitation targeted the names of the days.

In (11) below, I offer the list of 27 Tanzanian Bantu languages and resources from which data come. The resourcefulness of the materials differs, as some contain elaborate dictionaries (Digo, Gogo, Makonde, Ndali, Nyakyusa, Ruhaya and Swahili) while others have short lexicons (e.g. Chasu, Ikizu, Kahe, Simbiti, Yao and Zinza).

(11)	Guthrie's zones	Bantu languages	Resources
	E57	Daiso	Rugemalira et al. (2019)
	E621B	Mashami	Rugemalira (2008), field-notes
	E621D	Kiwoso	Field-notes ⁴
	E64	Kahe	Kahigi (2008), field-notes
	E73	Digo	Nicolle et al. (2004)
	F21	Sukuma	Field-notes
	F22	Nyamwezi	Kanijo (2019), field-notes
	G11	Gogo	Rugemalira (2013), field-notes
	G12	Kagulu	Beidelman (1963), Petzell (2008), field-notes
	G22	Chasu	(Mreta 2008), field-notes
	G42	Swahili	TUKI (2014), field-notes
	G62	Kihehe	Field-notes
	G63	Bena	Field-notes
	JD64	Shubi	Simeo (2018), field-notes
	JD66	Giha	Field-notes
	JE21	Runyambo	Rugemalira (2002), field-notes
	JE22	Ruhaya	Muzale (2018), field-notes
	JE23	Zinza	Rubanza (2008), field-notes
	JE253	Ruuri	Massamba (2005)
	JE402	Ikizu	Sewangi (2008), field-notes
	JE43	Kuria	Walker (2013), field-notes

³ Both Makonde and Yao are not full-time coastal Bantu. The speakers of Maraba dialect of Makonde inhabit coastal areas of Tanzania but the speakers of Nnima dialect of Makonde live in the hinterland. The Yao have homesteads in the interior. Nonetheless, both societies had had prolonged contact with the coastal people and had been influenced by Islamic civilisation.

⁴ In this paper the term *field-notes* has reference to elicitation based on face-to-face interviews, telephone conversations, and online conversations with speakers of specific Bantu languages. It also includes tokens obtained from electronic resources.

	JE431	Simbiti	Mreta (2008), Walker (2013)
	M31	Nyakyusa	Felberg (1996), field-notes
	M301	Chindali	Botne (2008)
	N12	Ngoni	Mapunda (2016), field-notes
	P21	Yao	Taji (2018), field-notes
	P23	Makonde	Rugemalira (2009), field-notes

In
the
course
of

gathering data, I found that some Tanzanian Bantu languages required complete inventory of the lexis for the time points because they lack dictionaries. The languages include Bena, Giha, Kihehe, Kiwoso, Kuria, Nilamba and Sukuma⁵. Thus, each name of any day given for these languages comes from data elicited from speakers.

I, too, found that additional information had to be gathered for other Bantu languages which have dictionaries. The dictionaries did not contain names for some days. Based on Vaux and Cooper (1999), I had to work with elite speakers of the Tanzanian Bantu languages in order to obtain the missing names of the days. It is fortunate that the elite participants provided data sets for their mother tongues⁶.

5. Findings

The findings of the paper are divided into two sections. In section 5.1, much attention is paid to the realization of the names of days in the past. Section 5.2 presents findings for the names of days in the future. In each section, any evidence that supports or counteracts the postulation by Mbiti (1969) is highlighted and an explanation is offered.

5.1 Lexis of the sequences of days in the past. I hinted in section 3 that the beginning of sequences of days is the point of speech, which is primarily today. I, too, stated that the point of speech lies exactly at **X** and the surrounding **A** points in both directions of the theoretical framework. In this section; therefore, I pursue the names of the days from point **A** towards one direction in the past. The assumption will be point **D** shall be the farthest, hence the abstract past, which I wish to compare with names presented by Mbiti (1969).

In data presentation and analysis, I will begin with the names of days for point **A** moving backward to pastness. For time-frame at **A**, some Bantu languages of Tanzania retained the proto-Bantu for this point in time. The two proto-forms that occur in reflexes include **-deedo* ‘today’ and **-no* ‘this, these’. As shown in (12), the reflexes for the former include the lexical entry *rero*, *reero*, *diyelo* or *lelo* ‘today’ attested in the Lake Victoria Bantu, central Bantu and coastal Bantu, while the reflexes for the latter include *inu* in Kilimanjaro Bantu, *lilino* in Lake Corridor Bantu and *mbwenu* in Lake Victoria Bantu. In addition, the plausible etymology of the name *neng’uni* ‘today’ in Bena and Hehe languages is the proto-form **-no* ‘this, these’. The robustness of these two names indicates the possible construe of this time in all Bantu languages. The Mijikenda people, whose neighbours are mentioned to be Digo (Walsh 1992), contain the name *rero* ‘today’. Swahili speakers use the word *leo* ‘today’.

