

Grammaticalization in Bantu Languages with Special Reference to Swahili

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Abstract

Bantu languages have played a prominent role in the development of grammaticalization theory (e.g. Givón 1971; Heine and Reh 1984; Heine, Claudi and Hünemeyer 1991; Heine and Kuteva 2002); but with few exceptions (Güldemann 2003) there are no works that deal more comprehensively with grammaticalization phenomena in this group of Niger-Congo languages.

The present paper provides a framework for identifying some more general lines of grammatical evolution in Bantu languages. It is argued that grammaticalization studies offer a basis both for reconstructing earlier stages in the development of Bantu languages and for understanding certain structural properties of present-day Bantu languages.

1. Introduction

In their seminal work on the Bantu languages, Nurse and Philippson (2003:10) note that this work includes a treatment of “grammaticalization because African, and especially Bantu, languages have been much involved in the development of grammaticalization theory in the late twentieth century”. The relevant treatment by Güldemann (2003) contains in fact a broad overview and a number of exciting hypotheses on specific grammaticalization processes; but what is required in addition is a more basic discussion of what grammaticalization is about, how instances of it can be identified, and what the potential is that it offers for understanding and analyzing the structure of Bantu languages. It is in particular these questions that we will be concerned with in the present paper. The examples presented are taken primarily from Swahili, but the processes described can also be observed in other Bantu languages.

Grammaticalization is defined as the development from lexical to grammatical forms, and from grammatical to even more grammatical forms.¹ Since the development of grammatical forms is not independent of the constructions to which they belong, the

¹ For a fairly comprehensive list of definitions that have been proposed for grammaticalization, see Campbell and Janda (2001).

study of grammaticalization is in the same way concerned with constructions, and with even larger discourse segments (see Traugott and Heine 1991a; 1991b; Heine, Claudi and Hünemeyer 1991; Hopper and Traugott 1993; Bybee, Perkins and Pagliuca 1994; Lehmann 1982; Kuteva 2001; Heine and Kuteva 2002 for details). In accordance with this definition, grammaticalization theory is concerned with the genesis and development of grammatical forms. Its primary goal is to describe how grammatical forms and constructions arise and develop through space and time, and to explain why they are structured the way they are. One main motivation for grammaticalization consists in using linguistic forms for meanings that are concrete, easily accessible, and/or clearly delineated to also express less concrete, less easily accessible and less clearly delineated meaning contents. To this end, lexical or less grammaticalized linguistic expressions are pressed into service for the expression of more grammatical functions.

2. The Parameters

There is a wide range of criteria that have been proposed (see e.g. Lehmann 1982; Heine, Claudi and Hünemeyer 1991; Hopper and Traugott 1993; Bybee, Perkins and Pagliuca 1994); in our model it is the four parameters listed in (1). A number of alternative criteria have been proposed, such as syntacticization, morphologization, obligatorification,² subjectification, etc. We argue that they can be accounted for essentially with reference to these four parameters. Henceforth we will rely on these parameters, using them as a tool for identifying and describing instances of grammaticalization.

(1) Parameters of grammaticalization

- a extension, i.e. the rise of new grammatical meanings when linguistic expressions are extended to new contexts (context-induced reinterpretation),
- b desemanticization (or “semantic bleaching”), i.e. loss (or generalization) in meaning content,
- c decategorialization, i.e. loss in morphosyntactic properties characteristic of lexical or other less grammaticalized forms, and
- d erosion (“phonetic reduction”), i.e. loss in phonetic substance.

Each of these parameters concerns a different aspect of language structure or language use; (1a) is pragmatic in nature, (1b) relates to semantics, (1c) to morphosyntax, and (1d) to phonetics. Except for (1a), these parameters all involve loss in properties. But the process cannot be reduced to one of structural “degeneration”: There are also gains: In the same way as linguistic items undergoing grammaticalization lose in semantic, morphosyntactic, and phonetic substance, they also gain in properties characteristic of their uses in new contexts – to the extent that in some cases their meaning and syntactic functions may show little resemblance to their original use.

² Some students of this paradigm of linguistics argue that obligatorification, whereby the use of linguistic structures becomes increasingly more obligatory in the process of grammaticalization, should be taken as a definitional property of this process. As important as obligatorification is (see Lehmann 1982), it is neither a *sine qua non* for grammaticalization to take place, nor is it restricted to this process, occurring also in other kinds of linguistic change, such as lexicalization. Within the present framework, obligatorification – as far as it relates to grammaticalization – is a predictable by-product of decategorialization.

