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LINGUISTICS

TENSE AND ASPECT IN BANTU

DEREK NURSE



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Notes on Appendices

For reasons of space, the data on which the analyses in the book are based is included not at the end of the text but in the URL: <http://www.ucs.mun.ca/~dnurse/tabantu.html>. In the body of the book this material is simply referred to as 'the Appendices'. The information and the appendices are provided because no reader will be familiar with all these languages, and often the information is hard to access. Here the reader has access to nearly 150 languages in one place and in one transparent format.

Appendix 1 contains tense-aspect matrices and accompanying notes for the 100 languages called the matrix languages. One language from each of Guthrie's eighty-four groups (as in the Maho (2003) version) was systematically selected, to ensure adequate coverage of the whole area. To the eighty-four another sixteen were added, roughly one extra from each zone, to give a round 100, to make statistical statements easier and to include languages typologically somewhat different from the chosen representatives for the zones. The matrices are all arranged with tense along one axis and aspect along the other. For most languages there is one matrix, but a very few have more than one, either because the data from different sources was contradictory or to illustrate the possibility of more than one analysis. The notes are all arranged in similar order and with similar content to make comparison easier. Matrices and notes are only intended as a summary introduction and readers should consult the original sources listed in the Bibliography.

Appendix 2 contains matrices for a further forty-six languages, taken from the larger database. The first two are for languages not Narrow Bantu but closely related. The other forty-four are Bantu but selected less systematically than those in the first appendix.

As the author is not a mother tongue speaker of any of these languages, the appendices may contain some factual and analytical errors. Should readers find such errors, they are invited to contact the author and together we can consider amending the text. The author would also be open to adding new matrices to Appendix 2 and enlarging the bibliography.

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Abbreviations

(see also Definitions on page 308)

1, 2, 3, 4, 5, etc.	Class 1, Class 2, Class 3 ... (1 ... 18). 1, 2, 3 may also stand for first, second, and third person, respectively.
A	aspect
A, B, C ...	Guthrie's 15 Zones: A, B, C, D, E, F, G, H, K, L, M, N, P, R, S. A listing such as A, (B), C means 'attested in all A and C languages but only some B languages'.
ADV	adverb or adverbial
AFF	affirmative
AGR	agreement
AM	aspect marker
ANT	anterior = retrospective
AOR	aoist
APP	applicative
ASP	aspect
ATR	advanced tongue root
AUX	auxiliary
BEN	beneficiary
BP	before present (so 3000 BP is 1000 BC)
C	consonant (or Zone C, as above)
CAR	Central African Republic
CARP	acronym for the commonest (neutral?) ordering of the four commonest extensions (CAU, APP, REC, PAS). Devised by L. Hyman
CAU	causative
CEXP	counterexpectational
CFL	counterfactual
Cl. or Cl	class(es) or class marker
COM	complement
CMP	completive
CNC	conclusive, 'to finish doing sth' (= Sotho and Zulu, the 'now' tense)
CND	conditional
CNJ	conjunctive
CNS	consecutive
CNT	continuous
CNTI	continuative
COP	copula
CUM	cumulative

DIS	disjunctive
DO	direct object
DfO	definite object (only in Notes for P22)
DRC	Democratic Republic of the Congo (formerly Belgian Congo, Zaire)
DS	dummy subject
DUR	durative
ENC	enclitic
EXP	experiential
EXPT	expectational
EXT	extension
FV	final = final vowel
FOC	focus or focus marker
FUT	future
IMM	immediate (future)
HOD	hodiernal (future)
MID	middle (future)
FAR	far (future)
F ₁ , F ₂ , F ₃ , F ₄	degrees of future distance from the present, F ₁ being the closest, F ₄ the farthest
H	high tone(d) (or Zone H, as above)
HAB	habitual
HES	hesternal (past)
HOD	hodiernal (past or future)
HOR	hortative
HUM	human
HYP	hypothetical
IMM	immediate (future or past)
IMP	imperative
INAN	inanimate
IND	indicative
INCE	inceptive
INCH	inchoative
INF	infinitive
INFL	inflection
INT	intensive
IO	indirect object
IPFV	imperfective
IRR	irrealis
ITR	iterative
JUS	jussive
L	low tone(d) (or Zone L, as above)
LIM	limitative
LOC	locative

M	mood or, in Appendices, metatony
MET	metatony
MB	modified (verbal) base
MOD	modal
N	nasal, realized as [m, n, ny, ŋ], depending on place of following segment (or Zone N, or, in Appendices, negative)
NAR	narrative
NC	Niger-Congo
NECB	North East Coast Bantu (languages)
NEG	the category negative, or the position in the word, or negation
NEG ₁	the (primary) negative which occurs at pre-SM
NEG ₂	the (secondary) negative occurring at post-SM
NEU	neutral, used of FV -a.
NF	near future or noun focus
NP	noun phrase
NW	northwest(ern) languages (See Definitions, under Northwestern)
O	object
OC	object concord (= OM)
OCP	obligatory contour principle
OM	the pre-stem Object Marker
OM-1 language	language allowing at most one OM in its structure
OM-2 language	language allowing any or all multiple objects to be expressed by OMs
OM-0 language	language allowing no OM in its verb structure
OP	object pronoun
OPT	optative
p or pl	plural (1p = first person plural, etc.)
PAS	passive
PAST	
IMM	immediate (past)
HOD	hodiernal (past)
HES	hesternal (past)
MID	middle (past)
FP	far = remote past
P ₁ , P ₂ , P ₃ , P ₄	degrees of past distance from present, P ₁ being the closest, P ₄ the furthest
PB	Proto-Bantu, assigned to ca. 3000 BC / 5000 BP
PER	persistive
PF	predicate focus (= CNJ)
PFT	perfect
PFV	perfective
PLU	pluractional
Post-FV or PostFV	the position following FV in the verbal string
POT	potential
PPFX	preprefix
PRC	proclitic

PREC	precessive
Pre-SM or PreSM	the position before SM in the verbal string
PRG	progressive
PRS	present
PRT	preterite
PUN	punctual
R	rising tone, or, in Appendices, relative
REC	reciprocal
REF	reflexive
REL	relative, pronoun or marker
RES	resultative
RET	retrospective = perfect
REV	reversive
s or sg	singular (1s = first person singular, 2s, 3s)
S	subject (or Zone S, as above)
SBJ	subjunctive
SBS	subsecutive
SC	subject concord (= SM)
SEM	semelfactive
SEQ	sequential
SIM	simultaneous
SIT	situative
SM	subject marker (= SC)
STAT	stative
SM	subject marker
SP	subject pronoun
SUF	suffix
SVO	subject verb object
T	tense
TA(M)	tense-aspect(-mood), or the pre-stem position in the verb structure where most TA morphemes occur
TBU	tone bearing unit
TC	tone copy
TEM	temporal
TM	tense marker
V	verb or vowel
VB	verb, or verbal, or verbal base
VC	vowel copy (suffix, FV)
VF	verb focus (= DIS)
VEN	ventive

Conventions

X = Y	'X is synonymous with, the same as, Y'
=	clitic boundary
-	morpheme boundary
#	word boundary
/.../	underlying or phonemic form
[...]	phonetic form
*	reconstructed or proto form (usually PB)
+	'and' or 'plus'
>	becomes, became
!	(tone) downstep

Tone marking: high tone (H) is represented by an acute accent; low tone (L) is unmarked; rising (LH) by a hachek; falling (F or HL) by a circumflex; downstepped H sometimes by an exclamation mark (´). Different conventions may obtain in material taken from other authors.

'Persons': In Appendix 1, 'Persons' refer to 1/2/3 singular and plural and the SMs are all ordered thus, 1s, 2s, 3s, 1p, 2p, 3p. In Appendix 1 and the text, 2p may also be called 'ye'. In places, rather than 's/he', the abbreviation '3s' is used.

Morphemes written using /I, e, o, u/ in reconstructed forms may appear with /i or i, e or ε, o or o, u or u/, respectively, in contemporary Bantu languages, as the result of different writing conventions or phonetic shifts.

Use of all capitals (e.g. IMPERFECTIVE) or initial capital (Imperfective) refers to a concrete category in a specific language, whereas use of lower case letters (e.g. imperfective) refers to a general category.

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1

Introduction

1.1 Purpose

Years ago a colleague asked me how ‘tense and aspect worked’ in Bantu. I realized I could not answer the question. I knew something of the verb in the standard form and in some dialects of Swahili, somewhat less of verbs in some other East African languages, and almost nothing about verbs in all the other hundreds of Bantu languages spoken in east, south, central, and west central Africa. I realized that most other Bantuists and linguists were and are in much the same situation. Many linguists know or suspect that some Bantu languages have a rich set of grammaticalized tense-aspect categories but the details and the limits of the set are much less well known. Two Bantuists (Meeussen 1967; Guthrie 1971) attempted to reconstruct (diachronic) verbal formatives and verbal morphology for Proto-Bantu. Guthrie (*ibid.*: 144–5) consists of a list of formatives. Meeussen goes farther, by outlining a verb structure and by suggesting how some of his formatives might combine within such a structure. These attempts, of course, rested on synchronic analyses. Both authors, by their own admission, only analysed a small subset of contemporary languages and both stressed the tentative nature of their proposals. More recently, general linguists have approached the issue differently (Comrie 1976, 1985; Dahl 1985; Bybee *et al.* 1994). They deal with sample Bantu languages as part of a broader examination of tense and aspect in the world’s languages. The number of Bantu languages treated in each is inevitably very small, the treatment is not complete, the choice of language(s) is arbitrary, and it is not clear if or how the languages chosen are typical.

This book was initially intended solely as a belated response to that question, how tense and aspect ‘work’ in Bantu languages. To paraphrase Comrie (1985: viii), the main area of concentration in this book is the typology of tense and aspect (henceforth TA) in Bantu, the establishment of the range within which Bantu languages vary in their grammaticalized expression of TA. It deals with what these tenses and aspects are, how tenses and aspects interact, their semantic content, something of their pragmatics, how they are expressed morphologically, and inevitably with the general structure of the verb in Bantu.

Then I realized that to deal only with TA was to ignore other important features of the Bantu verb, other categories expressed by the verb. While other authors had

examined some of these other facets, their results were scattered widely, often in locations not easily accessible. So it became a secondary aim of this book to gather in one place some of these other diverse verbal strands, to make them more easily available. I do not claim that much of this other material and analysis is original. Chapter 5 deals with some of the other facets of the Bantu verb, and Chapter 6 deals with what can be assumed for early or Proto-Bantu. Large parts of Chapters 3, 4, and 7 contain new material and analyses; most of Chapter 2 is a summary of known material; Chapters 5 and 6 are a mixture of old and new.

The book moves between typology, reconstruction, and grammaticalization. The general statement of purpose rightly implies a strong concern with typology, the architecture of morphosyntactic structures and their meanings. But I have always been fascinated by what the precursors of contemporary forms were or might have been, and more recently by recurrent patterns of change from assumed older to contemporary structures, and so the book moves often from synchronic to diachronic and back.

1.2 Bantu languages, the database, the choice of languages in the database

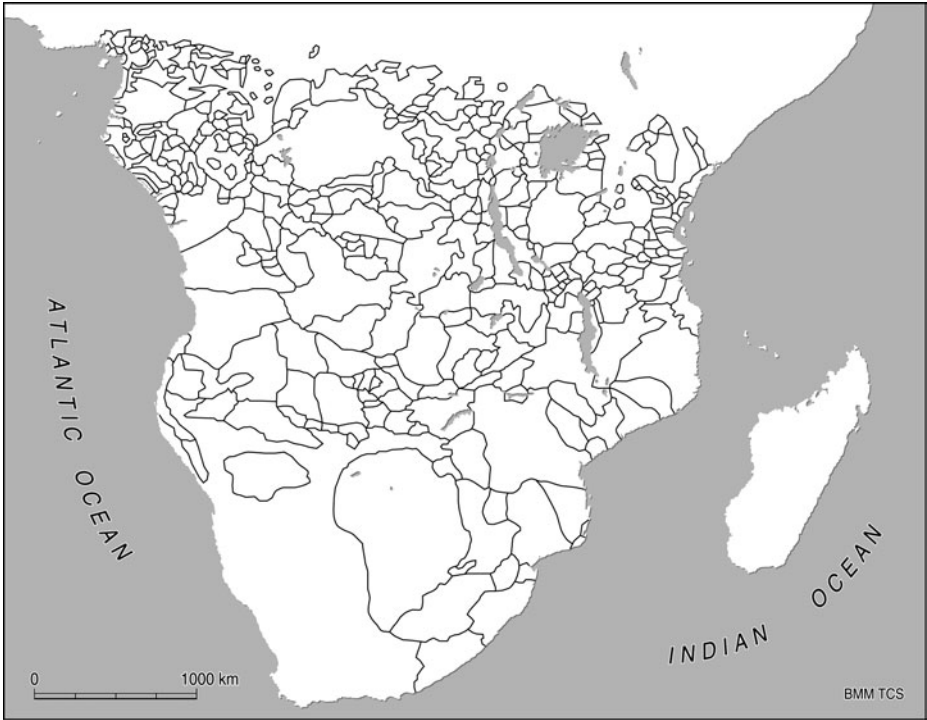
Bantu languages are spoken in the whole area south of a rough line from the Nigeria/Cameroon borderland across to southern Somalia, and thence down to the tip of South Africa. (Recent political events in Somalia are pushing the northeast tip a little further south, into northeast Kenya.) While not spoken by all communities within that area and while co-existing with languages of other phyla, they form the great majority in the area.

Guthrie (1971: 30–64) has a standard list of (Narrow) Bantu varieties. Maho (2003) expands Guthrie's list and brings it up to date. Maho has over 550 varieties, plus 15 'pidgin, creole and/or mixed languages'. Grimes (2000) has 501. Other authors have different numbers, mostly smaller. 'Variety' here covers languages and dialects. No one has yet been able to distinguish the two and to establish the number of Bantu languages to everyone's satisfaction. The number of Bantu 'languages', however defined, is certainly fewer than Maho's total, maybe 300 or less. If we take Maho's figure, then Bantu languages constitute nearly a tenth of the world's total (just over 6000). It would be arrogant to claim to know the total number of Bantu languages and preferable to say there are between 250 and 600, a lower figure being more realistic. Some scholars divide Bantu into Eastern and Western, or Eastern, Central, and Western, or North-west versus Savanna, or in some other way, and claim the divisions have some historical or genetic validity. I would prefer to say that we do not know any of this with certainty, and will talk of eastern, southern, central, and northwest(ern) languages. The use of lower-case letters here implies a geographical statement (whereas the capital letters have historical, genetic, or classificatory meaning).



Map 1. Countries with Bantu-speaking communities

It is equally difficult to know exactly how many people speak Bantu languages. There is always a discrepancy between the figures for national and continental populations, which are based on recent censuses, and those for language communities, often based on older assessments. So the most recent figure for Africa's population is around 750 million but the best estimate of the total of people speaking an African language (Gordon 2005) is much lower. It is likely that roughly 250 million Africans, one African in three, speak one (or more) Bantu languages. If we take 500 as the number of languages, then we may say the average Bantu language is spoken by 500,000 people. Some are spoken by huge communities of many millions: over five million speak each of Kikuyu, Kituba, Kongo, Lingala, Luba, Luyia, Makhuwa, Mongo, Nyanja-Chewa, Rundi, Rwanda, Shona, Sotho, Sukuma, Xhosa, and Zulu, with Swahili, at over seventy million, the largest. Others are used by a few dozen or a few hundred people (e.g. Benga, Himbaka, Leke, Gweno), mostly elderly. Unless an alternative source is named, language population estimates are from Gordon (2005) or Grimes (2000). Many of the smaller communities are in the northwest of the Bantu area. Many smaller communities are rapidly declining, especially those spoken in the shadow of a national or regional language, or lingua franca. The larger are getting larger, the small smaller. Some languages are only spoken by their native speakers, others are used by



Map 2. Traditional locations of the Bantu-speaking communities

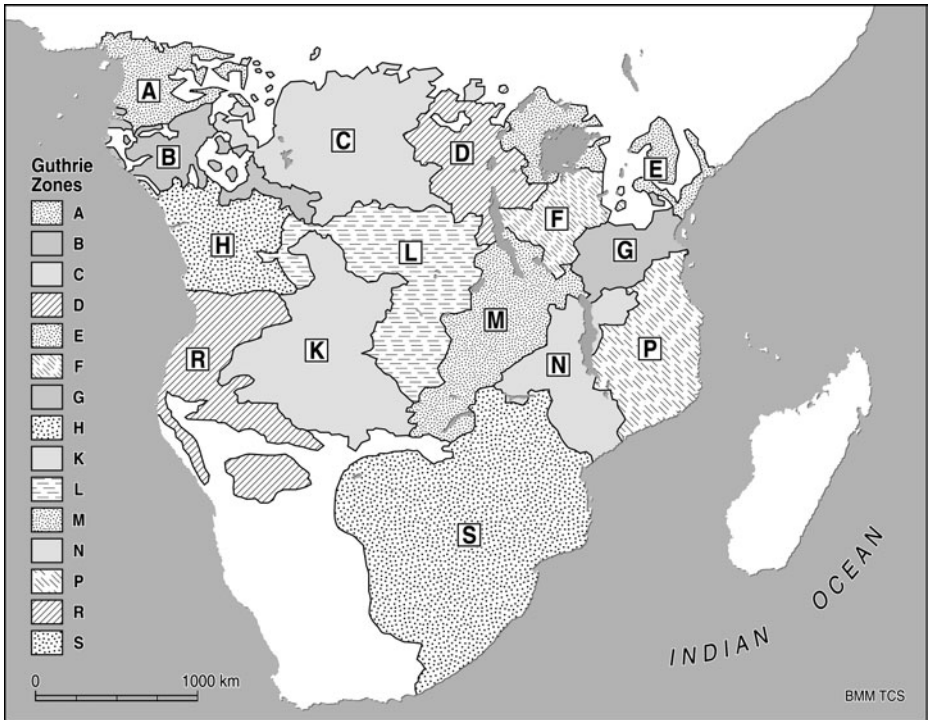
second-language speakers, who in some cases (e.g. Swahili) far outnumber the native speakers. Some are national or official languages, most are local with no official status. Some have been referred to as pidgins/creoles, speakers of others would regard that label as derisory. Even the notions of language and dialect are controversial for some.

Guthrie's list has limited historical or typological value but is useful taxonomically because it covers the whole Bantu-speaking area fairly equally. He divides the area into fifteen geographical zones (A-H, K-N, P, R, S) and each zone into a number of groups, varying from three to nine. The groups total eighty-four.¹

I covered at least one language from each group, to ensure adequate coverage of the whole area. To the eighty-four I added another sixteen, roughly one extra from each zone, to give a round 100, to make statistical statements easier.

During the book I refer to two databases. One is this set of 100 languages, shown in the matrices in the Appendices, referred to as the matrix languages. They are listed at the end of this chapter. The other is a larger set, 210+ languages, which includes the

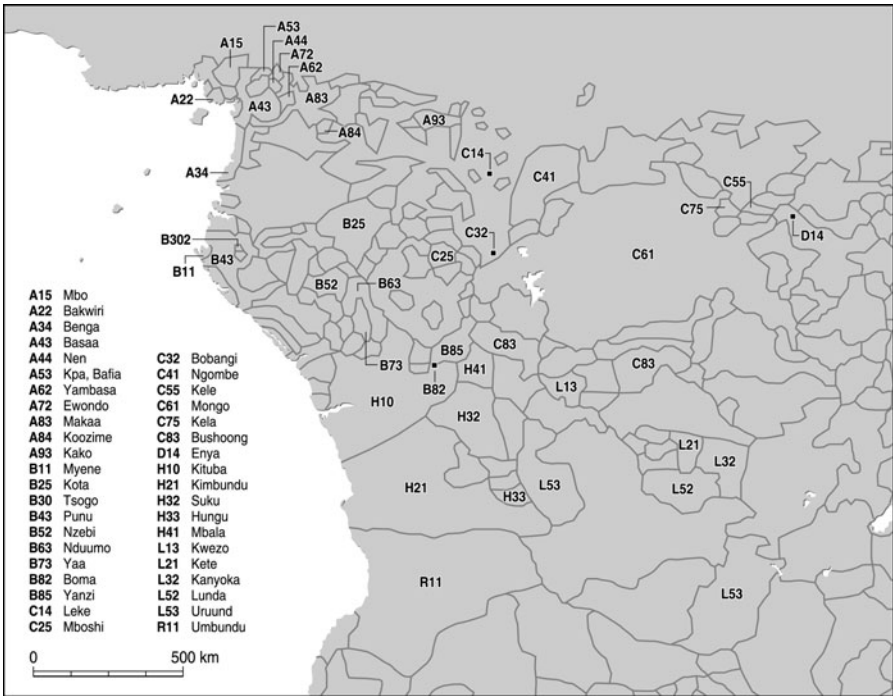
¹ To refer to languages by Guthrie's numbers, as in the previous paragraph, rather than by name will confuse many readers. But the use of numbers is more economical on space. A balance has to be struck between clarity and economy. It is hoped that the maps, the Language Reference Index at the end of the book, and giving number-name equivalence judiciously at certain points in the text will help readers.



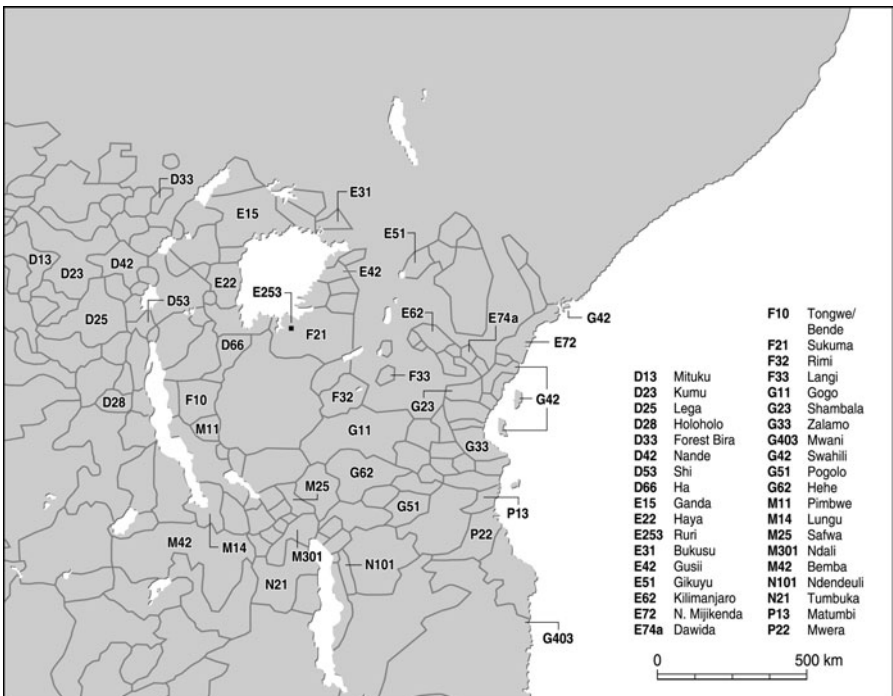
Map 3. Guthrie's 15 Zones

matrix languages and all others for which I had access to reasonable data. 'Reasonable data' ranged from good data for some (since I included another language from their group, they were excluded from the matrix languages) to fairly poor data for others. This second, larger, group is referred to in the text as the larger database. Some, but not all languages from the larger database appear in the Appendices. The larger database is not used for statistical purposes, because its coverage is uneven—I only had access to one language from some of Guthrie's groups, whereas for others several languages were available. I feel that this two-pronged procedure ensures a reasonably thorough coverage of Bantu and that the generalizations in this book rest on a firm foundation. It should be emphasized that the data in the Appendices is the tip of the computerized data iceberg. Bybee *et al.* (1994: 28) say: 'independent research indicates that the optimal sample would contain between seventy-five and a hundred languages', so 100 is at the high end of that optimal sample number.

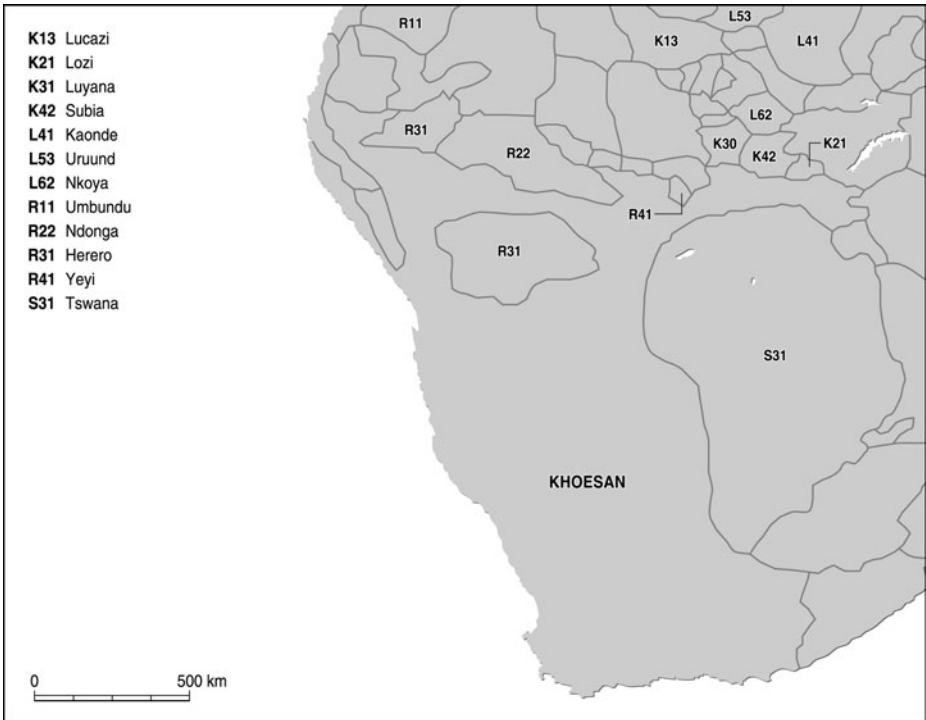
No one person can be familiar with so many languages, so in order to establish the larger database I made a list of all work I could find dealing with verbs in Bantu—books, chapters in books, articles, theses, short discussions, student papers from the 1970s in Tanzania, my own work, unpublished work by others, and I resorted to email in several cases. I then sought to read all of this. It was not possible in all cases,



Map 4. The matrix languages of the northwest segment



Map 5. The matrix languages of the northeast segment

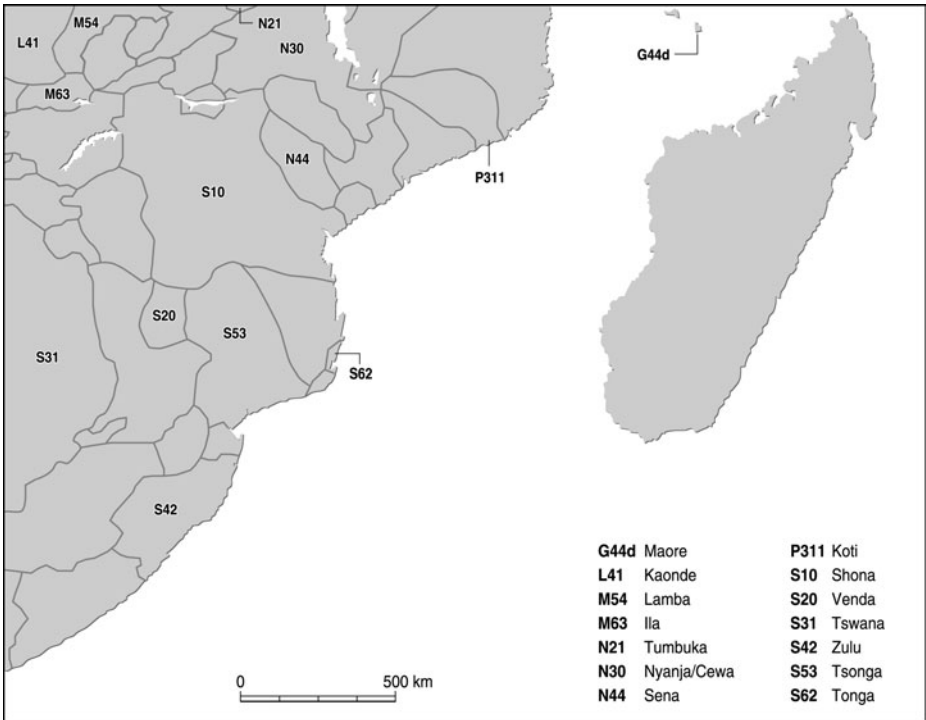


Map 6. The matrix languages of the southwest segment

because some were inaccessible, either because they were very old, or because they were published in difficult places. Nevertheless, all are included in the Bibliography, which is therefore a Bibliography and not a set of References. I made notes on many and included all that the authors had included. To make the Bibliography as friendly as possible, language numbers (see Maho 2003) are added at the end of most entries.

It should be emphasized strongly that these sources vary enormously. Some are long, some short; some are reasonably complete (what analysis is ever complete?), some far from complete; some are devoted exclusively to verbal analysis, most analyse verbs as part of a wider analysis or grammar, or mention verbs incidentally in the pursuit of some other goal; some are written with the advantages of the insights of modern linguistics, others are older, often written by missionaries with classical training; some are heavily theoretical, others are practical introductions for those wishing to learn the language; some mark surface tones, some show underlying tones, many show no tones at all; some present an analysis with few examples, some include analysis and many examples, some have analysis, examples, and text(s). Given that any analysis can be no better than the data in the sources, it should be clear that the quality and quantity of my analyses vary considerably.

Three rough general descriptive categories emerge for the groups: those well described, those with average descriptions, and those poorly described. These



Map 7. The matrix languages of the southeast segment

categories are relative. ‘Well described’ means that the verb system of at least one language in the group is well described and that there exist descriptions for most of the other members of the group; ‘poorly described’ means there is no good analysis of the verb system for any of the languages in the group and the whole group is poorly described; ‘average’ is the remainder, the largest set of groups and languages. This gives: ‘Well described’: A40, A70, C30, C60-70, E20, E50, G40, H16, K10, (K20), L30, P30, R30, S10, S30-40. Average: A10-20, A50-60, A80, B10-20-30-40-50, B80, C10, C40-50, D10-20-30, D40-50-60, E10, E40, E60-70, F20 (F21-22 good, others less good or zero), G10-20-30(?), G50-60, H30, L10-20, L50, M10, M30-40-50-60, N20-30, P20-30, R20, S20. ‘Poorly described’: A30, A90, B60-70, C20, C80, E30, F10, F30 (only F32 reasonable data), H10-20, H40, K30-40, L40, L60, M20, N10, N40, P10, R10, R40, S50-60. The language with the largest numbers of mentions in the Bibliography is G44d (Standard Swahili) and G40 in general is the best, albeit unevenly described group.

How was a target language for each of the eighty-four groups selected? At one end of the scale, there were groups where the choice made itself because of the limited data situation. So F10 has two members, for which there is but one source. Similarly for H40, also consisting of two languages, there is a reasonable analysis of

one (Mbala) but the one article on the other member (Hung'an) unfortunately does not concentrate on verbal analysis and presents few hard facts (which went into the larger database, nevertheless). At the other end of the scale were groups with several members reasonably well analysed. Here I chose the language with the most detailed data and analysis, which was usually but not always a language whose system seemed fairly typical of the group. In a few groups I chose more than one language because the members of the group were quite divergent, or were in some way interesting (A40, A80, B80, C30, D10-20, E20, E70, F30, G40, H10, H30, L50, M10). 'Interesting' is subjective and arbitrary, and in any case it was impossible to choose more than one language in most cases, for reasons of space.

1.3 The limits of Narrow Bantu; northwest(ern) Bantu (see 2.7)

Bantu is one of several branches of Niger-Congo, which, in one recent estimate, comprises over 1,500 languages (Gordon 2005), making it the world's largest phylum.² Just because Niger-Congo includes so many languages they are often necessarily presented in the form of a tree diagram, or tree diagrams (e.g. Williamson and Blench 2000: 18, 31–5). Such diagrams have the advantage of introducing order to an apparently untidy mass but the disadvantage of implying more order than exists on the ground. They misleadingly imply the existence of clear boundaries between different Niger-Congo families. The northwestern boundary of Bantu runs diagonally in a northeasterly direction across Cameroon from the southwest (Watters 2003). To the east and south of the boundary are communities speaking Bantu languages, henceforth called Bantu or Narrow Bantu. Adjacent, to the west and north in Cameroon and into Nigeria are communities speaking Bantu's nearest relative languages: Grassfields Bantu, Ekoid Bantu, other Bantoid languages, and other Niger-Congo languages, interspersed with linguistic representatives of two other language phyla (Afro-Asiatic, Nilo-Saharan). This is one of the world's linguistically most crowded areas, with Cameroon having almost 300, and Nigeria about 500 languages. Communities speaking these languages are sometimes separate but often adjacent, with villages only a few miles apart, the villagers in regular contact with their neighbours. As far as we know, it has been like this for millennia. The boundaries are often not clear on the ground between Bantu and non-Bantu nor between the different parts of Bantoid, such as Narrow and Grassfields Bantu.

This book is concerned with Narrow Bantu. Having said that, it should be obvious that there are certain challenges. One is that drawing exact lines within this crowded area is difficult just because for millennia people have been moving, trading, marrying, mixing across language boundaries. Linguistic features do not respect language boundaries, so it is sometimes hard to say where a feature started and whether the present distribution of a linguistic feature results from inheritance from a common ancestor

² For a historical overview, see 6.1.

or from transfer across a linguistic boundary. What is innovation, what is transfer? Another challenge is that, since many of these languages are only used locally by a few hundred or thousand people, and have little or no economic or political importance, nobody has bothered to describe them. So lots of them, Bantu and other Niger-Congo, are under- or undescribed.

Within Narrow Bantu, one group of languages stands out. They are referred to as the northwest, or Forest languages, which differ from other Bantu languages in several important linguistic respects. At various points throughout the book they will be seen to form exceptions to general statements. The term northwest Bantu languages is used variously.³ Most Bantuists would consider its core to consist of the languages of Zone A, or A and B, while others would include most of Zone C, D10, D30, H10, H40, parts of D20 (D21-2-3) and D40, and even the languages of Mamfe and Grassfields Bantu, spoken in west central Cameroon. Exactly which languages an author includes under this label often depends on what the author has in mind. Map 4 shows the larger area (Zones A, B, C, D10-20-30-40, H10, H40). The northwest languages are all spoken in Cameroon, Gabon, Congo, and north of the DRC, with a very few lapping over into adjacent areas.

In this book the term Savanna languages is used to cover the non-northwestern languages.

1.4 Conceptual framework

Before proceeding to how the sets of language data were analysed, it is necessary to set out the broad conceptual framework. Published work by Bybee (*et al.*), Comrie, Güldemann, Heine, and Hewson has had an effect on my thinking; I have drawn unashamedly from them, and I have profited by discussions, real and electronic, with many individuals, mentioned in the acknowledgements at the end of this chapter. No work can be theory-neutral but this book attempts to avoid a strong theoretical position.⁴ It is primarily about how TA functions in Bantu languages, not about formal theory. For many Bantuists and general linguists, the main advantage of this work will be as a reference book. It presents, synthesizes, and discusses large amounts of verbal

³ Grégoire (2003: 349) uses the term 'northwest' for the languages of Zone A (and B10-20-30) and reserves 'forest' for the languages of Zones B, C, and D10-20-30-40.

⁴ Since the onset of Bantu studies, descriptions and analyses of Bantu verbal phenomena have followed various theoretical positions. They cannot all be mentioned here. The commonest trend has been to follow the theory prevailing in general linguistics. In the nineteenth and first part of the twentieth century this meant models based on the norms of the classical languages. From these norms arose various adaptations to the facts of Bantu. Prominent among these were those of Meinhof (1948), the South Africans (Doke 1935, 1938, 1943), Tervuren (best overview is in Meeussen 1959), and SOAS (Guthrie 1948, 1961). In the second half of the twentieth century, the prevalent inspiration was that of Transformational Generative (TG) grammar and its offshoots. More recent approaches, other than those of TG, have been those of Givón (1979a), Güldemann (1996, functionalist), Botne (2003b, cognitive), and Hewson (Bubenik and Hewson (1997), a different kind of cognitive). A precursor of the matrices in the Appendices can be found in Sharman (1956).

data, in one place, in one format. It assembles much material not readily available or accessible hitherto. It has a solid discussion of the facts of Bantu verb categories.

The Bantu verb expresses many grammatical categories but the scope of this book is restricted mainly to an examination of TA, as evidenced in non-relative affirmatives. Other verbal categories are: polarity (negative versus affirmative), mood (indicative, subjunctive, imperative), relatives (versus absolutes, that is, non-relatives), degree of certainty of affirmation, subject, object, number of arguments (extensions), conditionals/potentials, notions such as focus/assertion, disjunctive versus conjunctive, independent versus dependent, foreground versus background, and other discourse features. Of course these exist, of course they interact with TA and with each other, of course they are mentioned often, but they are not the main thrust of this book. Some matrices in the Appendices show negatives and relatives but many do not.

There are several reasons for deciding to concentrate on TA and to sideline other categories. One is that it is TA that interests me. A second is that the greatest range of TA contrasts is not to be found in negatives or relatives, but in absolute affirmatives. I know of no Bantu language that has more negative or relative forms than non-relative affirmatives. The third reason is practical, namely, that a book attempting to cover hundreds of languages cannot at the same time cover dozens of grammatical categories, without falling into superficiality. A final reason, also practical, is that many sources do not show a complete range of categories such as negative or relative. Often they have a—more or less—complete set of absolute affirmatives, then discuss negative, relative, and other categories or merely exemplify them, without showing the complete range.

The following principles underlie the analysis.

1.4.1 *Tense and aspect form a system (Hewson 1997; Hewson and Nurse 2001: 82)*

This is as true for Bantu languages as it is for European languages. Thus English:

(1) NON-PAST	PAST
a. I speak	I spoke
b. I am speaking	I was speaking
c. I will speak	I would speak
d. I have spoken	I had spoken
e. I have been speaking	I had been speaking
f. I will be speaking	I would be speaking
g. I will have been speaking	I would have been speaking

It is evident that there must be a system, otherwise no one would be able to learn or use the language. Children and adult learners do not just memorize a list, they acquire a system. So the approach taken in this book is to start by examining the morphology of tense-aspect in the verb. The system outlined in (1) is essentially

morphologically based and begs the question of how its parts are actually used in discourse. It is important to see the components and the structure of the system before asking how they are used. Since most descriptions and analyses proceed atomistically, by presenting lists of forms, a major part of the work for this book has been finding the systems that are there in the lists. The interlocking nature of the systems in Bantu languages can be seen clearly in the matrices in the Appendices. In these systems, tense may combine with aspect, and aspect with aspect (1.4.7), but tense does not co-occur with tense in a single word form (see 1.4.6).

As the preceding section points out, the Bantu verb encodes other categories, which also form part of the overall interlocking verbal system: mood, negatives, relatives, focus. The decision to concentrate on tense and aspect does not deny the existence of these other systems.

1.4.2 Tense and aspect systems are cognitively based, not direct representations of events in the real world

Even though it represents a past event, 'I have spoken' in English is systemically non-past, not past (see (1)). Similarly 'We are going' or 'We fly' as in 'We are going to Paris next week' or 'We fly to Paris next week' are systemically non-pasts referring to future events. This simple and coherent result is based on finding patterns in the data. The underlying cognitive system is decipherable from the morphosyntactic forms, their place in the system, and their usage, in much the same way that a phonological system is decipherable from the phonetic forms and their contrastive usage.

The various verbal categories do not directly reflect the events or objects of this world, but they rather reflect human organization, human categorization of these objects and events. These categories have a strong cognitive component. Regardless of their morphological exponence, tenses and aspects have certain common semantic features across human languages. While they may not be quite universal, they are certainly widespread. This assumption is shared by, *inter alia*, Bybee *et al.* (1994), Comrie (1976, 1985), Dahl (1985), and Hewson and Bubenik (1997). The categories themselves tend to be relatively stable over time, and they tend to re-occur across languages. One of the purposes of this book is to seek out and highlight these recurring categories in Bantu.

1.4.3 Tense and aspect form an interlocking system

This is implied in, and represented by, the presentation in 1.4.1 and the matrices in the Appendices. This has practical beside theoretical value, because once a researcher knows this, it makes the jigsaw puzzle easier: one can look for the missing pieces. Why are there holes in the system? Because the researcher has just not found the missing pieces, or because there are really holes in the system? If the latter, are the holes accidental or principled?

1.4.4 A discrete verbal TA form has a specific and unique range of meaning

This range of meaning will differ from that of other TA forms in the language. All such forms fit into the single coherent system. A form derives its basic meaning by contrast with other forms within the whole verbal paradigm. Since each form and meaning is so derived, while there can be some overlap between forms, there is never total overlap, because that would make a form redundant. Standard Swahili (G42) has pairs such as:

- (2) G42 tu-na-nunua and tw-a-nunua
 ‘We buy, we are buying’
 tulikuwa tu-ki-zungumza and tulikuwa tu-na-zungumza
 ‘We were chatting, used to chat’

Some Swahili speakers would claim that the members of these two pairs are often or always semantically identical. There are two possibilities: either the many speakers are wrong, because they have overlooked certain subtle semantic differences which they have trouble articulating, or they are right, in which case one member of each pair above can look forward to a short life, as no language tolerates such redundancy for long. One member of the pair will slowly disappear or will be recycled to a new role.