⁵ I am grateful to the following native speakers of the languages given in brackets: Stella Kiula and Nichodemus Benjamin (Nilamba), Saul Bichwa (Giha), Simon Msovela (Bena and Hehe), Esther Masele, Jonace Manyasa and Zephaniah Kaswahili (Sukuma), Lea Mpobela (Runyambo), Henry Muzale (Ruhaya) and Resani Mnata (Kuria).

⁶ I, too, appreciate the following native speakers for enlightening discussion on the terms gathered from dictionaries: Cosmas Constantine (Hangaza), Atupelye Dugange (Bena), Loveluck Muro (Mashami), Kulikoyela Kahigi (Tanzanian Bantu), Amani Chipalo (Gogo), Aurelia Mallya (Kiwoso), Hamisi Amani (Makonde), and Henry Muzale (Tanzanian Bantu).

(12)	Simbiti	réero	'today'
	Ikiizu	reero	'today'
	Digo	rero	'today'
	Ruuri	leero	'today'
	Swahili	leo	'today'
	Jita	lelo	'today'
	Sukuma	lelo	'today'
	Nyamwezi	lelo	'today'
	Makonde	nelo	'today'
	Kagulu	diyelo	'today'
	Kahe	nyinu	'now, today'
	Mashami	inu	'now, today'
	Kiwoso	inu	'now, today'
	Runyambo	mbwenu	'now, today'
	Ruhaya	mbwenu	'now, today'
	Nyakyusa	lilino	'now, today'
	Hehe	neng'uni	? <It is today>
	Ruhaya	kireeki	'this night'
	Gogo	(i)zuwali	'this sun'
	Nilamba	ntende ⁷	? <It is today>
	Gogo	(i)lulu	'today'

The semantic expansion of the primary meaning of proto-forms is attested in the data. Speakers of some Tanzanian Bantu extended the meaning of the proto-form **-dobi* 'tomorrow (also yesterday)' to refer to *today*. For instance, speakers of Gogo use the term *ilulu* 'today'. To differentiate the temporal adverb from the name of the day, the Gogo lexicalized an adverbial expression for *right now* to become *lulubaha* 'right here'. This adverbial expression is common across Bantu languages (Nurse 2008). The grammaticalization of temporal adverbial expression to names of days is attested beyond Bantu languages (see Heine & Narrog 2012).

Alternative lexicalization of names of 'today' had been attested in the data. First, speakers of Gogo lexicalized the celestial body of the SUN to express the time-frame at speech point. It is the combination of the lexical noun *(i)zuwa* 'sun' (proto-Bantu: **joba* 'sun') and proximal demonstrative *ili* 'this' which entails today in the language. The literal meaning of this expression is *this sun*. The second innovation concerns the notion NIGHT. Speakers of Ruhaya lexicalized the name *today* from the dawn-fall. Data in (12) indicates that The notion *today* in Ruhaya is a function of the lexicalization of the noun *kiro* 'night' and proximal demonstrative *eki* 'this'. The literal meaning of *keroki* is *this night*. Both innovations concern the metaphorical expression of the state of the sky to mark the beginning of the present day.

Perhaps the choice of the name *sasa* 'now, right now' by Mbiti (1969) is a bad one. First of all, it is a loanword of Arabic origin (TUKI 2014). Also, it does not unfold in the data from Tanzanian Bantu. The presence of the name *le(l)o* 'now, today' is one corner that substantiates that African languages contained names of both abstract pastness and futurity.

The linear point **B** is dedicated to the formatives for the middle past, which are robust in the

⁷ The etymology of *ntende* 'today' in Nilamba is not yet established. It neither originates from *mwetzi* 'moon' nor *litzuva* 'moon'.

Bantu languages (Nurse 2008). In tense and aspect systems, technically, middle past has reference to events that occurred before today. Lexically, looking at point **B** in the direction of pastness, Tanzanian Bantu reveal the utility of four root-names, as illustrated in (13). As discussed below, each of these names of *yesterday* can easily be reconnected back to the proto-forms.

(13)	Gogo	igolo	'yesterday'
	Hehe	igolo	'yesterday'
	Runyambo	nyéígóro	'yesterday'
	Ruhaya	nyiigoro	'yesterday'
	Ruuri	igoro	'yesterday'
	Nilamba	gyulo	'yesterday'
	Nyamwezi	igolo	'yesterday'
	Sukuma	igolo	'yesterday'
	Jita	ligolo	'yesterday'
	Kagulu	digulo	'yesterday'
	Nyakyusa	mmajolo	'yesterday'
	Daiso	iworo	'yesterday'
	Mashami	isho	'yesterday'
	Kahe	ivo	'yesterday'
	Ikizu	izo	'yesterday'
	Simbiti	ishó	'yesterday'
	Kuria	icho	'yesterday'
	Kiwoso	ijo	'yesterday'
	Makonde	lido	'yesterday'
	Shubi	izweli	'that day'
	Swahili	jana	'yesterday'
	Digo	dzana	'yesterday'
	Kiwoso	ukou	'the day before'