The order of these parameters reflects the diachronic sequence in which they typically apply: Grammaticalization tends to start out with extension, which triggers desemanticization, and subsequently decategorialization and erosion. Erosion is the last parameter to come in when grammaticalization takes place, and in a number of the examples to be presented below it is not (or not yet) involved. Paradigm instances of grammaticalization involve all four parameters but, as we will see below, there are as well cases where not all of the parameters play a role. We will now look at each of these parameters in turn.

2.1 Extension

Of all the parameters, extension is the most complex one, for the following reasons: First, it has a sociolinguistic, a text-pragmatic, and a semantic component. The sociolinguistic component concerns the fact that grammaticalization starts with innovation (or activation) as an individual act, whereby some speaker (or a small group of speakers) proposes a new use for an existing form or construction, which is subsequently adopted by other speakers, ideally diffusing throughout an entire speech community (propagation; see e.g. Croft 2000:4-5). The text-pragmatic component involves the extension from a usual context to a new context or set of contexts, and the gradual spread to more general paradigms of contexts. The semantic component finally leads from an existing meaning to another meaning that is evoked or supported by the new context; we will return to this parameter in section 3.

2.2 Desemanticization

It is an immediate consequence of extension: Use of a linguistic expression E in a new context C entails that E loses part of its meaning that is incompatible with C – in other words, the two are Janusian sides of one and the same process.

Desemanticization is frequently triggered by metaphoric processes (Lakoff and Johnson 1980; Lakoff 1987). For example, a paradigm case of grammaticalization involves a process whereby body part terms (‘back’, ‘breast’, etc.) are reinterpreted as locative adpositions (‘behind’, ‘in front’, respectively) in specific contexts – a process that can be observed in many Bantu languages. Via metaphorical transfer, concepts from the domain of physical objects (body parts) are used as vehicles to express concepts of the domain of spatial orientation (extension), while desemanticization has the effect that the concrete meaning of the body parts is bleached out, being reduced, or giving way, to some spatial schema.

2.3 Decategorialization

Once a linguistic expression has been desemanticized, e.g. from a lexical to a grammatical meaning, it tends to lose morphological and syntactic properties characterizing its earlier use but being no longer relevant to its new use. Decategorialization entails in particular the changes listed in (2):

(2) Salient properties of decategorialization

- a Loss of the ability to be inflected.
- b Loss of the ability to take on derivational morphology.
- c Loss of ability to take modifiers.
- d Loss of independence as an autonomous form, increasing dependence on some other form.
- e Loss of syntactic freedom, e.g. of the ability to be moved around in the sentence in ways that are characteristic of the non-grammaticalized source item.

- f Loss of ability to be referred to anaphorically.
- g Loss of members belonging to the same grammatical paradigm.

In accordance with this list, nouns undergoing decategorialization tend to lose morphological distinctions of number, gender, case, etc., the ability to combine with adjectives, determiners, etc., to be headed by adpositions, they lose the syntactic freedom of lexical nouns, and the ability to act as referential units of discourse.

Verbs undergoing decategorialization tend to lose their ability to inflect for tense, aspect, negation, etc., to be morphologically derived, to be modified by adverbs, to take auxiliaries, to be moved around in the sentence like lexical verbs, to conjoin with other verbs, to function as predicates, and to be referred to e.g. by pro-verbs. Finally, they lose most members of the grammatical paradigm to which they belong by changing from open-class items to closed-class items.

An example involving adjectives will be looked at in more detail below: In a number of Bantu languages, some adjectives (e.g. Swahili *-dogo* 'small') have been grammaticalized to adverbs (Swahili *kidogo* 'a little'). This process crucially involved decategorialization in that the adjectives concerned lost their ability to inflect for noun class (and number), turning into invariable words.

In more general terms, decategorialization tends to be accompanied by a gradual loss of morphological and syntactic independence of the linguistic item undergoing grammaticalization, typically proceeding along the scale shown next in (3) Free form > clitic > affix.

2.4 Erosion

As a result of undergoing grammaticalization, a linguistic expression tends to lose parts of its morphophonological substance. As we observed above, this parameter is usually the last to apply, and it is not a requirement for grammaticalization to happen. Erosion can be morphological or phonetic. In the former case it leads to the loss of entire morphological elements, and in the latter to the loss of phonetic properties (see Heine and Reh 1984). Phonetic erosion involves any of the processes listed in (4), or some combination thereof.

- (4)
- a Loss of phonetic segments, including loss of full syllables.
 - b Loss of suprasegmental properties, such as stress, tonal distinctions, or intonation.
 - c Loss of phonetic autonomy and adaptation to adjacent phonetic units.
 - d Phonetic simplification.