While there are some notable exceptions, many treatments of Bantu languages have tended to treat individual TA forms as self-standing and present them as a list, to which labels are attached and meanings given, with little or no reference to the other members of the system. As a result it is often claimed that it is hard to distinguish tense from aspect. I hope to show that it is in fact not so hard to distinguish one from the other.

1.4.5 The system is not inflexible or unchanging

Although tenses and aspects have meanings independent of particular contexts, established by their place in the system, those meanings are modified by several factors. A TA system as sketched above is not inflexible or unchanging. Grammatical systems and meanings are constantly in flux, from what was to what is to what will be. To present a system is to present a snapshot, a still picture of a system at a fleeting moment. Once the picture is taken, movement resumes. There is variation in all systems. Some of it is the result of interaction between different parts of the system, whereby, for example, grammaticalized meaning and lexical meaning (Aktionsart) lead to different TA forms behaving differently when used with stative/inceptive versus dynamic verbs. Systems have strong and weak points, as seen in the fact that change occurs typically at certain points and not others. Other flexibility is not systemic but the result of speakers seeing or presenting the real world differently, or responding to the discourse situation, foregrounding some events, backgrounding others, assuming some things, stating others. Other variation results from the presence of bi- or even multilinguals in a community behaving variably.

All this is synchronic variation but today’s variation is tomorrow’s change.

1.4.6 Any given (single) verb form can only have one tense

If tense is defined as the representation of location in time, then it follows that any single verb form can only have one tense, because an event can only be located at one time. In the English example in (1), we see that, no matter how many words are contained in the verbal piece, there is only one mark of tense, carried by the first verbal element. Bantu single-word verbs behave in the same way. Multi-word ('compound') verbs are discussed briefly in 2.2.4, 3.13, and 4.14.

1.4.7 Every finite verb form has aspect

This is true at two levels. It is true at the lexical level because all verbs have Aktionsart, the aspectual distinctions lexically inherent in the inherent meaning of the verb itself. It is also true at the word level, where in Bantu, at least, verbs grammaticalize aspectual distinctions in their inflection.

Aspect may not always be marked. Thus, although unmarked for aspect, the forms in (1a) are obviously distinct from those in (1b). The forms in (1b) represent an event in progress, while those in (1a) often represent a complete event. Similarly in most matrices in the Appendices, the forms in the left-hand column are unmarked for aspect (perfective) compared with the overtly marked imperfectives or anteriors to their right. Marked forms are more explicit than their unmarked equivalents, which latter may be commonly interpreted by speakers as 'complete events', hence perfective (as in (1a)), but are not limited to that interpretation. Although verb forms are limited to one tense, they can have several aspects. Multiple aspects are possible because an event can be viewed and represented in more than one way simultaneously. Thus 'Iteratives, for example, commonly combine perfective and imperfective, to represent an indeterminate sequence of complete events' (Hewson and Bubenik 1997: 15).

The matrices in the Appendices do not represent the possibility of multiple aspect marking. This is a drawback of the two-dimensional representation, not a fact of the languages.

1.4.8 Most Bantu languages encode tense on the left and aspect to the right

This is true, whether both appear before the stem, such as:

- (3) Pare (G22) n-é-kí-na-ra-ima
 1s-PAST-aspect₁-aspect₂-aspect₃-stem
 'I also used to till'

or tense before the stem, and aspect after, as in

- (4) Gikuyu (E51) tw-a-hanyok-aga
 1p-P₃-run-IPFV
 'We were running'

or tense is in the auxiliary and aspect in the lexical verb, as in

- (5) Swahili (G42) tu-li-kuwa tu-ki-kimbia
 1p-PAST-be 1p-PAR-run
 ‘We were running’

Exceptionally, separation of functions can go even further, as in Yambasa, where a first auxiliary (‘do’) is marked for tense, a second (‘be’) for aspect, and the lexical verb for negative:

- (6) Yambasa (A62) a mba njá a gá lé a de dúé
 3s P₃ do 3s PER be 3s NEG sell
 ‘He hadn’t sold yet’

1.5 Analysis of the languages in the database: establishing tense and aspect

There is a difference between how one proceeds in a field situation and how one proceeds in a situation such as that outlined above, which calls for an overview of over two hundred languages, most based on fixed written sources.

1.5.1 Analysing in an ideal world

In a field situation one starts with a questionnaire of some kind (e.g. of the type in Dahl (1985)). The human source is asked ‘How would you say this in your language?’ or ‘How would you answer this question in your language?’ The eventual result is a set of sentences with verb forms encoding many categories. The verb forms are analysed, so the starting point is the morphology of the verb, especially in agglutinating languages such as Bantu.

Once the morphemes and morphology involved are—more or less—identified, the next stage is to establish some kind of meaning for each discrete form. That is done partly by examining the linguistic context, partly by establishing contrasts with other forms in the system. At this stage the linguistic context means, for example for tense, how each form collocates with time adverbials (a good but not absolute test), how it appears to function syntactically (based on the limited material collected), and its rough equivalence with forms in the language of the questionnaire (e.g. English). Establishing contrasts with other forms (say, tense forms) means establishing a rough morphological system, within which there will be contrasts with what appear to be other tenses, and with what appear to be aspectual forms referring to the same time. This assumes that each form has a basic meaning, a prototypical meaning, and a range of secondary meanings, and that the basic meaning can be best established as just described.

Once forms, approximate basic meanings, approximate place in the system of contrasts, and approximate syntactic function are thus established, the linguist proceeds to refining the material. This might involve discussing the material with the human

source, working out alternatives and other possibilities, and setting up a larger database, recording texts or discourse, and analysing them. In the Bantu case, this leads on to more sophisticated issues such as secondary meanings as found in discourse, the frequency of forms, whether forms occur independently or not, and what is the importance, if any, of the distinction between simple and morphologically more complicated forms.

1.5.2 *Analysing from secondary sources*

The procedure just sketched cannot be applied when doing an overview of existing published sources. Bybee *et al.* (1994) established a set of criteria for selecting test languages for their overview and if a language selected initially didn't prove adequate, they had the luxury of choosing a replacement. For me that was possible only in a few cases and in most cases the existing material had to suffice. Authors of many of the sources do not specify how the material was collected nor how they went from data to analysis, and not all have transcribed texts. The procedure above was modified as follows.

Having selected the target language, the first step was to analyse the data. All the information was extracted from the source and arranged as conjugations or lists of conjugations. Within each conjugation, it was preferable to use the 1p shape, usually *tu-*, because other classes or persons, say, 3s *a-* or 3p *ba-* have [a] as their vowel, and when these precede [a] of the commonest tense marker, the assimilated result is often opaque. At this stage, excluding imperatives and infinitives, the result would be a list of forms, each with the author's label, and mine pencilled in, if different.

The second step was to find patterns in the data and to identify forms encoding tense and aspect. Arranging the items from the list as a matrix was informed by the belief that T and A intersect to form an interlocking system (see 1.4.3). Any TA form in Bantu is likely to encode tense and a variable number of aspects. It was thus easiest to start by searching the list for forms which showed tense most clearly and were at the same time morphologically simple, and to arrange them in order: the analysis is based on a combination of form and meaning. The items were arranged from (far) past to (far) future. To do this often merely involved following the author's presentation as many authors automatically choose the same procedure. In the matrices these are the forms in the left-hand column (perfective, relatively unmarked, referred to by others as performative or simple): a few matrices reverse tense and aspect, and so have tenses in rows. Having thus established tense, the remaining data could be treated similarly: look for forms sharing not only tense similarity with the tense-marked forms already established but also sharing other morphological exponence and semantic similarity, that is, morphosemantic patterns. For many languages, this was fairly easy because there are clear clues, such as the sharing of suffixes such as *-a(n)ga* or *-ile*. The result was a number of sets of aspects, presented in the matrices in the columns to the right of

the left-hand column. While there is usually little doubt about forms in the left-hand column, there are often lacunae to the right. These are sometimes the result of the (incomplete) analysis as presented by the author, but are sometimes inherent in the system, because contrasts are often missing or neutralized in the marked categories (cf. Bybee *et al.* 1994: 101, for Mwera). The end result for each language was a TA matrix.

More or less simultaneous with the second was the third step, which is in fact the other side of the coin. Finding and arranging TA forms means separating them from forms representing other categories such as mood (subjunctives, imperatives), conditional, focus, independent versus dependent, and non-finites. For most languages, these and other categories are relegated to the Notes (see Appendices) accompanying each matrix. In a few cases, where the matrix was relatively uncluttered, I include some of these categories in the matrix. Where the source presented a fairly complete set of negatives (and relatives), and where there was space in the matrix, negatives in many cases, and relatives in a few cases, are presented. It is not stated but assumed that most forms in the matrices are independently occurring forms.

The final stage was to put labels on each category identified. Here there has to be a balance between the particular and the universal. In one sense every language is unique, so that not only will it have a unique arrangement of TA possibilities but also the semantic range of each category will differ from language to language. In another sense, following all recent work (Bybee, Comrie, Dahl, Hewson and Bubenik), I believe there are certain broad TA categories which occur and re-occur across languages, just as there are widespread cross-linguistic phonological features. If not universal, they are certainly widespread cross-linguistically and fundamental in many languages. How they are encoded, and their exact semantic/functional parameters will vary from language to language. I therefore use the labels from these cross-linguistic surveys, with some modification. Where languages seemed to have categories not widespread, or even uncommon, cross-linguistically, I mostly retain the author's label, and comment in the Notes.

As is clear from the foregoing, the actual presentation is necessarily influenced by the size and shape of the book. For a book of this size there was the serious issue of how to conflate data for 100 languages. The presentation of the analysis of each language in this book consists of two parts: a one-page matrix, and a one- or two-page set of accompanying Notes for each language. Just as I prepared them before writing the chapters, so readers might want to glance over them before proceeding to the body of the book.

At first sight, the matrices are impressive, but some conceal underlying doubts. Consider two examples. For Lucazi (K13), the presentation showing three futures implies that these be understood as primarily representing a chronological ordering, but this is not so, as the Notes indicate, since all three can co-occur with 'tomorrow'. Furthermore, the matrix with three futures is based on Fleisch (2000, a lengthy book on TA in one language), whereas White (1947, a twenty-page article on four languages)

shows four degrees of future. The reasons for the difference are unclear: different dialect, fifty years of change, or a decision on the part of one author to include only single-word verbs?

A similar problem occurs with Mituku (D13), which shows six degrees of past. Almost certainly Mituku has fewer than six: six would make it unique. From Stappers's (1973) analysis I was unable to determine how many degrees of straight past reference Mituku has, and so have merely listed and labelled them as in Stappers. Among other difficulties of interpretation here, there is a recurrent problem to which I return later, namely, where to draw the line between anterior and past, usually near past. Anterior involves the continuing into the present of past events, and the events of the near past are more likely to continue into the present than distant ones. In numerous cases, it proved hard to decide whether a given form would be best interpreted as a discrete near past, with some anterior usage, or whether it was an anterior with near past implications (see 3.6, 4.3, 4.11).

1.6 Questions and answers

During the writing of the book, I had occasion to consult colleagues on different issues and to give conference presentations. Misgivings or criticism of the direction I was taking were voiced. I deal briefly with some of them here, as they throw useful light on the procedures followed.

Some said: 'How is it possible for one human being to cover so many languages in a few years and a mere four hundred pages? I have spent a lifetime on one language, and wouldn't claim to know it well. Doesn't a treatment like this lead to superficiality?' The answer is that it is a matter of weighing pros and cons. If we wait until each of the 300/500 Bantu languages is comprehensively described, many will have become extinct, and describing the rest will take centuries, if we multiply the large number of languages to cover by the small number of active researchers with a lifetime to spend. In this situation, I feel it is better to advance hypotheses now, and let others refine them later.

Others said this approach sought to impose categories on the data, seemed to identify certain categories *a priori* and then to look for a form or forms that could be made to fit the categories. In other words, that it is a top down approach. Section 1.5.2 outlines the four major steps of the procedure followed: take all the author's data and arrange it; remove the material not relevant to the TA focus of the book; look for patterns in the TA data and arrange them as an interlocking system; label the patterns (rows, columns). To call that procedure a top down approach would not be accurate. Rather, the opposite is true. It starts with low-level observation of the data given by each author and works up to an analysis. The analysis is an attempt to look for patterns in the data, and most analysts would come to the same result. It could be

said that the labelling process was an imposition from above, but that is true of any labelling process.

Another formulation of the same concern was to say that each language is unique, and that the approach taken here is to marshal the data so as make the languages appear similar, by emphasizing their similarities and de-emphasizing the uniqueness of each language. The answer to that lies in balancing the particular and the universal. Examining TA phenomena in any set of languages is bound to reveal unique features and shared features. The latter are going to be even more apparent if all the languages, as here, are from one language family. Thus the shared features result partly from genetic inheritance, partly from the fact that there are features with cross-linguistic distribution, universals, or quasi-universals. The emphasis here is to concentrate on the large TA similarities, because they emerge strongly from the data and because it is important to establish the major building blocks before examining the minor ones. While the minor TA categories, and other, non-TA categories are de-emphasized, they are not ignored and can usually be found in the Notes.

Other commentators chafed at the labels. As one colleague put it: ‘The meaning of tenses and aspects is almost never simple. Any label is just a hint at the true meaning of a tense or aspect.’ Initially, TA forms for any language are established, by some combination of straight elicitation and analysing texts. They are then compared to other units in the system to establish their place in the system. At this point they receive an initial label. For tenses this is fairly straightforward. A reasonable approximation of temporal reference of ‘tenses’ is established by their right of co-occurrence with adverbials, so hodiernal, hesternal, etc. This is easier with pasts than with futures because future reference is tied up with factors such as degree of certainty and likelihood, where sometimes the futurity, sometimes the modality is primary. Labels for aspects are trickier. While a few, e.g. *persistive*, are fairly simple, others, such as *perfective*, *imperfective*, *anterior*, are not always easy to label. This is partly because, as another colleague said: ‘a language-specific form may sometimes only be an epiphenomenon of a deeper functional meaning which may only become apparent through discourse analysis (predication focus, taxis, event centrality, etc.)’. While this is true, it goes beyond what is possible here. The analyses here—and thus the labels—are restrained and shaped by their sources. Most sources, even the good ones, have little textual material. Consider Vansina (1959) and the two Schadeberg books (Maganga and Schadeberg 1992; Schadeberg and Mucanheia 2000). All three have succinct and detailed statements of TA, containing structural and tonal analyses, comparison of forms with related forms, and paradigms. But they say very little about the ‘meaning’ of each form, often just one terse sentence, and have limited accompanying textual material (Vansina a total of just over a page; the Schadeberg books have longer but necessarily limited texts). Most of the source texts have just paradigms so it is not possible to examine ‘deeper functional meaning’. In any case, that was not my intention, which was to establish a basic system and its contrasts for each language, leaving it to others and

till later to refine the system and all the functions of its constituents. The labels reflect this. They are, for the most part, well-established labels for well-established cross-linguistic categories. Within Bantu studies, during the twentieth century, there were two specific sets of terminology for Bantu phenomena. There is one tradition, especially among francophone colleagues, centred around the Tervuren group. There is a second, ‘South African’, set of conventions, deriving originally from Doke. In this book those Bantuist terms are not much used but are replaced by terms and labels currently in use among general tense-aspectologists. It should be remembered that linguistic work over the last half century or so has advanced our theoretical knowledge of phonology, morphology, and syntax much further than that of the meaning of TA categories.

Other colleagues were concerned at the limiting function of the matrices, at the possibility that matrices obscure more than they reveal. Matrices have advantages and disadvantages. The advantages are: they represent a belief that tense and aspect are discrete categories forming an interlocking system; as an analytic tool they force the author and the analyst to think in a disciplined way in terms of patterns and holes; and they are a means of presenting much data in a small space, such as a book of this length. A small danger is that, while they are a means of presentation, the analyst has to guard against allowing them to become an end in themselves—I found myself sometimes asking whether I was aiming at the analysis of a language or the preparation of a matrix. The big disadvantage is that they necessarily omit a lot of information, hence the Notes accompanying each matrix, to flesh out its bare bones. The Notes are written in a more or less standard format, with several purposes: to explain things not explained in the matrix, to show doubts, make generalizations, and present additional information (e.g. relatives, imperatives, subjunctives). Even the Notes are a condensation of what each author says, so readers should always consult the original source in case of problems of interpretation.

The standard format of the matrices is deliberate. The purpose can be seen by comparing F21, a Sukuma variety, and G42d, the standard variety of Swahili (henceforth when Swahili is mentioned, Standard Swahili is intended, unless stated otherwise: traditional non-standard coastal varieties of Swahili are somewhat different from Standard Swahili). The differences between the two are huge and obvious: Sukuma has a morphologically rich, Swahili a morphologically poor system, so Sukuma has far more forms than Swahili. While the matrix makes that obvious, it also makes obvious the similarities—the intersection of TA categories, the similarity of some of the basic categories, the similarity of the morphological structure of the two, and similarities in the morphological exponence of the two.

1.7 Bantu innovations (see Chapter 6, especially)

Bantu languages share many synchronic TA features. Some are also shared with other languages, as universals or quasi-universals. Those that appear to be specific to Bantu

are outlined here and discussed in detail later. A caveat is necessary. To be able to claim with certainty that a feature is a Bantu innovation means being sure that it is specific to Bantu and does not exist systematically elsewhere in Niger-Congo. As will be seen, some such claims are well founded, others less so, because the status of certain features in non-Bantu Niger-Congo is not always certain. I examined in some detail some twenty-five⁵ non-Bantu Niger-Congo languages, chosen from the major branches, and I read typological overviews of others. Nevertheless, as there are 1,000 or so Niger-Congo languages outside Bantu, it is very possible that I have overlooked some features.

1.7.1 Bantu languages are ‘verby’ (see Chapter 2)

Bantu languages are ‘verby’, that is, they are morphologically agglutinating languages, expressing by verbal inflection what other languages may express lexically or syntactically. As we see in Chapter 2, it is assumed that the single-word verb originally consisted of a string of up to eleven slots, centred on a root. To its left were inflectional prefixes expressing relative, negative, subject, tense, aspect, several other categories (conditional, focus, etc.), and object. To its right were (derivational) extensions, together with (inflectional) aspects, moods, and minor categories. Many Bantu languages still have this or a similar structure, some have modified it, some have shortened it, few have lengthened it.

‘Up to eleven slots’ does not mean ‘up to eleven morphemes’. Typically, the extension position allows several morphemes to co-occur. In some languages, the final position allows the co-existence of up to three morphemes. In a few languages, the main prefix position for TA can hold multiple morphemes. For most Bantu languages, the shortest verbal word is the singular imperative, consisting of just two morphemes: root and final vowel (and tone pattern). The longest string seen so far consists of some twenty morphemes, from Mutaka’s language, Nande (in Nurse and Philippson 2003: 9), although longer may be possible.

Since most non-Bantu Niger-Congo languages are not agglutinating, or not agglutinating to the extent of Bantu, this extreme agglutination is a Bantu innovation.⁶

1.7.2 Richness of time divisions, especially for the past (see 3.4)

It has been remarked (e.g. Dahl 1985) that Bantu languages are notable for their multiple time divisions. That is, while the range of aspects found in most Bantu languages is comparable to that found elsewhere, the number of distinctive tenses is

⁵ Moro and Otoro (Kordofanian), Bijogo, Kisi, and Fula (Atlantic), Bambara and Mende (Mande), Ijo (Ijoid), Donno So (Dogon), Kru, Senúfo, Gur, Adamawa, Zande, and Gbaya (Ubangi), Ewe (Kwa), Yoruba and Igbo (West Benue-Congo), Jukun and Cross River (East Benue-Congo), Aghem, Dschang, and Mundani (Grassfields Bantu), Ejagham (Ekoid). Where language families are listed instead of individual languages, it means a survey was done.

⁶ For instance Kordofanian, some western Atlantic and Bantoid languages have agglutination but nothing on the scale of Bantu.

unusual. While true, this needs quantifying. Over 80 per cent of the matrix languages have more than one division of past time. Over 70 per cent have two or three past tenses, 10 per cent have four pasts, and 17 have a single past. Those with a single past include a high percent of languages used as vehicular languages today, or probably in the past. Within Narrow Bantu (that is, excluding Grassfields Bantu), there is no reliably confirmed case of five pasts (see 3.7.2). Futures are different: 56 per cent have a single or no future, 41 per cent have two or three (the majority, two), a very small handful have four or—doubtfully—five.

A widespread cognitive basis underlies these divisions. These tense categories have to do with distance from present, as measured in days. Two past divisions usually divide today from earlier time, or today and yesterday from earlier time. Three past divisions usually have today versus yesterday (or maybe yesterday and the few preceding days) versus earlier time. Four past divisions usually add a ‘just now’ tense. The future works similarly. In most languages, the day starts with the awaking of collective consciousness, at dawn.

While in some Bantu languages, these time characterizations are strict, in others—apparently most—the time reference is flexible, not absolute. When used of daily situations,⁷ the divisions are as indicated. When used of other situations, e.g. once-a-year events such as planting, the divisions work differently and are relative. So the nearest past tense will cover a block of time (a year, or the most recent planting season), and more distant pasts to earlier blocks (see Comrie 1985: 87ff.)

Since most non-Bantu Niger-Congo languages do not have this array of tenses, this is a Bantu innovation (also Grassfields Bantu).

A Bantu day starts at sun up and ends just before the next sunrise. Tense reference is linked with the state of the communal consciousness. A hodiernal (today) past goes back to sunrise on the same day, the start of the most recent period of communal consciousness. Likewise, a hodiernal future extends to before dawn tomorrow, hesternal (yesterday) and crastinal (tomorrow) work the same way, and so on. That is specifically discussed in a few of the sources; from remarks made, it appears to be so for other communities for which data was available; and I assume it is true for those for which it was not mentioned. Its widespread distribution suggests it is an inherited feature retained by current communities.⁸

1.7.3 *Itive (and ventive) (see 6.2.4(iii))*

In many languages the notions of away from (itive) and towards (ventive) the speaker play a linguistic role. In some languages, such as English, it is implied in verbs such as ‘go (there)’ and ‘come (here)’ but is not otherwise formally expressed. In other

⁷ In this book, following Comrie (1976: 13) and Bybee *et al.* (1994: 316), ‘situation’ is used as a cover term for state, event, activity, and process.

⁸ For discussion, see Comrie (1985: 89).

languages, it is a more or less obligatory component of motion verbs. Thus German *schicken*, merely ‘to send’, contrasts with *hinschicken* ‘to send there, to that person’, and *herschicken* ‘to send here, to the speaker’, where *hin* and *her* are not the adverbs for ‘there’ and ‘here’. Many Bantu languages encode at least itive as an inflectional category in the verb (*-ka-) and a smaller number encode ventive. It is likely that this *-ka- is or was once related to the narrative *-ka-.

Itives and ventives also occur in Niger-Congo but their extent is not known.

1.7.4 *Two (or more?) negative patterns (see 5.2, 6.2.1, 6.3.3)*

Many Bantu languages have two (or three) negatives, one marked in the first position in the verbal string, and in this book sometimes referred to as the primary negative, the other(s) marked after the subject marker, and here sometimes referred to as the secondary negative(s). The distribution of these two negatives has been linked to syntactic factors such as main versus subordinate clause or indicative versus subjunctive. Evidence from within Bantu suggests that the secondary negative can certainly be assumed for Proto-Bantu, but that the assumption of the verb-initial negative—and thus the contrast between primary and secondary—for Proto-Bantu is less certain. However, evidence from non-Bantu Niger-Congo languages indicates that at least a binary negative contrast—probably indicative/main clause versus some other category or categories—goes back beyond Bantu into wider Niger-Congo and is thus inherited in Bantu.

Similarly, the association with negation of certain pre-root morphemes with specific shapes also characterizes Niger-Congo but it is currently difficult to associate them with pre- or post-initial position or with particular functions, because in many Niger-Congo languages they are pre-verbal or pre-root particles, not affixes. They appear to have gone from being pre-verbal particles in Niger-Congo to prefixes in Bantu. Finally, the particular constellation(s) of negative morphemes, structures, and functions that we see in Bantu does not occur as such elsewhere in Niger-Congo and so appears to be innovation in Bantu.

1.7.5 *Disjunctive versus conjunctive focus (see 5.3, also Downing et al. (2006))*

All natural languages, including non-Bantu Niger-Congo languages, can distinguish focused from non-focused utterances, and one kind of focus from another. But Narrow (and Grassfields) Bantu languages appear to be unique in their distinguishing disjunctive (verb) from conjunctive (post-verbal) focus. Disjunctive is the marked category, conjunctive focus the unmarked (zero) category. Inflectional morphology and tonal behaviour play a central role in this marking, which is not surprising, given the agglutinating and tonal nature of Bantu.

1.7.6 An anterior aspect marked suffixally (6.4.2(v-ix))

At least 66 per cent of Bantu languages have an anterior ('perfect') in suffixal *-ile*. While some non-Bantu Niger-Congo languages do have an anterior it is nearly always expressed analytically. With one doubtful exception (southern Igbo), no non-Bantu language has suffixal *-ile*. So this suffix with this meaning is an innovation in Bantu. Likewise, although many non-Bantu Niger-Congo languages have an imperfective category, which is sometimes indicated suffixally, few have *-ag-* in this function, so this suffix is also an innovation (6.3.2(iv)). Since it also occurs in a few neighbouring non-Bantu languages in West Africa, it may not strictly be a Narrow Bantu innovation.

1.7.7 A persistive aspect (see 4.8)

Persistive refers to a situation that held at one time (usually past) and holds at a later time (usually time of speaking). In European languages and a few Bantu languages (e.g. Swahili), persistive is expressed by an adverbial added to an imperfective. Thus English *still* ('We are still here'), German *noch* (*immer*), French *toujours*, Spanish *todavía*, and Swahili *bado* (a loanword). Being verby, many Bantu languages express persistive inflectionally (often by reflexes of **-kI-*).

1.7.8 A widely attested set of shared aspectual categories (see Chapter 3 and 6.2.4)

Most Bantu languages attest the same set of aspects: perfective, imperfective, progressive, habitual, persistive, and anterior (perfect). Perfective is unmarked, the others are marked. Persistives are often based morphologically on the imperfective or progressive.

The suffixally marked distinction of perfective versus imperfective goes back to Proto-Niger-Congo (Nurse 2007a). Perfective is the unmarked case in most Bantu and Niger-Congo languages. Progressive and habitual are also common in Niger-Congo, and some Niger-Congo languages have an anterior.

1.7.9 A narrative (dependent, relative) tense (see 3.12.1)

In discourse or narration, once the time framework is set, it is not strictly necessary to keep referring to it, as it is known and clear to the participants. Languages deal differently with this situation. Some just delete the (usually past) tense marker of verb forms following the first, others use TA forms whose main function is something else. Many Bantu languages have a special inflectional morpheme (**-ka-*), whose main (though not only) function appears to encode an event or a series of events following the first. Others use a null form, not marked for time.

Thus the narrative is a relative tense, that is, it takes as its deictic centre a point other than the present.

The status of a narrative in Niger-Congo is uncertain (6.2.4(iii)).

1.7.10 Rapid change⁹

When linguists talk in general about the differences between dialects, even between languages, they tend to think first of lexical and phonetic/phonological differences and mention verbal differences later, if at all. This is largely based on what is known of language families such as Germanic and Romance. Verbal structures and morphemes have changed relatively little over two or three millennia in Germanic. Romance verb systems have changed somewhat more, as can be seen by comparing them with Latin (Hewson and Bubenik 1997). The Romance changes pale in comparison with the changes within Bantu. Across Bantu, structures, categories, morphology, and morphemes have all changed since Proto-Bantu. They are constantly changing, so when discussing the differences between Bantu dialects, much less languages, linguists have to include features at the verbal level. Bybee *et al.* (1994: 115–21) point out that there is a close connection between the speed and frequency of grammaticalization and typology. Absorption of auxiliaries, fusion, and thus morphological change will occur more often and rapidly in agglutinating languages such as Bantu than in isolating languages such as Chinese.

1.8 The structure of the book

This book is based on a large collection of data, some of which is found in the Appendices. I would suggest that readers turn first to the Appendices, containing the matrices and the notes that explicate the matrices, and only then to the text. The Appendices display in one place data that is otherwise only available in many dozens of different sources, and they bring it together in comparable form.

Chapter 2 sets out and discusses the proposal made by Meeussen (1967) for Proto-Bantu, regarding canonical Bantu verb structure, and still extant in more or less that shape in many Bantu languages. It also discusses deviations and changes from that structure over the last five millennia (Proto-Bantu is placed at around 3000 BP).

Although there is no obvious reason to treat tense before aspect, or vice versa, I follow the conventional wisdom so Chapter 3 deals with tense. It sets out the general thinking behind the analysis of tense, deals with major categories and their exponence across Bantu, provides many examples, examines different kinds of systems, and devotes some space to minor categories.

The structure of Chapter 4 parallels that of Chapter 3. It sets out the general background to aspect, deals with major categories and their distribution across Bantu, provides lots of examples, looks at different systems, and at minor categories. Since aspect is less well known than tense, more space is given to the background thinking.

⁹ I would have liked to expand on this topic in Chapter 7 but space did not allow. Readers can check for themselves by consulting sources which permit comparison between older and contemporary stages of the same language. Thus, *inter alia*, Bachmann (1915/16), Busse (1960) and contemporary sources for M23 (Nyiha); Gowlett (1967) for K21 (Lozi) and its S30 parentage; Miede (1979) for older G42 (Swahili); Nurse (2000a) for E56 (Daiso); Sommer (1995) for variation between older and younger speakers of R41 (Yeyi).

Although the explicit targets of the book are tense and aspect, they interact closely with other categories. For reasons of space, it was impossible to treat them all. Chapter 5 deals with three other topics: types and expression of negation, focus (especially disjunctive versus conjunctive), and pronominal objects.

As readers will see, the book moves happily between synchronic and diachronic, and does not much distinguish between them: despite Henry Ford's claim ('History is more or less bunk . . . we want to live in the present'), the present cannot be understood without knowing something of the past. Chapter 6 deals explicitly with the historical background. Having seen today's patterns and structures, the reader will be curious about which of the phenomena can be reconstructed for the past, and to what extent today's structures, morphemes, and categories derive from older structures.

A focus of interest in the last two decades has been processes of change. What are the processes that link real or assumed older forms and structures with those of today? Chapter 7 examines some of these. The last decade, especially, has seen a lot of investigation of grammaticalization paths, along which older analytical structures and independent lexical items move as they are incorporated as grammatical inflections and categories.

1.9 List of languages used in this book (see 1.2)

Underlined languages (100) are the matrix languages (see 1.2), used for statistical statements in the book. For their location, see Maps 4–7. The entire list constitutes the larger data (210+).

A11a Londo, A11e Mbonge, A15b Akoose, A22 Bakwiri, A24 Duala, A32 Noho, A34 Benga, A42 Bankon, A43 Basaa, A44 Nen, A46 Nomaande, A53 Bafia/Kpa?, A62 Yambasa/(Nu)gunu, A72a Ewondo, A74 Bulu, A83 Makaa, A84 Koozime, A93 Kako, B11 Myene, B11a Mpongwe, B11c Galwa, B25 Kota, B302 Himba(ka), B43 Punu, B51 Duma, B52 Nzebi/Njabi, B61 Mbede/Mbete, B63 Nduumo, B73c Iyaa/Yaka, B82 Boma, B85 Yans/Yanzi, B87 Mboon, C101 Babole, C14 Leke, C25 Mboshi, C32 Bobangi, C36d Lingala, C301 Doko, C373 Gbuta, C41 Ngombe, C53 Sogo, C55 Lokele, C61 Mongo, C75 Kela, C76 Ombo, C83 Bushong, D12 Lengola, D13 Mituku, D14 Enya, D23 Kumu, D25 Lega, D27 Bangubangu, D28 Holoholo, D311 Forest Bira, D33 Nyali, D41 Konzo, D42 Nande, D43 Nyanga, D53 Shi, D61 Rwanda, D62 Rundi, D63 Fuliiru, D64 Shubi, D65 Hangaza, D66 Ha, E101 Gungu, E102 Bwisi/Talinga, E11 Nyoro, E12 Tooro, E13 Nyankore, E14 Ciga, E15 Ganda, E16 Soga, E17 Gwere, E22 Haya, E24 Kerewe, E253 Ruri (also Regi/Kwaya/Jita), E31c Luhya-Bukusu (also other Luhya), E41 Logooli, E42 Gusii, E43 Kuria (also other E40), E44 Ngurimi, E403 Suba, E404 Shashi, E46 Sonjo (Temi), E51 Gikuyu, E52 Embu, E54 Tharaka, E55 Kamba, E56 Daisu, E61-62a W. Kilimanjaro, E62b C. Kilimanjaro, E62c E. Kilimanjaro, E65 Gweno, E701 Ilwana, E71 Pokomo, E72 Giryama, E73 Digo, E74a Dawida, E74b Saghala, F10 Bende/Tongwe, F21 Sukuma, F22 Nyamwezi, F23 Sumbwa, F24 Kimbu, F25

Wungu, F31 Nilyamba, F32 Nyaturu, F33 Langi, F34 Mbowe, G11 Gogo, G22 Asu, G23 Shambala, G31 Zigula, G33 Zaramo, G35 Lugulu, G403 Mwani, G41 Bajuni, G41-42-43 Swahili, G412 Mwiini, G42D Vumba, G43D Ngome, G44a Ngazi(d)ja, G44d Maore, G51 Pogoro, G52 Ndamba, G62 Hehe, G63 Bena, H10a Kituba, H16 Kongo-Zombo (and several other varieties), H21 Kimbundu, H32 Suku, H33 Hungu, H41 Mbala, H42 Hung'an, K11 Cokwe, K13 Lucazi, K14 Lwena/Luvale, K21 Lozi, K31 Luyana, K333 Mbukushu, K332 Dziriku, K352 Mwenyi, K401 Mbalan'we, K41 Totela, K42 Subiya, L11 Pende, L13 Kwezo, L21 Kete, L23 Songe, L31a Luba-Kasai, L32 Kanyok, L33 Luba-Katanga, L41 Kaonde, L52 Lunda, L53 Uruund, L62 Nkoya, M11 Pimbwe, M12 Rungwa, M13 Fipa, M14 Rungu, M15 Mambwe, M201 Lambya, M21 Wanda, M22 Namwanga, M23 Nyiha, M24 Malila, M25 Safwa, M31 Nyakyusa, M301 Ndali, M41 Taabwa, M42 Bemba, M54 Lamba, M61 Lenje, M62 Soli, M63 Ila, N101 Ndendeuli, N11 Manda, N12 Ngoni, N13 Matengo, N14 Mpoto, N21 Tumbuka, N201 Mbamba Bay Mwera, N31 Nyanja, N44 Sena, P11 Ndengereko, P12 Rufiji, P13 Matumbi, P14 Ngindo, P15 Mbunga, P21 Yao, P22 Mwera, P23 Makonde, P311 Koti, R11 Umbundu, R22 Ndonga, R31 Herero, R41 Yeyi, S10 Shona, S20 Venda, S31a Tswana, S33 S. Sotho, S41 Xhosa, S42b Zulu, S53b Tsonga, S62 Gi-Tonga.

Sources for data are not given in the References in any chapter, but can be found in the Source Language Reference Index at the end. Most entries in the general Bibliography also carry a language number, corresponding to the numbers in Maho (2003).

2

Verb structure and categories in Bantu

2.1 Bantu languages are agglutinating

Most morphologists distinguish analytic/isolating from synthetic languages. In analytic languages ‘most word-forms are made up of a single morph’ (Bauer 1988: 246), clearly not the Bantu or Niger-Congo case. Synthetic languages are divided into polysynthetic, inflectional/fusional, and agglutinating. Polysynthetic is irrelevant, as it refers to languages having very long strings of bound morphemes, as in Algonkian, often equivalent to a whole long sentence in a language such as English. Inflectional and agglutinating are often presented as a contrast—a language is one or the other. Both types have in common that the major word classes, such as noun and verb, consist of a stem and inflectional morphemes. In agglutinating languages the strings of morphemes are longer and the morphemes are relatively transparent, having a single shape (no or few allomorphs, often phonologically conditioned) and one meaning, while in inflectional languages the morphemes are often opaque, with multiple allomorphs and fused meanings. In fact, there is a cline, with ideal types at either end and many languages along the cline. Since Bantu languages are nearer the agglutinating end, by comparison with many current and former Indo-European languages, they are regarded here as agglutinating, even though none is strictly so. Likewise a strict binary contrast between analytic and synthetic is less appropriate than a cline. At one end are languages whose verb structure is fully synthetic, at the other end are fully analytic languages, with many languages showing a range of intermediate possibilities.

2.2 Linear verb structure in Bantu

Five types of verbal structure occur widely in Bantu languages. They are:

2.2.1 *Singular imperatives*

These typically have a stem consisting of root, final vowel, and a tone pattern,¹ exemplified here by Rimi (F32):

¹ Meeussen (1967: 112) gives an overview of Bantu forms and tones. These F32 examples, from Schadeberg (1980a: 300) do not follow Meeussen’s general shapes in all respects. Subjunctives are also almost universally used for polite commands in Bantu.

- (1) F32 /ghur/ 'buy', /tégheey/ 'listen', /táp/ 'bring (water)', /ítaan/ 'call'
 a *ghur-á ñombe* 'Buy a cow', *tegheey-a* 'Listen', *tap-á maji* 'Bring water'
 b *ya-tap-é maji* 'Bring the water', *mw-itaan-e* 'Call him'
 c *n-tegheey-a* 'Listen to me'
 d *tegheey-í nkhanj* 'Listen (p) to the words'
 e *yi-ghúr-í* 'Buy (p) them', *va-tegheey-í* 'Listen (p) to them'
 f *n-tegheey-í* 'Listen (p) to me'

In such imperatives, the root typically keeps its own (underlying) tone and has final /-á/ (1a), whereas roots in subjunctives with most object pronouns also keep their underlying tone but have final /-é/ (1b).

Plural imperatives are most often marked suffixally (2.3.11).

2.2.2 Inflected single words

For example,

- (2) Nkoya (L62) *w-a-mu-shíng-ile*
 3s.SM-P₃-3s.OM-look-P₃²
 'She looked (P₃) for him'

2.2.3 Two-word structures, consisting of inflected auxiliary and infinitive

For example,

- (3) Basaa (A43) *a-bí-mal ## (ø)-tíl-a*
 3s-P₂-finish ## (infinitive)-write-FV
 'He has finished writing, he has written'
 (lit. He has finished (to) write)

2.2.4 Two/three-word structures

These are henceforth called compounds or compound constructions,³ comprising inflected auxiliari(es) and inflected main (lexical) verb. The (first) auxiliary inflects for tense, aspect, or other categories. The main verb (and other auxiliaries) always inflect for aspect, less often for tense:

- (4) a Haya *tú-ka-bá ## ni-tu-ø-gur-á*
 1p-P₃-be ## PRG-1p-PRS-buy-FV
 'We were buying (long ago)' (lit. We were we are buying)
 b *ni-tu-ø-gur-á*
 'We are buying'

² Throughout the book, the labels P₁, P₂, P₃, F₁, F₂, F₃, etc. are used. P₁ (past) and F₁ (future) represent the closest time divisions, P₂, F₂ for the next closest, and so on. These labels will have different reference, depending on how many degrees of temporal remoteness a language encodes.

³ Welmers (1973) calls them 'auxiliary structures'.

- c Sukuma d-áá-lĩ ## dǔ-taalí ## dó-líí-gól-a
 1p-P₄-be ## 1p-still.be ## 1p-PRG-buy-FV
 ‘We were still buying’
 (lit. We-were ## we-still be ## we are buying)
- d dǔ-taalí dó-líí-gól-a
 ‘We are still’ ‘We are buying’

As (4b, 4d) imply, it is widely true in Bantu that single-word aspectual forms not marked for tense are construed as being timeless or referring to the present, and as (4a, 4c) imply, the first member of multi-word structures refers to past or future time.

Another three-word compound can be seen at the end of 1.4.8. In the languages examined, the two verbs in these structures behave as a sequence of clauses, in which the auxiliary behaves as the main verb and the lexical verb as the verb of a subordinate clause. Swahili (G42) examples such as:

- (5) G42 wa-li-tu-ona tu-ki-zungumza
 3p-Past-1p-see 1p-SIT-talk
 ‘They saw us talking’

contain two verbs, and all observers would analyse the two verbs as belonging to separate clauses. On the other hand, in a phrase such as:

- (6) G42 tu-li-kuwa tu-ki-zungumza
 1p-Past-be 1p-SIT-talk
 ‘We were talking’

there would be less consensus about how to analyse the verb. However, in structure it is identical to (5), except that the subjects now have identical referents, and in the first example the verb in the main clause is a verb of perception whereas in the second it is the auxiliary ‘be’. Swahili has strict restrictions on which aspects may appear in this example (only *ki*, *na*, *me*) and exactly the same restrictions apply to the previous example, supporting the morphosyntactic identity of the two clauses. In some languages (e.g. M14, see Appendices) even the tones of the second, subordinate, clause are identical to the same clause occurring independently in main clauses: in other languages (e.g. D66, Harjula 2004: 110) they differ tonally. 3.13 discusses this further.