The first proto-Bantu forms of **-godo* 'yesterday' or **-godo* 'yesterday' manifest in the Tanzanian Bantu. The reflexes in daughter languages include *-góro*, *-goro*, *-golo*, *-jolo*, *-g(y)ulo* and *-woro*, which are attested in the Lake Victoria, central and Lake corridor Bantu. The second proto-Bantu form **-jo* 'yesterday' is retained in some Tanzanian Bantu. Its reflexes include *izo*, *izwo*, *icho* or *isho* 'yesterday' in Lake Victoria⁸, coastal and Kilimanjaro Bantu. Since these two lexical entries are pervasive across Tanzanian Bantu and are equally assigned to nominal class 5, then I conclude that speakers of Bantu languages construe time-frame of yesterday in a similar fashion.

Each of these proto-forms offers an interesting point. First, an important morphological alteration is worth reckoning here. Nyakyusa innovated the lexical form **godo* 'past-time' into two semantic contents, namely *yesterday* and time that extends before yesterday (*long time*). The meaning of the former bears the combination of the nominal class prefixes 18 and 6 to obtain *mmajolo* 'yesterday', while the later bears only the nominal class 5 prefix as *ijolo* 'antiquity'. To offer the exact meaning in time, each of these morphologies of nominal prefixes cannot be violated. Second, the semantic extension of the proto-form **ijo* is also worth reckoning here. Shubi combines the form *izwo* 'yesterday' and distal demonstrative *ili* 'that' to derive the notion *izweli* 'yesterday'. The combination of the two provides the reading *yesterday*.

⁸ The name *isho* has references to *tomorrow* and *yesterday* in Mara Bantu (e.g. Kuria and Simbiti).

The history of the Mijikenda people is not fully reflected in both Digo and Swahili who retained the proto-Bantu **-jana*. The reflexes are *dzana* and *jana* respectively, which is not attested in any other Tanzanian Bantu in the sample. However, Daiso maintains the name *iworo* ‘yesterday’. Since the Daiso originated in the vicinity of Mijikenda in eastern Kenya (Nurse & Spear 1985; Rugemalira et al. 2019; Walsh 1992), probably it would be possible to argue that earlier inhabitants of the Mijikenda used the expression *-golo* ‘yesterday’ before the incorporation of the name *dzana* or *jana*.

Semantic extension of existing forms occurred even for the name yesterday. For instance, the Makonde underwent innovation process in that the proto-Bantu form of **-deedo* ‘today’ is semantically extended to mean yesterday in the word *lido* ‘yesterday’.

The Kilimanjaro Bantu contained traditional naming system of the weeks and months (Dundas 1926), which they still reckon to-date. For instance, Kiwoso maintained the traditional way of naming days of the week in that the temporal adverb *ukou* ‘yesterday’ has reference to the previous day in the names of the week. Similarly, in an adjacent society of the speakers of Mashami, *nkonu* has reference to a day (24-hour time frame), while *ukou* refers to the lexical word of *yesterday*. In both languages, the traditional way of counting days in the week is still reckoned and utilized to name days in a week.

Now I turn my attention to point C which is dedicated for the time frame two nights before the present time. In the tense and aspect system in Bantu languages, Nurse (2008) treats this as events that occur in the far past. The common names for this time-frame appear in (14). Based on Guthrie (1971), two proto-forms of names for this day are **-joodi* and **-ijo* ‘day before yesterday’ are attested in Tanzanian Bantu.

(14)	Sukuma	mazuuli	‘the day before yesterday’
	Nyamwezi	mazuuli	‘the day before yesterday’
	Nilamba	mazuli	‘the day before yesterday’
	Swahili	juzi	‘the day before yesterday’
	Digo	dzuzi	‘the day before yesterday’
	Yao	lijusi	‘the day before yesterday’
	Kagulu	dijusi	‘the day before yesterday’
	Makonde	madudi	‘the day before yesterday’
	Shubi	izweli ili	‘the day before yesterday’
	Ruhaya	ijweli	‘the day before yesterday’
	Kuria	ichurya	‘the day before yesterday’
	Ruhaya	ijo	‘the day before yesterday’
	Kiwoso	icho (Iya)	‘the day before yesterday’
	Nyakyusa	pakijolo	‘the day before yesterday’
	Daiso	mdorong ⁹	‘the day after tomorrow’

The reflexes of the proto-Bantu **-joodi* are commonly used across Tanzanian Bantu. The central Tanzania Bantu retained the proto-form as *-zuuli* ‘day before yesterday’, while the coastal Bantu modified it as *-jusi* ‘day before yesterday’. The reflexes of the proto-Bantu **-jo* are attested to designate the time frame of *the day before yesterday*. Guthrie (1971) presents this form as *yesterday* in proto-Bantu. The daughter languages innovated the term to refer to one day beyond yesterday.