3. The Extension Model

As we observed in the preceding section, extension is a complex parameter, and a number of approaches have been proposed to deal with the phenomena relating to extension (see e.g. Bybee et al. 1994; Traugott and Dasher 2002:34-9); following Heine (2002) we rely on the four-stage model of context-induced reinterpretation depicted in table 1 to describe the most salient characteristics of extension (see Heine 2002 for more details). Table 1 suggests that the transition from less grammatical (e.g. lexical) meaning of stage I to more grammatical meaning of stage IV does not proceed straight from one to the other; rather, it involves two intermediate stages, viz. stages II and III.

Table 1
A model of extension (context-induced reinterpretation)

Stage	Context	Resulting meaning	Type of inference
I Initial stage	Unconstrained	Source meaning	-
II Bridging context	There is a new context triggering a new meaning	Target meaning foregrounded	Invited (cancellable)
III Switch context	There is a new context which is incompatible with the source meaning	Source meaning backgrounded	Usual (typically non-cancellable)
IV Conventionalization	The target meaning no longer needs to be supported by the context that gave rise to it; it may be used in new contexts	Target meaning only	-

We may illustrate the model with the following example of a proximative category³ – that is, of a verbal aspect denoting the temporal phase that immediately precedes the boundary introducing a new situation. Quite a number of languages across the world, including many Bantu languages, have developed such a category via the grammaticalization of a verb of volition ('want'). Swahili has a weakly grammaticalized category, which may be illustrated with the following examples:

- (5) Swahili
- | | | |
|---|--|-------|
| | | Stage |
| a | <i>Anataka kulima.</i>
A- na- taka ku-lima.
1CL- PRES- want to-farm
'S/he wants to do farming.' | I |
| b | <i>Anataka kuanguka.</i>
A- na- taka ku- anguka.
1CL- PRES- want to- fall
'S/he is about to fall down.' (or 'S/he wants to fall down.') | II |
| c | <i>Mti unataka kuanguka.</i>
Mti u- na- taka ku-anguka.
tree 3CL- PRES-want to- fall
'The tree is about to fall down.' (*'The tree wants to fall down.') | III |

Example (5a) illustrates the lexical source meaning of the Swahili verb *-taka* 'want', which is characteristic of stage I. At stage II (5b) there is a situation where a human subject referent cannot really be assumed to 'want' what is described by the relevant predication. Stage II-contexts cross-linguistically involve verbs whose meaning is conceived of as having negative effects on the subject referent, such as 'die', 'fall down', 'break of body-part' and the like. The meaning foregrounded in such examples is that of a proximative since an interpretation in terms of volition is possible but less plausible. Finally, volition is ruled out in examples where instead of a human referent there is an inanimate

³ Proximative is an aspectual concept paraphrasable by 'be about to', 'be on the verge of', 'be imminent' (König 1993; Heine 1994, 1997; Kuteva 1998, 2001; Romaine 1999). While proximative as a functional category is rare in European languages, it is a full-fledged category of languages in some other parts of the world.

referent, as in (5c), unless there is some metaphorical and/or culture-specific conceptualization to the effect that inanimate participants are, or can be, presented as wilful beings. (5c) thus appears to be an instance of stage III. A schematic description of the process concerned is presented in table 2.

Table 2
The extension of Swahili *-taka* 'want' from volition to proximative
(where *S* = the subject referent)

Stage	Context	Resulting meaning
I Initial stage	S is a sentient human participant	Volition
II Bridging context	S can be assumed NOT to want what is described by the event concerned	Proximative foregrounded
III Switch context	Rather than a human participant, S is inanimate; an interpretation of 'want' as denoting volition does not make sense	Volition backgrounded
IV Conventionalization	The proximative can now occur with human subjects in contexts other than stage III (not attested in Swahili)	Proximative only

Swahili has not proceeded beyond stage III, but there are languages that have, as has been shown in Heine (1997a); the following example is taken from Venda, where (6a) shows the initial stage I and (6b) the final stage IV. The latter has been conventionalized to the extent that the erstwhile verb *thodha* 'want' has merged with the following infinitive particle *u* to form a new particle, namely that of a proximative marker ('almost').

(6) Venda (Poulos 1990)

a Ndo **thodha** u mu rwa.
I want INF him hit
'I want to hit him.'

b Ndo **thodhu** mu rwa.
I almost him hit
'I nearly hit him.'