2.2.5 Two-word structures: infinitive and inflected form of the same verb

There is a minor type with a two-word structure, where the first word is an infinitive, and the second an inflected form of the same verb (i.e. infinitive fronting and a kind of reduplication):

- (7) Solongo (H16) o-sumba tu- \emptyset -súmb-anga
 infinitive-buy 1p-buy-IPFV
 ‘We buy regularly’
- Swahili (G42) ku-fa wa-naku-fa kwa njaa
 Infinitive-die 3p-PRG-die of hunger
 ‘They are really dying of hunger’
- Ndamba (G52) ka-yalamila, hata ku-m-wona va-mu-wona ng’odu
 3s-vanish until infinitive-3s-see 3p-3s-see NEG
 ‘She vanished until she was not to be seen’

2.2.6 Structure of the single inflected verb

These structures (1–7) all have at least one inflected verb. The structure of this single agglutinating verb is similar across Bantu, and a formal template was proposed by Meeussen (1967: 108) forty years ago. In fact, it had been assumed by Tervuren scholars since the 1950s (Coupez 1954; Stappers 1964). It has a double function: it is a statement of the commonest structure of the single-word verb in contemporary Bantu, and was also assumed by Meeussen to be the shape of the verb in Proto-Bantu. It ‘exhibits a clear structure with definable elements occurring in a fixed order’, involving eleven positions, set out in Meeussen (*ibid.*), from whom most of this section is lifted, with some modification. Readers should consult the original for more details. For reasons of space they are arranged vertically, using Meeussen’s labels:

- (8) 1 pre-initial
 2 initial
 3 post-initial
 4 formative
 5 limitative
 6.1 infix
 6.2 radical
 6.3 suffix (extension)
 7 pre-final
 8 final = final vowel
 9 post-final

Position 6.2 is a completely open, large set, because lexical. Positions 2, 3, 5, 6.1, 6.3, 7, and 8 are more or less closed small sets, that is, over the centuries they have allowed new allomorphy but few, if any, new members. 1, 4, and 9 are also small sets, but do allow new members, mainly by incorporation of new material via grammaticalization. What follows is more or less exactly from Meeussen. Section 2.4 and Chapter 6 modify some of the content.

2.3 Discussion and exemplification

2.3.1 Pre-initial (see 6.2.1)

At pre-initial Meeussen posited two possible morphemes, because they are the categories most commonly marked in this position. One is the primary negative (underlined in (9), below), the other the bound (object) relative (underlined in (10), below). The sequence of pre-initial + initial has the tonal sequence low-high, seen in Lega below (but not Bushoong). This negative likely occurred in ‘unmarked main clauses’ (Güldemann 1999: 551, see 5.1). The negative forms occurring in the largest number of Bantu languages today at pre-initial are reflexes of a morpheme reconstructed as **(n)ka-*, although other shapes such as **(n)ta-*, **ti-/ci*, and **(n)tI* also occur. The shape of the relative agrees with the class of the head noun. Examples (see also (14), below):

- (9) Bushoong t-a-bók nyam ‘We shot an animal’
 NEG ka-t-a-bók nyam ‘We didn’t shoot an animal’
- (10) Lega nnyama zi-bá-ta-gik-é zábolé
 meat 9REL-2-NEG₂-cook-FV it.will.rot
 ‘The meat that they don’t cook will rot’
 muzígi #gu-tú-bulută ‘Rope which-we-pull’

In contemporary languages other morphemes and categories may occur at pre-initial, because, as befits positions occurring at the edge of the verbal word, it tends to attract newly grammaticalized material. These other categories include tense, aspect, conditional (see (33), below), and focus. Thus Herero (R31) and Tharaka (E54):

- (11) a R31 má-tu-ø-mun-u máa-tu-ø-mun-u
 IPFV-1p-null-see-FV FUT-1p-null-see-FV
 ‘We are seeing, (will see)’ ‘We will see’
- b E54 Maria n-a-ra-k-ire nyomba
 Maria FOC-3s-near.past-build-FV house
 ‘Maria built a house’ (answering a question such as ‘What did Maria do?’)

In Proto-Bantu, the two morphemes at pre-initial are unlikely to have co-occurred because the negative associated with relatives occurred at post-initial. In some contemporary languages, apparently due to restructuring, they can co-occur, thus Lucazi (K13):

- (12) K13 mi-kanda i-ká-tu-a-ka-ci-va-sónek-il-ile-ho
 9-letter 9REL-NEG-1p-P₂-itive-modal-3p-write-APP-FV-postfinal
 ‘The letters which we had not just gone to write to them then ...’

2.3.2 Initial (see 2.9.2(i), 6.1.2)

This is the verb subject slot, filled by a set of morphemes showing compulsory agreement with the subject preceding the verb. A few languages (e.g. C85 (Rottland 1970: 45), older G42a (Miehe 1979)) may delete subject markers, widely or in some contexts.

Originally, and still in many languages, participants (first and second person) are low-toned, class markers high-toned, in absolutes (that is, non-relatives).⁴

- (13) Shona ndi-rí 'I am', u-rí 'You (s) are', ti-rí 'We are', mu-rí 'You (p) are'
á-rí 'S/he is', vá-rí 'They are', kú-rí 'It (5) is'

Following any pre-initial, all subject markers are high-toned.

A few languages (Babole, Lunda, Koti) put the SM subject at the right-hand edge, either as clitic or independent pronoun, in relatives: in the third example in (14c), it would involve replacing the noun *muntu* by a post-verbal clitic or pronoun.

In relatives, the initial slot contains, besides the subject, the object marker if the subject is not attached. In relatives, morphemes in this slot are high-toned, except for classes 1 and 9, which are low-toned. Further, the final vowel of relatives is in tonal harmony with this initial slot. The 3s initial shape in the relative (*jú-*) differs from that in the absolute (*ú-*, *a-*⁵). Thus, using hypothetical examples from Meeussen (1967: 113–14):⁶

- (14) a muntú a-ø-díma ipía
person 3s-null-cultivate garden
'Person cultivates garden'
- b muntú jú-ø-díma ipía
person who.3s-null-cultivate garden
(*jú-* Class 1, thus L, and *-a* L by tone harmony)
'Person who cultivates garden'
- c ipía dí-ø-dímá muntú/bantu
garden which.5-null-cultivates person/people
(*dí-* Class 5, thus H, and *-á* by tone harmony)
'Garden which person(s) cultivate(s)'
- d muntú jú-tú-ø-dím-il-á ipía
person whom.3s-1p-null-cultivate-for-FV garden (*-á* H because in harmony
with *-tú-*, which is H because preceded by pre-initial)
'Person for whom we cultivate garden'

Subject markers in subjunctives are all high-toned.

⁴ This means that in many languages, 2s (low-toned) and 3s (high-toned) differ only tonally.

⁵ Originally probably subjunctive *a-*, absolute *ú-*, but in many languages one or other shape has been levelled out.

⁶ Many languages have kept the original system outlined here, others have deviated. The range of deviation is considerable, including many languages which mark relatives verb-finally or verb-internally, exemplified in (41) and (42). For the whole topic, see Nsuka-Nkutsi (1982).

2.3.3 Post-initial (see 5.2, 6.2.3)

The only morpheme occurring here is the secondary negative, which does not co-occur with the primary negative. The secondary negative was probably originally associated with non-main clause contexts such as infinitives, relatives, and subjunctives. While that is still widely true today, it is not universally so, the contexts having widened in some languages (see 5.2).

The commonest morphemes encoding the secondary negative are reflexes of **-tí-*, but reflexes of **-tá-* (see Lega in (10) above), **-ka-*, **-ca-*, and **-na-* (tones unknown) also occur (in that order of frequency). The example language (Zalamo, G33) is toneless:

- (15) G33 u-si-gul-e (**ti > si*)
 2s-NEG₂-buy-SBJ
 ‘Don’t buy’

Meeussen’s formulation treats post-initial, containing the negative marker, and formative, containing tense-aspect markers, as discrete and, by implication, able to co-occur. This is widely true, as in the first two examples below, and probably the original situation. However, there are also cases, as in (16c), where the negative marker is not added to the TA marker but replaces it:⁷

- (16) a Londo a-mo-sak-á NEG a-sí-mo-sak-a
 3s-past-see-FV
 ‘He sought’
- b Babole a-á-dzík-ak⁸-á NEG a-ka-á-dzík-ak-á
 3s-past-eat-ak-FV
 ‘He ate’
- c Nen mɛ ná sambé NEG mɛ sá sambe
 1s P₂ put
 ‘I have put’

2.3.4 Formative (see Chapters 3 and 4, and Section 6.2.4)

This position is important in this book because it is here that most of the morphemes associated with tense and aspect occur. Early Bantu had a division of labour between this position and FV, whereby tense (including taxis) markers occurred predominantly at formative, and aspect markers at FV. Formative also embraced markers of other categories such as conditional, modality, and focus. This division no longer obtains universally and the slot now also contains aspect markers in most Bantu languages. The set of morphemes that once occurred here is controversial and will be discussed in following chapters, especially Chapter 6. Most languages allow just one morpheme

⁷ Creissels (1999a) discusses this for Tswana.

⁸ This *-ak-* is a reflex of **-ag-*, which most widely in Bantu represents IPFV. However, in many Zone C languages, such as Babole, its semantic domain has widened.

here, some two, a few more. Since syllables in most Bantu languages have the canonical shapes V, CV, NV, or NCV, most morphemes in this position also have one of those shapes, and newly grammaticalized morphemes tend to reduce to that shape. The reduction processes involved do not always occur elsewhere in the language. A clue to newly grammaticalized or grammaticalizing material is that it has a longer shape. While the strings in Lamba (M54) below are fairly transparent, that in Shambaa (G23) is not:

- (17) M54 tu- \emptyset -cit-a 'We who do'
 1p- \emptyset -do-FV
 tw-a:-cit-a 'We have done'
 1p-ANT-do-FV
 tu-la-cit-a 'We do'
 1p-PRS-do-FV
 tu-ka-cit-a 'We will do (remote future)'
 1p-F₃-do-FV
 tu-ci-cit-a 'We still do, are still doing'
 1p-PRS-do-FV
 tw-aku-cit-a 'We will do (near future)'
 1p-F₁-do-FV
 tw-luku-cit-a 'We are doing' (probably < *li + ku 'be at')
 1p-IPFV-do-FV
 tw-aku-luku-cit-a 'We will be doing (near future)'
 1p-F₁-IPFV-do-FV
 tw-aku-luku-ci-cit-a 'We will still be doing'
 1p-F₁-IPFV-PRS-do-FV
- G23 ni-(za-há-ka-na-)mu-ítánga
 'I (sometimes used to) call her (without purpose)'

Readers should remember that formatives do not consist only of segments but also of suprasegmentals, discussed in Chapter 3, especially in 3.9.1.

2.3.5 Limitative (see 3.12.1, 4.8, 6.2.4)

Meeussen proposes a very small set of (aspect) markers for this slot: *-kí-* 'persistent', and several morphemes of the shape *-ka-*, which he glosses variously as 'inceptive, itive, narrative'. He says these only occur in this position in a limited number of languages. In our experience such structures often result from the grammaticalization of earlier compound structures in which the first member would have been an auxiliary, and the second a lexical verb. Thus it has been suggested (Botne 1999) that at least one *-ka-* derived from a verb meaning 'go'.

- (18) Yanzi baar bá-má-ká-kóm
 2.people 2-just-go.to-pay
 ‘The people have gone to pay’

2.3.6 *Infix* (see 2.3.16, 5.4, 6.2.5)

The infix position contains (pronominal) object markers, showing agreement with the object(s), which might be one or more noun phrases following the verb, or a foregoing or previously mentioned object. Across Bantu there are three strategies for object marking. Some languages mark objects entirely at this infix position; others don't allow marking at infix but only verb-finally, either as enclitics or by independent pronouns; yet others use both positions.

The infix position is henceforth referred to as the OM position. At OM from zero to six objects are allowed, depending on the language. OMs for singular persons are low-toned, plural persons and all classes are high. The presence of an object marker may have an effect on tonal phenomena elsewhere in the verb, e.g. in subjunctives and imperatives.

2.3.7 *Radical = root*

Most roots have the shape CVC, where C₂ may be a regular consonant, a prenasalized consonant, or null: some twenty roots have a CV shape, including common verbs such as ‘eat, die, drink, fall, give’. A few have a longer shape, such as -(y)VC-VC or -CVC-VC but most of these are thought to have once been roots plus extensions, although the latter are semantically opaque today. Most eastern and southern Bantu languages undergo a vowel height harmony process, whereby degree two vowels in extensions lower to degree three (e, o) vowels following *e* or *o* in the root (Hyman 1999a: 241, data from Hulstaert (1965), and de Gheel (1652)):

- | | | |
|--------------|---------------------------------|---------------------------|
| (19) Lomongo | root + applicative /el/ | root + reversion /ol/ |
| | -íy-il- ‘steal + applicative’ | -is-ul- ‘discover’ |
| | -lúk-il- ‘paddle + applicative’ | -kund-ul- ‘dig up’ |
| | -ít-il- ‘call + applicative’ | -bít-ul- ‘awaken’ |
| | -tóm-il- ‘send + applicative’ | -komb-ul- ‘open’ |
| | -kamb-il- ‘work + applicative’ | -bák-ul- ‘unfasten’ |
| | -kend-el- ‘go + applicative’ | -lemb-ul- ‘erase’ (Kongo) |
| | -kot-el- ‘cut + applicative’ | -mom-ul- ‘unstick’ |

Many languages have a lexical contrast, whereby the first root vowel may be high-toned or toneless (low-toned). Other languages have lost this original lexical tone contrast in verbs, and stem tone is particular to certain tense-aspects or sets of them, being assigned to a particular vowel or vowels of the stem. Even in languages with a lexical tone contrast, there may be tense-aspects with such grammatical tone.

Nearly all (all?) languages have some words with at least partial reduplication of the root vowel with lexical meaning, e.g. PB **-pat-* ‘hold’, but **-pa-pat-* ‘touch, grope’, and many of these occur right across Bantu so must be inherited forms.

2.3.8 Suffix/extension (see 6.4.1)

Meeussen calls this position the ‘suffix’, but since suffix in most linguistic conventions refers to any post-radical element, we replace it here by extension. This is also not strictly accurate because a few morphemes occur here which are not productive (derivational) extensions. However, most extensions express valency-changing derivational categories. The commonest extensions are (Schadeberg 2003a): applicative (also called dative, prepositional), causative, extensive, impositive, passive, positional (static, stative), reciprocal (associative), separative (reversible), stative (also intransitive or neuter), and tentative (contactive). Several of these may co-occur. When they co-occur they tend to do so in a canonical (neutral) order (e.g. ‘CARP’ = causative, applicative, reciprocal, passive (Hyman 2002)). This order may vary somewhat, depending on syntax and meaning, and depending on language-specific constraints. Most extensions are low-toned. They are affected by a process which spreads the high tone of a following (absolutive) final to its left, into the extension.

2.3.9 Pre-final (see 6.4.2)

In Meeussen’s formulation, this contains a single morpheme, *-ag-* (regional variant *-ang-*) ‘imperfective, repetitive, habitual’. It behaves ambiguously. Tonally it typically behaves as an extension, and in some languages is a member of the set of extensions. In some languages it has moved towards the (inflectional) final (vowel) position (see 2.2.10). In some languages it coexists in both positions and roles, e.g.:

- (20) Bena (G63) ndi-laa-gul-ang-aga
 1s-FUT-buy-EXT-FV
 ‘I’ll be buying in quantities’

where *ang* is an extension whose meaning in this example translates as ‘in quantities’, and *aga* functions as a final vowel, ‘imperfective (be . . . ing)’. In most languages where it functions as a final vowel, it is bimorphemic and can be split by e.g. the passive morpheme, so *ag-w-a*. Some analysts also see the final vowel *-ile* (see 2.2.10) as being bimorphemic (*-il-e*), as the passive extension may be placed between the two parts, the passive occurring usually as the last extension. They would consider both *-il-* and *-a(n)g-* as pre-final morphemes.

2.3.10 Final/final vowel (see 6.4.2)

A small closed set of morphemes occurs across Bantu in the final (or, final vowel) position. Some are frequent: *-a* neutral or indicative; *-I/-e* subjunctive (it and the

accompanying initial are high-toned); *-ile* anterior/past (see (11b, 11c, 12), above); *-a(n)g-a* imperfective. Others are less common: *-I* anterior/near past/stative; *-I* negative; and a morpheme involving a vowel copy of the root vowel (see (11) above). As can be seen, all these express aspect or mood. Indicative/neutral *-a* is regarded as unmarked or neutral, the others as marked. Examples:

- (21) Tumbuka t(i)-a-timb-a ‘We (have) struck (today)’
 ti-(ka)-tol-e ‘Let’s (go and) take’
 1p-(Itive)-take-SBJ
 t(i)-a-timb-anga ‘We were striking (today)’
 1p-P¹-strike-IPFV
 ti-∅-lut-eng-e ‘We will go’ (/ -ang-e/)
- Vunjo ngí-∅-wóny-í
 ngi-∅-m-bon-ie (*-ie* < **-ile*)
 1s-null-3s-see-ANT
 ‘I see = have seen her’
- Venda a-ri-∅-rém-í
 NEG-1p-null-cut-NEG
 ‘We don’t cut, aren’t cutting’
- Babole to-∅-sál-í ‘We have done’
- Lungu tú-∅-lím-¹é ‘Let’s farm, that we farm’
- Ngombe ná-∅-sómb-é ‘Let me buy’
 1s-null-buy-SBJ

Some of these (subjunctive *-e*, anterior *-I*, and negative *-I*) occur predominantly with a null pre-stem marker. Meeussen includes *-ite* among the final vowels but its distribution is very limited and it is likely to have originated as an allomorph of *-ile* (see Chapter 6).

In general these final vowels are mutually exclusive. *-a(n)g-a* is bimorphemic and is not only separable by the passive extension but can co-occur with the FV, usually preceding them. For *ang-a* and *ang-e*, see Tumbuka in (21) above). Also:

- (22) Myene my a-yɛn-áɣ-í
 I PAST-see-IPFV-FV
 ‘I was seeing (P₃)’
- Lega tw-ǎ-bolot-ag-elé
 1p-PAST-pull-IPFV-P₂
 ‘We were pulling’
- Bukusu xu-∅-kúl-il-aang-e xu-xa-kul-aang-e
 1p-null-buy-{ile + ang} 1p-F₂-buy-IPFV-SBJ
 ‘We were buying (P₂)’ ‘We will be buying’

2.3.11 Post-final (see 6.4.3) and clause-final

The only morpheme occurring widely at post-final across Bantu is *-*ni*. It occurs in all zones, except F.⁹ It has the alternative shapes *-Vni*, *-(V)nu*, and *-Vna*, where the final vowel is mostly high-toned, and it is related to pronominal shapes for the second person plural. It is glossed by Meeussen as ‘plural imperative’, by Guthrie as ‘plural suffix in verbal interjections’. Although it occurs predominantly in second person plural imperatives that is not its only use, occurring also with first person plurals, extended in a few languages to all plural addressees, to non-imperatives, and playing a role in distinguishing plural and dual, thus:

- (23) Bemba bomb-a ‘Work, s’, bomb-eni ‘work, p’ (here it marks 2p imperative)
 Lamba ka-mu-y-a ‘Go, dual’ ka-mu-y-e:ni ‘Go, plural’
 ka-tu-y-a ‘Let’s go, dual’ ka-t-y-e:ni ‘Let’s go, plural’
 Benga kal-aka ‘Talk, s’, kal-aka-ni ‘Talk, p’, ho-kal-aka-ni ‘Let’s talk’
 Nkoya mona ‘See, look, s’ mon-enu ‘See, look, p’

A recent (March 2002) email discussion produced the following Standard Swahili (G42) forms, all rendering ‘I will bring (to) you (pl.)’

- (24) G42d ni-ta-ku-let-e-eni 1s - future - 2s - bring - APP - eni
 ni-ta-wa-let-e-a (ninyi)
 1s - future - 3p - bring - APP - a (2p pronoun needed)
 ni-ta-wa-let-e-eni 1s - future - 3p - bring - APP - eni
 ni-ta-m-let-e-eni 1s - future - 2p - bring - APP - eni

Participants in the discussion disagreed on the grammaticality of some of these forms and about whether some represented differences in focus.

In some contemporary languages other morphemes and categories may occur at post-final, because, as with pre-initial, the positions at the edge of the verbal word tend to attract newly grammaticalized material. These other categories include locatives, object pronouns, focus, aspect, and tense, So in Benga (A34) a morpheme *-ngo*, apparently meaning imperfective (see *n.10*), occurs in the post-final position:

- (25) A34 mbi-kala-ngo
 1s-talk-IPFV
 ‘I (am/ was) talking’

Two of the categories encoded in some languages today, object pronouns and negative clitics, undoubtedly started life as independent post-verbal or clause-final elements, and have been attracted to the verb over time. Their contemporary status, whether as independent element, enclitic, or suffix, is not always clear.

⁹ Zone F languages have instead suffixal *-I*, also found elsewhere.

2.4 Suggested modifications of the single inflected structure

2.4.1 Modification of the structure and terminology in 2.2 and 2.3

The structure and terminology above are now slightly modified, for two reasons (also Güldemann 1999: 546).

Bantu studies used to be mainly the domain of Bantuists but more recently general linguists have also become interested in Bantu phenomena. As a result two sets of terminology are sometimes in collision, that of traditionalist Bantuists and that of general linguists (see Rose *et al.* (2002)). Bantuist terminology is not always known to the general linguists. This problem, of course, also faces linguists working in other language families. It is best resolved by trying, as far as possible, to have a standard set of terminology: the same term, at least for the same phenomenon.

Second, two of the positions above could be eliminated without loss, and even at some gain. Thus, removing limitative and folding it into formative, labelling the resulting slot TA, and allowing TA to include more than one morpheme, would better reflect the whole range of contemporary possibilities in Bantu. In those contemporary languages which allow more than one morpheme here, tense usually comes early in the string, and directionals ('come, go') occur at the end. Removing pre-final, folding it into final, and allowing the final to contain more than one morpheme, would reduce the anomaly of a pre-final slot with a single member.¹⁰ Thus:

(26) Pre-SM + SM + NEG₂ + TA + OM + root + extension + FV + post-FV

This book concentrates on TA and FV, with lesser attention to pre-SM and post-FV.

2.4.2 More than one inflected structure?

The previous sections (2.2, 2.3, 2.4.1) follow a long tradition that insists on expressing all possible inflectional verb morphological variants as one template, as in (26). There may in fact have been three. One would have been the simple structure of the imperative (see 2.2.1, above): this occurs right across Bantu (27a). The second and third would be arrived at by breaking the structure in (26) into two, one for indicatives (27b), the other for subjunctives, and possibly relatives (27c). As mentioned in 5.2.4 and 6.2.1, the structure in (27c) occurs across Bantu, whereas that in (27b) is absent in the far northwest (Zone A, part of Zone B).

¹⁰ This would mean having a morpheme of the shape *-a(n)g-* as an extension, and of the shape *-a(n)g-a-*, *-a(n)g-e-*, etc. at FV. Is the Benga shape in (25) related to this?

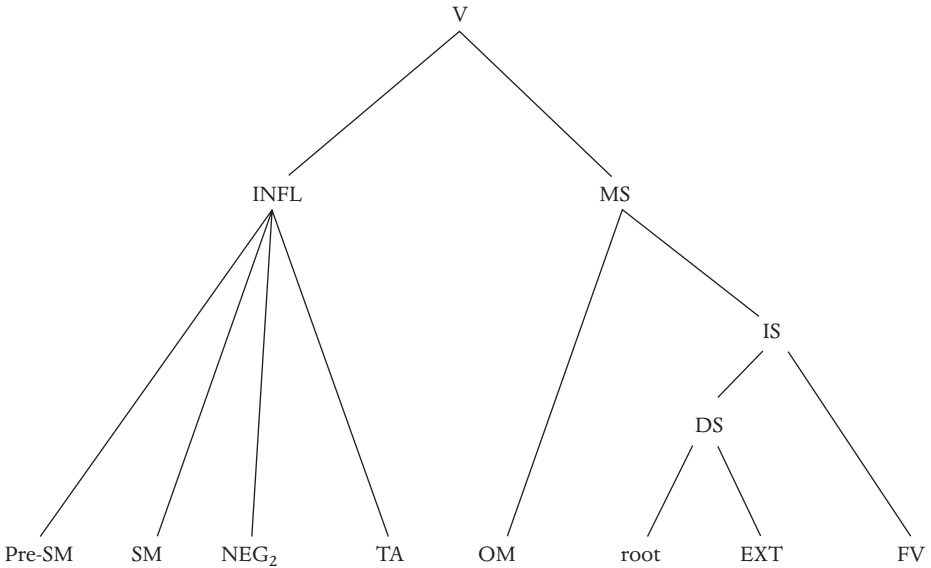
- (27) a Imperative affirmative (negative as in the subjunctive)
 stem - (ag) - á (- plural)
- b Indicative (tone pattern as in 2.3.1, above)
 Pre-SM + SM + TA + [OM + [[root + extension] + FV]]
- c Subjunctive (tone pattern set out in 2.3.10 and 6.4.2(iii))
 SM + NEG + [OM + [[root + extension] + é]]

2.5 Hierarchical verb structure

Starting in the late 1970s, the verb was increasingly viewed not as a linear string with little internal structure (2.3–4–5), but rather as a hierarchical structure. Building on the facts of the order of morphemes in 2.3, and of the role of derivation and inflection, it was recognized that some parts of the structure belonged more closely together than other parts. In his work on Makua (Cheng and Kisseberth 1979, 1980, 1981) and then on Digo (Kisseberth 1984), Kisseberth realized that certain tonal phenomena were closely linked to the shape of the verb structure, including the OM: specifically, high tone placement and movement had to do with counting morae within a domain from OM to FV, but not SM or TA. During the 1980s and into the 1990s this view was taken up and expanded by other scholars, who also enlarged the terminology. In what follows, I am indebted to Larry Hyman for advice.

Working out from the root, the two components of the string that adhere most closely are the root and extensions. The combination of root and extension is often called the derivational stem and is the domain of vowel (height) harmony: while a few languages extend this harmony further right, into the final vowel, or from the final vowel to the left, or from the root to the left, for nearly all non-northwestern languages the domain of vowel height harmony is the derivational stem (Hyman 1999a). The next largest unit is the inflectional stem, that is, the derivational stem plus FV: it is the domain of nasal harmony, reduplication, and vowel coalescence. The next largest unit is what is currently called the macro- or super-stem, consisting of the inflectional stem plus OM: some 95 per cent of Bantu languages are tonal, and tone placement and movement in many Bantu languages has to do with the number of morae between OM and FV. This macro-stem is also the domain of other tonal phenomena. Finally, the macro-stem combines with all the inflection morphemes to its left ('INFL') to form the verbal word. In eastern languages phonological features characterizing the whole word are fewer and less important, and in some western languages the prosodic word begins with the stem. As can be seen, the basis for this new formulation is essentially prosodic. The structure proposed at the end of 2.3 could be rewritten as follows, ignoring Post-FV, to reflect these considerations:

(28) Pre-SM + SM + NEG₂ + TA + [OM + [[root + extension] + FV]] + Post-FV



That these various domains in the verb are prosodically determined may be linked to the fact that many of the prominent Bantuists over the last thirty years have also been prominent phonologists. However, lest it be thought that the only support for this view of the verb stem is prosodic, we will see below (2.9.1, 2.9.2) that it is supported by comparison with verb structures elsewhere in Niger-Congo, and by a functional view that says that elements that function together or are closely linked grammatically tend to occur together. In 2.9.1 the assumption of this agglutinating structure for Proto-Bantu is revisited.

Readers who want to know more about the details and development of this hierarchical view should consult: Kisseberth (1984), Cheng and Kisseberth (1979, 1980, 1981), Keach (1986), Myers (1987), Hyman (1989), Mutaka (1994), Odden (1996a), and Downing (2001).

There is thus a discrepancy between the focus of this book and the focus of phonologists. We are here interested in aspect and tense, and in aspect and especially in tense the inflectional categories to the left of the macro-stem are really important. The phonologists lumped all these together as INFL (inflection), less interesting to them than the macro-stem.

2.6 Common verbal categories, and how and where they are encoded

The previous sections primarily examined structures. To right the balance and to help readers unfamiliar with Bantu, this section examines briefly categories mentioned

during the text, and how and where in the verb structure they are typically marked and therefore to be expected in the text. The discussion of some categories is particularly brief, as they are the topics of Chapters 3, 4, or 5. The categories are: aspect, conditional, focus, imperative, indicative, negation, object (pronouns), relativization, subject (markers, pronouns), subjunctive, taxis, tense, valency-changing categories (extensions). All abbreviations refer to the positions in (28).

2.6.1 Aspect

Aspect is most often encoded at FV or TA. FV originally carried a heavier aspectual load. Some languages today keep this while others have de-emphasized the FV and carry most or all of their aspectual distinctions at TA. As with tense, a few languages use Pre-SM or Post-FV to mark aspects, and tone is often involved. Many languages create aspectual forms by using compound constructions. In such languages the combination of aspect and ‘present’ (or unmarked time) is often carried by a single word, whereas combinations of aspect plus past or future involve compounds, and tense is marked on the first, auxiliary, verb, with aspect on the second, lexical verb. See Chapter 4.

2.6.2 Conditional

Conditional, when expressed in the verb, occurs most often at TA, but also at Pre-SM. Some languages involve a simple future, others have a special morpheme. See Mukama (1985), Parker (1991), Saloné (1979). It may also be expressed lexically or syntactically (asyndetically).

2.6.3 Directionals

Many languages have an Itive (‘go there and verb, go and then verb’), usually marked at the second or final position of TA, and one of the common morphemes for Itive (*ka*) is reconstructible for Proto-Bantu. Fewer languages have a Ventive and this does not seem to be reconstructible for Proto-Bantu. Directionals are also found among the pre-verb auxiliaries in many Niger-Congo languages. Locative suffixes/clitics, corresponding to the three locative classes, are also common across Bantu.

2.6.4 Focus

Focus is used here in a wide sense to include not just focus as defined in the Definitions but also notions such as assertion, conjunction/disjunction, and metatony. In this broad sense it can be indicated by some combination of lexical, syntactical, morphological, and tonal factors. Morphologically it may be marked by some combination of: Pre-SM, TA, or Post-FV. If encoded at TA, it is not the first component of a TA string. See 5.3.

2.6.5 Imperative (2.2.1, and (1))

Singular imperatives usually consist of a bare stem with the (neutral) FV *-á*. Plural imperatives are most often marked suffixally (Post-FV) and most often by a suffix of the shape *-(V)nV* (with a great range of shapes). Commands, usually softer, and requests may also be given by using the subjunctive. The subjunctive is regularly used with most object pronouns. A subjunctive has also become the preferred or only form of the plural imperative in some languages, so *mu-lim-e* (you-cultivate-SUBJ), instead of *lima-ni*.

The commonest way of forming a negative command is with a subjunctive, the second commonest way is via an auxiliary plus infinitive.

2.6.6 Mood

Mood traditionally refers to the small set of categories representing the speaker's attitude towards the status or factuality of the utterance: indicative, subjunctive, imperative. Indicative and subjunctive are both marked at final vowel, subjunctive by *-é* (with SM also high-toned) and indicative by something other than *-e*, mainly *-a* (or *-ile*, *-aga*). Since *-a* is regarded as the neutral FV, subjunctive is the marked category.

If mood is used in a wider sense (modality) to express ability, conditionality, desire, intention, obligation, possibility, permission, and subordination, then some of these notions are also carried by use of the subjunctive, or expressed at TA (or TAM, as it appears in some of the notes in the Appendices) or by auxiliaries.

2.6.7 Negation

Many Bantu languages distinguish at least two negatives, a secondary (in subjunctives, relatives, and other subordinate constructions) and a primary (main clause) negative. In such languages, the primary negative occurs at Pre-SM, the secondary at Neg₂. Some languages have a single negative, at Pre-SM or Neg₂. A few languages express negation pre-verbally, post-verbally, or at Post-FV, or by use of auxiliaries. See 5.2.

2.6.8 Object (pronouns)

Pronominal object concord is marked at OM, Post-FV, or post-verbally. Some languages allow marking at only one of these positions, others at two (OM versus Post-FV/post-verbally). Languages also differ in how many object pronouns are allowed at OM and in which object they regard as the default object. See 5.4.

2.6.9 Relativization

Relativization in Bantu is usually marked on the verb. Meeussen reconstructs the original situation as characterized by use of pronominal markers at Pre-SM or SM and by tonal harmony in which the tone of the verb-final vowel mirrors that of the

initial element. He distinguishes direct (subject) and indirect (object) relative. They are illustrated in (14), above.

Many languages have kept this system, others have deviated. The range of deviation is considerable, including many languages which mark relatives verb-finally or verb-internally. The examples on the left in (29) show verb-final relatives (usually the vast present), while those on the right show the verb-internal strategy:

- (29) Ngazidja wandu wa-hul-a-o wandu o-wa-jo-(u)-hul-a
 (Comorian, people 3p-buy-FV-REL people REL-3p-FUT.REL-INF-hit-FV
 G44a) 'People who buy' 'People who will buy'
- Mwiini (G412) munt^hu t_hesh-el-ó ni Núuru
 person laugh-past-REL is Nuru
 'Nuru is the person who laughed'
- Giryama (E72) ninwi mu-ni-sikira-o o ahaho ma-ri-o-guza
 2p 2p-1s-hear-REL DEM.REL children 3p-past-REL-sell
 'You who hear me' 'The children who sold'
- go makumba ni-ndi-go-ocha
 DEM.REL fish 1s-FUT-REL-roast
 'The fish which I will roast'

From verb-final to verb-internal in this case is an easy step, hinted at in 2.3.11, above. Relatives were first established from post-verbal demonstratives as word-final clitics on regular verbs, auxiliaries, and copulas, then auxiliaries and copulas plus infinitive were slowly incorporated at TA, and the relative moved with the auxiliary / copula, resulting in structures such as those on the right above (see Nurse and Hinnebusch 1993: 405–8). See 2.2.1 and 6.1.1.

2.6.10 Subject (pronouns)

In most Bantu languages, pronominal subject concord is compulsory and marked at the left edge of the verb, at SM. A few languages (e.g. C85 (Rottland 1970: 45), older Swahili (Miehe 1979)), and contemporary Mwiini (see (29)) may delete subject markers, widely or in some contexts. A few languages (C101, L52, P311) put the SM subject at the right hand edge in relatives, either as clitic or independent pronoun: in (14c), above, it would involve replacing the noun *muntu* by a post-verbal clitic or pronoun.

2.6.11 Taxis

Being about the relationship between the tenses or aspects expressed in different verbs in the same utterance, taxis is marked verbally mainly at TA, less often at Pre-SM. It can also be indicated non-verbally, by independent words. See Güldemann (1996, 1997, 1998).

2.6.12 *Tense*

Tense is most often encoded at TA and/or by a tone pattern. It may also be encoded at TA and FV together. It is marked less often at Pre-SM, and in a very few languages at Post-FV. Tones are sometimes all that distinguishes two different tenses. See Chapter 3.

2.6.13 *Valency-changing (derivational) categories*

These always occur at Extension. The commonest ones are: applicative (dative, prepositional), causative, extensive, impositive, passive, positional (stative), reciprocal (associative), repetitive, reversive (separative), stative (neuter), tentative (contactive). See Schadeberg (2003a).

2.7 **Non-inflection: compound constructions, clitics, and particles**

This book is concerned with categories expressed by inflection and also with the sources of some of the inflectional morphemes and the grammaticalization paths from sources to inflections. These paths are by now well known (see Heine and Kuteva 2002; Bybee *et al.* 1994: 40–1). For Bantu, the sources are typically structures involving auxiliary verbs, or non-inflecting particles. In 2.2.3, structures consisting of two (or more) words were mentioned. One of these is particularly relevant to the rest of this book—that comprising one or more inflected auxiliaries and an inflected main (lexical) verb. These are here called compounds, or compound constructions, and compound is used only to refer to these, and not other, structures. As a glance at the displays in the Appendices indicates, they are very widespread in Bantu. They are also widespread cross-linguistically (Heine 1993: 68, from Bybee and Dahl 1989: 56) in carrying meanings, especially aspectual. Comparison of a few matrices will show clearly that synthetic structures in one language (e.g. E51) regularly correspond to analytic structures in others (e.g. E22). One conclusion of this wide distribution would be that these compound constructions should be assumed to be old in Bantu. A second consequence is that this book will not often distinguish between single verbs and compound constructions as exponents of aspectual (and sometimes other) categories. On the other hand, structures are not included as exponents if they appear to be merely and always sequences of auxiliary and infinitive, unmodified semantically, phonologically, or syntactically, (such judgments are not always watertight, based on the sources).

At pre-SM and at post-FV some languages have morphemes whose morphosyntactic status is not always easy to judge from the sources. Some are clearly (non-independent) clitics, some are (independent) particles, some are between the two or their status is unclear. Unless they are unambiguously particles, they are included as

exponents of tense and especially aspect, and are explicitly mentioned in the notes in the Appendices.

- | | | | | | | |
|------|---------|-----------|-------------------------------|--------|--------------|----------------------------------|
| (30) | Shambaa | ti-dik-e | 'Let's cook' | versus | ne-ti-dik-e | 'We will cook (F ₁)' |
| | (G23) | ti-dik-a | 'We cook' | versus | ne-ti-dik-a | 'We used to cook' |
| | | ti-dik-ie | 'We cooked (P ₁)' | versus | ne-ti-dik-ie | 'We (had) cooked' |

The pre-SM *#ne* here acts as a shifter,¹¹ which moves the time of the situation further away, to future or past, from the time of reference suggested by the verb without the *ne*. Examples in the texts at the end of Besha (1989a) suggest that this *ne* is connected to, and so probably once derived from, the conjunction *ne* 'and', but its current status in Shambaa is that of clitic, which can attach to various structures, not just those illustrated.

For more detailed discussion of specific particles and clitics, see 2.9.2, below. For discussion of specific compound structures, see especially Chapter 4.

2.8 Structures in the northwest (Forest) languages (see 1.3)

The term 'the northwest (or Forest) Bantu languages' is used in this book as a purely geographical label and implies no classificatory claim. This section looks at those languages which do not share the structures sketched in 2.2.6 and 2.3, above. For this purpose fifteen languages from Zone A, twelve from Zone B, eleven from Zone C, three from D10, and varieties of D20, D30, and Zone H were selected. Although the zones have little general diagnostic value, in this case they had some value, in that many of the A, B, and C languages shared a set of features, which were seldom or not shared by the D or H languages. Not all the features were found in all A, B, or C languages, but they are typical of the area as a whole. What follows relies on the verbal data presented in the Appendices, plus an extra language for each of A10-20, A40, A70, B10, B50, B80, C10, and C50. The non-verbal data relies on the sources given for each matrix language in the Appendices. The characterization should not be relied on absolutely at this point, because the quality and quantity of the data varied considerably.

A set of phonological processes is widespread in the northwestern area, affecting vowels, tones, and consonants. Two main processes affect vowels. One is the loss of final vowels. In some languages all final vowels are lost, in others only certain vowels, or vowels in certain contexts. In most languages the loss is complete, in a few languages the result is schwa. This occurs in some A10, A40, A70-80, and in some others, such as B50, B80, and C80.¹² The result is codas ending in a consonant. The other vowel process is vowel harmony, most often vowel height harmony, occasionally ATR harmony. Most often this works from stem vowel into suffixes, and most often

¹¹ 'Shifter' is here used differently from Jakobson's (1991) usage.

¹² Also Zone L languages, such as Kete, Kanyoka, Uruund, Lunda, and others.

the degree four vowel [a] is raised one degree to [ɛ] or [ɔ], depending on the preceding stem vowel. Occasionally (e.g. in Nomaande) vowel harmony also goes from right to left. Occasionally (e.g. in Duala) vowel harmony even lowers the vowel of the *-i* suffix. Vowel harmony of this type occurs in A, B, C, the D languages, and H10.

Three tone phenomena are notable. One is the widespread presence of floating tones. While this may be partly an artifact of contemporary tonological analysis, it mainly reflects the loss of vowels, mentioned above: while the segmental part of a syllable is lost, its tone remains as a floating, unattached tone that docks on a following, or sometimes on a preceding vowel. Floating tones are mentioned for some A10, A40, A70-80, plus B80, and C10-20. A second is metatony, whereby in certain TA forms a high tone replaces a low or falling tone on post-radical syllables (e.g. of extensions) as well as on a following non-accented low syllable, if and only if the verb is not phrase-final, that is, followed by other material such as object or adverbial. It occurs widely in Zones A and B and also in a few C languages, in D13 (Mituku), D27 (Bangubangu), and some H10 (see 5.3.3). The third is the role played by tone in marking tense and aspect. Across Bantu in general tense and aspect are marked by some combination of segmental and prosodic features. Although this is not quantifiable, I have the strong impression that, although it occurs widely in A, B, C, D, and H, tone carries a much larger relative role in Zone A languages. The best example is A46, where only three segmental markers at TA, /ma, ka, ŋa/, encode eight different tenses, by having different tonal patterns associated with them.¹³

The main process affecting consonants is loss at positions after C₁ in the stem. The synchronic part of this is the repeated statement in descriptions of some Zone A and many B languages that while the full range of consonants occurs at C₁, fewer and fewer consonants occur progressively from C₂ to C₃ and C₄. The diachronic side of the coin can be seen in Guthrie (1971), where the consonants reconstructed for Proto-Bantu have different reflexes at C₁ and C₂, the latter often being weaker reflexes (e.g. *t > r) or zero.