Morphological realization of the name is either by a lexical entry as in *mazuuli* in Sukuma and

⁹ The same name has reference to *day before yesterday* and *day after tomorrow* in Daiso (Rugemalira et al. 2019). Its etymology is not yet established.

Nyamwezi or a combination of two words as in *ichurya* in Kuria. The combination concerns the base *icho* ‘yesterday’ and demonstrative *irya* ‘that’ provides the reading *the day before yesterday*. Thus, innovation of existing words is employed to derive the timein point C.

It is fascinating to note that the north-eastern Bantu languages, which are the neighbours of the Mijikenda (Nurse & Spear 1985; Walsh 1992), lexicalized the name *juzi* and *dzuzi* as the name of the *day before yesterday*. This is one corner that indicates the Mijikenda had had a name of the day before the incorporation of the Arabic names of the days.

Point **D** in Reichenbach linear model is attested in two proto-forms in Tanzanian Bantu. This is not uncommon because formatives for remote tense and aspect are also attested across Bantu languages (Nurse 2008). Reflexes of one primary proto-Bantu for *past-time* are attested across Bantu languages (15).

(15)	Makonde	kala	‘in the past’
	Gweno	kala	‘antiquity, ancient times’
	Ruhaya	nyakara	‘long time ago’
	Runyambo	nyakara	‘long time ago’
	Sukuma	kaale	‘long time ago’
	Nyamwezi	kaale	‘long time ago’
	Kiwoso	kacha	‘long time ago’
	Yao	karakara	‘long time ago’
	Digo	kare	‘long time ago’
	Daiso	kara	‘long time ago’
	Swahili	kale	‘long time ago’
	Swahili	zamani	‘long time ago’
	Chasu	kae	‘long time ago’
	Zigua	kale	‘antiquity, ancient times’
	Hangaza	kera	‘long time ago’
	Gogo	idaha	‘long time ago’
	Kagulu	idaha	‘long time ago’
	Hehe	idaha	‘long time ago’
	Makonde	machedo	‘long time ago’
	Giha	ahambere	‘long time ago’

Retentions of the proto-Bantu **-kada* ‘olden times’ manifest in most Tanzanian Bantu. The reflexes of this form have reference to antiquity or ancient time. It is pervasive across Tanzanian Bantu as *-kara* or *kala* ‘olden times’. Also, it manifests as *kare* or *kale* ‘long time ago’ in other Tanzanian Bantu. Perhaps this retention affirms the postulation by Mbiti (1969) that speakers of African languages had mechanisms to represent the ancient times which they reckon through events that occurred and they lived with.

Moreover, the expression of *zamani* ‘antiquity’ which has been underscored in Mbiti (1969) does not unfold in the data except in Digo and Swahili. Even in these languages, the abundance use of the name *kale* or *kare* ‘long time ago’ is attested in Daiso, Digo and Swahili. Thus, *zamani* ‘antiquity’ remains a newly borrowed name, which might not have been used by the Mijikenda as it has not replaced the native word of *kale* or *kare* ‘long time ago’.

Furthermore, the expression of antiquity Languages in Guthrie group G (Bena-Kinga and Gogo-Kagulu), which are spoken in central Tanzania, lexicalized the notion *remember* to the expression of antiquity. The etymology of the adverb *idaha* ‘long time ago’ derives from the verb *daha* ‘remember’

(Beidelman 1963; Petzell 2008). This kind of data helps to substantiate that speakers of Tanzanian Bantu could construe abstract past using the mental memory, say of events that occurred in the past (Mbiti 1969).

Some innovations points to a different direction. It appears both the antiquity in the past and eternity in the future are expressed by similar names. For instance, the innovation of the proto-form **-keedo* ‘tomorrow’ for antiquity occurred in Makonde in the reflex of *machedo* ‘long time ago’. Other innovations involved adverbial expressions of time. For instance, an adjectival *ahead/fore* developed to denote *long time ago* in Giha. Here the notion abstract past is expressed in the name for the abstract future as captured in the word *ahambere*. The name derives from the word *mbere* ‘fore, ahead’. Contrary to Mbiti (1969), Giha speakers innovated expression of abstract future time to refer to the antiquity past as well.

To summarize on the names of days which express pastness in Tanzanian Bantu, (16) below offers an array of the four pasts attested in the sample languages. The robustness in mechanisms to express pasts in reported in Mbiti (1969) and their formatives appear in Nurse (2008). Now I turn to the strategies employed to express futurity.