4. Completed Grammaticalization

We will now present a few examples to illustrate typical patterns of grammaticalization. The first example concerns the rise of prepositional constructions. One of the most common pathways leading to the rise of adpositions is provided by appropriate body part terms which in specific contexts are reinterpreted as spatial concepts; cf. English *in front of*, *in back of* (see section 2). We may illustrate this pathway with the Swahili preposition and adverb *mbele* 'in front (of)'. As we will see below (table 6), in Proto-Bantu, the hypothetically set up ancestor of all modern Bantu languages there was a root **-beéde* 'breast, udder' and 'milk' (Guthrie 1967-71). We hypothesize that the Swahili item is the result of a regular process of grammaticalization leading from a body part term 'breast', associated with the front region of the body, to a spatial term denoting the front region, as shown in (7),

(7) **(mu)- *-beéde* 'breast, udder' > Swahili *mbele* 'in front (of)'

This process involved all of the parameters distinguished in section 1: Extension meant that the use of a noun denoting a body part was extended from human (or animate) beings to inanimate concepts (cf. Swahili *mbele ya nyumba* 'in front of the house'). Extension necessarily entailed desemanticization in that the meaning 'body part' was backgrounded with inanimate concepts and the spatial meaning ('the front part/side of an object') was foregrounded. Decategorialization meant that as a noun **(mu)- *beéde* lost most of its nominal properties, such as being inflected for noun class membership, taking modifiers, etc. And finally, the erstwhile noun also appears to have undergone erosion, in that its form was phonologically reduced vis-à-vis the noun: The geminated vowel of *beéde* was reduced to a short vowel, and the tonal contour high-low has been simplified to low-low, hence the spatial form is reconstructed by Guthrie as **-bede*.

The second example illustrating the effect of the parameters distinguished in section 1 concerns verbs. As we will see in more detail in section 6, a paradigm process is one where verbs taking non-finite verbal complements are grammaticalized to TAM markers, that is, to grammatical expressions for distinctions of deictic time (tense), ascribing a temporal contour to it (aspect), or assessing its reality (modality).

The Swahili verb *-taka* 'want' that we were concerned with above can also be used to illustrate the entire process from lexical to functional category. Like many other languages (see Bybee, Pagliuca and Perkins 1991), Swahili has grammaticalized a verb of volition to a future tense marker (cf. English *will*). Example (8a) illustrates the lexical use of the verb *-taka* 'want', while (8b) illustrates its use as a future tense marker in relative clauses. In main clauses, the future marker was reduced to *-ta-*, cf. (8c). Originally a lexical verb requiring typically human subject referents, as in (8a), its use was extended to contexts involving inanimate subjects (extension). Desemanticization had the effect that the lexical meaning of the verb was "bleached out". In accordance with its use as a tense marker, *-taka* underwent decategorialization: it lost its status as an independent word as well as most other verbal properties and became a proclitic and eventually a prefix of the main verb. Finally, *-taka* underwent erosion, being phonologically reduced to *-ta-* in main clauses (but retaining its original full form in relative clauses; see above).

(8) Swahili (Bantu, Niger-Congo)

a *Anataka kuja.*
a- **taka** ku- ja
1SC.PRES⁴-want INF- come
'S/he wants to come.'

b *Atakayekuja...*
a- **taka**-ye ku- ja Desemanticization, decategorialization
1SC- FUT- ICL:REL infinitive- come
'S/he who will come...'

c *Atakuja.*
a- **ta-** ku- ja. Erosion
1SC- FUT- INF- come
'S/he will come.'

⁴ The item *a-* in (8a) is a portmanteau morpheme consisting of the noun class 1 marker *a-* plus the tense marker *-a-*.

Not always, however, are all parameters involved in grammaticalization. A common example can be seen in the development from adjective to adverb in Bantu languages; table 3 provides a few examples from two Bantu languages. Canonical instances of this process involve extension, whereby the use of an adjective is extended from the noun phrase to the verb phrase, and decategorialization, in that the items concerned lose their ability to be inflected for noun class membership: Adjectives grammaticalized to adverbs have a frozen class marker on them and no longer participate in the noun class system of the languages concerned. But this process is neither suggestive of desemantization, in that there is no dramatic change in the meaning of the resulting adverb, nor is there erosion of the phonetic substance of the items concerned.

Table 3

From adjective to adverb: examples from Swahili and Shona

	Adjective		Adverb	
Swahili	<i>-dogo</i>	'small'	<i>kidogo</i> (C7)	'a little, somewhat'
	<i>-zuri</i>	'nice'	<i>vizuri</i> (C8)	'nicely, well'
Shona	<i>-zhinji</i>	'many'	<i>kazhinji</i> (C12)	'many times, often'
	<i>-kuru</i>	'big, important'	<i>zvikúru</i> (C8)	'(very) much'

5. Discussion

The preceding discussion has raised a number of issues that we will now look into in this section. One of the issues concerns the widespread belief that grammaticalization is restricted to processes leading from lexical to functional categories. Such processes do in fact figure prominently in discussions on grammaticalization, including the present one, since they are easy to identify and to describe; however, they are not the only ones – and not even the most common ones – to be observed. More common processes relate to linguistic forms for functional categories that are further grammaticalized to even more grammatical forms.