The phonological loss just outlined leads to morphological loss. Words, especially verbal words, are shorter in many Zone A and some adjacent Bantu and Bantoid languages, because of restrictions on the number of syllables allowed in the word, and loss of final segments. There is also some loss of initial segments (Grégoire 2003) but it is less significant. The loss of final segments and restrictions on the number of syllables allowed affects stems and extensions—there are relatively few extensions in the northwest languages. It particularly affects morphemes in the final vowel slot. It affects consonants at other positions also. So for example across many of these languages, *k is deleted, which means there is no longer a segmental contrast between *ka ‘various’ and a ‘past’. In principle, the result of this morphological attrition could be either that the grammatical categories carried by the lost morphemes were lost, or marked in another way. In practice, the overall result of this shortening and loss

¹³ Also Yanzi, Nyali, and others (see Appendices).

of morphemes is that the categories they once carried are now encoded differently. Hence the enhanced role of tone, especially of floating tones, in marking tense and aspect. Hence also the tendency to analytic forms, in which strings of free pre-stem morphemes replace, or occur beside, the inflectional structures seen outside the northwest. This is mainly seen in some Zone A languages (A20, A40, A80-90). Care is necessary, because as Creissels (2000: 235, 238) says, in some languages verb prefixes are misleadingly identified and written as free morphemes. In the same languages another, apparently compensatory, feature is the heavier use of the post-final vowel position, one of the two positions to which newly grammaticalized material gravitates. It is noteworthy that most Zone A languages have no object marker position before the stem, or make limited use of it. Instead, object pronouns occur at the post-final vowel position, or after the verb, as clitics or particles. This also occurs in many B, C, the D languages, and H20-30. Even tense markers can be found in this position (e.g. in D10). The morphosyntactic status of some of this post-verbal material is not always clear.

While across much of eastern and southern Bantu, the set of suffixes in the final vowel position is small, stable, and fairly predictable, (*/-a, -e, -ile, -a(n)g-a/*), it is larger, more varied, and less familiar in the northwest. This is partly because some of the familiar set is absent. Thus in parts of A, B, and C, and H there is no segmental trace of *-e* 'subjunctive', but there is a form in *-a*, or with no final vowel, with some of the tonal characteristics of the *-e*. Few A, B, or C languages have *-ile* as do the eastern or southern languages: either it is not found in A, B, or C, or only in very reduced contexts, or—the most common pattern—with *-I* instead of *-ile*. A few languages alternate *-I* in regular verb stems with *-ile* in short *-CV-* stems. Similarly *-ag-* is often reduced to [a], [ɣ], or [k].

At the same time, to compensate for lost material elsewhere, new suffixes at post-final vowel or clitics have appeared (see 2.9.2(ii), below).

Languages don't exist in a vacuum. The parts of West Africa forming the western border with northwestern Bantu are among the linguistically most crowded and fragmented in the world and likely have been for some millennia. It is not possible here to examine the total distribution of the features discussed above across all of West Africa so we limit ourselves to the Grassfields Bantu languages, as outlined in Watters (2003). I am aware that at least some of these features occur in other neighbouring Bantoid languages (e.g. Ekoid¹⁴ and Mambiloid) and in other Niger-Congo languages further west.¹⁵ The Grassfields languages are a cluster of some fifty languages and are Narrow Bantu's nearest cousins, along with other clusters spoken in the same area. They are spoken in southwestern Cameroon, immediately to the north of, and adjacent to, many Zone A languages (A10 and A40-50-60 being closest). It is also worth mentioning that the average area occupied by a Grassfields language community is twenty square kilometers or less, so innovations can diffuse

¹⁴ See Watters (1981).

¹⁵ Hyman (2004) shows many of these features in more acute form in the Kwa languages.

easily from one language to its neighbour. The following features, discussed above, are mentioned by Watters (2003) as characteristic of Grassfields Bantu languages: loss of final vowels, leading to CVC syllables and stems; the widespread presence of floating tones and a multiplicity of contrastive tones, resulting directly from the loss of vowels (initial and final); loss of consonants in final (stem, syllable) position, leading to many monosyllabic CV roots: phonological loss leading to morphological loss, thus morphemes and words, especially verbal words, are reduced in length, due to the loss of final (and initial) segments; loss of final segments particularly affects extensions and the final vowel position, so that extensions and final vowel morphemes familiar from Narrow Bantu are not present or only skeletally so (Watters shows traces of **-aga* but *-ile* and *-e* are not mentioned); the overall result of this shortening and loss of morphemes is that the categories they once carried are now encoded differently. Hence the enhanced role of tone, especially of floating tones, in marking tense and aspect. Hence also the tendency to analytic forms, in which strings of free or cliticized morphemes occur, instead of, or beside the older inflectional structures. The three Grassfields languages examined in some detail (Bamileke, Aghem, Kom) all have analytic structures, as do the (half dozen or so) other Grassfields languages in Watters (2003).

Analytic forms in Niger-Congo and Bantu are discussed further in 2.10.1.

Morphological loss is driven here by phonological loss, in the shape of the loss of final syllables. The epicentre of this phenomenon seems to be in western Nigeria, with radiation eastward to Narrow Bantu Zones A and B, less in C, and traces in H, D10, D20, and D30.

2.9 Other changes from the canonical structure

2.9.1 *Pidgins, creoles, vehicular languages, contact languages, and the like*¹⁶

Care is needed in talking about these languages. Thirty years ago linguists spoke confidently of pidgins and creoles, as if their structures and the processes leading to them differed significantly from those of other languages. Meanwhile we have seen that the differences between them and other languages are not so clear and that pidgins/creoles themselves are of different types, with considerable variation. We have learned to be more guarded and realize that rather than being distinct they are just near one end of the spectrum of linguistic possibilities.

Some contact languages in Africa date from colonial times (Mufwene 2003), and are adequately described, but others pre-date the colonial period. The difficulties here can be illustrated via what is today Standard Swahili. In earlier times, as a coastal language, it underwent centuries of massive structural change and although the likely general circumstances are known, it is impossible to link the changes to specific times or places (Nurse 1997). Other languages are suspected to have acted as contact languages

¹⁶ For partial lists, see Heine (1970), Mufwene (2003), Maho (2003: 650) and their references.

but details are hazy, because of the lack of written records in Africa. Even in those reasonably described, the linguistic results vary and there is no single linguistic result of major language contact.

To avoid all the controversy, this section deals with only three languages for which I have access to reasonable data and which are known to derive from contact situations: Mbugu, Lingala, Kituba.¹⁷ This section treats structure, while 3.8 handles other categorial features.

Mbugu (also called Ma'a: G20A), spoken by over 30,000 people in northeast Tanzania's Usambara Mountains, is known to result from contact between a Bantu and one or more Cushitic communities. The circumstances are controversial and Mbugu is referred to as a mixed language. The verb system, and particularly its inflectional component, are however not controversial. It has been well described recently (Mous 2003*b*). Its TA system is almost identical to that of Pare (G22), known to be the Bantu language in the contact. The inflectional structures of Pare and Mbugu,¹⁸ the TA categories encoded, and the morphemes involved are almost identical (see Appendices for both). Both systems are quite complex. Within Pare itself there is some variation in verb structure and an informed observer would have no difficulty placing Mbugu's verb system within the Pare verbal sphere. As the Mbugu have lived the last several centuries surrounded not by Pare but in daily contact with Shambaa (G23) speakers, it is not surprising that some Shambaa verbal features have rubbed off onto Mbugu but they are few and marginal compared to the solid central block of Pare material. A few features from Swahili, the national language, have likewise penetrated but they also appear in all the languages of the area.

The mixed background of Lingala (C36) is well documented, as is the language itself (at least twenty-three items in the Bibliography). A range of urban and rural varieties exists, and it is spoken in one form or other by at least seven million people, many of them second-language speakers in northwestern DRC. It is classified as a C30 language, which seems appropriate. Maho (2003) lists twenty-three C30 varieties (there are certainly more), which are also fairly well described (some twenty items in the Bibliography). What follows is based on my having looked at ten of them. They are quite similar to each other in terms of the usual variables: number of tense and aspectual contrasts, verb structure, and constituent morphemes.¹⁹ Nearly all C30 varieties have: two past tenses; two futures (a few have one); one or more imperfectives marked by suffixal *-ak-*; a *-mo-*(locative) in the progressive; one future is always marked by *-ko-*, which also often occurs in the present; near versus far past

¹⁷ A different approach would be to ignore known or unknown prehistory and to start from languages having a simplified morphological structure. 3.8 offers a partial approach along these lines, using reduction of tense contrasts.

¹⁸ Their derivational structures (i.e. the extensions) diverge somewhat.

¹⁹ In fact, as readers may see for themselves in the Appendices, C10, C40-50-60 languages are also rather similar and share many of the features listed. Is this because they all have a recent common ancestor, or because they have all been influenced by the lingua franca Lingala? Within C30, C35 varieties appear to be the most divergent.

is marked suffixally as in Lingala, by high-toned final *-i* versus final high-toned *-á*, respectively;²⁰ and a null marker marks present in some languages (e.g. C36), where others have *-ko-* (e.g. C32). The most obvious characteristic of the verb structures of these languages is that they are rather similar, as are many Zone C languages (see *n.19*). On a cline of complexity, two C35 varieties (Ntomba, Bolia, also some C60 varieties) are at one end, while Lingala is near the other, simpler, end, but it is not alone there, several other C30 varieties (also C10, C25, and C53) being almost identical.

Two other features bear mention—object marking and negation. Descriptions of object marking in Lingala vary, some with object marking at OM, others having it post-verbally. Negation is expressed by a post-verbal particle. Those two features represent a partial dismembering of the structure seen in 2.3-4-5. But many C30 languages have the same tendency to analyticity,²¹ as do other Zone C languages (see Leke, Mboshi, and to a lesser extent C40-50-60, as can be seen from the Appendices). So it is not obvious that Lingala structure differs significantly from, or is more simplified than, other C30 varieties or other Zone C languages.²² Nor is it obvious that these Zone C languages are very different from, or more simplified than other Bantu languages.

By contrast with Mbugu and Lingala, Kituba (H10A) certainly has a simplified and altered structure. As seen in the Appendices, its verbal structure is: subject # TA # (ku-) root-Ext-FV # object # NEG, where subject pronoun, TA morphemes, object, and NEG are all self-standing morphemes, clustered around a verb nucleus consisting of root - extension - FV, thus essentially an analytic structure. There is no concord between subject and verb. The only inflections are at FV, *-a* and *-aka*, the latter having extended its domain from habitual/imperfective to past. Some TA markers derive transparently from auxiliaries, as can be seen by the lingering infinitive marker *ku-*. They are *ke* ‘present imperfective’, from *-ikala* ‘be’; *mene* ‘anterior’, from *-mala* ‘finish’. The origins of others is unclear: *vanda*, in the past imperfectives, and (*a*)*ta* ‘future’.

Kituba, spoken by some five million people in western DRC, many of them second-language speakers, is said to derive from Kongo (general H10), or, as Mufwene (2003) says, Kongo is said to be its lexifier. A search of the Bibliography produces at least fifteen items dealing with several Congo varieties, geographically quite diverse and covering over a century. Although they are more diverse than C30 varieties, their common characteristics could be stated.

That is not done here but it is clear that, first, the verb structure of Kituba is not like any of them, and, second, it has a simplified and renewed structure. So where other H10 varieties have synthetic structures, multiple pasts (number of futures is variable),

²⁰ In some varieties the final *-á* is supplemented by *-a-* at TA. The morphological contrast used to encode near versus far past appears occasionally to be used to encode perfective versus anterior, as in Bobangi.

²¹ See Motingea Mangulu (2005: 86–90).

²² There may be other simplified varieties of Lingala that I have not seen.

and inherited prefixes and suffixes, Kituba is analytic, has a single past and a single future, and has replaced all inherited inflections by partly grammaticalized auxiliaries. In passing it should be emphasized that not only does Kituba not look like other H10 languages, but it has features that appear to come from elsewhere. One example is its future, formed with *-ta-*, and its anterior with *-me-*, both features of Swahili: could these derive from contact with Zairean Swahili? A second example is its post-verbal negative *ve*, found in no H10 language but widespread in languages further north and northwest.

In sum, these three contact languages show different outcomes in their verb structures. Mbugu has a complex structure, virtually isomorphic with the contact language Pare, with no alteration of the canonical structure. Lingala has some modification, especially in the expression of negation and object pronouns, but no more than most other C30 and several other Zone C varieties. Kituba has undergone a massive move towards restructuring and an analytic structure.

2.9.2 *Renewing structures and categories*

Structures are not set in stone and, as we have just seen, the canonical structure in 2.2.6 is not kept in all contemporary Bantu languages. Besides the particular structural changes found in the northwest languages (2.8) and in some vehicular languages (2.8.1), general tendencies occur across Bantu. This section concentrates on structural (and some general phonological) change, while 3.8 concentrates on tense changes, and Chapter 7 on general categorial change.

Structures are renewed in three main ways, via processes starting at the left edge of the verbal word, processes starting at the right edge of the verbal word, and incorporation and fusion of auxiliary structures.

2.9.2(i) Proclitics Several morphemes not originally in the verb-initial position occur there in some languages today. The distribution of some is too local to bear mention but four occur in reasonable numbers of contemporary languages. They are: *#ni-*, *#na-*, *#nga-*, and *#pa-*.

#ni originated as, and still is in many Bantu languages, the independent, uninflecting equational copula 'be'. It has become a clitic or prefix in much of northeast Bantu, whose members are not all adjacent today but probably once were (Nurse 1989: 20–9). They are the languages in Zones E and F, and also, probably independently, a few languages farther south (M60, Mwera). As proclitic or prefix, it has a number of functions easily relatable to the copula. Thus it is associated with focus/assertion, and with conditionals and relatives (the latter two in Zone F).²³ Examples of progressive (Haya, E22) and focus (Gikuyu, E51, Chaga-Vunjo, E62b):

²³ It also occurs in focus or similar function in some non-Bantu Niger-Congo languages.

- (31) E22 tu-ø-gur-á ‘We buy’ versus ni-tu-ø-gur-á ‘We are buying’
 E51 Ciana ithiire rucini gothambia ngoo
 ‘Children went to the river to wash their clothes’
 (emphasis on the purpose, underlined) versus
 Ciana ni-ithiire rucini gothambia ngoo
 ‘Children went to the river to wash their clothes’
 E62b ny-álewóna msorö
 ‘He saw a man (focus on whole verb phrase)’

The first Haya form is maximally unmarked—it shows neither tense nor aspect, and, fittingly, it represents the vast present,²⁴ and refers to the situation represented by the verb itself, without reference to its profile. The second Haya form narrows the vast present to the immediate present: ‘What are you doing now?’ Answer: ‘Buying (X)’. Although it translates as a progressive, what #*ni* does in Haya is to focus on the current situation.

#*na* was originally, and still is in most Bantu languages, the independent, uninflecting conjunction ‘with, and’, usually linking nominals. It also widely forms the basis for ‘have = be with’. It occurs as clitic or prefix in a scattered distribution in languages outside the northwest, but mainly in two unconnected areas, K10-30-40 and G20-G40-E56-E71-E72. Its functions are diverse: with infinitives, with subjunctives, with pasts (narrative and non-narrative) and with futures. The scattered geographical distribution and the range of functions suggest it became grammaticalized at different times and places from *na* ‘and, with, have’.

- (32) Daisu na-ti-doj-a ‘We buy, are buying, will buy’ (Nurse 2000a: 50)
 Luvale ná-vá-ø-tángisa ‘They will teach’

#*nga* relates to what Guthrie (1971: 145) and Meeussen (1967: 115) refer to variously as the ‘affix’ or ‘comparative index form’ *nga*. Its geographical, functional, and semantic distribution is not documented but it is widespread. Assuming it was once an independent, uninflecting form (conjunction?) translating as ‘like, as’, it has become clitic or prefix in scattered languages right across Bantu, but especially in Zone M and adjacent languages (N10, etc.). It has various shapes. Its main—but not its only—function as prefix or clitic is to express conditional. It is not hard to see a semantic path from ‘as, like, if’ to conditional.

- (33) M42 nga tw-a-senda . . . ‘If we take . . .’ (lit. If we took)
 M31 li-nga aalile a-nga-li . . . ‘If he had eaten . . .’
 M11 nga-βa tw-a-göd-ile ‘We would have bought (long ago)’
 N14 nga-ti-ø-hik-iti ‘We would have come’

²⁴ See Abbreviations.

- G62 ngee-tu-ø-gús-ile ‘We would have come’
 G44a nga-ri-ø-hul-a-o ‘We are buying’ (exact role of *nga-* here is unclear)
 nga-1p-null-buy-FV-PRG

A second possible source for *#nga* may be by reinterpretation of suffixal *-a(n)ga* ‘imperfective’ on the preceding verb. There is little hard evidence so far for this but it deserves investigation.

#pa was originally, and still is in many Bantu languages, one of three locative prefixes (Class 16), attached to nominals, and therefore, by concord, on verbs. In most languages in which it occurs it is the locative with the most general reference. It occurs as verbal clitic and prefix, mainly although not only in a group of more or less adjacent eastern languages (F25, G50-60, L30, L60, M10-20, N10, P10-20). Its function can be stated most simply as the expression of ‘when, if’. Markers of spatial expression are often adapted for temporal expression, and many Bantu languages do not distinguish clearly between ‘when’ (‘will happen, but when?’) and ‘if’ (‘may happen’). Also involved in the shift from locative to ‘when’ is an extension from purely nominal to nominal and verbal marker.

- (34) Mawiha (P25) pa-tu-ø-shum-ile ‘When we bought’

After moving from independent item to clitic to prefix, the next stage for some markers is to migrate further, to the TA slot. Two of the markers just discussed have moved to the TA position in many languages: *#na* and *#nga*. In this move they are joined by the primary negative *#ka* (see 2.3.1, above).

- (35) Pokomo (E71) hu-na-gúy-a ‘We buy’, and hú-na-gúy-a ‘We will buy’
 Vumba (G42H) ka-na-kufwa ‘He has died = he is dead’
 Bungu (F25) tu-nga-gul-a ‘We would buy’
 Babole (C101) to-ká-sál-í ‘We didn’t do’

Na occurs much more often at TA than in the verb-initial position, *nga* occurs slightly more often at TA than at initial position, and *ka* occurs in fewer languages after than before the subject marker. It is not surprising that *na* occurs most frequently of the three, because as we will see below in this section, there is another route it can follow to reach the TA position. When these three move from initial to after the subject, they do not much change their meaning. This suggests that the main semantic shift to tense or aspect marker has already occurred at clitic or prefix, and once that has happened, what remains is a structural shift to the TA position. In a very few languages both positions are possible, suggesting the shift can be seen still taking place, thus Shambaa (G23):

- (36) G23 t-a-ngá-dika, or angá ti-za-dika ‘We would have cooked’

Perhaps unsurprisingly, none of the *#ni* and few of the *#pa* move to the TA position. I assume that there is meaning in the location of verbal morphemes relative to the

root. Morphemes whose meaning interacts closely with the meaning of the root are likely to be near the root. Extensions modify the meaning of the root and are so adjoin it. Tense and aspect markers affect root and extension and are one remove away. But the scope of #*ni* and #*pa* in most cases is the whole verb/predicate, hence verb-initial position, so they don't move to the TA position.

Why does #*ka* 'primary negative' move to the NEG₂ position after the subject? Examination of the languages with *ka* at NEG₂ rather than its traditional position before the subject marker show two patterns, both of which involve restructuring. Either *ka* is now the only negative marker, that is, it has spread from before to after the subject marker and occurs at both positions (e.g. Babole, Kumu, Kwezo, Kete, Umbundu), or, more commonly, all negative marking, whether it involves *ka* or some other formative, occurs at NEG₂ (most Zone A languages, many B, some C, scattered languages in D and E, several major Zone F languages, M10-20-30, and a few others).

2.9.2(ii) Enclitics Enclitic is used here to refer to any clitic that occurs in the position after the final vowel. In some languages there is only one position after the final vowel and usually only one morpheme in that position (see 2.3.11). In other languages up to three morphemes can occur here, and when they co-occur, they do so in a fixed order:

- (37) Koti k-uu-séél-el-a-ni-vo-ru
 (P311) 1s-PAST.FOC(?)-sweep-APP-FV-2p-LOC-PUN
 'When I had swept for ye here'

In Lunda (L52) only two of the three may co-occur:

- (38) L52 tal-eenu-ku
 look-IMPp-LOC
 'Look there'
- bayi mu-tal-i-ku-ku
 NEG ye-look-FV.SBJ-LOC-NEG
 'Don't look there'
- or bayi mu-tal-i kwo-ku
 NEG 2p-look-FV.SBJ LOC-NEG
 'Don't look there'
- or bayi mu-tal-i kwo-ku-ku same as preceding, with reduplication (of locative)

The last three Lunda examples raise a question about the status of what occurs after the FV: enclitic(s) may also occur as free particle(s). At this point it should be noted that the status of some of what are here called enclitics is not always discussed in detail in the sources, so some may be (attached) enclitics, and others (free) particles. What occurs at post-final varies across Bantu, and some of it is quite localized. Ignoring very local phenomena, five categories occur after the final vowel. The most widespread is the -(V)nV, mentioned in 2.3.11. It occurs in some part of every zone (Zone R?), is

clearly a clitic, and the amount of phonetic variation in its regional shapes attests to its great age.

Second most widespread is a range of formatives associated with negation. They are quite divergent in shape. They occur in most languages of Zones B, C, H, and L, and in at least some languages in A, D, K, E, G, N, P, and R. In some languages (Kongo, Suku, Hungu, Lucazi, Lunda, Uruund, Umbundu) they are associated with a pre-verbal *ki-/ke-/ka-*: whether it is particle or clitic is not clear. Most appear to have started as in French, where the pre-verbal *ne* was stage one, strengthened at stage two (Old French) by the addition of post-verbal *pas*, and reduced at stage three by deleting the original *ne*. Many Bantu languages have something like this, whereby the pre- and post-verbal parts can co-occur, or the pre-verbal part can be omitted. The divergent shapes and the geographical distribution of these post-verbal negatives suggest this form of negation has occurred several times and quite independently, and that the phenomenon and the specific morpheme can probably be transferred from one language to a neighbour. The two largest regional groupings for negatives of this sort, with similar and possibly relatable shapes, are: A40-50, A70, B30-40-50-60-70, C80, H10A (shapes such as *-bi/be/pe/we/ve*), and B82, H10, H30, K14, L52 (shapes such as *-ku/ko*):

(39) Basaa (A43) Lingom a-m-bəgɛ́l... bé
Lingom 3s-FUT-carry... NEG
'Lingom won't carry...'

Duma (B51) mɛ́ kí-yemb-á... vɛ 'I am not singing'

Kongo (H10) ke-tu-súmb-a... ko 'We won't buy' (F. Nsuka Nkutsi, p.c.)

It is clear that new negative formatives start at the left or right-hand edge of the verbal word. Their origin needs more investigation. Watters (2003) mentions these discontinuous negatives as characterizing adjacent Grassfield Bantu languages.

A third category of post-verbals consists of object markers, most often referred to by their authors as 'object pronouns' (see 5.4). In some of these languages, object markers do not occur verb-internally, and so only occur in this position: these languages are relatively few in number (16 per cent of the matrix languages) but this is the predominant type in the northwest, in Cameroon, Gabon, Congo, CAR, and adjacent parts of the DRC. In others, running in a broad band to the east and south of the northwest, there is a division of labour, whereby when the verb has two object markers, one occurs here and the other at OM. In most of the languages for which I have data, 'object marker' includes locatives. The status of these post-verbal object markers is not clear in some cases. Examples:

(40) Nyali (D33) a-na-béndá emi '3s-will-hit me'

Lunda (L52) n-a-mw-inka-wu 'I gave him it'
1s-past-3s (IO)-give-it (DO)
'I gave him it'

Koozime (A84) me á si jwe mwân mă
 1s P₂ PFV give child it
 'I gave it to the child'

Watters (2003: 249) mentions such post-verbal or sentence-final objects as characterizing adjacent Grassfield Bantu languages. I examined over a dozen other non-Bantu Niger-Congo languages from different families. Those with the order SOV all had independent pronominal objects in the O position.²⁵ Those with SVO had pronominal objects either at the end of the verb or as independent items after the verb. With one exception, none had an OM as in the canonical Bantu order. The exception is the Atlantic language Bijogo, spoken off the coast of Guinea Bissau, which has an agglutinating structure and a pre-root OM, which may contain but a single pronominal object (Segerer 2002).

The fourth coherent category of enclitics is that of locatives, *-po*, *-ko*, *-mo* (Classes 16–18). Where they are not part of the larger object marker set, they are found in an even smaller set of languages (E102, K10, M50, N20-30, P30, R30). Again, the data is not complete so the set may be larger. These are certainly enclitics in all the languages examined. For example, see (37) P311, above).

Sitting between the object marker languages and the locative languages is a small set of matrix languages (A20, E72, G20, G40, and other, non-matrix languages such as other E70, some G30, L33, etc.), which have relatives, subject and object, including locatives, as enclitics. Thus Bajuni (G41):

- (41) a (G41) chu-nen-a-o
 1p - speak - FV - subject.REL
 'We who speak'
- b buru chu-l-ie-o
 ugali 1p - eat - FV - object.REL
 'The ugali which we ate'
- c chu-end-a-po
 (1p - go-FV - locative.REL)
 'Wherever/whenever we go'

²⁵ The past thirty years have seen three major proposals about the order of sentence constituents in early Niger-Congo. The first, the 'California' approach, was made by Givón (1975b, 1979c), Hyman (1975) and Williamson (1986), who saw Proto-Niger-Congo as having SOV. The second, the 'Cologne' approach, was by Heine (1980), Heine and Reh (1984), and Claudi (1993), who saw Proto-Niger-Congo as having SVO, in contrast to the first group. The third is a modification of the second, starting with Gensler (1994, 1997). While the focus of the first two groups is OV versus VO, the third proposes that early Niger-Congo was basically SVO (where O was a noun phrase) but that a secondary structure S AUX O V Other (where the O was a pronoun) derived from, and coexisted with SVO within early Niger-Congo, and was probably a feature of the protolanguage. Cross-linguistically, S AUX O V is uncommon outside West Africa. In fairness to Gensler's predecessors, it should be said that they or their data also allowed the possibility of S AUX O V (Other). I follow the third position here. Most Niger-Congo languages, Bantu and non-Bantu, are basically SVO today.

Besides these four coherent categories there is an assorted residue of ‘enclitics’. This set of leftovers has no consistent shape nor consistent semantic content. It contains, *inter alia*, markers of past, future, ‘inceptive’, ‘first’, etc. These enclitics are found mainly in parts of Zones A (A20-30, A50), B (B30-40), C (C30-40-50), as well as D30 and H30, and some can be seen in the appropriate matrices or notes accompanying the matrices.

All these enclitics do not generally migrate to the TA slot, they stay at the end of the verb. Whether they start as post-verbal particles and move to the post-final vowel position, or whether, as *-ni*, they start as enclitics, they do not migrate further to the left in the verbal structure. In this they differ from the proclitics and the auxiliary strings that follow. There is one set of circumstances in which enclitics move to a pre-stem position. This can be illustrated by considering relatives in Standard Swahili (G42), a sibling of Bajuni (G41):

- (42) a (G42) watu wa-pig-a-o
 people 3p-hit-FV-REL
 ‘People who hit’
- b watu wa-na-o-pig-a
 people 3p-PRG-REL-hit-FV
 ‘People who hit’

(42a) is exactly as (41a). From verb-final to verb-internal in this case is an easy step. Relatives were first established as word-final clitics on regular verbs, auxiliaries, and copulas, then auxiliaries and copulas plus infinitive were slowly incorporated at TA, and the relative moved with the auxiliary/copula, resulting in structures such as (42b) (Nurse and Hinnebusch 1993: 405–8). See the next section, 2.3.1–2, and 6.2.1.

2.9.2(iii) Auxiliaries and main verb While cliticization and affixation have certainly played a role over the past few millennia in changes in the verb structure, undoubtedly the most productive source for categorial and morphemic, but not necessarily structural, change has been the incorporation of original strings of inflected auxiliary plus infinitive, or inflected auxiliary plus inflected main verb (see Güldemann 1999). Of the two, the former has been more common and more productive than the latter. These strings finish up as (mainly) aspect markers at the TA position. This incorporation has been occurring across Bantu for millennia. In most cases we can only suspect what has happened, because written traditions in sub-Saharan Africa are short, but for Swahili, available written records go back some three centuries and allow us to witness some of these changes in action (Miehe (1979) is a good source of such material). Only the general structural and phonological processes are dealt with here—the details and especially the semantic component are dealt with in Chapters 4 and 7.

The reduction of inflected auxiliary plus infinitive can be seen in the well-known example which results in Swahili’s *me* ‘anterior’. It started life as the imbricated

ile-form of *-mala* ‘finish’: *-mal* + *ile* > *-mele*, wherein *-ile* was the older anterior marker, then:

- (43) Amu (G42a) *tu- \emptyset -mele ## ku-lima
 1p - null - have.finished ## infinitive - cultivate
 ‘We have finishing cultivating’
 (loss of l/_e) *tu-mee ## ku-lima ‘We have finished cultivating’
 (V-shortening) *tu-me ## ku-lima
 ‘We have finished cultivating/have cultivated’
 (ku-deletion, fusion) tu-me-lima ‘We have cultivated’

The last two stages, vowel-shortening and ku-deletion/fusion of auxiliary and lexical verb, might be reversed or simultaneous.

The reduction of inflected auxiliary plus inflected main verb, can be seen in Amu (G42a) and Lungu (M14):

- (44) a G42a tw-a-li-(kuwa) ## tu-ki-nena
 1p-past-be (be) ## 1p-ing-talk
 ‘We were (we) talking’
 (identical SM deletion, ‘be’ deletion) tw-a-lik-i-nena ‘We were talking’
 b M14 tú-cí-lí ## tu-ku-kála > tú-cí-lí-kála
 1p-PER-be 1p-IPFV-buy > 1p-PER-IPFV-buy
 ‘We are still buying’

(43a) may be used to illustrate a further point. Historically, and today still in some Swahili coastal dialects, past was marked by *-ali-*, which is literally *-a-* ‘past’ plus auxiliary *-li* ‘be’. But structural reduction is followed by phonological reduction, which reduces structures at TA to NC, NCV, V, or, most often CV. So VCV [ali] reduced to CV [li], and the ‘past’ meaning became associated with the new shape, thus explaining how ‘be’ came to represent ‘past’. Different Bantu languages tolerate strings of morphemes of different lengths at TA. Most prefer TA markers with the canonical syllable shapes and strive to reduce newly grammaticalized material to one of those shapes. When TA markers have reduced to one of these shapes, only some combination of comparative evidence, the plausibility of certain grammaticalization paths, and restricted geographical distribution helps to unravel what has happened. Partly reduced auxiliaries at TA can be recognized in many of the matrices in the Appendices by their anomalous shapes (VCV, CVCV, CVV, VCVV, VVCV, etc.). A few languages have developed a tolerance for longer strings, e.g. D42 (Nurse and Philippson 2003: 9), E42-43, E50, E60, G20, K10 ((12) above), M54 (17) above).

The verb which serves overwhelmingly as the auxiliary in inflected auxiliary plus inflected verb right across Bantu is ‘be’. Its most common exponent is **-ba* (‘be, become’), almost as common is **-li* (‘be at’), much less common is **-ikala* (‘be, remain, stay, sit, live’). Other verbs are few in number and local.

Verbs most commonly serving as the auxiliary in inflected auxiliary plus main verb in the infinitive are: 'be (at), have (= be with), finish, come, go'. Less common are: 'want, do, say, begin, be able, know, continue, sleep'. The topic of 'be + at/locative' is taken up again in 4.6, 6.1.4.5, and 6.5.

The source morpheme *na* can finish up at the TA slot as a result of two different processes, which explains its frequency in that position. As explained under Proclitics, *na* as conjunction tends to become clitic, then prefix, then to migrate to the TA position. But by a different route, the conjunction *na* becomes the basis for the verb *have* (*ni-na* 'I with = I have'), this verb *have* is one of the verbs which acts as an auxiliary in auxiliary plus infinitive constructions, and so becomes incorporated at the TA position. *Nga* may have followed a similar path but less often.

As mentioned in 1.7.10, Bybee suggested a connection between typology and the speed and frequency of grammaticalization. Absorption of auxiliaries, fusion, and thus morphological change occur often and rapidly in agglutinating languages such as Bantu. That is clearly the case when compared with analytic languages such as Chinese. But it also often strikes observers familiar with Romance and Germanic languages, which are or were agglutinating, that change in verbal structures has occurred more often and more widely in Bantu than in those languages. A particular structural fact accounts for that. In Romance and Germanic, inflection is on the right edge of the verb while auxiliaries are to its left. It is therefore hard to see how the *will* of *she will go* could transfer itself to the suffix position (as in *she goes*) without a major structural change in English (German, French, etc.). But Bantu auxiliaries are on the left of the verb, as are all the relevant inflectional slots, so *tumele##kulima* to *tu-me-lima* is easy to effect.

Zone S languages, also Ewondo, Cewa, and Sena, appear particularly prolific at incorporating auxiliaries and interested readers are referred to the reference sources for those languages.

2.10 Why the structure of 2.2.6/2.5 is as it is

In science, the why-question is always harder to answer than the questions about what, how, when, or where. Why is the order of the constituents in the structure set out in 2.2.6 as it is? What does the order of the morphemes reflect? Is there non-phonological support for the hierarchical view of the verb sketched in 2.5? What follows does not pretend to be a complete answer, merely a start. These questions can be answered in three ways. One says an order was inherited from Niger-Congo into an early Bantu stage, and then into today's several hundred languages (2.10.1). Although it underwent major changes en route, today's order still reflects that structural inheritance, despite a regular turnover in morpheme inventory. A second says that certain parts of the ordering reflect these historical changes (2.10.2(viii)). A third says that the ordering of the grammatical affixes relative to the lexical root is important because it reflects how closely they interact with the meaning of the root (2.10.3). In order:

2.10.1 *The inherited structure: Niger-Congo SP AUX²⁶ OP V Other*

Proto-Niger-Congo and early Niger-Congo had a syntagma SP AUX OP V Other, where SP stands for subject pronoun, AUX for a string of morphemes (words, particles, auxiliaries, adverbs) representing mood, aspect, negation, and other categories, OP for object pronoun, and V for what 2.4 refers to as the ‘inflectional stem’, consisting of a root and two bound suffixes: root-extension-final vowel. All five components of the syntagma are discrete.

This statement is specifically designed to provide a syntactic starting point for the developments that eventually led to Meeussen’s proposal about the morphology of the verb structure of Proto-Bantu, seen in 2.2.6 (8). It does not claim that this was the only syntactic structure in early or Proto-Niger-Congo.²⁷ The representation of the syntagma above is not accurate in several respects. For instance, it makes no reference to the morphological encoding of focus, but since some Bantu languages and some non-Bantu Niger-Congo languages encode focus morphologically at the equivalent of AUX, it is likely that the AUX above should allow for focus, as should Meeussen’s ‘limitative’. Similarly, although AUX in the template above for many Niger-Congo languages would include negative markers, negation can also be encoded before SP and post-verbally, either as clitic or independent item. Finally, it says nothing of relativizers: relativization can be indicated variously in Niger-Congo and Bantu, but Meeussen’s proposal, on the basis of data from many Bantu languages, has relativization marked in the equivalent of the pre-SP slot, which must have a Niger-Congo precursor. It should also be kept in mind that the representation above implies three independent items before V, but there were in fact several more as AUX stands for a string of discrete items. Many languages allow time adverbials (less often, place adverbials) here, the precursors of tense markers.

A majority of the 1,500 or so (500 Bantu, 1,000 non-Bantu) Niger-Congo languages and of the dozens of Niger-Congo branches still have a similar isolating structure today, a structure in which the pre-stem items are discrete.²⁸ Nearly all have what 2.5 refers to as the ‘inflectional stem’: root-extension-final vowel. The final vowel originally expressed aspect (and maybe mood), and the commonest aspectual contrast across Niger-Congo is and was that between perfective and imperfective. The evidence suggests perfective was unmarked, imperfective marked. Contrasts between final lexical vowel and some other vowel, between null and final *-i*, or final *-a* and *-i*, are common. Unfortunately I found no convincing correlation between perfective/imperfective and a specific final vowel. That is, it would be nice to be able to say that, for example, *-i* represented perfective and not imperfective or vice versa, but there

²⁶ The items currently termed AUX were referred to earlier as ‘modality markers’.

²⁷ For parallel and related structures, see Gensler (1994, 1997), Gensler and Güldemann (2003), Childs (2005), Good and Güldemann (2006).

²⁸ The content of this and the following paragraphs is based on Nurse (2007b).

are almost as many cases with *-i* imperfective as *-i* perfective (e.g. Ubangian Gbaya has *-a* perfective versus imperfective *-i*, but neighbouring Zande has imperfective *-a* contrasting with perfective some other vowel or vowels). However, where *-i* participates in the contrast, it is most often the marked member. Many languages also instantiate additional aspects, commonly at AUX. Data from wider Niger-Congo for what preceded this inflectional stem can be ranged on a continuum. At one end are the few Niger-Congo families that have moved to an agglutinating verb structure, that is, all the pre-stem material is prefixal: Kordofanian, most Narrow Bantu, some Atlantic languages, some Bantoid and nearby Benue-Congo²⁹ languages (e.g. Ekoid, Jukun). There are other families or languages near that end of the continuum (e.g. the Ubangian language Zande). Examples of agglutinating structures, with inflectional prefixes underlined:

- (45) Bantu Lucazi (K13) mi-kanda i-ká-tu-a-ka-ci-va-sónek-il-ile-ho
 9-letter 9REL-NEG-1p-P₂-itive-modal-3p-write-
 EXT-FV-postFV
 ‘The letter which we had not just gone to write to
 them then . . .’
- Bantu Ha (D66) tw-aá-ra-gúz-e
 1p-P₂-FOC-buy-ASP
 ‘We have bought’
- Kordofanian (Otoro³⁰) gwiji gwu-ma-riny-in-i
 man 3s-perfect-kill-PASS-PFV
 ‘Man has killed himself/been killed’
- Bijogo (Atlantic)
 (Segerer 2002) Antonio ɔn-an-gboɔɔ-an-ɛ
 Antonio 3s.PFV.FOC-2s-be.big-REC-PFV (A it is who
 is . . .)
 ‘Antonio is bigger than you’
- Jukun
 (Storch 1999a) ku-tə-rí-yag-é
 3s-NEG-PRG-go-SBJ
 ‘He is not going’
- Ejagham (Ekoid)
 (Watters 1981) á-kí-¹kpó-gudí
 3p-PRG-ITR-sell
 ‘They are selling (it) again’

²⁹ Bantu, a low node on the Niger-Congo tree, is a branch of Bantoid, a branch of Bantoid-Cross, a branch of East Benue-Congo, a branch of Benue-Congo (Williamson and Blench 2000: 31, 35). Ekoid is part of Bantoid, Jukun part of another branch of East Benue-Congo.

³⁰ From T. C. Schadeberg (forthcoming).

Zande	kó=a-kp-í
(adapted from Boyd 1995a)	3s P ₂ -die-PFV 'He died' ³¹
	i=á-tá-ro
	3p FUT-beat-2s 'They will beat you'

At the other end are most Niger-Congo families and languages, still isolating, in that the stem is preceded by a string of discrete morphemes (pronouns, auxiliaries, particles, adverbs). Examples of such languages, with the discrete morphemes underlined>:

(46) Nen (Bantu A44)	<u>mé</u> # sa # <u>nd</u> # <u>á</u> # <u>ńó</u> # <u>ból</u> # indi 1s NEG FUT HITHER 2s thing give 'I'll never give you anything'
Ditamari (Gur)	<u>o</u> # twòk-ù <u>o</u> # <u>n</u> # twòk-ù 3s arrive-IPFV 3s DUR arrive-IPFV 'Il arrive' 'Il est en train d'arriver'
	<u>o</u> # <u>bo</u> # <u>n</u> # twòk-ù 3s FUT DUR arrive-IPFV 'Il sera en train d'arriver'
	<u>o</u> # twòk-á <u>o</u> # <u>bo</u> # twòk-a 3s arrive-PFV 3s FUT arrive-PFV 'He arrived' 'He will arrive'
Doyayo (Adamawa) (Elders 2004)	wál # za # <u>gi</u> ' # <u>be</u> ' # <u>gò</u> ' # <u>gi</u> ' # z'éé-z-i-g # máát # lu'u'r Man other IPV CUM HAB IPFV dig-IMM-EV-VN yam theft 'There was a man always digging/stealing cocoyams'
Edo	<u>o</u> # <u>ghá</u> # <u>fékó</u> # <u>ghá</u> # tié # ebé (ad. from Agheyisi 1991) 3s FUT quietly IPFV read book 'He'll be quietly reading the book'
Aghem (Anderson 1979)	<u>o</u> # <u>ká</u> # <u>ló</u> # <u>bó</u> # ghâm-fó 3s NEG/HOR F ₂ hit mat 'He shouldn't hit the mat'
Maandé (Bantu A46) (Wilkendorf 1991)	<u>tu-ti-ńé-su</u> # ket-i 1p-NEG-PRS-1p believe-FV 'We don't believe'

³¹ The = here represents cliticization. # represents word boundary.

Sherbro (Atlantic) ya # bí # ha # cé # wo # ké
 (Childs 2005) 1s have to be 3s see
 'I'll be seeing him'

2.10.2 Innovations: from SP AUX OP V to Meeussen

How do we get from the isolating/analytic verb structure SP AUX OP V to Meeussen's agglutinating template Pre-SM + SM + NEG₂ + TA + OM + [inflectional stem] + Post-FV³²? The answer to that question would fill a book and what follows is merely an outline.