(16)	The linear order of names of days in the past in Ruhaya and Nyamwezi				←	X
	‘ancient’	‘day before yesterday’	‘yesterday’	‘today’		
	nyakara	ijo	nyigoro	mbwenu	speech point	
	kaale	mazuuli	igolo	lelo		

5.2 Names of sequences of days in futurity. The future begins with point **A**, which is very common across Tanzanian Bantu. I have already discussed the lexicalization of names for point **A** in section 4 with examples in (12). Suffice to say at this juncture that names for *today* are attested in the sample of Bantu languages. Now I examine the way the future is expressed beyond point **A** in the schemata in (6) (see section 3). The main intent is to unearth the way speakers of Tanzanian Bantu construe futurity and eternity, which is presumed to be narrow (Mbiti 1969).

Point **B** is numerously expressed lexically, as illustrated in (17). I account for each name, tracing the etymology and innovations, if any. I begin with the proto-Bantu form **-keedo*, which Guthrie (1971) provided the reading morning. It manifests in the daughter language Swahili.

(17)	Swahili	kesho	‘tomorrow’
	Digo	machero	‘sun rise, tomorrow’
	Runyambo	nyéncha	‘to dawn, tomorrow’
	Ruhaya	nyenkya	‘to dawn, tomorrow’
	Ruhaya	bukeire	‘to dawn, tomorrow’
	Ndali	ningeelo	‘dew, to dawn, tomorrow’
	Kagulu	nosiku	‘a new day, tomorrow’
	Makonde	luundu	‘turning point, tomorrow’
	Ruuri	mutoondo	‘tomorrow’
	Jita	mutoondo	‘tomorrow’
	Gogo	mitondo	‘dawn, tomorrow’
	Sukuma	ntondo	‘tomorrow’
	Nyamwezi	ntondo	‘tomorrow’
	Digo	muhondo	‘tomorrow’

	Nilamba	mudau	'tomorrow'
	Hehe	milawu	'tomorrow'
	Nyakyusa	kilabu	'tomorrow'
	Daiso	royo	'tomorrow'
	Kuria	icho	'tomorrow'
	Simbiti	ishó	'time for tomorrow and yesterday'
	Kahe	Ngama ¹⁰	'tomorrow'
	Ikizu	taboori	'tomorrow'
	Mashami	(n)desi	'tomorrow'
	Kiwoso	(n)desi	'tomorrow'

Lexicalization of names from the state of the cosmological bodies (e.g. STAR, SKY, LIGHTNESS/DARKNESS) is common for the name of *tomorrow*. Several patterns of such lexicalization are attested in the sample. I discuss one after another.

The first pattern concerns predicates. The predicate strategy involves expression of dawn for *tomorrow*. The proto-Bantu form of **-kri* 'dawn' or **-kria* 'to dawn' manifests in Tanzanian Bantu. For instance, along the coast of Tanzania, Digo represents a language that lexicalized the name *machero*, which is related to the verb *-cha* 'to dawn, sunrise'. Likewise, the Lake Victoria Bantu lexicalized the name *nyéncha* or *nyenkya* from the verb *-cha* or *-kya* 'to dawn, sun rise'. This mechanism is therefore dominated by the predicate as a source of name of the day.

The second pattern involves the argument for the name that is lexicalized. For instance, the state of the SKY is represented by Ndali in which the dawn of the day and the prevalence of dew is reckoned as *tomorrow*. In this expression, the argument predominates the strategy of naming the day because the word *ningeelo* entails a new day. The literal meaning of the name is *during/at dawn*.

The third pattern involves the construal of *tomorrow* by marking the end of the day. In this regard, the conceptualization of a day in Tanzanian Bantu is associated with the day-time in combination of the night-time. Both day-time and night-time are construed through the state of the SKY. In fact, the end of the day is marked by the turning point called *luundu* in Makonde. Similarly, Kagulu speakers lexicalized the new day as the name *luundu* 'tomorrow'. Therefore, the end of the day is marked by the dawn.

The fourth pattern concerns the construe of *tomorrow* from the proto-Bantu form of **-tondoa* 'star'. Perhaps the name is construed from the morning STAR in Tanzanian Bantu. The notion STAR manifests *inondwa* in Makonde and *indondwa* in Ndali and Nyakyusa (Botne 2008; Felberg 1996; Rugemalira 2013)¹¹. The lexical entry *mutondo* 'tomorrow' is attested in reflexes of daughter languages in (17) above, namely Digo along the coast, Gogo, Nilamba and Nyamwezi in central Tanzania, and Jita, Ruuri and Sukuma in Lake Victoria area. Nonetheless, this postulation should be taken with caution because some Tanzanian Bantu innovated the same proto-Bantu form of **-tondoa* 'star' for a name of another day. For instance, Nilamba lexicalized *lutondo/ntondo* 'day(s)' and Swahili *mtondo* 'third day following/day after tomorrow'.

The last pattern involves the proto-form **-daad-* 'sleep, pass the night' that bears reflexes in Hehe and Nyakyusa in Lake corridor and Nilamba in central Tanzania. It manifests as *lawu*, *-labu* and *-dau*, respectively. This is an innovation which is straightforward because a day is construed after

¹⁰ The etymology of the names in Kilimanjaro Bantu has not yet been established. Further research is required to achieve its sources.