The following example may illustrate this. A crosslinguistically fairly widespread development is one leading from future tense categories to markers for epistemic modality, expressing concepts of possibility or probability (see Bybee et al. 1994:205ff.; see table 5 below). Such a development can also be observed in Bantu languages; for example, the Swahili future tense prefix *-ta-*, illustrated in (9a), has acquired uses of a marker of epistemic modality in contexts where a future meaning is ruled out, as in (9b) (in much the same way as has happened with English *will*, as the translations below show):

(9) Swahili

a *Atakuja.*

A- ta- ku- ja.
ISC- FUT- INF- come
'S/he will come.'

b *Atakuwa nyumbani sasa.*

A- ta- ku- wa nyumba- ni sasa
ISC- FUT- INF- be house- LOC now
'S/he will be at home by now.'

Furthermore, attention should be drawn to the fact that in addition to nominal and verbal constituents there can be other structures that are pressed into service for grammatical functions. Mention may be made of clausal constructions that turn into functional categories, in particular into conjunctions and other grammatical particles. For example, Swahili phrases such as *i-si-p-o-ku-wa* 'when it is not', *i-ki-wa* 'if it is', or *i-ki-isha* 'if it ends' have given rise to the conjunctions *isipokuwa* 'except, unless', *ikiwa* 'if', and *kisha* 'finally, then', respectively (see Güldemann 2003:189), and the Swahili phrase *ku-li-ko* 'where there is' was grammaticalized to a marker of standard of comparative of inequality (*kuliko* 'than').

Another issue concerns the fact that one and the same source item can follow different pathways and lead to the emergence of different functional categories. This is due to the fact that extension can go in different directions with each evoking a different grammatical concept. Thus, as we saw above, the Swahili verb *-taka* 'want' was on the one hand extended to contexts triggering a prediction sense, giving rise to the future tense marker *-ta-*; on the other hand it was extended to contexts where it invited an aspectual inference to the effect that a situation is on the verge of changing into a new situation, resulting in a weakly grammaticalized proximative construction.

Another example concerns the Proto-Bantu verbs **-gamb-a* 'speak' and **-tè* 'say' (or **-ti*; see table 4), which also gave rise to two different grammatical concepts, both involving clause subordination. A crosslinguistically common pathway, widely attested in the Bantu languages (see Güldemann 1996), takes the following form, being responsible for various forms of clause subordination:

(10) Main stages in the evolution from verb for 'say' to clause subordinator⁵

- a Speech act verb 'say',
- b 'Say' as a quotative marker,
- c Complementizer of object clauses headed by speech-act (e.g. 'say', 'tell'), perception (e.g. 'see', 'hear'), and cognition verbs (e.g. 'know', 'believe'),
- d Complementizer of subject clauses,
- e Subordinator of purpose clauses,
- f Subordinator of cause clauses.

Table 4

Some Proto-Bantu (P-B) reconstructions of verbs

Meinhof and van Warmelo (1932)	Guthrie (1967-71)
*-yamba 'speak'	P-B *gamb- 'speak'; starred Bantu *-gamb- 'speak'
*-ti 'say'	P-B *-tè 'that, namely'; starred B *-ti 'that, namely'; 'say'

Both verbs have undergone multiple grammaticalization processes in the development of Bantu languages. In Swahili, **-gamb-a* 'speak' is retained as a lexical verb in its applicative form⁶ (*-ambia* 'say to, tell'), but it has also been grammaticalized in its infini-

⁵ We are leaving out further specifications of this grammaticalization chain, such as the development of conditional clauses. Note further that there is some evidence that (10d) does not necessarily precede (10e) (see Heine and Kuteva 2007).

⁶ But the non-extended root is retained in some fossilized forms, e.g. in the salutation *Wambaje na hali?* 'How are use?' or *kumwamba mtu* 'to speak against someone' (Ashton 1944:309).

tival form *kwamba* essentially to a stage-(c) complementizer, cf. (11a). And this Proto-Bantu verb has also developed in another direction – one that is crosslinguistically less common: It was grammaticalized to the relative clause marker *amba-*, cf. (11b). In both grammaticalizations, all of the parameters were involved, except for erosion: There are no indications that the erstwhile verbs lost significantly in phonetic substance.