2.10.2(i) Negation: Pre-SM³³ and NEG₂ (2.3.1, 2.3.3, 5.1, 6.1) Negatives in just over half (at least) the Niger-Congo languages surveyed have at least a binary functional contrast, most often between main and subordinate clause, indicative and subjunctive, or indicative and imperative. Some languages have more than a binary contrast, others have a single universal negative, some make contrasts other than those mentioned. Three marking strategies are common: pre-verbal, pre-subject, or prefixal; post-subject; post-verbal or post-FV. Although this third strategy, involving suffix, clitic, or particle, is the most frequent in West Africa, it is ignored here, because not part of the inflectional verb structure.³⁴

That leaves us with the other two, which are the most widespread in Bantu (see 5.2). The Niger-Congo pre-verbal strategy became the Bantu pre-stem position, and the post-subject strategy became NEG₂. Even the morphemes involved are often shared between Bantu and non-Bantu. In 5.2.8, there is discussion, partly based on Güldemann (1999), on how syntactic constructions consisting of auxiliary and infinitive, or auxiliary and inflected main verb, could in principle give rise to grammaticalized negative markers at Pre-SM or NEG₂. While the discussion is well founded, it is striking that non-Bantu Niger-Congo and Bantu have the same pre- and post-subject strategies, and some of the same morphemes, nearly always of CV shape. This leads to the conclusion that Bantu inherited the positions and morphemes, while allowing the possibility that they may have derived long before that from auxiliaries. However, the particular constellation(s) of negative morphemes, structures, and functions we see in Bantu does not occur as such elsewhere in Niger-Congo and so appears to be innovation in Bantu.

2.10.2(ii) Subject pronoun to subject marker Subject (and object) prefixes derive ultimately from independent pronouns.³⁵ Personal pronouns come in many shapes

³² Post-FV is ignored in this section, being minor and peripheral as an inherited feature.

³³ Pre-SM (Meeussen's 'pre-initial') includes negative and relative markers. Relativization is ignored in this section for want of good wider Niger-Congo data.

³⁴ These post-verbal constituents can clearly move across language boundaries: *te* is shared by Bantu C30 and Ubangian Zande, *bo/wo* is shared by C85 and some Grassfields languages, etc.

³⁵ This section deals only with person markers, not with class markers.

and functions: subject pronouns, object pronouns, independent pronouns, cliticized or bound pronouns, emphatic pronouns, full form, reduced form, sometimes compound pronouns, sometimes animate versus inanimate, sometimes dual versus plural, other pronouns, and forms that have undergone phonetic change not often seen elsewhere in the grammar. Given the huge number of Niger-Congo languages and the long period over which they have been developing, it is not surprising that no scholar has so far been brave enough to present an overview. Examination of a limited set of personal pronouns in over two hundred Bantu and a smaller number of Niger-Congo languages revealed a bewildering range of variation.

A few generalizations can be made. One has to do with geographical distribution. The shape of four of the six subject markers suggests they go beyond Bantu into Niger-Congo, thus the 1s *n(i)*, the 2s (*u*, with the degree 2 vowel); the two 3s markers *a* and *u*; the 3p with a bilabial consonant followed by [a]: two are restricted to Bantu and seem to be Bantu innovations (1p and 2p). Second, the characteristic Bantu tone pattern, whereby typically low-toned discourse participants contrast with high-toned class markers, also goes beyond Bantu (e.g. occurs in Ubangian, Yoruba, and maybe others), although not always occurring in exactly that form.

Finally, Zones A, B, C, (and partly H and L) show shapes which are clearly different from those in the rest of Bantu in some cases: the best example is in the 1s, where most Bantu and some other Bantoid languages have *n(i)-*, whereas many languages in Zones A, B, and C and many adjacent Niger-Congo languages have the shape [mV], and also the typical Bantu shapes for the 1p (*tu-*) and 2p (*mu-*) persons plural do not occur at all or rarely in the NW languages, which have a different shape or shapes. This last fact suggests that the grammaticalization of independent pronouns that led the forms in the NW languages must be independent of the process for the Savanna languages, which in turn suggests either that at the time it took place the subject markers were not fully fused with what followed, or that the NW shapes diffused later out of neighbouring Bantoid languages, replacing the older 'Bantu' forms.

2.10.2(iii) AUX to formative and limitative Meeussen's formulation in (8) has 'formative' and 'limitative' as two separate and adjacent slots, the two rolled together as TA in (27, 28). At least some languages in all fifteen Bantu zones have today the active sequence formative+limitative. 6.2.4 and 6.5 suggest that Meeussen's formative slot would certainly have included at an early point in Bantu the morphemes \emptyset 'general present', *a* 'past', and a progressive (aspect) construction based on be+locative+verbal noun: it may have included *laa* 'future': but there is no good reason to think *na* 'various', *ma* 'past, anterior', or *nga* 'concessive' can be so included. Limitative would have included non-tenses such *ka* 'itive' (which later developed other meanings) and *a* 'disjunctive focus': the present evidence does not strongly support the inclusion of *ki* 'persistive, situative' or *la* 'focus'. Other languages today, which no longer have

the active sequence of formative and limitative, have complex TA morphemes such as *a+ka*, *a+ki*, *a+a*, which show that they once had it. Yet others have collapsed it and only allow one slot at TA so the morphemes listed above, and others, all occur in a single slot. Languages with this latter structure are more common in the east and south of the Bantu area (Zones E, G, P, S).³⁶

Such in summary is the internal Bantu evidence for Proto-Bantu ‘formative + limitative’. Formative (largely tense) plus limitative (largely non-tense) is unlikely to have arisen independently and later in many places across Bantu so it is easiest to agree with Meeussen that the original structure allowed formative plus limitative, later replaced by a single slot in many languages, as part of a widespread tendency to simplify the amount of morphological material between SM and OM (excluding NEG₂), and ultimately to reduce it to the canonical shape CV.

How to derive this grammaticalized sequence from the semantically much wider AUX of Niger-Congo? What is the evidence from Niger-Congo languages outside and above Bantu in the family tree? Most Niger-Congo languages are still isolating and have something akin to AUX, with the few families just mentioned having fused their pre-stem morphemes into agglutinating structures, most apparently independently. We know that in morphosyntactic change words and particles become clitics, which in turn become inflections. Auxiliary and modal verbs, such as ‘want, go, come (from), be able, say, finish, be plus locative, do, live, sit’, and the subjunctive are all sources for TAM markers. These processes involved are widespread and well known.

However, this general statement is of limited use with the details of deriving early Bantu TA (*Ø*, *a*, *ka*, etc.) from Niger-Congo AUX. Most Niger-Congo languages have a string of several independent morphemes between subject pronoun and verb stem, many of the morphemes are unfamiliar, most languages do not have tense as such. At the same time they show grammaticalized forms that could have arisen more than once at any time or place before, during, or after Proto-Bantu and are of limited diagnostic value. Thus many Niger-Congo languages have be+locative+verbal noun in progressive forms: many have derivatives of ‘be, have, with, and’ (e.g. *na*) in various constructions: some use derivatives of ‘finish’ (e.g. *-mala > ma*) in anterior, completive, or perfective functions, but these are cross-linguistically common grammaticalizations. Many Niger-Congo languages have an unmarked form for ‘general present’ but that is also common cross-linguistically.

In a few wider Niger-Congo languages (e.g. Supyire (Carlson 1994)), increasingly in languages geographically and genetically close to Bantu, such as Bantoid and Eastern Benue-Congo, and especially in the analytic Zone A Bantu languages of Cameroon, we find an ordering of the constituents of the pre-stem string that is similar to Bantu,

³⁶ As mentioned above, in 2.9.2, under Auxiliaries and Main Verb, a few languages tolerate much longer fused strings.

morphemes (*a*, *ka*) similar to those in Bantu, an increasing number of languages with tense beside aspect, and tense to the left of other categories in the string. It is not possible to point at a particular language or family and identify it as the specific source of Bantu. All this suggests a fluid pre-stem situation, or set of pre-stem situations, at AUX, out of which arose a language or languages with the grammaticalized conventional order we see today in Bantu. Until we have much more detailed knowledge of wider Niger-Congo, we are unlikely to get past this general statement.

2.10.2(iv) Aspect to tense and aspect (Nurse 2007a) A central part of the move from AUX to TA, or more accurately, to formative, is the emergence of tense contrasts. Proto-Niger-Congo and early Niger-Congo had a verb system based on aspectual distinctions, not tense and aspect. The most basic aspect distinction contrasted perfective and imperfective, expressed at final vowel in the stem structure. Other aspects could be expressed at AUX. Most Niger-Congo languages are still aspect-prominent, only a minority having superimposed tense on aspect: Narrow Bantu, Grassfields Bantu, some (all?) Nupoid languages (NW Nigeria), many (but not all) Bantoid languages (SE Nigeria, SW Cameroon), Supyire, Zande, eastern Kru, maybe Igbo and some Cross River languages. The languages which have developed tense can be divided geographically into those which are closely related and geographically close to Narrow Bantu, and those which are not. It seems likely that the geographically sporadic rise of tense in the latter is an independent phenomenon. But the presence of tense distinctions, often multiple, in many Bantoid languages geographically and genetically close to Narrow Bantu suggests that tense may have arisen not at the Narrow Bantu level, but rather above Narrow Bantu in the family tree, somewhere in Bantoid or southern Bantoid. Currently available comparative data does not allow a definitive decision.

Although there is a strong correlation between the acquisition of tense and the acquisition of a synthetic verb structure, it is not absolute, as can be seen by comparing most Bantu languages, which have acquired tense distinctions and a synthetic structure, Grassfields Bantu, which has tense distinctions but keeps the older analytic structure, and Ekoid Bantu, which has no tense distinctions but has moved to a synthetic structure.

2.10.2(v) Object pronoun to object marker (5.4, especially 5.4.4) Comparative evidence suggests that in Niger-Congo pronominal objects would normally occur pre-verbally, but if additional emphasis is required, a pronoun object could be moved to post-verbal position, or repeated after the verb. Most Bantu languages today have the pre-stem OM strategy, that is, they have kept a strict correlation between pre-verbal position and pronominal form. A few, all in the northwest, only have the post-verbal strategy, having apparently generalized it and lost the original pre-verbal position. Slightly more allow both pre-stem and post-verbal marking. Other languages have kept both possibilities for pronoun placement.

Thus what we find today across Bantu can be derived from a Niger-Congo situation and it would be reasonable to posit that Proto-Bantu had the pre-stem and the post-verbal strategies.

2.10.2(vi) The intrinsic ordering of 2.10.2(i) to (v) Can the general processes set out in the five foregoing sections be intrinsically ordered? Going from a string of independent items preceding the inflectional stem to clitics to bound prefixes and agglutinating structures, which items cliticized or become bound first? In descriptions of individual languages today many authors emphasize the role of cliticization. This general emphasis is valuable but limited by its application to those languages which have not yet become agglutinating, not to those which did it long ago. Further, there is a lack of consistency in the examples given for various languages. For instance, several Niger-Congo languages have a TAM marker *-a*,³⁷ frequently occurring after the subject pronoun, and it is often said that this *-a* cliticizes leftward onto the preceding subject pronoun. That this is not always the case can be seen in the Zande example in (45), where *-a* is firmly bound to the material to its right and the subject pronoun may cliticize rightward to it. It is also often said that AUX features in general—aspect, tense, mood, negation—cliticize to the left and finish by being cliticized or bound to the subject pronoun, and that this is a West African feature, apparently transcending phylum boundaries (Childs 2005: 11, 25). The logic of this would be the formation of a pre-verbal complex followed by the inflectional stem, which can be seen in the Maande example in (45).

Again, this is contradicted by the Zande example. This is a fruitful area and would benefit from a comprehensive investigation. Until that time we have to say sadly that we cannot be sure in what order these pre-stem components cliticized and then joined to the stem.

2.10.2(vii) When did the agglutinating structure emerge? As we saw in 2.2.6, modified in 2.4, Meeussen (1967) proposed a template as follows for Proto-Bantu:

(47) Pre-SM + SM + NEG₂ + TA + [OM + [[root - extension] + FV]] + Post-FV

which could be alternatively expressed as Pre-stem material + macrostem (+ Post-FV), as in 2.5. As we have just seen, this derived from an earlier and much looser Niger-Congo structure.

But did the agglutination necessarily take place in Proto-Bantu? Meeussen's initial proposal and the subsequent suggestions to represent his string as a hierarchical structure were based on comparing contemporary Bantu structures, but in fact there are three kinds of contemporary Bantu structure. One occurs in most—hundreds of—Savanna and Forest languages, which have an agglutinating structure similar or identical to that proposed by Meeussen, with a set of derivational affixes immediately following the root, and inflectional affixes in various positions preceding and

³⁷ For a list, see 6.2.4(ii).

following the derivational stem. Some of these languages deviate from the structure, for instance, by encoding object, locative, and negative in the post-FV position (see 2.9.2(ii)). Secondly, some Zone A languages have analytic or multi-verb structures parallel to or instead of the synthetic structures of the majority. Among the matrix languages at least six have such analytic structures (A43, A44, (also A45 and A46), A62, A83, A84, A93 (also A24)), which can be viewed in the Appendices.³⁸ Finally, at least one language, Nen (Mous 2003a) is a clear exception, having not only analytic structures but also a specific structure with three parts: (1) a string of words encoding subject (in the absence of a noun, this is a pronoun)/tense/aspect/negative, followed by (2) object, nominal or pronominal, and finally (3) the second part of the verb consisting of the derivational stem. In other words it has (AUX) O V, not the V O of other Bantu languages. For example Nen (A44):

- (48) A44 mɛ nɔ mokolɔ nɔk
 1s P₁ foot broke
 'I just broke my foot'

Gensler (1997: 68), Hyman (p.c.), and Mous (2005: 424) cite other Bantoid languages spoken nearby as allowing OV in certain constructions:³⁹ Tikar (spoken 100 kilometers northeast of Nen in southwest Cameroon), several Grassfields languages (at least Ndemli, Aghem, Ngwe, Mankon), Ejagham (an Ekoid language). Gensler (1994: 6) mentions that (Bantu) Ewondo (A72), spoken adjacent to Tikar, has analytic structures in which the object pronoun, but not the object noun, may occur as an independent element before the verb. Other northwest Bantu languages allow OV in some circumstances (Grégoire 1993; Mous 2005: 423). This areal feature cuts across the boundary between Bantu and non-Bantu and needs more careful investigation.

As all observers have considered Nen (A44) to be a (Narrow) Bantu language, why does it have this OV structure? Either the structure is transferred from some adjacent language, or it is a relic from a much earlier stage, or it has developed independently over the centuries.

Could this structure in Nen have been taken from another language? This is beset with difficulties. One is identifying that other language—adjacent Bantoid languages are basically SVO (Watters 2003), only allowing OV in some constructions, not OV as the default order. Another is that the contact history of the area is not known (Mous 2005: 424). So without further knowledge, this is not a promising solution.

Similarly, it is possible but unlikely that Nen (and nearby Nyokon, A45) of some 500 Bantu languages kept SOV as a frozen archaism. Not only do no other Bantu languages have this order but the other non-Bantu Niger-Congo languages with SOV as their only or main word order are located much further west in West Africa. Nen is unlikely to

³⁸ Larry Hyman (p.c.) says that in some western Bantu languages there is little evidence that the 'prefixes' are part of the same word, even though they are conventionally so written.

³⁹ Güldemann (forthcoming) has others, further away.

have managed to survive for several thousand years as an SOV island, surrounded by a sea of SVO languages.

That leaves the hypothesis that the SOV order is innovated in Nen. This is just the solution proposed by Mous (2005; see also Gensler 1994, 1997), who presents a detailed and plausible scenario for SOV as innovation, originating in a infinitive construction which allowed an O to follow or precede (an areal feature). So we can set aside the possibility that the SOV order characterized Proto-Bantu and is an innovation in Nen.

That still leaves us with the issue of whether the Proto-Bantu verb was analytic, partly agglutinating, or fully agglutinating. Where and when did agglutination take place: (a) among a cluster of related Bantoid⁴⁰ languages spoken by communities clustered together in SE and NW Cameroon four or five millennia ago, or (b) in pre- or Proto-Bantu alone, today's distribution among nearby and related languages being due to subsequent spread, or (c) after Proto-Bantu broke up and early Bantu moved out of the West African linguistic area, or (d) by some combination of these models? At a workshop in London in April 2006 three specialists addressed these issues. All had worked independently and approached the issues from slightly different angles: Good and Güldemann (2006) used evidence from grammaticalization and information structure, comparison of Bantu morphological and morphosyntactic structures with those in its nearest relatives (Bantoid), and linguistic geography; Hyman (2007) drew conclusions from the phonological and morphological status of verbal prefixes within Bantu; Nurse (2007b) considered evidence from grammaticalization and the linguistic distribution of verb structures within wider Niger-Congo. All agreed that (a) late Proto-Bantu⁴¹ was at least partly agglutinating and (b) it is still too early to reach a definite conclusion on the issues, despite understanding the variables better than we did some decades ago.

Based on the evidence presented in Chapters 3, 4, 5, and 6, I would go further than my colleagues at that workshop. With the exception of the few Zone A languages, other Bantu languages have innovated the pre-stem agglutinating structure. It is axiomatic in comparative linguistics that the most economical explanation for daughter languages having innovated identical structures is that the structures developed once historically and were then inherited by the offspring. That is, it is unlikely that Bantu languages, singly or as groups, developed similar or identical agglutinating verb structures after the Proto-Bantu stage. However, once the basic structure was established, it was not set in stone. It could be broken down, by phonological change, or it could be expanded, by grammaticalizing new compound structures and reducing them to a single word. Similarly, the morphemes that occurred at the first four positions in (27, 28) are very similar across Bantu,⁴² and in particular those at TA. Again, the

⁴⁰ One of the few non-Bantoid agglutinating languages is Jukun. Storch (1999a) suggests this is a recent—and therefore independent—development in Jukun.

⁴¹ For the distinction of late versus earlier Proto-Bantu, see 6.1.

⁴² For this and following, see 6.2.

limited set of inherited morphemes at TA is not set in stone. Later, as will be seen in the following chapters, compound structures were reduced and grammaticalized, giving birth to new TA morphemes, thus swelling the TA inventory. These two factors—identity of pre-stem structures across Bantu and identity of morphemes at TA (also Pre-SM, SM, and NEG₂)—incline me to think that late Proto-Bantu had essentially the agglutinating structure proposed by Meeussen, but not necessarily with the whole inventory of morphemes we find today at TA in Bantu languages.

In that case, how to explain the analytic structures in the Zone A languages mentioned above? Three possible hypotheses offer themselves for this messy situation.

The weakest is that at an early point in the Proto-Bantu period, when verb fusion was still fluid, the main early Bantu community moved south and east, solidifying the fusion en route, while the ancestors of those Zone A languages remained within the ‘West African analytic zone’ and never fully fused. In practice, it is hard to imagine these languages hovering on the brink of fusion for four millennia, and why would A40 and A60 remain analytic while adjacent A50 fused, A80 and A90 remain analytic while nearby A70 fused, and apparently—if the data is correct—A22 fused but its neighbour A24 did not?

The second possibility is that these languages once had a synthetic verb structure but replaced it. Two pressures could have conspired to produce this result. One is the presence of a surrounding ring of analytic languages, with a number of bilinguals, in constant daily contact, presenting alternative analytic structures to the synthetic ones already in place. The second would be that the phonetic attrition that operated at the right edge of the verbal word would slowly but inevitably reduce the phonetic and morphological substance of final vowels and extensions (see 2.8). These carried grammatical categories and either those categories would be dropped or reencoded by the grammaticalization of auxiliaries to the left of the stem. The evidence suggests that the latter happened.

The last possibility is that these languages do not derive from Proto-Bantu, that they are not and never were Narrow Bantu languages. This is not the time or the place to go into what is and what is not a Narrow Bantu language but it needs at least to be said that Bantu is not really convincingly defined. For decades, the position of the Mbam languages (A60, A44-45-46) relative to Bantu has been controversial. Among others, the authors of the latest *Ethnologue* (Gordon 2005) represent A60 and most A40 languages as being outside Narrow Bantu. The verbal features examined here suggest a continuum from clearly Narrow Bantu (most) to clearly not Narrow Bantu, and where one places these Zone A languages depends on the features one sees as diagnostic.

2.10.3 The logic of today’s structure

The two previous sections set out what is known or assumed about the historical background of today’s verb structure. In what follows I ignore Nen and the diffused,

partly analytic structures found in some Zone A languages and concentrate on the synchronic structure of most Bantu languages as set out in (27, 28). Languages are not simply the sum of their inheritance plus changes undergone during their development. Morphological structure also reflects certain organizational principles, specifically that the order of elements relative to the root in inflecting languages is not haphazard. 2.5 showed that phonology, especially prosody, suggests a certain structuring of the verbal word. A connection between prosodic and morphosyntactic features would be expected on the grounds that one of the main functions of prosodic features is to carry and support grammatical features, so we would like some non-phonological support for—or contradiction of—this hierarchical structuring. Such support can be sought using semantic or functional criteria. Remarkably little cross-linguistic work has been done on this. The most relevant work remains Bybee (1985), particularly her chapter 2, ‘Semantic determinants of inflectional expression’, in which she examines categories widely associated with verbs: valency (expressed in Bantu via the extensions), voice,⁴³ aspect, tense, mood, and subject and object agreement (person, number, gender). She examines general principles governing inflectional (and derivational) expression, particularly ‘relevance’.

‘A category is relevant to the verb (stem) to the extent that its meaning directly affects the lexical content of the verb stem’ (Bybee 1985: 15). In Bantu terms, the valency extensions such as causative, applicative, passive, reciprocal, and reversive are very relevant to the meaning of the basic notion expressed in the verb root because they directly affect its meaning and the number and role of participants in the situation. Basic aspects such as perfective, imperfective, and anterior are also relevant to the verb because they are sensitive to the meanings of different verb types (Aktionsart) by describing how the types represent the distribution of the situation within a given period. For an action verb, for example, anterior represents a situation that is completed but relevant, whereas for a stative verb anterior represents the continuing state resulting from an action initiated in the past. On the other hand, agreement is less relevant to the meaning of the verb stem, because it deals less with the meaning of the verb and more with relating the verb and its categories to other arguments in the utterance. Between very relevant categories such as valency and aspect and less relevant categories such as agreement are intermediate categories such as tense. Since Bantu languages are agglutinating they would be expected to mark verbally categories that are not so expressed in other languages, and indeed, Bybee’s investigation does not include negation, focus, or relatives, which are encoded on the verb in most Bantu languages. Her general scale of ‘relevance to the verb’ is, from high to low: valency, aspect, tense, mood, agreement.

She then presents a statistical examination of how often these categories are marked in a sample of fifty languages, selected carefully and—lest there should be any suspicion of bias—not containing a single Bantu language (and only one Niger-Congo

⁴³ Passive voice is expressed via an extension in Bantu, so is not morphologically distinct from valency.

language). Valency tops the list, occurring in 90 per cent of the test languages, followed by aspect (74 per cent), mood (68 per cent), tense (50 per cent), and object agreement (28 per cent). Subject agreement is not treated as a single category but is divided into number (68 per cent), person (56 per cent), and gender (16 per cent). A following section reports how these categories, excluding valency, are ordered relative to the root, on the general principle that elements that function together and are closely linked grammatically and semantically tend to occur together, so are expected to occur nearest to the verb root. Not unsurprisingly, aspect occurred closest, followed by tense, mood, and (person) agreement. In another section, she looks at the possibility that surface phonological fusion is an indicator of a close relationship between root and categories that has long endured.

'Relevance' can also be seen in terms of scope. Valency categories have a major effect on the meaning of the verb root and as such occur next to it, forming the derivational stem, so the scope or domain of valency is the root. The scope of aspect, and mood, is the derivational stem, not just the root. More peripheral categories such as tense and subject agreement take the whole resulting inflectional complex and relate it to the external situation and to the participants in the utterance, so their scope is the macrostem.

How do Bybee's findings fit with Bantu structure and with the prosodically based suggestions about structure suggested above? One detail in particular affects the application of Bybee's scale of relevance. She deals with languages where all the inflection is on the same side of the stem, but in Bantu there is limited inflection on the right of the derivational stem, in the 'final vowel' position, with most inflection to the left. Historically, that may be explained by saying that the limited inflection to the right may be frozen morphology, left over from a time where the order of sentence constituents was different (Givón (1971a, b)). Synchronically we may modify Bybee's linear formulation. Bantu was traditionally analysed by first expanding the root by adding the suffixed derivation extensions, to which the suffixed material at final vowel was then added, followed by all the inflectional prefixed morphology. I think the reason for this was the simple shape of the imperative—it is possible to omit all the prefixal material but not the final vowel. This is also the result arrived at by phonologists over the last quarter century, using quite different criteria (see 2.5). If the linear requirement is loosened and this approach followed, then Bybee's criteria and results are useful.

Her analysis suggests that the closest relationship between root and any category would be that involving valency. The prosodically based hierarchy above suggests that, working out from the root, the first stem would indeed be the derivational stem, root plus extension(s). It should be noted that, following Bybee, the distinction derivational versus inflectional affix is not used here, but if it were used, then the extensions are considered derivational, and further, that morphologists have a rule of thumb for the ordering of morphological elements, which places derivation nearer to the root than inflection (so inflection derivation root derivation inflection). So the traditional and prosodically based derivational stem fits well with Bybee's morphosemantic findings.

The prosodic analysis suggests that the next step would be the inflectional stem, combining derivational stem with final vowel. ‘Final vowel’ comprises different constituents across Bantu but these morphemes occur widely (taken from 2.3.10, and see Chapters 3, 4, and 6): *-a* neutral, indicative; *-e* subjunctive; *-ile* anterior/past; *-I* anterior/near past; the vowel copy suffix anterior/near past; *-a(n)ga* imperfective; negative *-I*. The latter is ignored here, because its distribution in Bantu is limited and its role across Bantu not clear, and because its possible relationship to other suffixes of the same shape is also unclear (see Chapter 5).

Essentially, at final vowel, two broad categories are encoded: mood (*-a*, *-e*) and aspect (the others). Suffixal *-e* ‘subjunctive’ is clearly modal, and while *-a* is a portmanteau morpheme with several functions, a major function is to serve as the indicative counterpart to *-e*.

Examination of many Bantu languages, as exemplified in the matrices, shows *-ile*, *-I* anterior/near past, the vowel copy suffix, *-a(n)ga* with a range of functions and meanings today, but it can be argued that their original role was essentially aspectual, as it still is. Since Bantu tense/aspect systems are in constant motion and have been for some five thousand years, uniformity of function or meaning cannot be expected. Although it may have started life as an extension (see 2.3.8, 2.3.9), *-a(n)g-a* occurs as final suffix in many Bantu languages today, and where it so occurs, it carries a variety of imperfective meanings (general imperfective, habitual, durative, etc.). The picture with *-ile* is more complicated, as examination of the matrices shows that across Bantu it represents anterior (‘perfect’), perfective, near past, all/any past, and far past. I will propose in Chapter 6 that the original meaning was probably anterior, on the basis of what is known cross-linguistically about grammaticalization: anterior (aspect) to perfective (aspect) to past (tense(s)) is widely attested as a grammaticalization path, whereas the opposite rarely occurs (Bybee 1985; Heine and Kuteva 2002). The same argument applies to *-I* and the vowel copy suffix. In sum, these four final vowel suffixes encode imperfective and anterior aspect, pleasing music to the ears of those who claim perfective and imperfective are the two basic aspects in the world’s languages (although they may prefer to hear perfective rather than anterior).

So far, the successive bracketed structures suggested by prosody—root, derivational stem, inflectional stem—correspond fairly well to the ordering suggested by Bybee, if the linear requirement is relaxed. She was not influenced by thoughts of Bantu, and perusal of the Bibliography in the writings of those Bantuists responsible for the prosodic structure suggests they did not know of her work, nor take it into account. So Bybee and the phonologists arrived independently at a rather similar view of the structure of the verb.

One feature of Bantu structure that doesn’t agree with Bybee’s findings is the position of the suffixes here interpreted as encoding mood (*-e*, *-a*). Bybee would have aspect nearer to the root than tense and mood, and tense in turn nearer than mood. By Bybee’s predictions, the Bantu mood suffixes are therefore in the wrong place.

Taking the next step in the prosody-based structure, that of the macro-stem—inflectional stem plus pre-stem object marker—the fit with Bybee's proposals breaks down again. In her scenario and in the statistical picture, concord, both subjectival and objectival, is to be expected at the periphery of the verbal word. In many Savanna Bantu languages, all object agreement or at least one object marker occurs in the pre-stem position. By the principle that elements that are closely linked grammatically and semantically tend to occur together, then in SVO languages one would expect to find subject agreement on or towards the left edge of the verbal string, and object agreement on the right edge. In most Bantu languages, agreement for subject does so occur but not for object, which occurs to the left of the stem. As pointed out in 2.10.1, 2.10.2(v), and 5.4.4, the explanation for this is that it appears to be a relic of a Niger-Congo syntagm SP AUX OP V, not common worldwide but widespread in Niger-Congo.

Proceeding leftward beyond OM, prosodic analysis gives little help, as its proponents have not given it much attention and tend to regard Pre-SM, SM, NEG₂, and TA as an undifferentiated string. Bybee's approach suggests that tense is more 'relevant' to the verb than subject agreement, occurs nearer the stem in her sample, and therefore predicts that it will so occur in languages not covered by her sample, as it does in Bantu. Certain caveats are in order. One is that, while most Bantu languages allow just one morpheme at TA, several allow two, three, or even more. Meeussen's proposal in 2.3.4 of 'formative' (straight tense) followed by 'limitative' (consecutive, itive, persistive) covers one possibility but not all. For the purposes of the current discussion, I assume that any number of temporal markers at TA can be labelled 'tense'. A second caveat is implied by the very use of 'TA', not just 'T'. That is, there are rather conservative languages such as Gikuyu, where tense and aspect are largely kept apart, tense being encoded in the pre-stem position, and aspect mainly at final vowel (Bennett 1969). But many languages today—such as Haya and Sukuma—encode tense and aspect, but especially tense, by a combination of morphemes at TA and FV, with a mixing of functions and positions—although it is largely aspect which appears in the pre-stem position, not tense at FV. And there are others—such as Swahili—where the FV has atrophied and plays a reduced role, with only *-a* indicative or neutral, *-e* subjunctive, and *-i* negative. This leaves the TA position expressing tense, aspect, and modality (e.g. conditional). Faced with the variety apparent in five hundred languages, I look for generalities. One such is that comparative reconstruction suggests that at an early Bantu stage, tense was largely encoded at TA, and that is still the majority position today. If the verbal word is viewed as building outwards from the root, then the incorporation of tense (at TA) is one step further away than valency and aspect, which corresponds to Bybee's proposal.

Finally, some remarks about negation and relativization, remarks intended only as pointers, not as a complete analysis. Relatives and some negatives tend to have the whole verb as their scope. Most, though not all, Bantu languages express relatives as

prefixes (Nsuka-Nkutsi 1982): object relatives at Pre-SM, and subject relatives at SM but tonally or structurally different from absolutes. Both have in common that they relate the verb to a preceding constituent external to the verb, and have the whole verb as their scope, and it is thus not surprising that they usually occur early in the verb, at its left-hand edge (in an SVO language).

A majority (at least 55 per cent) of Bantu languages have two or three negative contrasts (see 5.2.3), together with three common ways of expressing negation: 74 per cent use the NEG₂ position, 58 per cent the Pre-SM position, while a mere 30 per cent have post-verbal clitics or particles. Functionally, negation at Pre-SM is the type linked to denial (see 5.2.4) while negation at NEG₂ is strongly linked to the descriptive function. If these two types are examined morphologically as well as functionally, there are broad areas of agreement. The first type, denial, might be expected to occur at the edge of the verb (typically the left-hand edge in SVO languages), as it refers back to the foregoing affirmation, and forward, by having scope over the whole verbal proposition following. The second type is best handled morphologically by considering not what it follows but what it precedes. In Meeussen's formulation it precedes everything from 'formative' (TA) to the Post-FV. In fact, the post-SM negative is hardly ever followed by tense-aspect markers at TA, this slot usually being blank when the post-SM negative occurs. Its real scope is the following macro-stem (underlined). The absence of tense marking is indicated by use of the null symbol (\emptyset) in the Swahili (G42d) examples in (49):

- (49) G42d a ku-to- \emptyset -pika 'Not to cook'
 b wa-si- \emptyset -o-pika '(Those) who don't cook'
 c ku-to- \emptyset -m-pik-i-a 'Not to cook for him'
 d u-si- \emptyset -pik-e 'Don't cook'
 e (waambie) wa-si- \emptyset -i-pik-e '(Tell them) they shouldn't cook it'

This negative has scope over the macro-stem: either the lexical content of the verb (49a, b), or verb and object (49c, e), or verb and mood (subjunctive overtly in (49d, e), indicative in (49a, b, c). In most Bantu languages suffixal *-aga* 'imperfective' may also occur in most of these contexts, and in some languages *-ile* 'anterior, past' can occur in some of these contexts: so some aspects may co-occur with this negative.

This discussion of negatives (and relatives) is scant, as are most treatments of negation, morphology, and scope. For instance, Bybee (1985: 177) talks of a cross-linguistic preference for prefixal expression of inflectional negation, but her discussion doesn't mention the possibility of two negative types nor does it take verbal typology much into account. Another large lacuna can be seen in how to negate compound constructions, verbs with two, or even more, components (see 2.2.4), discussed briefly in 5.2.10.

2.10.4 Summary of 2.10

At the beginning of 2.10 three questions were posed: Why is the order of the constituents in the verb structure as it is? What does the order of the morphemes reflect? Is there non-phonological support for the hierarchical view of the verb sketched in 2.5? They were answered on three levels: the historical background, innovations in the interim, and synchronic evidence for today's structure(s).

Comparative evidence in Niger-Congo suggests a pre-Bantu structure S AUX OP V Other (2.10.1), perhaps side by side with a S V O Other structure. This differed from the morphological structure of the verb in most contemporary languages in several ways: (a) S, AUX, and OP were independent items; (b) AUX consisted of a string of independent items; some adverbials, encoding aspect, mood, negation, focus, direction, and mood; (c) while some of the AUX items are retained in one form or other in today's structures, other contemporary components are clearly new; (d) the evidence suggests a binary negative contrast, but how it might have been encoded is not clear, as negative markers occur not only at AUX but also before S and after V; (e) early Niger-Congo was aspect-dominant; and (f) V comprised [root + valency + final vowel].

Changes and additions moved this structure towards what occurs today (2.10.2). Prominent changes were particularly (a) the extraction and postposing of OP, (b) the development of the sequence of tense (formative) plus other categories (limitative), (c) the emergence of tense alongside aspect categories, (d) the development of a dual negative-marking strategy before and after the subject pronoun, and (e) the eventual fusing of what became the INFL components to each other, to subject and object pronouns, and to the V in an agglutinative structure. The notion of Proto-Bantu was not heavily invoked during the discussion, because it is difficult to pin down when these innovations appeared. The weight of current evidence supports Meeussen's hypothesis that the verb in at least late Proto-Bantu had an inflectional structure. Some details of the structure set out by Meeussen are less solid, specifically, the positing of a pre-initial slot; the dual negative strategy; and possibly the assumption of the post-final.

Finally, there are two kinds of evidence about the nature of today's structure, one resulting from examination of the prosodic characteristics of the verbal word in Bantu, the other being comparison with the typological universals proposed by Bybee. Between the apparent details of the genesis of the verbal structure, starting back in Niger-Congo, and the details of today's prosodically based INFL and inflectional stem⁴⁴ there is much agreement. The inflectional stem is older, and as such is the domain of segmental and prosodic processes found widely in Bantu. The components of INFL were added later, are thus less fused with each other and with the macro-stem, and share fewer phonological processes.

The fit with Bybee's proposals is less complete but nevertheless reasonable. Her basis of semantic relevance—and morphological scope—was found useful. Once the

⁴⁴ 'Inflectional stem' as used in 2.5.

requirement that categories all be realized on the same side of the root is relaxed, then suffixal valency, followed by final-vowel aspect suffixes, followed by prefixal tense and subject agreement, in that order, fit with her findings. Similarly, even though she only mentions negative marking briefly and relative marking not at all, certainly the Bantu exponents of ('denial') negative and the relative at pre-initial, occurring as they do at the outside and left edge of the morphological string, are where her criteria of relevance and scope would predict they ought to be.

That said, some parts fit less well with her predictions: (a) position of the mood suffixes, (b) division of inflection between pre- and post-stem position and particularly presence of some suffixal inflection, and (c) the inflectional pre-root object marker. One explanation for these is that they represent frozen historical morphology. A second would be that Bybee's proposals need refinement—testing on a larger language sample, and inclusion of the specific Bantu categories. A third would be that they do not make allowance for functional variation, such as that of the object pronoun.

3

Tense

3.1 Tense

This chapter sets out the general thinking behind the analysis of tense, deals with major categories and their exponence across Bantu, provides examples, examines different kinds of systems, and devotes some space to minor categories.

In Bantu studies in English, the term ‘tense’ is used in two ways. Elsewhere it has been used as a cover term for both tense and aspect, thus any form inflected for tense, aspect, or mood (and sometimes other categories, too) would be referred to as a ‘tense’. In this book ‘tense’ is not used like that, the concepts ‘tense’ and ‘aspect’ being clearly distinguished. Once they are separated, there are several definitions of tense, which differ mainly by their emphases. Thus Guillaume (1964: 48) defines tense as the different representations of the time containing the event (and aspect as the differing representations of the time contained in the event). A by now classic semantic definition is that of Comrie (1985: 9, 6): ‘Tense is grammaticalised expression of location in time’ (whereas aspect is grammaticalised expression of ‘internal temporal constituency’).

It should be remembered that a structural tendency characterizes the expression of tense in Bantu: where tense and aspect are encoded in separate slots, tense is to the left (see 1.4.8). This is a tendency rather than a universal, because it characterizes most, but not all, Bantu languages.

Comrie’s definition is taken as the starting point for what follows. If that rather terse definition is unpacked, it consists of a number of explicit and implicit components, as follows.

3.2 ‘Grammaticalized expression’ (see also Chapter 6)

Tense can be expressed lexically or grammatically. Many West African Niger-Congo languages closely related to Bantu carry time reference not by verbal inflection but by the use of time adverbials, aspectual verb forms, or some combination of the two. By contrast, with the exception of the northwest languages, discussed in 3.14, Bantu languages express tense by (obligatory) inflection. Most use the pre-stem TA slot (see 2.4, 2.5) as the primary carrier of tense inflection:

- (1) Shona (S10) nd-a-dy-á
 1s-P₁-eat-FV
 'I ate (earlier today)'
 ndi-chá-énd-a
 1s-future-go-FV
 'I will go'
 nd-aka-úy-a
 1s-P₂-come-FV
 'I came (before today)'

Some languages use other positions to encode tense: FV, Pre-SM, and, rarely, Post-FV:

- (2) Pogolo (G51) tu-ø-hemer-iti
 1p-null-buy-PAST
 'We bought'
 Suku (H32) tú-ø-lós-i
 1p-null-throw-P₁
 'We have thrown'
 Dciriku (K332) ngá-tu-ø-ping-a
 FUT-1p-null-inherit-FV
 'We will inherit'
 Mituku (D13) tu-ø-bund-íye-bí
 1p-null-catch-PAST-HESTERNAL
 'We caught'

Some carry tense reference at two positions, usually some combination of Pre-SM, TA, and FV, it being often impossible to split the functions:

- (3) Yanzi (B85) (n^é)-ε-s-í
 (2s) P₂-put-P₂
 'You put (P₂)'
 Lunda (L52) hi-tu-ku-y-a
 F₂-1p-FUT-go-FV
 'We will go (F₂)'
 Yei (R41) z-a-vunj-u
 10-P₁-break-P₁
 'They broke'
 Kota (B25) by-á-lap-á-sá
 They-PAST-disappear-FV-P₃
 'They disappeared'

Table 3.1 Main morphemes involved in affirmative past tense reference in the matrix languages

Morpheme(s)	Percentage of languages with
- <i>a</i> - in any tense	84% ^a
- <i>a</i> - 'past' (with any suffix) ^b	78%
(- <i>a</i> - 'non-past')	27%
- <i>a</i> - . . . - <i>a</i> 'past'	59%
- <i>a</i> - . . . - <i>ile</i> 'past'	43%
- <i>a</i> - . . . -other suffix	15%
Any pre-stem morpheme plus - <i>ile</i>	60%
-∅- . . . - <i>ile</i> ^c	45%
- <i>a</i> - . . . - <i>ile</i> ^d	43%
Any pre-stem morpheme with - <i>i</i> ^e	26%
-(<i>a</i>) <i>ka</i> - with any suffix	15%
Any pre-stem morpheme with -VC ^f	8%

^a This includes three languages (C61, C75, S20) with [o], not [a]. Comparative evidence suggests in all cases this [o] is [a] in disguise, probably the result of [a] plus a following vowel.

^b In some languages, -*a*- occurs with more than one suffix.

^c This figure may be slightly inflated, as it includes a few negative tenses. The suffix -*ile* is also the main carrier of the anterior aspect, especially in conjunction with the null pre-stem marker. Accordingly -∅- . . . -*ile* is treated in 4.11.

^d Combinations of other pre-stem morphemes (e.g. -*ka*-) and -*ile* are rare (L21, G62, M11, M25).

^e This excludes a few languages with -*i* in restricted contexts (e.g. E62). Affirmative suffixal -*i* occurs predominantly with pre-stem null; sometimes with -*a*-; rarely with any other morphemes (C76, L52).

^f The vowel copy suffix occurs mostly with -*a*- or -*na*-, occasionally (G44, R22) with null.

3.2.1 Past tenses

If all the markers of past in affirmative, non-relativized verbs in the database are considered, certain are geographically widespread and common, others are widespread but less common, yet others are merely local. The commonest are displayed in Table 3.1.