¹¹ Star is called (*injota*, *inyota*, *inzota* or *inshota* in other Tanzanian Bantu. Another name is lexicalized as *nyelezi* (Gogo), *enyonyózi* (Runyambo), *enyinyizi* (Zinza) and *ng'eng'eri* (Kahe). Its proto-form is **(n)nyenje(di)* 'star'.

the end of the night when the speakers wake up for a new day. This means that in Tanzanian Bantu, the notion *tomorrow* begins with the end of the night, which is the time for resting (sleeping)¹².

Further innovation involves the proto-form **-jo* that means ‘yesterday’. It is also innovated to refer to future time as it manifests *asisho* or *icho* ‘tomorrow’ in Mara Bantu and *royo* ‘tomorrow’ in coastal Bantu (see 17 above). These languages also retained the same form for past-time. I argue that both pasts and futures are construed similarly by some speakers of Tanzanian Bantu. This claim has implications to the suggestion by Mbiti (1969) that pasts are elaborate, while futures are brief. It appears that pasts and futures are construed and expressed equally.

Now I turn to names for point C as attested in Tanzanian Bantu. I begin with the etymology of the name *-tondo* ‘day after tomorrow’. It is a reflex of the proto-Bantu form **-tondoa* ‘star’. It is available in Swahili and Mashami (18).

(18)	Swahili	mtondo	‘the day after tomorrow’
	Mashami	nyondo	‘the day after tomorrow’
	Kagulu	chisindo	‘the day after’
	Digo	kusinda muhondo	‘the day after tomorrow’
	Swahili	kesho kutwa	‘the day after tomorrow’
	Nilamba	mudau lea	‘that day’
	Nyakyusa	pakilabu	‘beyond tomorrow’
	Gogo	chilawu	‘the day after tomorrow’
	Kiwoso	lau	‘the day after tomorrow’
	Hehe	pawucha	‘at dawn’
	Makonde	palyamba	‘at dawn’
	Ruhaya	ijweli (ijo ili)	‘this day’
	Daiso	mdoronge	‘the day after tomorrow’

The etymology of the name for *day after tomorrow* is also the 24-hour time. This time is measured in day-time and night-time. Therefore, the name of the day after tomorrow is realized by the predicate *sinda* ‘wait after a day’ in Kagulu and Gogo. Similarly, it has reference to day after today in Swahili.

The proto-form **-daad-* ‘sleep, pass the night’ is innovated to also refer to the day after tomorrow. This innovation is a straightforward extension of the notion tomorrow because the day after tomorrow concerns the day beyond 48-hour time. Morphological adjustment is a strategy which is used to extend the semantic content of the proto-form **-daad-* ‘sleep, pass the night’ so as to obtain time frame beyond tomorrow. Nyakyusa used the secondary nominal prefix to achieve the reading *pakilabu* ‘beyond tomorrow’. Gogo assigned the nominal class 7 to the proto-form **-daad-* ‘sleep, pass the night’ so as to obtain the name *chilawu* ‘day after tomorrow’. The use of the locative 16 nominal class is also attested in Hehe and Makonde. The former assigned the nominal prefix 16 to the base *wucha* ‘at dawn’ so as to obtain *pawucha* ‘day after tomorrow’. The later inserted the nominal prefix 16 to the word *lyamba* ‘morning’ to obtain *palyamba* ‘day after tomorrow’. I argue that Tanzanian Bantu developed a strategy of assigning a secondary class to a noun so as to express time frame beyond yesterday and tomorrow. Since both strategies are used, it becomes plausible to argue that both pasts and futures are construed alike, contrary to the suggestion by Mbiti (1969).

A common strategy to express distant time is using the demonstratives. Nilamba used the

¹² The name is also innovated to refer to the day after tomorrow.

demonstrative *lea* ‘that’ to represent the time frame beyond tomorrow. The proto-form ***-dia** ‘that, those’ manifest as *dia* in Kagulu and *lea* in Nilamba. Both are used to mark time frame beyond 24-hour period, either in the past for Kagulu or future in Nilamba. Similarly, Ruhaya inserted the demonstrative *ili* ‘this’ in the adverb *ijweli* to refer to the time frame beyond tomorrow.

Looking at the term *sasa* ‘now’ offered by Mbiti (1969), one notices the incomplete inventory of the traditional naming of future time. The best candidate for the Tanzanian Bantu would have been the name *mtondo*, which has reference to future beyond today.

Point **D** is rare across Tanzanian Bantu. It is innovated from other names. Mbiti (1969) argues that the expression of eternity in time-frame is not lexicalized in African languages. Perhaps this claim is satisfied because I find only a couple of lexical entries for the notion of eternity and/or infinity in Tanzanian Bantu (19). Nonetheless, this limited number of names does not rule out the possibility of speakers to construe of eternity using names they coined.