(11) Swahili

a *Sina shaka kwamba atatusaidia.*

Si- na shaka kwamba a- ta- tu- saidia
 NEG.1.SC-with doubt COMPL 1CL-FUT- us- help
 'I have no doubt that he's going to help us.'

b *Hakuweza kuona mti ambao haukuwa rafiki yake.*

Ha- ku- weza ku- ona mti
 NEG.1CL NEG.PAST- be.able INF- see 3CL.tree
 amba- o ha- u- ku- warafiki yake.
 REL- 3CL NEG- 3CL- NEG.PAST- be friend his
 'He was unable to find a tree which was not his friend.' (Ashton 1944:309)

Proto-Bantu **-te* (or **-ti*) 'say' has undergone various developments across the Bantu languages along the scale in (10); suffice it to mention Shona *kùti*, which has been grammaticalized in its infinitive form to a complementizer and purpose clause subordinator (Brauner 1993).

6. The Rise of New Markers for Tense, Aspect, and Modality

One of the most conspicuous lines of grammaticalization to be observed in Bantu languages can be seen in the constant growth of new forms for tense, aspect, and modality (see Poulos 1986, and Bybee et al. 1994 for a world-wide survey). The process concerned typically led from a structure like (12a) to the one in (12b):

A verb (V1) taking a non-finite verb as a complement (in most cases an infinitival verb) gradually develops into an auxiliary, losing part or all of its lexical semantics in favor of some grammatical function (desemanticization) and many of its morphosyntactic properties, such as the ability to select the sentence subject or to take adverbial modifiers (decategorialization).

In the same way as V1 acquires properties of an auxiliary does the verbal complement gain in properties of a new main verb (V2). Since the old morphosyntactic structure tends to be retained, at least for a long time, the result is a somewhat peculiar structure where inflections typically associated with a verbal word are coded on the auxiliary while the main verb appears in a non-finite, invariable form.

But the process may proceed further, in that the auxiliary undergoes further 'decategorialization', by losing its independent word status and turning into a clitic of the new main verb, in extreme cases into a verbal prefix, and it also may be subject to erosion, being reduced to a monosyllabic grammatical affix, as the example of the Swahili future tense in section 4 shows.

(12) The grammaticalization of auxiliary constructions (auxiliation)

- a main verb (V1) - (non-finite verb) complement
 b auxiliary - main verb (V2)

It is a fairly small pool of verbs that tend to be recruited for auxiliation; table 5 provides a list of the verbs most commonly recruited; for more examples of verbs see Bybee et al. (1994), Heine and Kuteva (2002).

Table 5
 Common pathways leading to markers for tense, aspect, and modality

Lexical source	Grammaticalization 1	Grammaticalization 2	Grammaticalization 3
'want', 'go to', 'come to'	Intention	Future	Epistemic modality
'come from'	(Immediate) past		
'want', 'be near to'	Proximative		
'be at' (location), 'do', 'be with'	Progressive	Imperfective, present	(Default tense)
'(re)turn'	Iterative		
'finish', 'end'	Completive	Resultative, perfect	Perfective, past
'be able'	Deontic modality, possibility	Epistemic modality, permission	

One may wonder why verbs expressing contrasting concepts of deixis such as 'go' and 'come' will lead to the same function of future tense, as in the following examples from Zulu, where the verb *-ya* 'go' turned into a remote future marker (13) and the verb *-za* 'come' into the immediate future marker *-za-* (14); for a similar example from Chaga, see Emanatian (1992).

(13) Zulu (Mkhatshwa 1991:97)

a Ba- ya e- Goli.
 3PL- go LOC- Johannesburg
 'They are going to Johannesburg (eGoli).'

b Ba- ya- ku- fika.
 3PL- FUT- INF- arrive
 'They will arrive.'

(14) Zulu (Mkhatshwa 1991:96)

a Ngi- ye- za.
 1SG- ?- come)
 'I'm coming.'

b U- za- ku- fika.
 2.SG- FUT- INF- arrive
 'He'll arrive.'

The reason is that it is not the lexical semantics of the verb but primarily its argument structure which determines the nature of grammaticalization: If a verb 'go' or 'come' expresses goal-oriented motion this may result in a future meaning. Conversely, if the semantics is that of source-orientation then most likely a past tense meaning will appear, like in the case of French *venir de* ('come from') or Southern Sotho *-tsōa* 'come from', which developed into an immediate past tense prefix, cf. (15).

(15) Southern Sotho (Doke and Mofokeng [1957]1985:204)

kē- tsōa- reka.

'I have just bought' (lit. 'I have come from buying').