It can be seen that 78 per cent of the languages in the database have a form of -*a*- with some past reference. 'Past reference' might mean that it is the only pre-stem marker of past, or marks one form of past (near, far) and not another, or is present in several forms of past, or combines with another marker to mark past, or represents anterior. 27 per cent also have it in non-past, predominantly present, reference but most of this 27 per cent are languages which also have it in past reference. Only 6 per cent of these do not also have it in past reference, so the total percentage of languages with -*a*- in some kind of tense reference is $78 + 6 = 84$ per cent. This makes it easily the commonest pre-stem marker and it is the commonest marker of past reference

in Bantu. Although present in all fifteen geographical zones, it is less frequent in the Forest languages. It is entirely absent from B30-40 and parts of B80, C20-30, and G30-40-50, and absent with past reference from A10 and A40.

The combination *-a-...-a* is more common (59 per cent) than *-a-...-ile* (43 per cent) largely because of the distribution of *-ile*: while suffixal *-a* is almost universal, *-ile* is absent ('lost') in D23, H30-40 and locally in parts of Zones G, K, M, N, and S and the evidence for it in much of zones A, B, C, D10, D30 is scanty: either it has disappeared completely or left traces. Examples:

- | | | |
|----------------|-------------------------------------|--|
| (4) Sena (N44) | nd- <u>a</u> -dya | 'I ate' (single past) |
| Nyali (D33) | k- <u>á</u> -kora (P ₁) | 'We bought' |
| | k- <u>á</u> -korá | 'We are buying, will buy' |
| | | (Harries notes that raising the pitch of the whole utterance gives P ₂ or F ₂ , respectively.) |
| Ewondo (A72a) | ma- <u>á</u> -dí | versus m- <u>a</u> -dí |
| | 1s-P ₂ -eat | 1s-PRS-eat |
| | 'I ate' | 'I eat' |
| Umbundu (R11) | tw- <u>a</u> -land- <u>é</u> le | 'We (have) bought (P ₂)' |
| | tw- <u>a</u> -land- <u>á</u> | 'We (have) bought (P ₁)' |
| Benga (A34) | mb- <u>a</u> -kal(-ak)-a | 'I talk' |
| Swahili (G42) | tw- <u>a</u> -nunua | 'We buy' |
| | tw- <u>a</u> -li-nunua | 'We bought' |

Sena (toneless) *-a-* marks the only past tense. Umbundu distinguishes near and far past by different FV, the tone on both *-a-* being L. In Nyali the *-a-* is high-toned, various suffixal tone and overall pitch combinations differentiating tenses. Although the underlying tones of the Ewondo forms are not known, the surface contrast is clear. Benga *-a-* indicates present (tones unknown). Older Swahili and many coastal dialects today (toneless) (as in the last example above) have two *-a-*, one marking general present, the other fused with what used to be auxiliary *-li* 'be', indicating past:¹ in Standard Swahili the [a] 'past' is deleted: VCV [ali] > canonical CV [li], leaving the remnant auxiliary to mark past.

Next most frequent in past reference are forms with null at TA plus final *-ile* (so $\emptyset \dots -ile$, 45 per cent of the languages). The lower frequency of this also has to do with the loss of *-ile* in the areas mentioned. It refers not only to near past, but also to anterior, so is typically not just a marker of past time. This is further discussed in 4.1.1 and 6.4.2.

Even less common (26 per cent of the languages) are forms with the final vowel *-i*. It occurs predominantly with pre-stem null, much less often with pre-stem *-a-*, and

¹ Nurse and Hinnebusch (1993: 366–7, 386) suggest that the language ancestral to Swahili and its relatives, including Shambala (G23) once had two tonally contrastive /-a-/.

just once with *-na*.² As *ø/-ile*, it marks not only affirmative (near) past but affirmative anterior.³ The B82 example in (5) shows that tone alone may distinguish these pasts.

- (5) Babole (C101) to-*ø*-sál-ak-í 'We did (P₁)'
 to-*ø*-sál-í 'We have done (P₁)'
 Boma (B82) bɔ-*ø*-túm-í 'You sent (P₃)'
 bɔ-*ø*-túm-i 'You sent (P₂)'
 bɔ-*ø*-mu-túm-iN⁴-i 'You sent for him'
 bɔ-*ø*-túm-i 'You sent (P₁)'
 bɔ-*ø*-mu-túm-íN-i 'You sent for him'

It occurs widely in Zones B and especially C, also in parts of A, D, H, and K. It is thus in geographical complementary distribution with *-ile*.

Also infrequent is *-ka-* (15 per cent), most often with final *-a* (8 per cent), occasionally with final *-ile*, or in the shape *-a-ka-*. As a past marker, *ka* occurs in most zones but not with much frequency. As in *-a-*, the vowel of *-ka-* apparently varies in length and tone. In multi-past systems, it refers overwhelmingly to far or the farthest past.⁵

- (6) Tumbuka (N21) ti-ka-timb-a 'We struck (P₃)' (penultimate stress)

Least frequent of all (8 per cent) is the vowel copy suffix, where the FV copies the stem vowel:

- (7) Comorian (G44) tsi-*ø*-law-a 'I came/have come'
 a-*ø*-(e)nd-e '3s went/has gone'
 a-*ø*-him-i '3s (has) stood up'
 tsi-*ø*-mw-on-o 'I saw/have seen him'
 a-*ø*-hul-u '3s (has) bought'

This usually refers to near past or anterior. It co-occurs most with *-a-*, less often with *-na-* and null. It occurs predominantly in Zones K and R, washing over into H20, L60, and also occurring, surprisingly, in B73 and parts of southern G40.

All other past patterns have a limited distribution and appear to be local innovations. They include, *inter alia*, the use of a null marker at TA plus the neutral final *-a*, representing past, near past, or anterior, as exemplified by:

- (8) Zalamo (G33) tu-*ø*-gul-a 'We bought' (penultimate stress)

This null-past is an anomalous innovation in a group of related and mostly contiguous group of languages in Tanzania: some G10 varieties, G30, G403, G43D, G50, and E71, the latter being separate and further north, in Kenya. How could such a null-past have arisen? A key to this may lie in geography. Adjacent and

² In L52.

³ Both *-I* and the vowel copy suffix occur in negatives, in which case they have predominantly non-past reference. This is discussed further in 6.4.2.

⁴ N represents a retroflex nasal.

⁵ The 15% excludes Bukusu (E31), whose [aaxa], referring to immediate past and having an anomalous [aa], seems to be a separate development.

closely related to these languages are two other groups of varieties, Southern Swahili (G43⁶, southern G42), and Comorian (G44), which have the vowel copy suffix, with the same or similar function. The nearest other languages with the vowel copy suffix lie nearly 2,000 kilometres further west, in Zambia, the Democratic Republic of the Congo, and Angola. This apparent gap may be partly bridged by what occurs in the G30 and G50 languages, stretching west in a line from the east coast. If we hypothesize that communities speaking the G30 and G50 languages once came from, or were also spoken further west, that would at once provide a link in the chain between G42-43-44 and the languages far to the west, and suggest that today's *-ø...a* forms in G30 and G50 languages are simplified descendants of earlier vowel copy forms (so **to-ø-gul-u > tu-ø-gul-a*).⁷

3.2.2 Future tenses

Unlike the past, future reference does not show a clear preference for a few markers, there being a range of morphological possibilities, none really widespread. Only one (*laa*) is a tentative candidate for reconstruction for Proto-Bantu (see 6.2.4(ix)).

Although *-ka-* appears in 29 per cent of the matrix languages (Table 3.2), this is a figure significantly lower than that for any of the principal markers of past reference. It occurs in most zones (not G, N, or S), sometimes forms a composite marker with other morphemes, and refers predominantly to far future (6.1.4.3) in systems with multiple future reference. Next commonest is *-la(a)-* (or [ra(a)]), which occurs in 12 per cent of the matrix languages, mostly in the eastern part of the Bantu area, from Lake Victoria down to Zambia, plus five doubtful cases (see Table 3.2).⁸ Tonally reflexes of [la(a)] are predominantly underlyingly low. Derivatives of the verb 'come' provide a third source, occurring locally all across Bantu (15 per cent or 17 per cent of the matrix languages, see *n.15*), outside of the northwest. The variable meaning of these derivatives, the fact that they vary a lot in their degree of grammaticalization, and their scattered geographical distribution, suggest that they do not derive from an early Bantu form but are rather spontaneous and more recent innovations that have arisen, and continue to arise, in different times and places. The only area where virtually all languages share this come-derivative is Zone S. Infrequent are forms ending in a mid front vowel, most often [ɛ] or [e], that derive from subjunctive **-e* (11 per cent). They are not obvious in the northwest languages but this may be because final vowels are often lost there. It is noticeable that there are languages (e.g. Benga, Haya, Bemba) where a future based on the subjunctive only occurs in the negative, not the affirmative: negative futures have even less factual status than affirmatives. Forms deriving from 'come' and the subjunctive tend to refer to near futures.

⁶ Mafia (G43D) is unique in having both the null-past and the vowel copy suffix.

⁷ This would of course not explain why this phonological simplification occurred. It is also not clear whether this is connected to the prosodic situation: all G50, most G30, and many, though not all Swahili dialects (not G412 or G43c) have replaced tones by penultimate stress.

⁸ The only language outside that area is Kele (C55), spoken in the DRC.

Table 3.2 Morphemes involved in affirmative future tense reference in the matrix languages

Morpheme(s)	Percentage of languages with
-ka-	25+?4 = 29% ^a
Derivatives of 'come'	17% ^b
-la(a)-	12+?5 = 17% ^c
Derivatives of the subjunctive	11%
Others	70%+ ^d
No discrete future	9%

^a 25% are clear, 4% less clear. They are: *ga* (A43, A62), *a* (A15), *eka* (D14). Additionally, several languages show a combination of [a+ka], or [ka+a].

^b The 17% includes two languages (E15, E22), for which derivatives of 'come' do not appear in the matrix. In both languages they are in frequent use, although not grammaticalized.

^c The twelve clear cases are: C55, D60, E15-22-25-31, F22, G11, G62, M14, M42, M63. The five doubtful are: D13 (*lo*), E51 (*ree*), F10 (*lo:*), F32 (*#naa-*), M11 (*lu*). I would guess that the vowel in D13, F10, and M11 is [la:] plus some other vowel, possibly the vowel of the pre-prefix of the infinitive. I cannot explain the vowel of E51. As for F32 proclitic Near Future *#naa* (also Far Past *#náa*), the best that can be said is that it uses in the pre-verbal position elements that in nearby languages occur as TAMs, and nearby languages (F21, F22, F24) have *laa* Future.

E15 (also E16 and E55) have [na:]. Are these connected to *laa*? Alternation between [l, r, n, d] is common cross-linguistically (e.g. the Siouan dialects Dakota, Lakota, and Nakota, from a reconstructed *l, and Cree reflexes of *l also include r, n, θ, y). In the northeast Lake Victoria area, where E15 and E16 are spoken, there is a series of villages, whose Bantu names contain [r] but whose Luo versions have [n], so maybe E15/E16 *naa* has to do with absorption of former Luo speakers? E15/16 have *naa* Future corresponding to *laa/raa* in neighbouring languages.

The Romaine (River) in Labrador is named after the original Innu name Uranam (*sipu*), now Unaman (John Hewson p.c.).

^d The total percentages exceed a hundred, because many languages have more than one future tense, and thus more than one formative.

Examples of these markers:

- (9) Lucazi (K13) tu-ka-ímb-a '3s will sing (F₂)'
 Umbundu (R11) tu-ka-land-a 'We will buy'
 Kele (C55) tó-la-kol-aka 'We will work (F₂)'
 Ruri (E253) ci-laa-gul-e 'We will buy (uncertain near future)'
 Cewa (N30) a-dzá-fik-a '3s will come' (-dza 'come')
 Mwera (P22) ci-tu-ø-lim-e 'We will hoe'⁹
 Nyoro (E11) ti-tu-ø-gur-e 'We won't buy' (ti- NEG)

⁹ Ci- probably derives from an original 'say'. Auxiliary 'say' (-ti, -ci) occurs widely in languages of Zambia and adjacent areas.

A regional pattern is worth comment. The E10-20-30-40 languages spoken around much of Lake Victoria have innovated a contrastive pattern in which *-la(a)/ra(a)-* (from **laa*) marks a or the near future, and *-li/ri-* (probably from ‘be’ plus infinitive) marks a or the remote future, so:

- (10) E11 tu-ra-gúr-a ‘We will buy (F₁)’
tu-ri-gúr-a ‘We will buy (F₂)’

At least 70 per cent of the matrix languages have one or more future markers originating in sources other than those above. All are local and of low frequency. While some are of obscure origin, others are fairly transparent. Some derive from original sequences of ‘want’, ‘go’, ‘be able’, and ‘say’, plus infinitive. Others include forms with *-a-*, which presumably came to refer to future as a semantic extension of present; forms with *na*, *li/ri*, and *ku*, presumably semantic extensions and phonological reductions of *na+ku*, or *li-ku*, originally referring to present, imperfective, or progressive. Where the origin is a present of some kind, three stages of grammaticalization can be discerned: initially they refer only to the present, at a second stage this extends to the near, even middle future,¹⁰ and at a final stage, not achieved in all languages, the former present becomes restricted to future reference, as a new marker of present arises. An important feature of these shifts—whether from auxiliary verbs, from subjunctive, or from present reference—is that some semantic part of the original modal component is often retained.

A final, minor, source for futures is in anteriors, which is examined further in 4.10.3.

3.3 ‘Location in time’

Location in time must be relative to some other point in time, to a cognitive deictic centre. Situations are located before, after, or during the deictic centre, normally the present, unless there is a clear indication to the contrary. That clear indication might be specific use of a prior non-present form in the discourse, or it might be understood from the context that the deictic centre is not the present, or it might be implied.

This can be illustrated from Swahili. For some speakers of contemporary Standard Swahili (G42), *-na-* can be labelled (Present) Progressive, that is, it apparently refers to a situation going on at present: *wa-na-zungumza* ‘They are chatting’, as opposed to *w(a)-a-zungumza* ‘They chat (in general)’, *wa-li-zungumza* ‘They chatted’, or *wa-ta-zungumza* ‘They will chat’. For other speakers, it needs a different label, because *wa-na-zungumza* renders both ‘They are chatting’ and ‘They chat’. These interpretations are independent of the context, as speakers of Swahili, if simply presented with the word out of context, will interpret it as meaning ‘They are chatting/They chat’, never ‘They chatted’ or ‘They will chat’. Hence *-na-* is often referred to as the present tense. It is not a tense at all, but an aspect (Progressive) acting as a tense. Let us ignore the

¹⁰ Cf. English *On Friday we go to Kampala* (part of our plan), versus *We are going to Kampala on Friday* (less definite)).

possible distinction between ‘They are chatting’ and ‘They chat’, on the grounds that both are non-past, and both might even be interpreted as referring to present, in one case the immediate present, and in the other case the vast present.

But *na* represents more than just the present. In examples such as:

- (11) G42 tu-li-wa-ona wa-na-zungumza
 we-PAST-3p-see 3p-na-chat
 ‘We saw them chatting’
 wa-li-kuwa wa-na-zungumza
 3p-PAST-be 3p-na-chat
 ‘They were chatting’
 wa-ta-kuwa wa-na-zungumza ‘They will be chatting’

na has no intrinsic time but takes its time reference from the prior tense markers in the phrase. The deictic centre can be marked as being other than present but if not so marked, it is interpreted as the present. If readers examine the displays in the matrices, all the tense markers in the left-hand columns have the present as their point of reference. For that reason they—as *-li-* and *-ta-* above—are referred to as absolute tenses.

Contrasting with absolute tenses are relatives tenses, which have a point other than the present as their reference point. Such tenses are not common across Bantu (see 3.12, below).

3.4 Multiple degrees of location in time

Most Bantu languages—excluding several better-known ones spoken by large communities such as Kituba, Nyanja, Shona, Swahili, and Tswana—encode several degrees of past (especially) and future reference. If languages encoded the real world, since time in the real world is constant, all languages would have the same number of pasts and futures, one past and one future being probably the best candidates. That languages don’t do this suggests that verbal morphology represents conventional human conceptualization of situations, not the situations themselves. For cognitive and historical reasons, Bantu languages have differing numbers of tenses. Using the 100 matrix languages, the numbers are as follows.

These numbers should be viewed as grossly, not absolutely, accurate. For a few languages, for example, it was not clear whether a certain form in the source would be best regarded as a near past or an anterior. For a few others, there was uncertainty about futures (see 3.5). Since only a few languages were dubious, the figures can be taken as a reasonable overview of the overall picture, and, for the reasons set out in 1.2, the database can be taken as being typical of Bantu. In fact, percentages were also calculated for the 210 languages in the larger database and were very similar to those below. For a summary of languages with particularly incomplete data, see 1.2.

Table 3.3 Percentage of matrix languages with different numbers of pasts and futures

Number of tenses	No. of languages with ___ pasts	No. of languages with ___ futures	No. of languages where total pasts = total futures
0	0	9	0
1	17	47	15
2	41	25	17
3	31	16	9
4	10	1	1
5	1	2	0

Certain generalizations can be made. Nearly half the languages have a single future, whereas over 80 per cent have more than one past. That is, multiple pasts, with two, three, or four per language, are normal, whereas multiple futures are much less common, with two less common than one, three less common than two, and more than three almost non-existent. So the most accurate statement would be that most Bantu languages have multiple pasts, whereas only half have multiple futures. It would be interesting to see if this imbalance obtains in other language families with multiple tense distinctions. It is tempting to think that the past has more degrees of reference because, having happened, it is open to more detailed representation than the future. Not obvious from the display is the fact that, with very few exceptions (C61, H21, some K10, L52, P22), the number of pasts is always equal to, or greater than the number of futures. Many languages use one present imperfective or other (PRG, HAB) to refer to near future events: these were not counted as futures but as presents, part of whose function was to refer to future.

It can be seen that past and future reference is not symmetrical. Not surprisingly, only in languages with a single past is the number of languages with equal numbers of pasts and futures nearly identical.

The only Narrow Bantu languages purported to have five pasts are some Kongo dialects (e.g. Yombe (H16c), Western Gogo (G11), and maybe Mituku (D13)). There are doubts about all three. They are discussed in 3.7.2, below. Similar doubt exists about most of the languages reputed to have five futures, e.g. Western Gogo and Cokwe (K11), likewise discussed in 3.7.2.

Nine per cent of the matrix languages (slightly more in the larger database) have a non-past category, that is, they have no discrete future. They are: Bakwiri, Nduumo, Mboshi, Kumu, Zalamo, Mwani, Kongo (Zombo), Koti, and maybe Yei. Including languages from the larger database, it is clear that some are genetically related (Pokomo, Mwani, G30), and Nurse and Hinnebusch (1993) suggest that this non-past category may have characterized their common ancestor. The absence of a discrete future in Koti may also be a knock-on effect from Mwani.

A very few languages have neutralized the distinction between past and anterior: Duala (?), Upper Pokomo, Ilwana, Mwiini, Comorian, Makua (?), Venda. Some of these

are or were geographically adjacent (Ilwana, Pokomo, Mwiini, Comorian) so this is an areal feature.

3.5 The time limits for multiple pasts and futures

In languages with multiple pasts and futures, where are the cut-off points between different degrees of remoteness from the present? Where do P_1 , P_2 , F_1 , F_2 , etc. start and end?¹¹

For speakers of most Bantu languages, a day starts at sun-up and ends just before the next sunrise. Tense reference is linked with the state of the communal consciousness. A hodiernal (today) past goes back to sunrise on the same day, the start of the most recent period of communal consciousness. Likewise, a hodiernal future extends to before dawn tomorrow, hesternal (yesterday) and crastinal (tomorrow) work the same way, and so on. Such a temporal framework is specifically discussed in a few of the sources; from remarks made, it appears to be so for other communities for which data was available; and I assume it is true for those for which it was not mentioned. Its widespread distribution suggests it is an inherited feature retained by current communities.

Less clear are the details of the exact time reference for multiple degrees of remoteness. The difficulty lies in the sources. What are the cut-off points for the various time divisions? Is time reference flexible or rigid? Since not all source grammars address those issues, the discussion following cannot give absolute figures for languages behaving in one way or another. It deals rather with tendencies, which need to be confirmed.

For languages with two past tenses, the most common division is to have P_1 referring to hodiernal situations and P_2 to earlier situations.¹² A variant of this, exemplified by fewer languages, is to have P_1 represent hodiernal and hesternal situations, and P_2 to prior situations. An alternative is to have what the sources refer to as recent versus far/remote/preterite. Usually this means that the two divisions are not fixed but flexible, and that P_2 situations are simply more distant than those represented by P_1 .

(12) E72a f-á-gula ‘We bought (P_2 : before today)’, fu-dza-gula ‘We bought (P_1)’¹³

The two futures in some languages mirror their two pasts semantically. That is, F_1 represents hodiernal situations, or hodiernal plus crastinal situations, or occasionally hodiernal, crastinal, and some time beyond tomorrow, while F_2 represents situations beyond that. In the Matumbi (P13) and Tongwe (F11) examples following, even the morphology reflects the categorization (P_{13} /aa/ P_2 and F_2 , lack of /aa/ P_1 and F_1 ; F11 /ká/ P_2 and F_2 , lack of /ka/ P_1 and F_1). In Mpotu (N14), closely related to Matumbi, P_3 and P_2 are morphologically distinct in parallel ways:

¹¹ See Chapter 2, n.3.

¹² Francophone sources have a convention of referring to this as ‘récent’ or ‘d’aujourd’hui’ vs ‘préterit’ or ‘d’hier’.

¹³ For the reference of P_1 and P_2 in Giryama, see the Appendices, under E72.

- (13) a P13 P₂ n-aa-tóumbwiike ‘I fell’ F₂ n-aa-lúwa-tóumbúka ‘I will fall’
 P₁ ni-tóumbwiike ‘I fell’ F₁ ni-luwa-tóumbúka ‘I will fall’
 b F11 P₂ tw-a-ka-ghúla ‘We bought’ F₂ tu-lo:-ká-ghúlá ‘We will buy’
 P₁ tw-â-ghula ‘We bought’ F₁ tu-lo:-ghúlá ‘We will buy’
 c N14 P₃ t-a-hik-iti¹⁴ ‘We came’ F₃ t-â-hek-ayi ‘We will laugh’
 P₂ ti-ka-hik-iti ‘We came’ F₂ ti-ká-hek-ayi ‘We will laugh’

Most of the languages with this morphological symmetry between past and future reference are spoken in the southern Tanzania area, where it appears to be a local innovation.

For languages with three pasts, the most frequent categorization was a division between hodiernal (P₁), hesternal (P₂), and earlier than hesternal (P₃). Less frequent was hodiernal (P₁) versus yesterday and a few days before yesterday (P₂) versus situations before that (P₃):

- (14) Pimbwe (M11) P₃ tw-á-lí tɔ-gód-ile ‘We bought (remote)’
 P₂ (tw-á-lí) tɔ-ká-gɔd-ile ‘ditto (yesterday to last month)’
 P₁ (tw-a-ti) tɔ-gɔd-ile ‘ditto (today)’

Two other categorizations, also less frequent, involved the notion of an immediate past, representing situations of the last few seconds or minutes. Here the division was either immediate (P₁) versus hodiernal (P₂) versus remote (P₃), or immediate (P₁) versus hodiernal plus hesternal (and in a few cases a few days beyond that) (P₂) versus remote (P₃). For three futures, hard data is not abundant but the divisions are similar to those of the past.

- (15) M11 F₃ tɔ-lɔ-gɔl-ánga ‘We will buy (next month to infinity)’
 F₂ tɔ-lɔ-gɔl-á ‘We will buy (tomorrow to next month)’
 F₁ tɔ-kú-gɔl-a ‘We will buy (today)’

For languages with four pasts, the commonest categorization involved the addition of a category immediate: thus the commonest division was immediate (P₁) versus hodiernal (P₂) versus hesternal and some time before yesterday (P₃) versus remote (P₄). Thus Nomaande (A46):

- (16) A46 P₄ tɔ-ŋa-só sómb-ák-a ‘We cut, were cutting (long ago)’
 1p-P₄-1p cut-pluractional-FV
 P₃ nɔ-ŋa-nɔ námb-ak-a ‘You hid, were hiding (yesterday, last few days)’
 P₂ ɛ-ŋá-mɛ táŋ-ák-a ‘I talked, was talking (earlier today)’
 P₁ tɔ-ma-sɔ lɔŋ-ɔk-ɔ ‘We just called, were just calling’

A couple of four-past languages had a division as for three-past divisions but with the addition of a general past. A couple of languages had different divisions.

¹⁴ The *-iti* in N14 (and other languages in the area) derives from *-ile*, and the *-ay-* of *-ayi* is probably a reflex of *-ag-*. The P13 suffix [iike] is an allomorph of *-ile*.

Languages with expanded systems (four or more futures, five pasts) are examined in 3.6.2, below.

With futures, a factor not seen with pasts comes into play. Not having happened, the future is less certain than the past. Future situations cannot always be counted or counted on. Futures mingle what is seen or represented as factual with the speculative. So future divisions are often less fixed than pasts. In practice this is reflected in various ways. At one end of the spectrum are languages (Kpa, Ruri) whose futures are described by the authors solely or mainly in terms of certainty (more, less) and likelihood. At the other end are languages with futures described as representing mainly distance from the present. Between the two ends of the spectrum are other possibilities. There are languages with some futures described by their authors in terms of distance from the present, but other futures in terms of degree of certainty, or of modality. Alternatively, some futures are described by their authors in terms of distance while others are said to represent general future situations and also degrees of certainty. Near future is more or less certain, whereas far/remote future is less certain, even improbable: as B. Masele (p.c.) said, a child considers adult promises or statements about remote future situations as so far away as to make them inconceivable or unlikely to occur (his native language, Sukuma, has three futures). Most authors do not discuss this in detail, so it is hard to know what is primary semantic component and what is implicature.

The anonymous author of the Tumbuka (N21) grammar lists six forms for representing future situations, of which only one appears in the matrix. In fact, there are more because some may co-occur and the present can also refer to the near future. The semantic variables are not all clear—often described in terms such as ‘difficult for a European mind to grasp . . .’—but obvious variables are emphasis, duration, distance in time or space, and being on the way to or from the deictic centre.

Similarly, for nearby Sena (N44), B. Heins (p.c.) mentions four possibilities for future reference, of which two appear in the matrix. As for Tumbuka, they are not put in the matrix because several are patently ungrammaticalized auxiliaries:

- (17) N44 *ndi-na-dya* ‘I will eat (near, more certain)’
 ndi-na-ti ndi-dy-e (far, more certain: AUX *-ti* ‘say’, SBJ *-e* in second verb)
 ndi-sa-funa ku-dya (near, less certain: *-funa* ‘want’)
 ndi-na-dza ka-dya
 (far, less certain: 3s SM lost on second verb: *dza* < ‘come’)

These cognitive considerations are reflected in how futures are morphologized. While all tense reference in Bantu is like a slow kaleidoscope, constantly shifting, examination of how past tenses are formed morphologically reveals that past morphemes and past morphology are relatively stable, compared to futures. A fairly small number of morphemes is involved in pasts, and past is mostly marked transparently at TA. Futures are much more variable. Only two TA future morphemes have more than

local distribution. One of these (*laa*), although not widespread, is of long standing in Bantu (see 6.2.4(ix)), the other (*ka*) is most likely a semantic or functional innovation at an early stage of Bantu (see 6.2.4(iii)). Many morphemes marking future are local and/or recent innovations, and they sometimes retain part of their original modal meaning (see discussion in 3.2.2).

A feature hardly touched so far is whether time reference is fixed or flexible. Comrie (1985: 90) makes the point that one Bantu language he examined, Haya, has fairly rigid cut-off points by contrast with others that appeared more flexible. Only 150 miles away, Sukuma has flexible cut-off points. In a book such as this, it would be desirable to be able to quantify Comrie's point, by saying whether the Haya or the Sukuma situation was more frequent. That proved impossible because most sources do not comment on the flexibility or rigidity of the remoteness system. In the larger database, some twenty-five languages are explicitly described as having flexible reference, while most of the others, the majority, simply do not mention this. The silence is neutral, it does not comment at all on this point. One fact that argues in favour of many more having a flexible reference system is that some descriptions explicitly mention clear cut-off points in the grammar, while clearly then breaking the 'rules' in the texts appended at the end of the description. I would therefore guess that flexible, relative time reference is more frequent than are rigid cut-off points.¹⁵

How does this flexibility work? With verbs referring to daily situations, that can be talked about in fairly fixed terms that speaker and listener agree on ('He read the article yesterday', 'We will meet tomorrow'), cut-off points between tenses work in a predictable way (hodiernal, hesternal, crastinal, remote past or future, etc.). But many situations are not rigid. Thus in some languages, applied to farming events that only occur annually, such as the planting season, the nearest past would refer to the most recent planting, the next to the planting in the previous year, and so on. Similarly with other kinds of events, such as the life span of huge trees as opposed to small plants, or divine versus human events, the various pasts could well refer differently. The way the speaker sees events or wants to depict events is also relevant. So while it is therefore not really possible to say with absolutely certainty that flexibility is more frequent than rigidity, it is possible to give examples. Thus Beshu's (1989a) book on Shambala includes a historical narrative and, relevant for our purposes, a discussion (ibid.: 293–300) of the use of tense forms in that narrative. Shambala has two degrees of past reference, near and distant. If used with the moment of speech as the reference point, then near past normally represents situations that occurred in the previous day or two, with distant past beyond that. If used of units of time (week, month, year, etc.), then near past represents the previous two or three units, with distant beyond that. Her historical narrative has a young interviewer and an elderly narrator discussing the foundation of the royal clan, an event that occurred centuries earlier. One would

¹⁵ Hyman (1980) discusses and exemplifies absolute and relative reference in Bamileke, a Grassfields Bantu language.

expect both participants to use the distant past, but while the young interviewer does use this, the elderly narrator uses the near past. Besha (p. 294) explains this as follows:

The possible explanation for this is the relationship between the narrator and the narrated events. Being a chief, he is a direct descendant of the founder, a part of that history. To him, then, the events might have taken place a long time ago, but because their effects are a ‘present reality’ (or have present relevance), they are near in his perspective. To the young man, on the other hand, those events are just an interesting piece of history. He had attended formal school, and grew up at a time when tribal tutorship had almost come to an end.

I have found instances such as this in several of the source grammars or articles. In some cases, the authors, aware of the flexibility of reference, mention it in their text. In other cases, it only becomes apparent by comparing statements about time reference in the text and comparing these with actual (contradictory) usage as exemplified in accompanying texts.

An example of a different kind occurs in Lucazi, K13 (Fleisch 2000). He shows three futures, a simple future (‘action about to start’), a definite (‘deemed certain’), and a remote (‘more distant, more likely not to materialize’). Time reference can only be one variable here, as in the texts all three co-occur with the same time adverb, ‘tomorrow’ (*mene*, or *ci-mene*):

- (18) (ibid.: 204) va-ka-hiluka cimene ‘They will return tomorrow’ (ka: simple)
 (ibid.: 150) mene mutu-ka-iza ono a-kaku-livanga hano hanjamba . . .
 ‘Tomorrow, when we (will) come (ka: simple), one who will arrive first at the place of the elephant (kaku: definite) . . .’
 (ibid.: 152) mene tu-aku-ya ‘Tomorrow we will go (aku: remote)’

As mentioned above (3.5) and in Fleisch’s categorizations, the time component combines with modal factors such as degree of likelihood in future reference, which is presumably the case here, although that is hard to judge from the translations.

Watters (2003) and Hyman (1980) both say that in Grassfields languages time reference may be absolute and relative.

3.6 A problem of interpretation: anterior (= perfect) versus near past

One reason the numbers in Table 3.1 should be treated with caution is because of the difficulty of distinguishing anterior (aspect) and near past (perfective), in which the perfective is also an aspect, but typically unmarked in Bantu): should a form in a given language be treated as anterior or recent past? In some cases it is clear, in others not. In English it is clear because *They went* (past) and *They have gone* (present anterior) are systemically, structurally, and semantically distinct (see 1.4.1). That would also be true in some Bantu languages, but the distinction is less clear in others (see 4.11). There are

two main reasons for caution here. One has to do with the nature of anteriors (widely called perfects, see 4.11). An anterior often involves the same situation at an earlier and a later time, chronologically ordered. Either the present or later state results from that earlier situation (mostly for stative verbs) or the past situation is relevant to the later situation (mostly for dynamic verbs). While in principle any past situation could have consequences for the present, in practice it is predominantly recent situations that do: if we are sitting now, that is most likely because we sat down recently, not two weeks or two years ago. So there is a close connection between recent pasts and anteriors and some authors did not choose to, or were not able to differentiate them.

The other reason has to do with the language of the authors of some of the sources for this book. It is notable that many of the Bantu languages described as having no 'perfect' were analysed by authors whose first language was French (or German), especially languages in central and west African francophone countries. Most contemporary varieties of French and German have two forms, which appear to instantiate past versus perfect: French *Nous allâmes* versus *Nous sommes allés*, German *Wir gingen* versus *Wir sind gegangen*. But these pairs are no longer semantically distinct in most speech, differing only in register. In both cases the first member of the pair is literary, the second oral and everyday. Both can have similar functions—Simple Past. Both translate into English as *We went* or *We have gone*. So if a francophone linguist asks a question involving *Nous sommes allés*, or translates a Bantu form as *Nous sommes allés*, is that an anterior/perfect or is it a simple past? Few francophone writers resort to translations such as *Nous allâmes*, which in any case does not solve the problem, because any real functional difference between that and *Nous sommes allés* disappeared centuries ago (Comrie 1976: 61). There are notable exceptions among francophone writers but even they are not always consistent. Analyses of Bantu languages produced by the Tervuren school were done either by francophones or others using French as their language of communication. The result is that Tervuren analyses typically have no category ANT, by contrast with analyses of Bantu languages done by anglophones, which usually do have this category. That is, the analyses take Bantu facts and give them French- or English-based analyses. How to resolve this? By providing not just translations into French or English but by stating carefully what the verb forms represent.

How then to distinguish a perfective near/very near past from an anterior/perfect? Four practical methods offer themselves, which will resolve most but not all of the difficult cases.

One is systemic. In languages such as Gikuyu (E51), which expresses basic tense-aspect contrasts in a single word,¹⁶ aspect is encoded inflectionally at the post-stem FV position, whereas tense appears at the pre-stem TA position, and never the twain shall meet. Thus:¹⁷

¹⁶ However, even Gikuyu expresses some aspects by compound constructions (Mugane 1997).

¹⁷ Tones shown are underlying, kindly supplied by Patrick Bennett.

(19)	E51 (-rug- 'cook')	Far Past /-a-/ Perfective /-irɛ/ Anterior /-eetɛ/	t̀w-à-rúg-íré 'We cooked' t̀w-à-rúg-éeté 'We have cooked'	Middle Past /-raa-/ t̀ò-ráà-rúg-íre 'We cooked' t̀w-à-rúg-éeté 'We have cooked'
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Here tense and aspect coexist in a single word and are clearly discrete, so tenses such as far past, middle past, and near past are clearly distinct from aspects such as anterior and perfective. By contrast, in Swahili, where single verbal words express a single tense, aspect, or other category, all at TA, but combinations of tense and aspect involve compound constructions, the systemic/morphological approach is less useful.

Typologically, Sukuma (F21) lies between Gikuyu and Swahili. As Gikuyu, it uses suffixes, but many aspects, except perfective, are encoded via compounds, as in Swahili. So:¹⁸

(20)	F21 (-göl- 'buy')	Far Past /-aa-/ Perfective (-a) Anterior (-ile)	d-áá-göl-ǎ 'We bought' d-áá-lǐ d-ö-göl-ilě 1p-P ₄ -be 1p-buy-ANT 'We have bought'	Near Past /-á-/ d-áá-göl-ǎ 'We bought' d-aa-lí d-ö-göl-ilě 1p-P ₁ -be 1p-buy-ANT 'We have bought'
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A second test involves examining compound constructions. The first member of the compound contains an auxiliary such as 'be' (-li in Sukuma, above), the second contains the lexical verb. Both parts of the compound are inflected. The first, auxiliary, part allows any marker, tense, or aspect, but only members of a small set of aspects (anterior, progressive, -*kl*-, but never perfective) can appear in the second, lexical, part. As a result, many Bantu languages are like Swahili (G42) in having tense in the first verb and aspect in the second, or aspect in both, but never tense or aspect in the first with perfective in the second. Thus:

(21)	G42	Past /-li-/ Perfective (unmarked) Anterior (-me-) lit. they were they-have-bought but not	wa-li-nunua 'They bought' wa-li-kuwa wa-me-nuna 'They had bought' *wa-li-kuwa wa-li-nunua ¹⁹	Future /-ta-/ wa-ta-nunua 'They will buy' wa-ta-kuwa wa-me-nunua 'They will have bought'
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There are a number of components to these systemic and morphosyntactic differences. In many Bantu languages anterior and near past (perfective) are encoded

¹⁸ Tones kindly supplied by Balla Masele.

¹⁹ See also 4.3 for more detail.

differently; if they are, then typically near pasts appear to the left, and anterior to the right; in languages which use compounds such as those above—which is the case of most Bantu languages—antérieurs tend to be expressed in compounds whereas perfectives are typically one-word verbs. The fact that the anterior marker (Gikuyu *-eete*, Swahili *me*, *-ile* in Sukuma and many other languages) typically co-occurs with markers of past and future suggests it has no independent time reference of its own.

A third test is how anterior behaves with different kinds of verbs: stative or inchoative versus dynamic.²⁰ Stative verbs represent states whose elements are unvarying, as is the speaker's knowledge of the situation. 'Know' is a typical stative verb. Once one knows that two and two is four, that knowledge will not alter until death or incompetence intervenes. By contrast, dynamic verbs represent a situation involving a change, with changing components, and usually an end point.

Stative verbs are fewer than dynamic verbs. There is no complete list of stative verbs for Bantu in general nor even for most individual Bantu languages. It is curious that no one seems to have yet produced such a list but comparing the partial lists available for individual languages suggests that these stative verbs occur widely in Bantu: agree, be asleep, die, feel, hate, hear, hold, know, lie/sleep, like/love/want, must, resemble, be ripe, be rotten, see, sit, stand, be swollen, understand, be alive, be angry, be awake, be drunk, be happy, be ill, be lost, be pregnant, be satiated, be spoilt, be tall, be tired, be visible, be wrong, be various colours.²¹

Verbs may be intrinsically stative or stativity may be brought about by changing the valency of dynamic verbs. Certain extensions typically produce forms that are stative: passive, stative (*-ik-*, also called neutral), intransitivizing extensions, extensions that imply being in position or state (*-am-*, *-at-*), and denominatives (*-ip-*). Bantu languages are notoriously short of colour adjectives, so many colour notions are rendered by stative verbs (be black, be red, etc.).

Antérieurs used with stative verbs represent the state resulting from the action, and the translation in English (and other European languages) is a present, whereas with dynamic verbs they represent the current relevance of some prior situation, and translate by a past or anterior. Thus in Swahili *watoto wa-me-piga kilele sana* 'The children have made a lot of noise (so will be punished)', where *-piga kilele* is a dynamic verb, compared to *wa-toto wa-me-lala* 'The children are asleep/sleeping' (lit. they-have-gone.to.sleep): in the one the noise-making was in the past, is now over, but has a consequence, whereas the state of being asleep was entered into in the past and continues now. Similarly Swahili has *tu-me-shiba* 'We are satisfied' (lit. We have become satisfied), *i-me-vimba* 'It is swollen' (lit. It has swelled), *ni-me-i-ona* 'I see it' (lit. I have it seen),

²⁰ In fact, this contrast is too simplistic and readers should consult e.g. Botne (1983b) and Fleisch (2000) for discussion.

²¹ Lists and/or discussion can be found in e.g. Abdulaziz (1996), Doke (1938), Fleisch (2000: ch. 3), Möhlig (1967), Mreta (1998), Quirk *et al.* (1972: 92–7), Redden (1979). Most grammars treat stative/inchoative verbs as taking the category anterior, used 'normally' in dynamic verbs, and using it differently. Doke (1938) proceeds somewhat differently and presents two parallel paradigms for dynamic and stative verbs.

a-me-kasirika 'He is angry' (lit. He has got angry), *wa-me-kaa* 'They are sitting/seated' (because they have sat down), *a-me-fahamu*, or *a-me-elewa* 'She understands' (lit. She has understood). The most obvious way of distinguishing this difference in behaviour is by considering the translations into a non-Bantu language. Because these verbs are so widespread, it is easy to identify them and their behaviour. Many Bantu languages will only have one such anterior, but the test is not absolute because in those Bantu languages with multiple past reference, there may also be multiple anteriors, and a current state might result from situations at different past points.

What is said in the previous paragraph should not be understood to mean that stative verbs only co-occur with the anterior. Typically they can also be used with other categories. Thus in Swahili the same verbs used with the progressive represent the act of getting into the state, so *wa-na-lala* 'They are falling asleep, going to sleep', *i-na-vimba* 'It is swelling', *a-na-kasirika* 'He is getting angry'.

A third way is to check, if possible, the range of reference of the morpheme at issue. Giriyama (E72, see the Appendices, also (12), above) is a close relative of Swahili's, and in many ways the two are intertranslatable, but not in all. Giriyama and Swahili have two morphemes referring to past situations, Giriyama /-a-/ and /-dza-/, which correspond generally to Swahili /-li-/ and /-me-/. As *me*, Giriyama *dza* can appear in the first or the second member of compound constructions. But the relationship between *me* and *li* in Swahili is not quite the same as that between Giriyama *a* and *dza*. Whereas Swahili *li* can refer to any past situation, including quite recently on the day of speaking, Giriyama *a* only refers to events before the day of speaking, not on the day of speaking. For past situations on the day of speaking, it is replaced by *dza*, which can also refer to earlier events, either if they have some relevance to the present, or continue a state entered into in the past, or if they appear recent compared to the range of *a*. So Swahili *me* is an anterior which can refer to recent events but Giriyama *dza* is both a P₁, referring to today, and an anterior, referring to situations before today, and is represented as such in the matrix.