(19)	Chasu	kae na kae	‘eternity, eternal life’
	Nilamba	kali na kali	‘eternity, eternal life’
	Ruhaya	iráinéfra	‘eternity, eternal life’
	Runyambo	iraineira	‘eternity, eternal life’
	Nyakyusa	nkyeeni	‘on the face, fore time’
	Swahili	milele	‘eternity, eternal life’
	Gogo	cibitilila	‘bita ‘go’, time ahead’
	Yao	panyuma	‘later time frame’
	Kagulu	ifia	‘later time frame’
	Sukuma	buja na buja	‘eternity, eternal life’

In Chasu, Nilamba, Ruhaya and Runyambo, the word *kare*, which is used to express ancient time is innovated through conjunction and reduplication to refer to eternal future. This implies that speakers construe remoteness in the past as being similar to remoteness in the future. The construe of both readings of remoteness is abstract.

To sum up the expression of futurity by using adverbs in Tanzanian Bantu, (19) below offers an array of adverbs which express four futures attested in Makonde. The availability of mechanisms to express future is amiss in Mbiti (1969). In this paper, I argue that speakers of Bantu languages innovate adverbs to express futurity up to eternity.

(19)	Expression of future time frames in Ruhaya and Swahili			
X	→			
	‘today’	‘tomorrow’	‘day after tomorrow’	‘eternity’
speech time	mbwenu	nyenkya	ijweli	iráinéfra
	leo	kesho	kesho kutwa, mtondo	mbeleni

6. Discussion

In the course of presentation of data in preceding section, some variations occur in the names of days in Tanzanian Bantu. Some languages have many structures, while other contain few names. I begin discussing mechanisms in languages with eight structures (e.g. Nyakyusa, Ruhaya, Swahili and Nilamba). Then I discuss languages with less than eight structures (e.g. Kiwoso and Machame).

Nilamba, Nyakyusa, Ruhaya and Swahili offer many structures for the expressions on time frames. To unearth the structures, I discuss each language specifically and in comparison. The nominal morphology of Nyakyusa constitute 18 noun classes, which locative nouns (Lusekelo 2009).

The Nyakyusa lexicalized key terms, namely *-jolo* (past) and *-labu* (future). These two begin from an important point of *-lino* (today), extending in both directions as outlined in (20) below.

(20)	Names of days in Nyakyusa								
	←				X	→			
	D	C	B	A		A	B	C	D
	ijolo	pakijolo	mmajolo	lilino		lilino	kilabu	pakilabu	nkyeeni

The data in (20) exhibits that nominal prefixes contribute much to the realization of time frames. The pasts in Nyakyusa are realized in the nominal prefixes attached to the key term of *-jolo*. It occurs with the locative noun *m(u)-* combined with the nominal class 6 of *ma-*. The combination of these nominal prefixes assumes the time frame of day after today, i.e. tomorrow¹³. Futures begin with the nominal prefix in class 7 of *ki-*, which is attached to the root *-labu*. This combination provides the reading equally similar to 24 hours after today.

Time frames beyond tomorrow or yesterday are realized in one nominal prefix class 16 of *pa-*. Once it attaches to *-jolo*, it provides the reading day after yesterday. Once it occurs on *-labu*, it provides day after tomorrow.

Abstract past and future times are realized differently. The root *-jolo* is assigned to nominal prefix class five as *ijolo* ‘long time ago’. The future is realized in the different word of *kyeeni* ‘forehead’ with the nominal prefix for class 18. Thus, with this term of *nkyeeni*, the future is indeed embroiled in a vast time frame. With this evidence, as opposed to Mbiti (1969), I argue that linguistic materials allow futurity to be expressed in lexical forms.

Swahili morphology comprises reduced the noun class system because regular diminutive and locative classes were lost (Mpiranya 2015; Schadeberg 1992). Also, Swahili comprises of numerous loanwords of Arabic origin (Schadeberg 2009). As a result, names for each time-frame is expressed lexically, as illustrated in (21).

(20)	Names of days in Swahili								
	←				X	→			
	D	C	B	A		A	B	C	D
	majuzi, kati	juzi	juzi	jana		leo	leo	kesho	keshokutwa, mtondo

Time division for 24 hours from *leo* ‘today’ is called *kesho* in Swahili. Mpiranya (2015) offers examples that place this word close to *jana* that stands for another period of time some 24 hours before today. The former is related to many Tanzanian Bantu, while the latter is specific to Swahili because it does not occur in other Tanzanian Bantu.

Both *keshokuwa* and *mtondo* ‘day after tomorrow’ are attested in Swahili (TUKI 2014). In Tanzanian Swahili, the name *keshokutwa* is commonly used. This does not rule out the utility of *mtondo* in limited conversations.

With the utility of the lexical entry *majuzi* ‘day before yesterday’ in Swahili, the nominal prefix *ma-*, that is very productive in noun class 6, is used to designate time beyond 48 hours in the past. Also, the notion *juzi kati* is available in Swahili. In this context, the nominal prefix remains functional for the conceptualization of time that is abstract in the past.