Tense, aspect, and modality are not the only grammatical functions that arise via the auxiliarization process sketched in (12); such a process can also lead to the emergence of other grammatical functions, such as negation. One major source for negation is provided by the grammaticalization of verbs such as 'lack', 'be absent', 'stop', 'fail', or 'leave', serving as auxiliaries.⁷ One may take the East African language Makwe (Devos 2004: 279) as an example, where the verbs *-kósá* 'lack, miss' and *-leka* 'leave' are used synonymously as negation markers with a following infinitival verb, e.g.

(16) Makwe (Devos 2004:279)

...*kukósá kúlóngéjáná náawe.*

[...] **kukósá** kúlóngéjáná náawe
to.lack to.talk.CAUS.RECP with.3SG

'[...] have not been talking to her/him.'

Note that *-leka* 'leave' has been conventionalized as a negation marker to the extent that it may co-occur with itself:

(17) Makwe (Devos 2004:279)

Uimba cáani wépo kuleka kúwáleekawaalyé.

uimba cáani wépo **kuleka** kúwáleeka waalyé.
you.sing what you to.leave to.you.leave you.eat.OPT

'What is it that you are singing that does not let them (the birds) eat?'

A somewhat rarer type of development can be found in Swahili. In this language, the verb *ku-toa* 'to put out' has been grammaticalized to a negation marker, *-to-*, and it is restricted to be used in its infinitive form (*ku-to-*), cf. (18a). But this case allows us to reconstruct the various morphophonological stages in the process from lexical verb to negation marker: Of the four conceivable stages of grammaticalization, all except stage I are attested in modern Swahili as variants of the negation marker (Ashton 1944:279), cf. (18b).

(18) Swahili

Wengi huwa na desturi ya kutoandika majina yao halisi [...].

a Wengi hu- wa na desturi ya ku- to-andika majina yao
many HAB- be with custom of INF- NEG-write names their
halisi [...].
genuine

'Many people have a custom of not writing their real names [...].'

b Stages of development

0 *ku-toa pesa* 'to put out money'

I **ku-toa ku-* fanya 'not to do' desemanticization

II *ku-to- ku-* fanya

III *ku-toa-* fanya

IV *ku-to-* fanya

decategorialization, erosion

erosion

erosion (Ashton 1944:279)

7. The Comparative Method and Grammaticalization Compared

Ever since the 19th century, the comparative method with its insistence on regularity of sound change has been a basic tenet of historical linguistics, and without such a tenet it is difficult to imagine how the progress that we have observed in linguistic classification and in the reconstruction of proto-languages over the past century would have been possible (Blust 1996:151). Bantu linguistics bears witness to this success story of the comparative method (see e.g. Meinhof 1899; 1906; Meinhof and van Warmelo 1932; Meeusen 1967; Guthrie 1967-71).

Grammaticalization has some attributes in common with orthodox methods of historical linguistics. Like the comparative method it is based on the exploitation of regularities in the development of linguistic forms for reconstructing earlier states of language use. In the case of the comparative method, these regularities are manifested e.g. in sound correspondences; in the case of grammaticalization they consist in the regular behavior underlying the desemanticization, extension, decategorialization, and erosion parameters. And the rates of "irregular" changes are roughly the same in sound change and in grammatical change (see section 8).

But unlike the comparative method, work on grammaticalization is not confined to comparisons across languages or dialects; it may as well concern language-internal analysis. In this respect, grammaticalization theory resembles internal reconstruction. Compared to the latter, however, which concentrates mainly on unproductive/irregular alternations, grammaticalization studies are not restricted in such a way: They deal in much the same way with regular and with irregular patterns, and they are concerned with morphological, syntactic, semantic, and pragmatic problems; it is only in the domain of phonology where they have not much to contribute. Their main contribution lies in the reconstruction of grammatical forms but it is also of help in analyzing syntactic change.

Semantic change constitutes a problem area in orthodox methods of historical linguistics; it is considered to be irregular; no wonder that semantics is not considered to be a priority area in the application of the comparative method. By contrast, grammaticalization provides a systematic access to semantic change; at least as far as grammatical meaning is concerned. While grammaticalization theory constitutes an enrichment of historical linguistics since it offers an additional instrument for diachronic reconstruction, it may at the same time challenge already existing reconstructions. That grammaticalization studies can contribute to revising or improving lexical reconstructions based on the comparative method may be illustrated with the examples listed in table 6.

⁷ Güldemann (2003:190) proposes an additional source in Bantu: He argues that "early Bantu" had a verbal marker **-ki-* that probably encoded a persistive state, reflected in Swahili and a number of other languages as a simultaneous or imperfective marker in subordinate clauses, but assumed the function of a negative inceptive marker in Bemba and Lwena.