These three tests work quite well if the reader knows the language, or if the material in the sources is rich enough to permit such tests, which is not always the case. Readers can check this for themselves by comparing some of the matrices and corresponding notes in the Appendices. The languages concerned are found especially, but not only, in Zones A, B, C, and D. I mention three cases briefly here²² but for more detail readers should consult the sources. One is Nzebi (B52), analyzed by Guthrie (1968) and Marchal-Nasse (1989). Guthrie sees one anterior ('aspect of completion'), four degrees of past, and a narrative/no specific past time: Marchal-Nasse has three anterior forms ('parfait') and four degrees of past. But Guthrie's single anterior is a past (perfective) for Marchal-Nasse, and her three anteriors are treated as past (perfectives) by Guthrie. So Nzebi appears to have perfectives and anteriors but the two authors are at odds on how to interpret them (see the Appendices, under B52).

²² Others can be found in 3.7.2.

Another is Lomongo (Hulstaert 1938). Hulstaert has a large number of affirmative absolutes (forty-four). Six are degrees of time reference (two pasts, three futures, a null present). So thirty-eight, the majority, are aspectual forms (or aspects other than PFV), including an unusually large number of ‘parfaits’. He shows six affirmative anteriors: simple, reinforced, strong, reinforced strong, special #1, special #2, each combining with the two pasts. He also has a ‘continuatif’ anterior and a conditional anterior, that is, forms with multiple aspects. He admits many of these are hard to separate semantically. It is possible that he has so many forms because his display includes data from different dialects.²³

A third case is Bushoong (Vansina 1959). Vansina shows six forms referring to past. These appear to include four degrees of past: immediate, (probably) hodiernal, prior to hodiernal, and far past. Since they ‘clearly accentuate the idea of the time in which the action occurs’, I assume they are perfectives. Then there is a ‘constatatif passé’, which states simply that an action occurred in the past, and finally an ‘absolute’, which refers to a past action of which ‘no trace remains’. As the matrix shows, I have not interpreted any of these as anterior, but I am not sure what ‘constatatif’ and ‘absolute’ represent.

In these and other cases I leave readers to interpret the data but doubt that can be done without more factual detail. That few authors define their terms makes it hard to know their terms of reference.

3.7 Innovation: expanded tense systems

3.7.1 Immediate past, immediate future

Table 3.3 above shows five pasts and four or five futures to be statistically unusual. It seemed relevant to examine how the systems in languages with five pasts and four or five futures differed from those with fewer, and even to examine even those with four pasts and three futures. They differed on two levels, categorial and structural. Typical (two or three degrees of remoteness) and atypical systems (four or five degrees) contrasted hodiernal (versus hesternal/crastinal) versus remote, in which hesternal/crastinal (i.e. one day removed) might include a few days beyond the immediately adjacent day.

The most obvious way in which the larger systems differed was by having an extra category immediate, which typically translates as ‘have just verb-ed’ and ‘be just about to verb’. No language with two pasts or futures had a contrast between immediate and non-immediate, and very few languages with three pasts had such a category. So categorially, an immediate (past or future) appears exceptional. The impression that it is exceptional is strengthened by how it is marked. Most past immediates have one of four shapes. One is *ma*, mainly low toned, which looks as if it derives from the

²³ It was impossible to present all the Lomongo forms in Appendix 1 under C61. Readers should consult Hulstaert (1965: vol. 2).

low-toned verb *-mala* ‘finish’ (A46, B30, B85, D43). Another is *-(a)ka-/aaxa-*, source unknown (E16-17, E30). A third is what looks like recycling of *-a-*; *-a-* is the most widespread marker of past across Bantu, but in these atypical systems, there are either two distinct types of *-a-*, or *-a-* has been displaced from what was presumably its original place in the system by some new morpheme (C83, D13, E42, F21-22, K11, L31a, M301). A final source consists of a heterogeneous set of auxiliaries, often verbs of motion. A nice example appears in Kongo-Yombe (H16c: De Clercq 1912):

(22) H16c *tu-ø-fuma-sumb-i* ‘We have just bought’

where *fuma* is a verb meaning ‘come out, come from’.²⁴ Immediate futures derive from a collection of auxiliaries, some familiar and identifiable (Nomaande ‘go’, Nande ‘remain to (do)’, Lunda ‘want’), some not. Not only are the sources for these immediates quite varied, but they are all local and areal. Thus, for example, for past immediate, *-ma-* occurs in nearly all Zone A (and some Grassfields) languages, parts of Zone B, and Bushoong, while *-(a)ka/aaxa-* affects a set of adjacent languages at the northeast of Lake Victoria.

I suggest that the immediate past/future category, where it exists, is a local innovation, together with the morphology instantiating it. An alternative explanation might be that immediate is an old category, but just widely reencoded. It is known that categories are fairly stable whereas their morphological encoding can be renewed (Kuteva 1998: 125). I have already provided three arguments in favour of the innovation, rather than the reencoding solution: typological atypicality, wide range of sources for the morphology, geographical restrictions. Besides these, there is also the argument that if immediate was an inherited category, it would surely have retained its original morphology in at least a few cases. The only inherited morpheme that could have been involved would be *-a-*, which is a widespread marker of past reference. But examination of all the languages where this marks immediate pasts suggests that all the systems have been restructured in some way, and that *-a-* has been displaced into the immediate slot from somewhere else in the past reference system.

3.7.2 Other expanded systems

Taking a three-past or -future system, and adding a category of immediate, accounts for most four-way systems, leaving only systems with five contrasts. The display in Table 3.3 shows that such very large systems are uncommon. Furthermore, the data in several of them is doubtful, reducing the total even further.

The only Narrow Bantu languages reported with five pasts are some Kongo dialects (e.g. Yombe (H16c), Western Gogo (G11), and maybe Mituku (D13)). There are doubts about the data or analysis for all three. De Clercq (1912) shows for Yombe:

²⁴ So the form is similar to French *Nous venons d’acheter* ‘We have just bought’, or Yoruba *ti*.

- (23) H16c P₅ tú-ø-súmba
 or tú-ø-súmb-idi
 or tu-ø-súmb-id-il-ing-i ‘We bought (far past)’
 P₄ tu-ø-súmba ‘We bought some time ago’
 P₃ tu-ø-súmb-idi ‘We bought yesterday’
 P₂ tu-ø-sumb-idi ‘We bought today’
 P₁ tu-ø-fuma-sumb-i ‘We just bought’ (or tu-ø-fuma sumb-i?²⁵)

We might note in passing that De Clercq’s semantic characterization of Kongo-Yombe in 1921 and that of the five-past dialect of Bamileke-Dshang (Grassfields, not Narrow, Bantu) by Hyman (1980) are strikingly similar—Hyman did not know of De Clercq’s description when he wrote his analysis. There was (and is?) an apparent tradition for analysing Kongo which shows PFV versus IPFV, but no ANT (Perfect). Since that is true also for Yombe, it is possible that one of the pasts, probably P₂ or P₃, is in fact an ANT, reducing five pasts to four. Four can probably be reduced to three as P₁ is also doubtful: infinitives in Yombe have a null prefix, and if Yombe behaves as the Kongo dialect described by Laman (1912), it may—atypically in Bantu—have a ‘perfect’ infinitive with suffixal *-i*, so the P₁ form would be just an ungrammaticalized auxiliary (*-fuma*) plus infinitive, although not so written by De Clercq.

Gogo is the westernmost member of the Ruvu languages (G11-12, G301, G32-33, G35-39), which stretch in the east from the Indian Ocean near Dar es Salaam in more or less a line across to west of Dodoma. The eastern members have simple systems, which become expanded morphologically to the west. Even eastern Gogo varieties have fewer tense distinctions than western ones. Unfortunately, analysis of Western Gogo (e.g. Cordell 1941; Nurse 1979a: 74–5; Rossel 1988) throws doubt on the semantic characterization of the five pasts: as Yombe, what is near past tense and what is anterior?

Finally Stappers (1973) describes Mituku with six apparent degrees of past reference, presented as such in the matrix in the Appendices: Recent Past = immediate, Hesternal = yesterday, P₂ and P₃ = about a week ago, Far Past = prior to P₃, and Historical Past, rendered by the French *Nous prîmes* ‘We took’). Not clear here are: the difference between P₂ and P₃, the meaning of the Historical Past, and whether these six are all simple pasts, rather than some representing other aspects. Some may represent a dependent versus independent distinction, others perfective versus anterior. Several have variant phonetic forms, with and without [a]. The three far past forms have free variants in [-iti, eti], said to be identical or near identical in meaning. Finally, the semantic reference of some forms is in doubt. I think this should not be interpreted to mean that Mituku has six such degrees but rather that the analysis is opaque. The supporting material does not allow judgment on these issues, and the matrix simply presents all six, but I am sceptical about this large number of degrees of past reference. Mituku’s neighbours are not described by their authors as having six degrees of past reference.

²⁵ Here *sumbi* would be the infinitive.

Similar doubt exists about two of the three languages reported to have five futures, Western Gogo, Cokwe (K11), and Lunda (L52). For W. Gogo the semantic interpretation of the data is again suspect (Nurse 1979a: 74; also Rossel 1988). White (1947) shows K11 and L52 with five futures, and K13-14 with four. There are two grounds for suspicion here: one is that other sources (for K11, Atkins (1955), although he only shows one-word verbs, and for K13, Fleisch (2000)) show fewer futures than White gives, the other is that some of the five are transparently based on auxiliaries, not fully grammaticalized, and it is not quite clear whether the modal or the tense component is uppermost. The latter objection is also true for L52, although B. Kawasha (p.c.), a native speaker, inclines to accept the five.

Two points should be made in summary here. One is that the data needs reexamination. For the few Narrow Bantu languages described as having five degrees of past (Kongo-Yombe, Gogo, Mituku) the facts need clarification before anything can be said about common semantic properties or common paths of innovation. For futures the same is true for W. Gogo and the K10 languages. The other is that, if the cut-off points for the one language with five degrees of future (Lunda) are compared with those in Bamileke-Dschang (Grassfields Bantu), they turn out to be different. The morphological structure and origins of the five futures also differ in Bamileke-Dschang and Lunda. The two languages appear to have followed different paths to similar but not identical systems.

3.8 Innovation: reduced tense systems, externally influenced systems

3.8.1 Languages with fewer tense contrasts

A question likely to be asked by some readers is whether there are languages with a reduced set of tense contrasts significantly different from that of other Bantu languages? 2.9.1 took the approach of starting with three languages known to have undergone major contact in the past and examining the overall morphological structure of their verbs consisting of one word. Here the approach is different. Rather than start with such languages and seek to compare them with the other languages of the database, this section surveys the reduced languages of the database and examines what, if anything, makes them different. For tense, what is a reduced language? Heine (1973: 210–14) suggests four characteristics of African pidgins: (1) general reduction of tense contrasts, (2) this often results in one past and one future, or fewer, (3) some neutralization of contrasts (e.g. present and future = non-past), and (4) morphologically null forms (e.g. *tu-Ø-gúr-a*, see 3.11) are often part of the system.

Reduction to a single past tense is used here as diagnostic for general reduction. In both the databases, reduction to a single past is more useful than reduction to a single future. As we have seen (Table 3.3), half of the languages in the database

have but a single future²⁶ and as we will see in Chapter 6, there is good reason to think that Proto-Bantu had only a single future or perhaps no discrete future. Thus the minority of languages with multiple futures have innovated. The past situation is different. Although, as will be seen in Chapter 6, we can currently only reconstruct one past with confidence for Proto-Bantu, over 80 per cent of Bantu languages have more than one past today because after the Proto-Bantu period the number of past tenses multiplied. The languages with a single past today might have retained the earlier situation, or they might have initially multiplied and later reduced their past tense contrast. Without careful and lengthy examination that is hard to judge. If many of the languages with a single past today showed the past tense morphology posited for Proto-Bantu (Chapter 6, Section 6.5, Table 6.4) I would be inclined to think they had retained it, but that is not the case. I am therefore more disposed to assume that past tense reference multiplied everywhere and that subsequently those few languages with one past today underwent a reduction from this intermediate multiple past situation. In the larger database they are (see Maps 4–7: A15, A24, A93, E102, E701, E71 (Upper Pokomo), G32-33 (and probably G36-37-38-39), all G40 except G42H, H10A, K21, K42, N101, N30-44, P11-12-14 (?), some dialects of P21, P25 (?), S20-30-50-63).²⁷ It will be noticed that a combination of genetic and geographical factors links E701-71, G30-40, K21, P10-20, S20-30-40-50. There is a genetic and geographical link between E70 and G30-40 (Nurse and Hinnebusch 1993, esp. 384–460); and between K20-S20-S30-S40-S50. The N30-40 and P languages lie geographically between the two other groups. Given this combination of genetic and geographical features, it seems unlikely that each language underwent reduction separately.

All the languages just mentioned with one past also have one future, except some dialects of P21 (Yao).

A few of these have reduced even further, by neutralizing their single past and anterior: A15, E701, E71 (Upper), G44, G412, S20, and maybe some of the P10-20 languages (the data is not clear). A few other languages, not part of this group, have neutralized past and anterior.

A few have reduced further by neutralizing the present–future contrast as a non-past: A24, E71, G32-33-36-37-38-39, and G401. This non-past, although occurring elsewhere, is probably an innovation common to E71, the G languages, and their relatives (their relatives having redeveloped the contrast more recently: Nurse and Hinnebusch 1993: 384).

What kind of generalizations are possible here, following Heine's suggestions? Twenty-odd languages²⁸ have a single past (A15-24, A93, E102, E701-71 (Upper

²⁶ E.g. Akɔɔse, Benga, Myene, Himba, Yanzi, Bushoɔŋ, Mituku, Shi, Ha, Gusii, Giryama, Rimi, Mwiini, Swahili, Comorian, Pogolu, Kituba, Suku, Lozi, Kwezo, Nyanja, Umbundu, Herero, Shona, Tswana, Tsonga.

²⁷ Contrary to some analysts I treat S30 and S50 as having a past and an anterior, not two pasts.

²⁸ The imprecise term 'twenty-odd' is used because in some cases it is not clear whether the varieties are languages or dialects. The twenty-odd appears to be at odds with the 17% with a single past in Table 3.3. The languages in 3.3 are the 100 matrix languages, whereas the twenty-odd come from the larger database.

Pokomo), the G30 languages, G401-412-42-44, G50, H10A, K21, K42, N101, N30-44, P11/12-14 (?), P21 (one dialect), P25 (?), S20-30-50-60) and are considered to be reduced, using reduction to a single past as a major criterion for systemic reduction. How do these languages encode their single past? Over half these languages mark their past by use of some form of pre-stem *-a-* and/or final vowel (*-ile*, *-ite*, *-i*, or vowel copy suffix), which are inherited morphemes and widespread in Bantu. While ‘over half’ is lower than the Bantu average, it should be realized that all the other languages have multiple pasts so the chance of one or other of their pasts being marked by use of *-a-* and/or final vowel is commensurately higher. The few languages with no trace of *-a-* and/or suffix express past in a variety of ways and often quite local. For instance, E71, G30, and G401, all with null pre-stem marking for past, are related and assumed to have innovated just once in the past (Nurse and Hinnebusch 1993: 389). The *-ma-* in A93 is an areal feature for past marking (see 3.7.1).

So the ways in which these languages reduce their system of past reference do not have significant common or unique features. Further, they do not appear to involve more replacement of inherited morphemes than is found in other languages.

Does reduction of past reference correlate to reduction of future reference? All except one (P21) of the twenty-odd also have a single future. Half of the languages in the database have but a single future, and I assume that was also the earlier Bantu situation. It is unlikely that degrees of future reference would be increasing while those for the past were reducing. So past reduction does not imply future reduction. In 3.5 a number of sources for new futures were mentioned and the same sources can also be seen in these single-past languages (e.g. ‘come, want’). So consideration of the numbers of single futures here, and the ways in which they are encoded, does not suggest any special shared features.

Are neutralizations of contrasts obvious, other than those of past and future reference? A few of the twenty-odd have neutralized past and anterior (A15? E701-71, G412-44, S20, and maybe (?) a few Zone P languages). Again these appear to be local, and in any case languages apart from the twenty-odd do this. At least with E701 and E71 this probably results from Cushitic influence.²⁹ Where this has happened it is the anterior (aspectual) morphology that has won out. A very few of the twenty-six have neutralized present and future as non-past: again, this is very local. So these other neutralizations that occur among the set of languages with a single past are infrequent and local.

Finally—Heine’s fourth feature—are morphologically null forms part of the end result in this reduction? Seventeen of the twenty-six (65 per cent) have such forms, most—but not all—as some kind of present. It might be expected that reduced

²⁹ That E701, E71, and G412 should have been influenced by one or more Cushitic languages is not surprising, as the area between the Tana River and Barawa is now and was in the past home to various Cushitic communities (Nurse 2000a). Other related languages, such as E72 and E73, are Cushitic-influenced in other ways, and ancestral G44 may have started life on the Kenya coast (Nurse 1985; Nurse and Hinnebusch 1993).

languages would be morphologically simpler than their non-reduced relatives, and that a null present would form a central part of that. But some 50 per cent of the matrix languages also have such a form. So a null present, at least, is not specific to these morphologically reduced languages. Null futures and pasts are rare and not diagnostic.

General conclusions about the distribution of these features and about typology can be drawn. Using reduction to a single past as a clear indicator of categorial reduction, we see reduction occurring in two kinds of situations, single language situations and group/areal situations. The single language situations are A15, A24, A93, E102, and H10A. The two main group situations involve E70/G30/G40 and K21-S20-30-50-60. These might be the result of genetic and/or diffusion factors, and the reduction in the intervening languages (N10-P10-20) is more likely to result from earlier historical diffusion. It would be worthwhile to pursue these geographical pointers and investigate whether the languages in these reduction situations can also be linked clearly to certain sociolinguistic contexts, such as use as vehicular languages or whether the communities once absorbed large numbers of outsiders or outside influence.

The brief survey above does not identify many worthwhile shared typological features. Languages with one past usually also have one future (not vice versa) although the end results and the paths followed differ and are not significant. A few languages in the set have undergone other reductions—present and future to non-past or past and anterior to ‘past’—but again, these are local and do not have obviously common features. Finally, many of these languages have a null vast present, but so do many other Bantu languages, neutralizing the usefulness of this.

3.8.2 *Externally influenced systems: D10, D20, D30 in the northeastern DRC*

Cross-linguistically, verbal systems have shown themselves open to outside influence, usually by bilingual native speakers importing outside patterns, or by groups of outsiders speaking the language imperfectly and managing to impose their norms on the community. This book makes a basic distinction between the majority of Bantu languages and those in the northwest, which are assumed to share features with languages to their west and north. At the same time, other subsets of the majority have been influenced in one way or other, and perhaps the most striking are the languages of northeastern Democratic Republic of the Congo.

Guthrie’s (1971) classification of the D10-20-30 languages does not properly reflect their genealogical or contact history. Based on a number of factors and sources, these languages arrange in different groupings, roughly as follows:³⁰ (a) D12; (b) D13-14; (c) D22-23-31 (+ D32?); (d) D25 (+ D26?); (e) D27 (originates in L20); (f) D28 (common origin with F20?); (g) D33. For several centuries, at least, the Bantu communities of this

³⁰ This rough classification is based on several (non-verbal) factors: number of vowels, extent of noun class system, degree of lexical similarity. It derives largely from the work of SIL, whose members kindly shared their insights with me. See SIL (1995), Kutsch Lojenga (2003), for discussion and references. Despite their efforts, many languages in the area remain ill described.

area have been in close contact with each other and with non-Bantu languages (Central Sudanic, Ubangian). Bi-/multi-lingualism and language shift are, and apparently have long been, common.³¹

The turmoil has resulted in all kinds of changes in verb systems. As the changes have resulted from contact between different languages in different places at different times, they are not uniform and do not lend themselves to neat statements. The general poor level of description and analysis in this area contributes to the lack of clarity. The following tendencies are apparent:

- Several languages in the area have frozen one morpheme at TA, and make tense distinctions at FV, at post-FV, post-verbally, or by intonation. Readers may see for themselves in the Appendices that D33 has frozen *-a-* at TA and that tense distinctions are made intonationally, thus *-a-* indicates tense or indicative. Similarly, D13 (Mituku) uses *-a-* in all past reference, extended to present in D14 (Enya). Forest Bira (D311) has null in past and future, making distinctions at FV or Post-FV, so:

(24)	D311	P ₃	bi- \emptyset -támb-í-í do	
			1p-null-walk-P-P ₃ P ₂ /P ₃	'We walked long ago'
		P ₂	bi- \emptyset -támb-í do	
			1p-null-walk-P P ₂ /P ₃	'We walked recently'
		P ₁	bi- \emptyset -támb-í	
			1p-null-walk-P	'We walked, have walked'
		Future	bi- \emptyset -támb-a nó	
			1p-null-walk-FV FUT	'We will walk'

- This first tendency has led to heavy use of morphemes at FV or after FV. The material in (24) shows a lengthening of suffixal *-í* and two post-verbal morphemes seen nowhere else in Bantu. Readers may look at D23 in the Appendices and see another collection of unfamiliar suffixes. D13 (see Appendices) has *-a*, *-e*, *-ang-*, *-í*, *-ilí*, *-iyé*, and even *-iti/ite* at FV, the largest set in any language in this position, and since the last four are closely or ultimately related, but co-occur hardly anywhere else, some of them would seem to have been appropriated from neighbouring languages. Finally, D12-13-14 all have traces of /*(o)bi/* and /*mono/* at post-FV, the former referring to hesternal and deriving from an adverb meaning 'yesterday', the latter from the Bantu particle 'very', and acting as a shifter, pushing past and future reference further into remote time. This heavy use of post-FV or post-verbal material in tense reference is unusual for Bantu languages.³² Another case of these post-verbal particles is discussed in 3.9.2.
- A few languages have unfamiliar morphemes at TA. Readers can see for themselves in Kumu, (D23, in the Appendices, and (2) in 4.3) a set of markers for the

³¹ The best documented language, but least affected linguistically by this turmoil is Lega (D25).

³² For a similar grammaticalization in Nilotic, see Dimmendaal (2001).

aspects and for Past Definite that occur nowhere else. Holoholo (D28) has unfamiliar *bu* and *fu*, as in *tu-bu-vündaganya* ‘We broke (P₂)’ and *tu-fu-sóbola* ‘We chose (P₁)’. Whether these morphemes at TA in Kumu and Holoholo are transferred from some other language or are the grammaticalized forms of auxiliaries is not known, although the latter seems more plausible.

- Whether these languages have new categories is unclear, but seems unlikely. Mituku (D13, see the Appendices) is described as having a ‘Preferential’ (‘prefer to’), Kumu a ‘Definite Past’, and several languages an Inceptive. Preferential is unknown elsewhere, Definite Past is very uncommon, and Inceptive not common. But how widely distributed these are, what they really represent, and to what extent they represent the theoretical stance of francophone analysts is unclear.

In an area where Bantu, Ubangian, and Central Sudanic have long been in contact, the overall impression is that some of the Bantu languages at least have changed their morphology but not their verbal categories. Tense-aspect categories do not look particularly unfamiliar, either in quality or quantity, but some of the ways in which they are marked are unfamiliar and typologically atypical.

3.9 Possible internal innovations, interesting patterns

Chapter 6 sets out tentative hypotheses about what tenses and tense patterns can probably be assumed for Proto-Bantu. If they are correct, then it becomes possible to see other tenses and patterns in today’s Bantu languages as innovations. So this section deals with patterns which are areal, likely to be innovations, and interesting (a subjective notion). It is impossible to do justice to all such patterns as many local patterns are found, so what follows examines those with a fairly wide distribution, or those clearly identified.

3.9.1 *Multiple past distinctions indicated by length or tone distinctions involving -a-*

The verbal systems of Narrow and Grassfields Bantu languages differ in certain ways from those in the rest of Niger-Congo. Most non-Bantu Niger-Congo languages represent time differences by aspect alone, not tense, whereas Narrow and Grassfields Bantu languages—and a few others, mostly in eastern Nigeria—have both aspect and tense. Tense distinctions can be taken to be an innovation in the latter, especially multiple pasts and futures, with pasts exceeding futures numerically. In Bantu these distinctions are mostly carried by inflection (except in some analytic Zone A languages).

Outstanding among inflectional past tense morphemes are reflexes of *-a-* at the TA slot in the verbal string. Some—not all—languages from Niger-Congo families other than Bantu have a TA marker [a], and a few of those make a tonal distinction

between different values of /-a-/. For example, some Grassfields Bantu languages³³—spoken adjacent to Zone A languages—Fante (Akan), and one Ubangian language (Zande³⁴) make a meaning distinction based on tonal contrasts on -a-. As far as I know, none makes a distinction based on vowel length ([a] versus [a:]). This suggests that Bantu [a] derives from its ancestral Niger-Congo connection and that it originally had no length variation (i.e. was short). While relatively few non-Bantu Niger-Congo languages make a meaning distinction based on tone, many Bantu languages do. Morphemes having pre-stem -a- marking past or non-past occur in all Bantu zones and in 84 per cent of the matrix languages, with tonal and length differences correlating to semantic distinctions, so these length and semantic distinctions, and many of the tonal distinctions, arose within Bantu.

Surprisingly little cross-linguistic work has been published on such tonal or length distinctions. Tonal contrast is documented in a number of monographs on individual languages or small sets of languages over the last thirty years³⁵ but few studies have yet attempted to juxtapose and analyse the data comparatively. Variation in length is poorly documented and the comparative data nowhere assembled.

An overview of Bantu (Nurse and Philippson 2006) presents certain basic facts. There is clear phonetic and phonological evidence for instances of several past -a- in Bantu. Phonetically, [a] may be short, lengthened, or long. If a language has a TA /a/ with only one length it will be short.³⁶ Tonally, Nurse and Philippson found [a] low, mid, high, downstepped high, rising, and falling. The vowel of this marker shows more phonetic and tonal variation than that of any other marker. This results from a combination of its context in the verbal word and the fact that vowel-initial TAMs follow the subject marker. Many subject markers consist of (consonant and) tone-bearing [i] or [u]. When the latter are followed by a vowel such as [a], two things happen. The [i, u] become glides, lengthening the [a], and their tone is displaced onto the [a]. Thus over millennia -a- developed several tonal and length alloforms. Languages seized on this as a means of expressing new grammatical distinctions, and gradually the alloforms became phonologically and semantically distinctive. In principle, both [a] and [a:] might also result from consonant loss, so originally [Ca] and [aCa], respectively, but in practice no convincing cases of this were found (see 6.2.4(ii)).

³³ See Hyman (1980), Anderson (1983), Nguendjio (1992), Watters (2003: 246–7).

³⁴ Until there is evidence from some Niger-Congo language or languages other than Zande, I am inclined to disregard the Zande situation. Zande also—atypically—makes tense distinctions and it makes them—also atypically for Ubangian and for Niger-Congo in general—by prefixal inflection. Zande is often said to be atypical of Ubangian, and this may be due to an earlier period of contact, where Zande absorbed external features, possibly from a Bantu language.

³⁵ E.g. Goldsmith (1985); Bastin (1994); Muzale (1998). The widest overview is Philippson (1991). Meeussen (1967: 113) suggests a possible contrast between -a-/-a P₁ and -á-/-a P₂ imperfective, and between -a-/-ilé and -á-/-ile P₁ and P₂ perfective, respectively. But he says of them that they are 'guesses rather than... real constructions', and as Bastin (1994) shows, they are restricted to a few 'central languages' (Mituku, Lega, Luba, and Kaonde).

³⁶ Giryama and Sotho, with (underlying) /-a:-/ are the only exceptions to this.

Bastin (1994) discusses in some detail the potential difference between long and short past *-a-*, in ‘Central Bantu’ languages (i.e. Zones D and L). She concludes that the evidence is good for a contrast in shape—in other words, a contrast between short and long *-a-* can be found—but not so good in terms of a correlation with meanings, a conclusion similar to Nurse and Philippson’s.

Some 22 per cent of the languages examined by Nurse and Philippson had contrastive *-a-*, that is, the tone or the length of *-a-* is involved in distinguishing tenses, but very few languages in their database distinguished two past forms on the basis of a prosodic contrast (i.e. length and/or tone) between two different instances of *-a-* alone.³⁷ Only five examples were found in the 100 matrix languages, and it is unlikely that a search through the larger database would raise the percentage appreciably. The five languages are D66, E42, M14, R22, and R31. Four of these (all but D66) contrasted *-á-* recent and *-à-* remote (see below). In D66 the reverse was the case.

In the other languages that displayed such a contrast, the forms exhibited other differences as well, sometimes in the tone of the suffix only, such as Bemba *-á-* *-ilè* P₃ vs *-à-* *-ilè* P₄, more often in the shape of the suffix itself, such as Logooli *-á-* *-í* P₂ vs *-à-* *-á* P₃, or Lega *-áá-* *ilè* P₂ vs *-à-* *ilè* P₃, to which could be added Bukusu where the two forms do not strictly speaking contrast two *pasts*, but P₃ *-áá-* *-ilè* and Anterior *-àà-* *-ilè*.

(25) has examples with surface tones marked, as illustrations, taken from languages for which the tonal data is reliable.

- (25) Shi (D53) áábálu¹mé bá-á-shákwiire dúbá (remote) versus áábálu¹mé
bá-a-shakwíiré dúbá (recent) ‘The men pounded fast’
- Rundi (D62) ba-á-turutse-hé? (hesternal) versus ba-a-turutse-hé?
(hodiernal) ‘Where did they come from?’
- Bukusu (E31c) xw-áá-limile músiro ‘We have cultivated at night (anterior)’
versus xw-aa-límile músiro ‘We cultivated at night (P₃)’
- Gusii (E42) ngw-áá-síek’ éghesieri? (P₁) versus ngw-áa-síek’ éghesieri?
(P₃) ‘Did you close the door?’
- Nyamwezi (F22) tw-aá-kúlimilá (P₁) versus tw-áa-kúlimilá (P₄)
‘We cultivated for you’
- Bemba (M42) tw-aa-limíné kúcishima (P₄) versus tw-aa-límine kúcishima
(P₃) ‘We cultivated near the well’

As mentioned, any combination of a CV prefix followed by [a] will give rise to a long vowel, since even those languages which have kept length distinctions on the surface could not accommodate more than two moras per syllable, so CVa and CVaa would

³⁷ 20% of the matrix languages show a surface tonal distinction between two otherwise identical past forms involving pre-stem /a/, either /a...a/ versus /a/...a/, /a...ile/ versus /a...ile/, or /a/...I/. The underlying distinctions are not known in some cases. The languages are: B11; D13 (maybe 14), 25, 33-42-53-66; E253, 31, 42; F21, 33; G11, 23; H32; L52; M14, 42; R22, 31. As can be seen, these are mainly non-Forest languages. The larger database contains other such languages.

Table 3.4 Distribution of various /a/ in fifty-three languages

Language	-á- -a	-á- -ile	-à- -a	-à- -ile	-aa- -a	-aa- -ile
B11c			P ₂			
B25	P ₂ , P ₃ , PRS					
B52	P ₃ , P ₂ ?					
B73c			P ₃ ?			
C14			P ₂ ANT			
C101	ANT					
C41			P ₂		F ₁	
C55	P ₂					
D25			P ₁	P ₃		P ₂
D28	P ₁					
D33	P ₂ , F					
D42	P ₃	P ₃ + ANT	P ₄	P ₄ + ANT		
D43	F ₁		ANT			
D53	PRG	P ₁		P ₂		
D61		P ₂		P ₁		
D66		P ₂		P ₁		
E13	P ₁					
E15 ^a	P ₂	P ₁				
E22	P ₁	ANT				
E24			P ₁			
E25		ANT	P ₁	P ₃		
E31c			P ₄		P ₄ + ANT	P ₃ + ANT
E42	P ₁			ANT	P ₃	
E51	'just past'			Far Past		
E62b	P ₁					
E72					P ₂	
E74a	ANT	P ₁			PRS	
F21	P ₁	P ₃			P ₄	
F32	P ₁					P ₃
G22	ANT					
G23			P ₂ PFV		P ₂ , PRG	
K11	P ₁	P ₄				
K13			ANT	P ₂		
K31		P ₂ + ANT				
K332			ANT	P ₂		
L13	P ₁ , ANT	P ₃				
L23			PRS			
L33		P ₂		P ₃		
L41		P ₂	ANT P ₁			
M14	P ₁	P ₂		P ₃		
M42	P ₁	P ₃	ANT P ₄			P ₄
M63	P ₁					
N30			ANT			

(cont.)

Table 3.4 (Continued)

Language	-á- -a	-á- -ile	-à- -a	-à- -ile	-aa- -a	-aa- -ile
P311			P ₁ , ANT			P ₂
R11			P ₁	P ₂		
R22		P ₁		P ₂		
R31		P ₁	P ₂	P ₂		
S10			P ₁ , ANT			
S20			PRS			
S31a			PRS			
S32			PRS			
S42					P ₂	
S53			PRS			

^a A third pattern occurs in E15 in limited contexts. See Hyman and Katamba (1990).

uniformly resyllabify as C(G)aa, never as *C(G)aaa. The only clue to an underlying length difference could be expected from the tonology, assuming tone assignment rules are sensitive to underlying length contrasts, and even then the evidence is at best indirect and often ambiguous.

For the sake of exemplification, and to illustrate the diversity of the material, Table 3.4 shows the distribution of *-a-* in the (fifty-three) languages for which the tonal data was felt adequate. It includes only forms with final *-a* and *-ile*, not other finals; it does not take the tone of the final in consideration; it includes pre-stem *-aa-* but does not attempt to analyse the tones.³⁸

If P₁ and anterior are treated as one category—which makes sense, as their functions often overlap—and opposed to all other pasts, we get the following numerical results in terms of the tones of the various *-a-* markers (non-past meanings are in brackets; we ignore long *-aa-* for the moment):

- (26) *-á- -a* : P₁ / ANT 15 (36,5%); other past 9 (24%); (non-past 4)
-à- -a : P₁ / ANT 17 (40%); other past 6 (16%); (non-past 5, of which 4 in southern Africa)
-á- -ile: P₁ / ANT 7 (17%); other past 12 (31,5%)
-à- -ile: P₁ / ANT 3 (7%); other past 11 (29%)

What seems to emerge is that 76 per cent of *-a- ... -a*, whatever the tones, refer to P₁ / ANT. Similarly, two-thirds (60.5 per cent) of *-a- -ile* correlate with reference to other past meaning. Furthermore, although these other pasts divide about equally into *-á- -ile* and *-à- -ile*, this latter form is practically unattested with P₁ / ANT meaning. Forms with long *-aa-* are too few to allow any generalization, but it is at any rate clear that no P₁ / ANT meanings, and a very few non-past, are associated with them.

³⁸ For those forms where past is linked with aspect (e.g. P₃ + ANT) only its past value is counted.

This might suggest that *-a- -a* forms originally referred to Near Past and/or anterior meanings, tonal distinctions being irrelevant and most probably of secondary origin, and that the *-a- -ile* forms would refer to more remote degrees of past, perhaps specifically in association with low-toned *-à-*, although there again it is possible that the tone differences are due to other factors.³⁹ As for length, it is almost certainly an innovation, doubtless due to factors mentioned above. However, a more plausible explanation is that *-a- -a* originally represented a general past, which became restricted to Near Past and/or Anterior, as the association of *-a-* with *-ile* came to refer to a more remote past. This is the position taken in 6.2.4(ii).

So in principle Bantu could make multiple past tenses by inflection (at final vowel), or prosodically, or by a combination of the two. In practice, Bantu has preferred inflection or a combination of inflection and tonal devices to tonal (or vowel length) distinctions alone.

Going through the representation of tense (and aspect) in many dozens of Bantu languages gives the impression that the notion of regular sound change in vowel length does not operate well in TA markers, or that some changes are specific to grammatical markers, or that the kinds of environments that create certain changes are found mainly in verb morphological contexts. Regular sound change is usually based on considering many lexical items. It is not usually based on simultaneously considering grammatical morphemes. Sometimes the vowel length contrasts found in lexical items corresponds to that in these affixes but often the differences in length are not to be explained in terms of regular change. In this case that would mean that either the long variant would be explained by the loss of some consonant, or that the original length contrast was neutralized in favour of the short one, but not in these affixes. If we compare the length variants in the affixes with the ‘regular’ retention or loss of length in their languages, the two are often at odds. At least in the case of *a/aa* it is hard to recover the length contrast because they both follow prefixes ending in vowel or glide, which produces a long vowel and neutralizes the surface contrast. Tones behave in a similar way—they are sometimes ‘regular’ and explicable, other times they are quirky and local. Shambala (G23) shows irregular vowel length and strange tonal behaviour:

- (27) G23 *n-áá-káánga* ‘I fried, remote past’
 n-a-káánga ‘I fried, remote past (predicate focus)’
 n-aa-dika ‘I am cooking’
 n-a-dika ‘I am cooking (predicate focus)’

Although Shambala once had an inherited length contrast in lexical items, it has been neutralized, yet here we see such a contrast kept in a grammatical context.⁴⁰ Internal and comparative evidence does not suggest a lost consonant here (so **aCa*).

³⁹ As mentioned above, however, in the very few languages where two forms differ by the tone of *-a-* alone, it is low-toned *-à-* which represents remote (four times out of five).

⁴⁰ German writers a century ago wrote [kaanga] as [kalanga]. This points to its known original shape and the fact that the loss of intervocalic [l] in lexical items seen in most, but not all Shambala dialects, is very recent. They did not so write the tense-aspect markers.

Equally, there is no good explanation for the tone difference between the first and the second and third forms. Examination of the past tense situation in Bemba, Gusii, or Gogo, which have all expanded their past tense repertoire, suggests they have done something similar. 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 (Mpotó (N14) has something similar). That is, speakers of languages where tonal and vowel length distinctions can be meaningful can sometimes resort to imaginative solutions for encoding grammatical distinctions, especially where limited structural devices are available. Some of these imaginative solutions are currently beyond the reach of our analytical tools. It should not surprise that the outcome of these imaginative solutions should sometimes be similar or identical in some of five hundred languages which have been evolving over five millennia.

All this suggests that length and especially such widespread tonal contrasts associated with past *-a-* are a Bantu innovation, which were shared with or spread into or from Grassfields Bantu, and maybe other nearby Niger-Congo languages. They started as phonetic distinctions but it would seem that as Bantu communities realized the possibilities of using such distinctions for semantic purposes, they became contrastive. The fact they are so widespread in Bantu, and in Grassfields, suggests they were first used at an early Bantu stage, or even at an immediately pre-Bantu stage. Once started, the mechanisms were widely used in some areas, less so in others, and have been used continuously over the last five millennia.

3.9.2 The Zone C pattern

Many—but not all—Zone C languages have a pattern involving three components:⁴¹ a binary past contrast; the use of contrastive *-i* versus *-á*, where *-i* usually represents P_1 and *-á* P_2 (in languages such as C32 or C60, *-i* has expanded its domain); and the use of *-ak-* (occasionally *-ag-*). This [ak] reflects **ag*, which originally represented, and widely still elsewhere represents, imperfective, but across Zone C, it has expanded its semantic domain to encompass other categories, including perfective, in fact, most categories except anterior. While it should be emphasized that each language operates a little differently, Lingala (C36) can serve for all:

(28) C36	Perfective	Imperfective	Anterior
P_2	a- \emptyset -pés-ák-á 3s-null-give-ak-FV 'He gave'	a- \emptyset -zal-ák-á ko-pésa 3s-null-be-ak-FV to-give 'He used to give, was giving'	a- \emptyset -pés-á 3s-null-give-FV 'He gave, has given'
P_1	a- \emptyset -pés-ák-í 'He gave'	a- \emptyset -zal-ák-í ko-pésa 'He was giving'	a- \emptyset -pés-í 'He gave, has given'

⁴¹ See 2.8.1 for more detail.

There are echoes of this system outside Zone C, for example in A34, and in Zone H (H10, H30). Kituba (H10A) has even spread *-ak-* into anteriors (see the Appendices).

It was mentioned in 3.8.2 that post-verbal particles characterize many D10-20-30 languages of the northeastern Democratic Republic of the Congo. Some C40 languages combine these particles, mainly post-verbal but a few pre-verbal, with the Zone C pattern. The following examples, which are not exhaustive, are from Boa (C44, Motingea Mangulu 2005). The particles are underlined.

- (29) C44 na- \emptyset -gw-í 'I fell', but na- \emptyset -gw-í tú 'I have fallen' (tú 'perfect')
 v- \emptyset -münd-ag-a 'You are paying attention' but
 v- \emptyset -münd-ag-a tú 'You be paying attention (when ...)'
 na- \emptyset -dú 'I come, will come', na- \emptyset -dú la 'I'll come immediately'
 wɛ, sú si nã mbólá
 you pass immediate LOC front
 'You, go and sleep in front'
- tá- \emptyset -g-I 'Let's go' versus tá- \emptyset -g-I si nó
 1p- \emptyset -go-SBJ 1p- \emptyset -go-SBJ immediate 'first'
 'Let's go' 'Let's first go'
- na- \emptyset -mas-í 'I have finished', but na- \emptyset -mas-í lé 'I have already finished'
 ká li- \emptyset -bɔng-í lí
 NEG 1s- \emptyset -be.well.made-PAST longer (li is the negative of lɛ)
 'I am wrong = I am not well made any more'
- a- \emptyset -d-é ndí ...
 3s- \emptyset -arrive-NAR then ... (ndí assertive)
 'He arrived then ...'
- ta- \emptyset -sál-a 'We work', but á ta- \emptyset -sál-a 'We are working' (á PRG)
ndú bá- \emptyset -zɔn-ó 'They were playing' (ndú PRG)

As can be seen these particles carry aspectual or modal meaning.