¹³ Another term with slightly different morphology is *namajolo* ‘evening’ that has reference to the immediate future. The nominal prefix *na-* with no proper meaning that provides the future reading.

Beyond this time frames, Swahili lexicalized time divisions using key terms of *kutwa* ‘after time X’ and *kati* ‘before time X’. Also, the lexical word *mtondo* is available for Swahili. This is different from Nyakyusa that uses the nominal prefixes. Perhaps this is possible in Swahili that has reduced noun class prefixes and had long integrated numerous loans from Arabic and Persian (Schadeberg 2009).

Alternatively, reduplication is very productive in the realization of abstract time in Tanzanian Bantu. Swahili reduplicates the word *juzi* that has an exact time frame of *yesterday* to extend time into abstract past period as it manifests as *juzi juzi* ‘immediate (memorable) past’.

Abstract time in the future is expressed lexically by *mbeleni* ‘ahead’, longer mechanism such as *siku za mbeleni* ‘ahead days/future time’ or *siku za usoni* ‘fore days/future time’. For the abstract time in the past, Mbiti (1969) has already outlined the utility of the lexical entry *zamani* ‘long ago’, which is related to time immemorial.

Nilamba lexicalized proto-forms into contemporary mechanisms to express names of days (22). It has lexicalized the form **-godo* for yesterday. Also, the proto-form **-juudi* is lexicalized to mean antiquity and day before yesterday. When the term occurs without nominal prefix, it has reference to day before yesterday, but as the nominal prefix *ma-* (class 6) is assigned to the word, it has reference to antiquity. Thus, this morphological process allows speakers to distinguish time frames in the past.

(22)	Names of days in Nilamba								
	←				X	→			
	D	C	B	A		A	B	C	D
	majuli	juli	gyulo	ntende		ntende	mudau	mudau lea	kali na kali

The remote future time is construed by the proto-form **-daad-*. In this side, the *tomorrow* future is expressed by the root, while the *remote* future is expressed with addition of the intensifier/modifier *lea* ‘later, ahead’. The eternity is expressed by the notion *kale* ‘antiquity’. This entails that abstract time is perceived in the antiquity. I want to use this lexical innovation to argue that speakers of Tanzanian Bantu construe the eternity and express it in their languages.

Some Bantu languages reveal few strategies used to mark time-frames. For instance, both Kiwoso and Hehe do not mark eternity, as illustrated in (23-24), but it have lexicalized the notion *idaha* for antiquity. Machame does not mark both antiquity (abstract time in the past) and eternity (abstract future time), as illustrated in (25). Mbiti (1969) had sample languages which behave like Hehe and Machame in that they have not lexicalized time-frames for abstract future. But this does not rule out the possibility of Tanzanian Bantu to innovate mechanisms to express remote future. For instance, Machame reveals another way of expression of pastness using the term **-daad-*, which is available for remote future in Nilamba.

(23)	Names of days in Hehe								
	←				X	→			
	D	C	B	A		A	B	C	D
	idaha	isusi	igolo	neng’uli		neng’uli	milawu	pawucha	?

(24)	Names of days in Kiwoso								
	←				X	→			
	D	C	B	A		A	B	C	D

	kacha	icho lya	ukou	inu		inu	desi	lau	?
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(25)	Names of days in Machame								
	←				X	→			
	D	C	B	A		A	B	C	D
	?	isho	ikwau	inu		inu	ndesi	nghondo	?

7. Conclusion

Names denoting the abstract past and future time-frames existed in ancient times in African languages. This is evident in the way Tanzanian Bantu lexicalized timeframes more or less equally for both pasts and futures. The foregoing discussion allows me to postulate the proto-forms in (25) as the main strategies used by speakers of Bantu languages to name sequences of days. I argue that innovations of the existing structures enable speakers to construe of the far future time and eternity, contrary to Mbiti's (1969) claim that the future is swallowed in the present time.

(25)	Names of sequences of days in proto-Bantu								
	←				X	→			
	D	C	B	A		A	B	C	D
	*-kada	*-joodi	*-godo	*-deedo		*-deedo	*-tondo	*-daad-	xxx

The notion ***-godo** and ***-ijo** have been semantically expanded to include remoteness in the past and aloofness in future. It has been extended to refer to remoteness which fits point **C** in the schemata offered in (6) above. I want to argue that Tanzanian Bantu developed mechanisms to express remoteness in future using the proto-forms, which also have reference to other points in the linear time scale.

Abbreviations

APPL	applicative suffix
F	future tense/time frame
FV	(default) final vowel
HAB	habitual aspect marker
OM	object marker/prefix
P	past tense/time frame marker
PFV	perfective aspect marker
PRS	present tense/time frame marker
SM	subject marker/prefix
TAM	tense-aspect-modality

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