Table 6
Some Proto-Bantu reconstructions of nouns

Meinhof and van Warmelo (1932)	Guthrie (1967-71)
*-yele 'breast; in front'	*-béédè 'breast, udder' (5/6), 'milk' (6)
*-ki 'country, ground'; *pa-ki 'underneath'	*-ce 'ground; country'; *pa-ncé 'underneath'
*-la (*nda) 'interior'	*-dā 'intestines' (6), 'abdomen' (9)
*-yulu 'above'	*-gòdò 'top; sky' (5)

The authors who proposed these reconstructions argued that in the hypothetically set up ancestor language Proto-Bantu there were certain nouns that at the same time expressed spatial functions. For example, the root *-la 'intestine(s)', 'abdomen' is reconstructed by Meinhof as meaning 'interior', and the root *-ki of Meinhof and Warmelo or *-cé 'ground, country' of Guthrie also occurs with the locative meaning 'underneath'. As we observed above, findings on grammaticalization show that body parts provide the most common source for deictic location, and nouns for 'stomach' or 'bowels' are frequently grammaticalized to adverbial or adpositional markers for 'inside' (see Heine 1997b; Heine and Kuteva 2002). Thus, there is reason to assume that 'interior' and 'underneath' are later developments, respectively, of the meanings 'intestine(s)' or 'abdomen' and 'country, ground'. That the development from body part noun to locative marker happened independently in many Bantu languages after the split-up of Proto-Bantu is suggested by observations in some modern Bantu languages; for example, in the Tswana and Sotho languages of southeastern Africa there are reflexes of the body part meaning ('bowels') of *-dā but no traces of a locative marker.

At the same time, there are some areas of reconstruction where the contribution of grammaticalization theory is severely limited. One such area concerns the dating of historical events. It is possible to establish relative chronologies of grammatical change, of the kind *X must have preceded Y in time*. For example, it is possible to establish that the body part meanings of the Bantu items just mentioned must have been there before the locative meanings arose. But beyond such observations, the potential of grammaticalization theory for dating historical events is limited. Similarly, grammaticalization theory has little to offer in the area of genetic classification or sub-classification.

With regard to the time depth of reconstruction, grammaticalization theory is similar in scope to the comparative method: Both allow for empirically sound historical reconstructions when a time depth of a few centuries or a few millennia is involved, but reconstruction work becomes less reliable the more one goes back in time. Table 7 proposes a comparison of the two approaches with regard to their potential as tools for linguistic reconstruction.

Table 7
The comparative method and grammaticalization compared

Property	Comparative method	Grammaticalization
Main goal	Reconstructing earlier states of language structure	Reconstructing earlier states of language structure
Regularity used for reconstruction	Regular sound correspondences	Unidirectional development
Magnitude of irregularity	Minor	Minor
Kind of analysis	Comparative	Comparative and language-internal
Main domains of grammar accessible	Phonology, morphology	Morphology, syntax
Dating historical events	Relative dating only	Relative dating only
Tool for genetic classification	Yes	No
Potential for reconstructing extra-linguistic events	Yes	No

8. Conclusions

The observations made in this paper were meant to show, first, that grammaticalization theory offers not only a means of reconstructing earlier states in the history of the Bantu languages but also of explaining some structural characteristics of these languages. Findings on grammaticalization also make it possible in particular to understand why functional categories may exhibit certain peculiar structural features. As we saw in section 6, for example, the fact that the negation marker *-to-* of Swahili shows a number of different morphophonological forms (*-toku-*, *-toa-*, and *-to-*) can be explained in a principled way with reference to the genesis and development of this category.

The processes described in this paper are hypothesized to be unidirectional. We saw, for example, that body part nouns may develop into prepositions and lexical verbs into auxiliaries for tense, aspect, and modality, and it is highly unlikely that a preposition will turn into a body part noun, or a tense or aspect marker into a lexical verb. Still, some examples contradicting the unidirectionality principle have been identified (see especially Newmeyer 1998). But of all cases of grammatical change that have been documented, at least 90 per cent are in accordance with the principle, and not a single case of complete reversal of a grammaticalization process has been identified so far. Note further that a number of instances of grammatical change which are not unidirectional have been shown to be due to alternative cognitive and communicative principles shaping linguistic change (Heine 2003).

More recent work suggests that the regularities that were the subject of this paper are not confined to language-internal development; rather, they can be observed in the same way in situations of language contact (Heine and Kuteva 2003; 2005; 2006). In this paper we were restricted to instances of internal grammatical change, for one obvious reason: While some research on language contact has been conducted (e.g. Nurse 2000), the data available do not allow for a detailed analysis of contact-induced language change in Bantu languages.