3.9.3 The Sukuma pattern

The Sukuma pattern is so called because it was first recognized in Sukuma (F21), and later in other languages also:⁴²

- (30) F21 P₄ [d-áá-gól-ǎ]
 1p-P₄-buy-FV 'We bought' /-aa...a/
 P₃ [d-aa-gól-ilě] 'We bought' /-á...ile/
 P₂ [d-aa-gól-agǎ] 'We bought' /-á...aga/
 P₁ [d-aa-gól-ǎ] 'We bought' /-á...a/

⁴² Readers should not be disturbed by the opaque relationship between underlying and surface tones. Underlying tones are realized to their right. This tone shift also characterizes other languages in the era, e.g. Gikuyu and Chaga.

The apparent innovation here is the structure of the three nearest past tenses. All three are based on the common use of short, high, pre-stem *-á-*, which combines with simple *-a* for P₁, with *-aga* for P₂, and with *-ile* for P₃. This development can be explained cognitively as follows (J. Hewson, p.c.). Prestem *-á-* represents a past event. Its combination with the neutral suffix *-a* gives a form that the immediate memory knows to be simply complete and over: P₁ / Immediate Past. Its combination with *-aga*, the Imperfective aspect marker, says that the event is in the past, part complete, part incomplete: P₂ / Near Past, intermediate between Immediate and Middle. Its combination with *-ile*, the Anterior aspect marker, announces that the event is in the past, complete and out of sight to the memory: P₃ / Middle Past.⁴³

Incidentally, analysts differ on the analysis of the tonal pattern of *-a(a)-* in P₄. Above I follow Schadeberg (p.c.), who thinks the tonal phenomena can be explained by assuming *-a(a)-* as long and low, but others (e.g. Batibo, p.c.) assume a short vowel, which blocks tone shift.

Besides F21, this general pattern characterizes Nyamwezi (F22), Nilyamba (F31), Nyaturu (F32), and Kimbu (F24), thus the five largest communities in Zone F, although F24-31-32 do not have a P₄. Not far to the west, but separate from the F languages, Holoholo (D28) has *-a...a* P₁, *-a...aga* P₂, and Nyanga (D43) has *-a...ayo* P₃, *-a...anga* P₄. Also *-a(n)ga-* is involved in past reference in D14 and D53.⁴⁴ Adjacent to F22 to the south, Pimbwe (M11) and Rungwa (M12) have *-a...anga* as their anterior, with traces in M14. A long way southwest, Cokwe (K11), Luvalé (K14), and Uruund (L53) form a small group with similar features. Cokwe has a pattern almost identical to that in Zone F, even with identical tones, and adjacent Lucazi and Uruund have some parts of the system.

At first sight this might look like grasping at straws but in fact the emergence of this pattern involves a well-known principle. It is often said that aspects become tenses but rarely vice versa, a theme revisited in Chapter 7. Here we merely look at the outcome. It is to be expected from well-known grammaticalization paths that *-ile*, as an anterior, could evolve into a perfective or past. It is not to be expected that *-a(n)ga*, as an imperfective, would evolve semantically in a similar way. Not only that, but they fit together in a specific pattern of past reference, which can be justified cognitively: there are no cases of *-ile* representing a nearer, and *-aga* a more distant past.

3.10 'Present tense': what is it?

A way of looking at present tense is to say it refers to a situation coextensive with the moment of speech, thus fleeting ('...*He shoots...he scores...*'). A present tense

⁴³ John Hewson would regard Sukuma as having only two real past tenses: P₄ vs P₁₋₂₋₃, and would regard the difference between the latter three as aspectual. Similarly he would regard Haya as having two pasts, where the conventional analysis has three (Hewson *et al.* 2000).

⁴⁴ Kpa has *-ga* 'far past'. *-a(n)ga* occurs in some negative pasts in E10-20, where the equivalent affirmatives do not have it (Muzale 1998). It is unclear whether or how these are connected.

with only this reference would be of limited use, because it would represent few real situations. Another way of looking at present tense is to say it represents the period between past and future, on the time line. Such a period would be of variable length, depending on speaker and situation. The length of the period varies from language to language. It can cover a really long period, as in German *Ich bin seit zwanzig Jahren hier* 'I have been here for twenty years' (lit. I am here since twenty years), or Irish English *We are working here twenty years*. That long(er) period extends beyond the present moment but will include it (*They are writing a book, She lives in Timbuktu*). It will be seen in the matrixes that many languages have several forms that include the present moment, and translate as e.g. 'We buy, are buying, are still buying, still buy, have bought, etc.'. These forms always have an aspectual component and are not just statements about time. Because 'present' has such a flexible reference to a period between past and future, the line displaying 'present' tense is not labelled in the matrices.

To exemplify 'presents', consider data from Duala (A24) and Mwera (P22). Duala has a remarkable lack of discrete tenses, only a past and a present (plus a future, transparently a scarcely grammaticalized form of 'go'). One of the presents extends to future reference. As if to compensate for this, Duala is rich in aspects. These are best seen in the present, where five forms coexist, all translated as English 'present':

- (31) A24 na ma-bola⁴⁵
 1s-ma-give 'I give, will give'
 na ø bola 'I give (repeatedly)'
 ná ø bola 'I give (constantly)'
 ne ó bola 'I give, am giving'
 na ma-bé ná ø bola
 1s ma-be 1s give 'I give (habitually)'

All these translate as 'I give' but all, except perhaps the first, need extra lexical material in English. The difference between them has not to do with location in time, but with how the giving is distributed over time, that is, they are aspects.

Another example is in Harries's (1950) treatment of tense in Mwera, which he divides into Presents, Pasts, and Futures. The Presents are numbered 1–7, which he supplements by saying that *-ga*, 'Habitual Action in the Present', may be suffixed to six of the first seven, making a total of thirteen present 'tenses'. It is not hard to reduce this number. All the forms with *-ga* are imperfectives or iteratives, so aspectually different from the forms without *-ga*. Of the remaining seven, six can be explained: one only occurs with stative verbs, two are conjunctive equivalents of otherwise disjunctive⁴⁶

⁴⁵ Ittmann calls *-ma-* 'simple present', *-ó-* 'progressive', and *-ø-* is not acknowledged.

⁴⁶ Conjunctive verb forms focus on a post-verbal complement/constituent, such as object, adverbial, second verb, or new material. It contrasts with disjunctive forms, which indicate that there is no special relationship between the verb and a following constituent. Emphasis is on the verb lexeme or one of its categories. The verb often stands alone following constituents being optional. See 5.3 and Definitions.

forms, one is an alternative of another (but ‘confined to short questions, and simple introductory answers’), one is progressive (‘they are hoeing’), and one is a vast present (‘they hoe’). So five are discrete, aspectually or functionally, and the sixth is an alternative form. The members of the only unexplained pair (*tu-naa-lima* and *tu-li-lima* both ‘we are hoeing’) are labelled identically by Harries (‘Indefinite and Continuous’: our disjunctive and progressive). He does not say they are homonyms but neither does he explain the difference. The way in which Harries talks of these thirteen shows that his labelling as ‘present tenses’ is a cover term for forms he recognizes as different (with the one unexplained exception). There are clear aspectual or functional differences between these ‘present tenses’.

3.11 Forms not marked for tense, null forms

Whereas 3.2 discussed the various morphemes associated with past and future reference, Section 3.10 signally did not treat the representation of present tense. Situations which have a present component or are coextensive—more or less—with the present moment are often not marked for tense, because ‘present’ is obvious to the participants.⁴⁷ What is marked is aspect, because more important for the participants is how the present situation relates to past situations (anterior, persistive), to future situations (non-past, prospective), or forms part of wider situations (progressive, habitual, general imperfective, vast present, even perfective (4.3)). A whole set of forms in Bantu is typically not marked for tense, for example:

- (32) (a) *tu-ø-gul-anga* ‘We buy regularly’
 (b) *tu-ø-gul-ile* ‘We have bought’
 (c) *tu-ø-gul-eete* ‘We have bought’
 (d) *tu-ø-gul-í* ‘We have bought’
 (e) *tu-ø-gul-u* ‘We have bought’
 (f) *tu-ø-li ku-gula* ‘We are a-buying’
 (g) *tu-ø-kí-gula* ‘We are still buying, we still buy, if/as we buy’
 (h) *tú-ø-gul-é* ‘Let’s buy’

With the exception of (32c) and (d), which are tonally modified forms of Gikuyu and Lingala, respectively, all the other examples are from Kinasi. Each has present reference or takes the present as their reference point, has a null marker at TA, and represents aspect or mood (subjunctive *-e* in (g)). (a) represents present plus imperfective, (b, c, d, e) present plus anterior, (f) present plus progressive, (g) present plus persistive/situative, and (h) present plus subjunctive—only a very few Bantu languages combine subjunctive and any other tense.

⁴⁷ Readers can check for themselves in the matrices that the commonest form of marking at TA for present is null. Only two other morphemes have more than a very local distribution: pre-stem *-ku-/-ko-* and *-a-*. *Ku/ko* most likely originated in a progressive of the shape **-li+ku* ‘be at’.

The ultimate null form is unmarked for both time and aspect, as in Haya (E22):

(33) (E22) [tu-ø-gúr-a] ‘We buy’

Forms such as this, with null at TA and the neutral suffix *-a*, are very widespread in Bantu. Some 52 per cent of the matrix languages have a word of this null shape, referring to the vast present or an easily derivable meaning, such as future.⁴⁸

It might be asked here: are these (structurally) null forms also unmarked tonally for tense and aspect? They may have tonal marking, just as they have morphological inflection (for person, number, and FV), but is that tonal marking more than the sum of the tones of individual morphemes plus tone rules? That is, in these structurally null forms does the high tone indicate tense or aspect or are they, as it were, also tonally null? In the Haya form none of the three syllables is underlyingly high tonally, so where does the high come from? An email discussion in February 2003 produced a consensus that the high is what tonologists call a melodic (also suffixal or posterior) high, a tonal phenomenon that appears across Bantu in contexts and functions not yet well understood, but there was no consensus on the role of this high in general. One opinion was that it has no function: in other Bantu languages it does not appear—it appears in Haya but not in neighbouring and related Ganda. Another opinion was that it characterizes non-focus or low focus, in contrast with the focused Progressive (*ba-lim-a múno* ‘They cultivate a lot’ versus *ni-ba-lim-á múno* ‘They are cultivating a lot’). A third was that since it only appears when not followed by a complement but loses it otherwise, it marks the disjunctive member of the disjunctive-conjunctive pair (*ba-lim-á*⁴⁹ ‘They cultivate’ versus *ba-lim-a múno* ‘They cultivate a lot’). The consensus therefore was that, whatever its meaning, in none of these cases does the high carry any discernible tense or aspect meaning, so that the null form is both structurally and tonally unmarked for tense or aspect.⁵⁰

These null forms have four typical uses. They refer, as above, to the vast present, that is, to general, frequent, or generic situations: ‘We farm (as a job), we often go to X, cows eat grass’. Such forms are often called ‘general presents’. They are often extended and appear to function as present progressives. So because we farm, it might in the right context mean ‘We are farming’. Presents, general or progressive, are often

⁴⁸ Cross-linguistically presents often become futures. Occasionally a null present may extend to future reference, and then be divorced from present reference by a new present being formed. Such (infrequent) forms are included in the percentage of null forms.

On the other hand, the figure excludes (a) a language such as Gikuyu, which has a null form with a very small set of verbs, (b) a few languages where it is not clear to me that the present really is a null form, and (c) a very few languages where a null form appears to be the only marker of past (e.g. Zalamo and other G30 languages).

⁴⁹ The tonal difference between /*ba-lim-á*/ and [tu-ø-gúr-a] is not one of person but of tonal level—underlying final high tones are realized on the penult.

⁵⁰ My thanks to Lee Bickmore, Larry Hyman, David Odden, and Gérard Philippson for this.

used to refer to the future, as in ‘We go or we are going to Timbuktu tomorrow’. These are the commonest functions of the null forms.

Second, they are one of several ways of indicating narrative (see 3.12.1). That is, the first action is time-marked, or understood by the participants as located in a certain time frame, and all subsequent verbs in the narrative string are null-marked, as in (34a, b). Third, they appear in subordinate clauses, as in (34c):

- (34) a Nen a ná-bal óngwáy usi a \emptyset kendak a \emptyset hiamak (Mous 2003a: 296 (37))
 he P₁-start friend seek he null go he null look.about
 ‘He started to look for his friend, walked, and looked about for him’
- b Kpa a- \emptyset -la?
 3s-null-buy
 ‘She buys’ (main/independent clause)
 mán a- \emptyset -kɛn á fyee a- \emptyset -la? bɪzɛn
 child 3s-null-go to market 3s-null-buy fish
 ‘Child goes to market and buys fish’
 gíp a- \emptyset -kɛ́ é á fyee a- \emptyset -la? bɪ-zɛn
 woman 3s-null-went to market 3-null-buy fish
 ‘Woman went to market and bought fish’
 (subordinate/dependent clauses, null form acts as narrative)
- c Rwanda a- \emptyset -gwa ‘He falls, is falling’ (conjunctive) a-ra-gwa (disjunctive)
 3s-null-fall 3s-DIS-fall
 ‘He is falling’ ‘He is falling’
 ba-ruuz-i umwaana a- \emptyset -gwa
 3p-see-PAST child 3s-null-fall
 ‘They have seen the child falling’ (null form acts as situative)

Fourthly, null forms may be the (unmarked, low focus) conjunctive member of the conjunctive-disjunctive pair:

- (35) Tsonga (S53) hi- \emptyset -dy-a vuswa ‘We eat, are eating porridge’ (conjunctive)
 h-a-dy-á ‘We eat, are eating’ (disjunctive)

Vast present (conjunctive), narrative, situative, and timeless relative can be seen in the five Ha (D66) null examples in (36). Vast present and narrative (first two examples), situative, seen in subordinate clauses (next two), and relative (last example) differ tonally.⁵¹

⁵¹ Just because these functions differ tonally in D66 (data from Harjula 2004: 110), they do not necessarily so differ in other Bantu languages. Derek Gowlett (p.c.) says they would be tonally identical in some South African languages.

- (36) D66 ba-Ø-rima
 3p-null-cultivate
 ‘They cultivate, are cultivating’
 yatóoye ibitúnguru a-Ø-shira mu-mavúta
 3s.took onions 3s-null-put LOC-oil
 ‘He took onions and put (them) in oil’
 tuhaaye tú-Ø-dya ‘We are eating’
 baábonye abantu bá-Ø-aza ‘They saw people coming’
 umwáana a-Ø-rirá ‘A child who cries, is crying...’

3.12 Relative tenses

Some analysts have distinguished absolute from relative tenses (Comrie 1985: 56). Absolute tenses relate the situation to the present moment, while relative tenses relate it to some other time already established. In Bantu there is a case for only one real (3.12.1) relative tense.

3.12.1 A real relative tense, the narrative

Many Bantu languages use a special device in narratives, where a string of situations happens in sequence. The time of the situation is first established, either explicitly in the first verb in a string, or implicitly, because the participants know the context, which therefore doesn’t need mentioning.⁵² All following verbs in the sequence are then marked by a special narrative marker, which replaces the tense marker appropriate to the time established by the first verb.⁵³ Just because most sequences deal with past events, this special marker is most frequent in past narratives, less frequent in timeless events, followed by futures. It also occurs across sentences and utterance, in which case the context most often crosses sentence boundaries and characterizes a long utterance. Use of the special marker can be suspended and then deliberately reintroduced by the speaker to stress continuity. A final feature characterizing this marker is that it tends to reduce the number of tense distinctions, and in some languages to neutralize them entirely. So while some languages with multiple past reference use more than one narrative strategy, most languages have only one narrative marker and the number of narrative markers never exceeds that of past tense markers. The idea can be illustrated by Gikuyu (E51), where three morphemes (*ki* [ki, gi], *a*, *ka* [ga]) can all be seen acting as narrative markers:

⁵² Henry Muzale kindly suggested the Swahili sentence *tu-ki-wa bado pale, a-ka-ja Musa*, lit. We-ki-be still there, he-NAR-come Musa, ‘While we were still there Musa came’. Clearly past in reference, it contains no explicit marker of past.

⁵³ It therefore fits within the general axiom that a single word verb carries only one tense marker.

- (37) E51 a *tw-a-thi-ire Nairobi, tɔ-ki-nina mteri iiri tɔ-gi-cok-a...*
 1p-P₃-go-PFV Nairobi 1p-NAR-finish months two 1p-NAR-return.
 ‘We went to Nairobi, completed two months, and went (home) (P₃)...’
- b *ni-n-gɔ-gwat-aga (na) nd-a-tiga*
 PreSM-1s-P₁-grasp-IPFV (and) 1s-NAR-leave off
 ‘I was taking hold and then I left off (P₁)’
- c *ma-njɔ-r-agia riitwa rakwa, n-ga-ma-henia, n-ga-mera...*
 3p-me-ask-EXT/FV name my, 1s-NAR-them-deceive, 1s-NAR-say...
 ‘They ask me my name and I deceive them and I say... (present)’

Some languages make a distinction whereby if the subject of the first clause in the string is identical to that of all the others, then some authors refer to the form as the consecutive or narrative, but if the subjects are different, the form is called the subsecutive or sequential (Hyman and Watters 1984: 258). These terms are not used consistently by different authors nor do all authors discuss this distinction explicitly. In what follows I therefore use the neutral term narrative (tense, abbreviated NAR) to cover both possibilities.

A survey of a few dozen languages reveals that this narrative function is marked in several ways. One is by the use of *-a-* (37b). Since this is the commonest marker of past tense in Bantu, and since most narratives have to do with past situations, it is unsurprising that *-a-* should have been generalized to all narrative reference. Similarly, the use of *na* or *na-*derivatives might be expected. Just because Bantu languages are verb-y, functions that in other languages are expressed by the use of conjunctions are mostly expressed verbally in Bantu, which lacks conjunctions. The one Bantu-wide conjunction is *na*, which mainly links noun phrases (‘and, with’), including verbal nouns (infinitives), and forms the basis for ‘have’ (< ‘be with’). So Nyamwezi (F22, Maganga and Schadeberg 1992: 125) has verb initial *na* with a tense called the Sequential Past, as:

- (38) F22 ... *na-tɔ-ly-á* ‘(and) we ate’ (SEQPAST-1p-eat-FV)

While it may seem logical to link clauses by a conjunction of this type, a distinction should be made, which can be illustrated in Swahili (G42):

- (39) G42 *walikunywa na kula* ‘They drank and ate’ (lit. they drank and to-eat)
walikunywa wa-ka-la ‘They drank and ate’ (they drank they-NAR-eat)

The first sentence involves no ordering—drinking and eating both went on, either together or in no particular order—whereas the second places drinking first, followed by eating. The first involves an infinitive while the second involves the narrative, which is typical across Bantu. So the narrative explicitly sequences events which occurred in the same time framework and says that within that framework the second situation is later than the first, the third is later than the second, and so on. This can be seen in E51, which has several narrative markers, all used often, but with which *na* can sometimes

be used to add information (Barlow 1960: 66): ‘*Na* may be introduced, however, to link acts or events not strictly consecutive, to mark a change of subject, to bring in a temporal clause, or to add supplementary material’.

A third way of encoding the narrative function, already hinted at in the Swahili example, is by use of the bare infinitive. This can be seen in Ekoti (P311):⁵⁴

- (40) *Khú-rí*: ‘Paasi, háyá lankhá weéyó wa ttaátthu.’ *Khu-lán*’hka otúle wa ttaátthu, *khu-láwá*, *khw-ípíkha* chaá yáwe *khú-nywa*. . .
 NAR-say: ‘All right, get up, you of three.’ NAR-rise demonstrative of three, NAR-leave, NAR-cook tea his NAR-drink . . .
 He said: ‘All right, get up, you third one.’ And that third one got up, and left, and made his tea, and drank . . .

A fourth way is via null marking. This is akin to the use of the infinitive, as in both there is no need to mention time further, once it is established. This appeared particularly often in northwestern languages (so tonal marking is often involved). So, for instance in Basaa (A43):

- (41) A43 *Lingom a n-lô*, a *bádá bípân*, a *bók gwó ilólé a pám-ák*
Lingom 3s P₁-come, 3s null.take dishes, 3s null.arrange them before he null.leave-IPFV
 ‘Lingom came, took the dishes, and arranged them before he left’

where the first verb is marked as P₁ and the last three verbs have null marking between subject ([a] ‘he’) and verb stem. Bitjaa Kody (1990: 440) says explicitly that this is a dependent form, can be used with any of Basaa’s three pasts, and that all subjects in the discourse must have the same referent. For other examples, see (34).

The commonest narrative morpheme is *-ka-*. At least 30 per cent of the languages examined had a reflex of **ka* in narrative or relatable function, e.g. Daisu (E56), Swahili (G42):

- (42) E56 *Lindau ma-ka-keta* charo cha kuji Dambalani. *Ma-ka-jikuta* nguwa *ma-ka-doja* atumwa. *Ma-ka-shoka* mushini *ma-ka-rya* uyeni. *Lindau ma-ka-jikuta* atumwa oo *ma-ka-doja* baruti . . .
 ‘Then they set off for Usambara. They sold the clothes and bought slaves. They went home and enjoyed hospitality. Then they sold their slaves and bought gunpowder . . .’ (Dammann 1936/7: 226)
- G42 *Basi wa-ka-tumia* zile pesa za kuni walizokuwa *wameweka wa-ka-tumia wa-ka-tumia* mpaka *zi-ka-malizika* (Maw 1969: 17)
 ‘And so they spent the firewood money which they had put aside, they spent and spent until it was used up’

⁵⁴ From Schadeberg and Mucanheia (2000: 200), which has so many examples that it was hard to choose the best one.

The functions varied somewhat: in E51 and F22 *-ka-* is only one of several morphemes used as narratives. The shapes also varied: mostly [ka] but also [a] (e.g. in P30 and some northwestern languages, where *k deletes), [ka:], [aka], [ga], and #ka-, in most cases apparently low-toned but not always. Word-initial #ka- can be seen in Lamba (M54):

- (43) M54 pa-ku-fika awayyeesu, wewo ka-w-ikele mung'anda, sombi newo
ka-nj-ikele peesonde
 LOC-infinitive-arrive our.friends, 2s NAR-2s-were.sitting, but 1s
 NAR-1s-was.sitting outside
 'When our friends arrived, you were sitting in the house, but I was
 sitting outside'

Doke (1938: 265) says it can replace either of Lamba's two pasts.

In summary, narrative tenses represent independent situations occurring sequentially in the same time frame, each one having its time established by the previous situation; are treated here as (relative) tenses; are dependent on some other preceding verb (or context) for the establishing of the temporal frame; and represent foregrounded rather backgrounded situations.

The morpheme *-ka-* is used for other functions beside Narrative, and *ka has been reconstructed for Proto-Bantu (6.2.4(iii), 6.5, and Botne 1999).

Welmers (1973: 365) says that 'consecutive constructions are frequently found in Niger-Congo', where his use of consecutive corresponds to my use of narrative. Although this is a very general claim and needs quantifying, it suggests that such narratives are probably not a Bantu innovation but inherited from Niger-Congo.

3.12.2 Other relative tenses?

Three other categories widespread in Bantu have sometimes been treated as relative tenses, the persistive, the anterior ('perfect'), and the situative ('participial'). In a persistive, a situation current at the time of reference is connected to an identical past situation: Nyanja (N30) *ti-daka-gula* 'We are still buying' (1p-PER-buy) directly ties our current with our past buying. An anterior represents a situation current at the time of reference as the result of a past act: N30 *a-a-góna* 'He is asleep' (3s-ANT-sleep). Situatives occur in dependent clauses, representing a concomitant situation and/or a backgrounded situation: E56 *a-ki-vika ni-chere ni-ki-rema* 'When she arrived, I was hoeing' (3s-SIT-arrive 1s-was 1s-SIT-hoe).

Persistive and anterior differ from narrative in that they deal with a single situation, while narratives treat a series of independent situations. Comrie treats persistive (1985: 54) as tense, and anterior ('perfect') as both tense and aspect—as aspect in a chapter in Comrie (1976) but in a discussion of absolute-relative tenses in Comrie (1985: 80) rather as tense. Bybee *et al.* (1994: 318) and Frawley (1992: 304, 346) have anterior

as a (relational, relative) tense. There is an apparent argument for treating anterior, persistive, and situative as tenses, which is that they take as their point of temporal reference the tense mentioned or understood elsewhere in the utterance, and this point is frequently not the present. In fact, they have no time reference at all, as is typical of aspects, but can be interpreted as having e.g. present reference, if no other time is specifically mentioned. This book handles all three as aspects, because they regularly combine with different tenses and other aspects, which is characteristic of aspects, not of tenses, and so are found in Chapter 4 (4.8, 4.11).

3.13 Tense combinations (see 2.2.4)

All Bantu languages in the databases allow combinations of tense and aspect in a single-word verb, and they allow combinations of aspect and aspect in a single-word verb or a compound construction (see 2.2 and 4.3). No language allows combinations of tense in a single verb, but what of compounds? In languages with a single past or future, the first verb marks tense and it would be redundant to indicate it again on the second, lexical (main) verb, so the main verb shows only aspect (so Swahili in (2.5 and 2.6)). But in languages with multiple pasts or futures (Haya and Sukuma in (2.4)), the first, auxiliary, verb has a tense marker establishing a temporal reference point other than the time of speech (or the present), and the second verb takes that as its reference point, and may therefore have a tense reference to some other point, preceding or following, besides showing aspect. Detailed discussion of combinations of tense and tense, and tense and aspect is postponed till 4.13 and 4.14, because it requires some prior exposition of aspect.

3.14 Northwest Bantu and Grassfields Bantu

The point has been made previously (1.3, 2.8) that the northwest Bantu languages do not always behave as the others. This section examines briefly tenses in the northwest languages: how many tenses occur, whether the range is similar to that elsewhere in Bantu, and how they are expressed. It also looks even more briefly at adjacent Grassfields languages.

Fifty northwestern languages were considered: fifteen from Zone A (A11-14-22-24-34-43-44-46-53-62-72-74-83-84-93), ten from B (B11-25-302-43-52-63-73-82-85-87), eleven from C (C101-14-25-32-36-41-53-55-61-76-83), ten from D (D13-14-23-25-27-28-311-33-42-43), and four H10 varieties (excluding H10A). For Grassfields, I consulted Anderson (1979), Chia (1976), Hyman (1980), Tadjadjeu (n.d.), and Watters's overview (2003). This is not such a detailed sample as for Bantu.

I first totalled the number and percentages of pasts and futures for all fifty languages and for each zone separately. The figures are not set out here because for the whole group the averages are similar to those shown above (in 3.4) for all Bantu, so the number of tenses and their semantic range of reference is the same as that of Bantu in

general. The only exception to this general claim is that the whole set of northwestern languages has a higher than average percentage of languages with four pasts (18 per cent, compared to 10 per cent for all of Bantu), offset by a lower percentage of languages with one past (6 per cent, compared with 17 per cent for all Bantu). More revealing are figures for certain local groupings. Parts of A10-20 (also A90) have only a single past. B, C, and especially the H languages have a lower than average level of futures. All Zone C languages examined (except Ombo and Bushoong) have a two-way past contrast, and often a single future. At the large end of the scale, D and H languages, C70-80, B70-80, and A44-46 have multiple pasts.

What of the morphology? How are the tenses marked? This section should be read together with the end of Section 3.2 above, where the morphological exponence of tense in the non-northwest languages is set out. Across Bantu in general, past reference is mainly carried by, in order of decreasing frequency: *-a-/-a*, *-a-/-ile*, *-ø-/-ile*, *-I*, *-ka-/-a*, and the vowel copy suffix. Three of these do not occur at all, or only as traces, in Zones A, B, C, D23, and D30: *-a-/-ile*, *-ø-/-ile*, and the vowel copy suffix. All three involve suffixes, and loss of final vowels leading to the atrophy of suffixes is a regional feature in the northwest. Loss of inherited [k] also characterizes most of the same languages so it is not surprising that a past tense [ka] occurs in only one language (Nen) in the whole area, and this [ka] may have another source. That leaves *-a-/-a* and *-I*. They do occur in the northwest, although with regional disparities: *-a-* is infrequent in Zones A and B, and *-I* is infrequent in A but widespread in C. Because the northwest languages have on average just as many degrees of past reference as other Bantu languages, and because they have lost these inherited markers of past reference, they have developed new markers. Tone plays a large role in the area (see the B82 example in (5)), probably because segmental tone-bearing units, but not their tones, are lost (see A83 and A84 in the Appendices). A marker occurring fairly widely in Zones A and B (also C83, D43) is [ma], and phonetic variants: the shape and meaning of this suggests a possible origin in **-mala* ‘finish’:

(44) Punu (B43) tu-má-díbig-a ‘We closed (P₂)’, tu-má-dibíg-a ‘We closed (P₁)’

Otherwise most of the morphological innovations in past reference are local.

D10 gives every sign of being a transition zone, with a mixture of northwest and non-northwest features. D23 and D30 share morphological features marking tense (and aspect) quite unlike most other Bantu languages and probably induced by contact with Ubangian or Central Sudanic languages. This is an area where Bantu and non-Bantu coexist and interact today, and must have done for long in the past.

The mainstream future markers listed in 3.2.2 are even more conspicuous by their absence. There is little or no clear sign of *-laa-*, *-e*, or derivatives of ‘come’ in A, B, C (but C53 *la*), D10 (but D13 *lo*), D20 (but D25 *-e*), D30, or H. Future markers of the shape [ka] (not deriving from auxiliaries) appear hardly or not at all in B, C, or D30 and only in three Zone A languages. Again, there are many unfamiliar future shapes, maybe innovated in compensation for the loss of longstanding features, but all local.

In sum, examination of past and future reference in the northwest leads to the conclusion that, while the number of tense contrasts and their time reference in Zones A, B, C, D10, much of D20, D30, and H10 are similar to what occurs elsewhere in Bantu, their morphological exponence is different. Phonological loss has removed or reduced traditional markers so the languages of the northwest have compensated by innovating new markers for old categories.

What, if anything, can be said of tense in non-Bantu Niger-Congo? As mentioned in 2.9.2(iv), most Niger-Congo languages are still aspect-prominent, only a minority having fully superimposed tense on aspect: Narrow Bantu, Grassfields Bantu, some (all?) Nupoid languages (NW Nigeria), many (but not all) Bantoid languages (SE Nigeria, SW Cameroon), Supyire, Zande, maybe Igbo and eastern Kru. Others have traditionally been analysed as having tense and aspect, or as having a single tense contrast,⁵⁵ but these analyses may be wrong-headed. The tense distinctions that have emerged in geographically distant languages or families, such as Supyire, Zande, and eastern Kru, give the impression of being independent, of each other and of Bantu. The most striking similarities in tense are between Narrow and Grassfields Bantu, not surprising given their geographical closeness in Cameroon. The local groupings mentioned above do not stop at the edges of Narrow Bantu. The A44 and A46 communities of Cameroon are adjacent and the former in turn adjoins the nearest Grassfields community at its northern edge. Watters (2003: 246) says of Grassfields languages in general that 'their tense-aspect-mood systems... are usually complex, involving a full set of past and future tenses'. He goes on to say that 'Mbam-Nkam (and perhaps Eastern Grassfields in general), exemplified by the Bamileke languages, have the largest number of formal tense distinctions'. Most Eastern Grassfields languages have four pasts and futures, and at least one has five of each.⁵⁶ So the large tense systems in A40, and to a lesser extent in A50-60-70, are an areal characteristic, crossing narrow genetic boundaries. Further west, western Grassfields languages and A10 languages have smaller numbers of tense distinctions. Thus just as Aghem has two pasts, so do several Narrow Bantu A10 varieties (Londo): they share not only categories but even the morphemes are identical (Aghem and the Londo varieties have *-mó-* P₂, *-mo-* P₁). Finally analyticity of verb structures is also areal: while Bantu languages in general, including some Zone A languages, have agglutinating structures, others (A40, A60, A80-90, some A20) are analytic, as are all Grassfields languages.

If we ignored the conventional classification (Narrow versus Grassfields), and if we ignored possible (?) diagnostic lexical and phonological features, and concentrated

⁵⁵ Many West African languages, from several language phyla, have traditionally been viewed as being basically aspectual but with a future tense. It remains to be seen whether this is really a West Africa feature or a semantic misinterpretation of the data (future tense = prospective or potential mood). Other West African languages are said to have past versus non-past (tense) but this may be an interpretation of perfective versus imperfective (aspect).

⁵⁶ The example usually cited is Dschang-Bamileke. There are slight doubts about whether some of its distinctions are all strictly tense (i.e. past tense versus anterior).

only on these verbal distinctions, it would be hard to uphold the unity of Zone A and the distinction between Zone A and Grassfields.⁵⁷ These criss-crossing patterns must result partly from shared inheritance and partly from contact, and make it hard to be sure whether tense distinctions originated in Narrow Bantu or in southwestern Cameroon in general.

⁵⁷ See 1.3 and 6.1.

4

Aspect

4.1 Aspect

This chapter treats aspect and is similar in shape and intent to Chapter 3. It sets out the thinking behind the analysis of aspect, deals with major categories and their exponents across Bantu, provides examples, examines different kinds of systems and devotes some space to minor categories.

For some readers tense will be easier to grasp than aspect. It is not hard to move from general and non-linguistic ideas of past, present, and future time to past and future tense, and then to multiple past and future tenses and other notions discussed in Chapter 3. Aspect is less obvious for several reasons. One is that in languages of western European origin, and for writers brought up in the traditions of those languages, tense is seen as primary, aspect as secondary (in Slavic studies it is the other way round). This is seen in labels such as ‘past imperfect(ive)’, where ‘past’, the first word, locates the event, and only then is the shape of the event addressed by the second word, ‘imperfect(ive)’. A second reason is that tense and aspect are often merged or confused and ‘tense’ used as a cover term for both. Thus a category such as ‘past imperfect(ive)’, which combines the past tense and the ‘imperfect(ive)’ aspect, is usually referred to by the single English word *tense*, the French word *temps*. The German for verb is *Zeitwort*, ‘time-word’. Thirdly, there is a confusing welter of Latinate nomenclature for aspects: continuous, continuative, progressive, habitual, iterative, imperfect, imperfective, durative, generic, performative, persistive/perstitive, perfect, perfective, punctual, completive, conclusive, semelfactive, anterior, retrospective, prospective, resultative, aorist, telic, atelic, situative, participial, etc. Unhappy with this confusion, linguists tend to devise new terms or to give new definitions to traditional terms, thus increasing the confusion. Finally, there are different national traditions, so analyses of aspects in African languages written in English use a somewhat different lens from those in German or French.

The approach in this book is data-based (see Sections 1.5.1, 1.5.2), letting the data speak for itself as far as possible. Morphological data from each language description was extracted, analysed, and arranged in patterns. From these patterns a set of categories usually emerged. Some of the categories were tenses, some aspects, some other categories, and there were other categories (see e.g. Chapter 5), with a

variety of combinations. Any language or dialect differs from other related varieties, and between Bantu varieties there are nearly always differences in the shape of the morphology carrying the verbal categories, or the semantic or functional content of the categories, or both. Despite this, certain typical aspect categories occur again and again across Bantu, while others are of lesser frequency. This is also true in other language families. My purpose is to identify broad general categories, paying less attention to small semantic differences in their realization in different languages, and paying less attention to how they are encoded. It makes sense to refer to these major categories by the same labels, wherever they occur, and to try to use labels as they are used in the general linguistic literature (Comrie 1976; Dahl 1985; Bybee *et al.* 1994; Hewson and Bubenik 1997). A possible objection to this is that such an approach makes languages appear more homogenous than they really are, that the progressive in one language has not quite the same range as the progressive in its neighbour, and therefore should have a different label. One result of such an approach is to further multiply labels and categories. The approach here is rather to use a general set of categories and labels, and to say what they mean for each language where they are different or unclear.

We start with Comrie's semantic definition of aspect already mentioned: it is the grammaticalized expression of 'internal temporal constituency'. In Bantu aspect is also characterized and partly defined by certain structural features, discussed in 4.3.

4.2 'Internal temporal constituency'

Tense establishes the time framework for the listener and aspect then sets out how the situation is distributed within the time framework, as in (1). Consider:

- (1) i The Paddocks lived in the Green Bay district for two centuries.
- ii Harold wrote a letter.
- iii Harold breathed in sharply.
- iv The Paddocks have lived in the Green Bay district for two centuries.
- v Harold has designed a great computer program.
- vi The Paddocks used to catch cod.
- vii The Paddocks used to live in Green Bay.
- viii The Paddocks were living in Green Bay when Harold set out for the big city.
- ix The Paddocks were still living in Green Bay when he set out for the big city.
- x We saw Harold cross the road.
- xi We saw Harold crossing the road.

The first part of the verbal piece in most of the English sentences above (lived, wrote, breathed, used, were, saw) establishes the time as the past. Thereafter these sentences all differ aspectually. (i) presents the situation of a group of people over two centuries. Despite the length of time and the number of individuals involved, it

is presented as a single situation: that individuals in the group may have come and gone, and that individuals were certainly born and died, is not denied but is irrelevant so not presented. We also know that the Paddocks no longer live there now. (i), (ii), and (iii) show that a single situation can vary enormously in length but that is a function of the type of action/verb, not of the aspect itself. (iv) is identical to (i) by telling us of a past situation but different from (i) in that the situation still obtains at the time (iv) is uttered. So this situation has a past beginning and duration, continues into the present, and the end point has not been reached. The present component is reflected by the present form of 'have' (not 'had') and the past component by the 'have' plus '-ed', but those are accidental grammatical facts of English, not necessarily to be expected in other languages. (v) is formally identical to (iv) (have liv-ed... has design-ed) but differs in that the action occurred in the past, is over, but its consequences live on into the present—it could be used by someone announcing the results of a competition for new programs. The difference between (iv) and (v) has to do with the nature of the action/verb. (vi) presents a situation characteristic of a time period. The Paddocks didn't catch cod continuously over the period but often enough to make it a typical situation. (vi) differs from (vii) not by the aspect but by the action represented in the verb: catching cod happened from time to time, whereas living in Green Bay was a continuous act. In (viii) the second verb, as in (i), presents a single situation in the past, while the first verb presents a continuous background situation that went on for an unspecified time before the departure, obtained at the time of the departure, and maybe even after the departure. (ix) adds a component to (viii): the listeners have been told that the situation obtained at some previous point and 'still' tells them that it continued up to at least Harold's departure. The use of 'still' to represent this situation is again a grammatical fact of English, and such a usage should not necessarily be expected in other languages. (x) and (xi) share a first verb that presents seeing as a single situation, but the form of the second verb in (x) tells us that we saw the whole act—stepping into the road, walking across the road, and leaving the road at the other side—whereas the second verb in (xi) only refers to all or part of walking across the road, not necessarily to the stepping into or off the road.

The verbs in (i–iii) and the second verb in (viii, ix, x) exemplify what will be referred to as perfective (PFV).¹ The verbs in (iv–v) are examples of what is here called anterior (ANT: called perfect by others). (vi–vii) illustrate (past) habitual (HAB). The first verb in (viii–ix) and the second verb in (xi) are instances of progressives (PRG).

These examples are meant to illustrate aspectual possibilities and are not intended to be exhaustive. Readers will also see that the sentences and explanations above are provided by a linguist, and in real life some are overlapping, interchangeable, or replaceable by other forms.

¹ Welmers (1973) calls this 'factive', Hewson and Bubenik (1997) call it 'performative' (representation of complete performance of an event).

4.3 ‘Grammaticalized expression’

Bantu languages express aspect either by inflection or by the use of compound constructions. Both are widespread. Such aspect markers commonly occur at the FV slot (Kamba (E55) in (2) and often, but less often, at the pre-stem TA slot (Mbuun (B87), Kumu (D23)). So:

- (2) E55 a^2 - \emptyset -tony-a ‘He is able’
 n- \tilde{u} - \emptyset -semb-eete
 FOC-3s-null-run-ANT ‘He has been running’
 n- \tilde{u} - \emptyset -koot-ie
 FOC-3s-null-pull-PFV ‘He pulled’ (-ie < **-ire*)
 n- \tilde{u} - \emptyset -koot-aa ‘He always pulls’ (IPFV: -aa < **-aga*)
- B87 ba- \emptyset -dia ‘They eat, are eating’
 ba-ye-dia ‘They are eating’ (PRG)
 ba-wu-toma ‘They cry (regularly)’ (HAB)
 ba-be-toma ‘They are crying again’ (ITR)
 ba-bena-dia ‘They have already eaten’ (ANT?)
- D23 bi-u-demá(má) ‘We hoe, are hoeing’
 bi-di-dema ‘We hoe’ (HAB)
 bi-p^ho-dema ‘We are hoeing’ (PRG)
 bi-p^hóto-demá ‘We are still hoeing’ (PER)
 bi-sú-dema ‘We are about to hoe’ (INCE)

The pattern seen in Kamba is likely to be older than that in B87 or D23. The languages in (2) exemplifying the two ends of the morphological spectrum for most languages have a mixture of inflection at FV and at TA. Aspect is much less often marked at pre-SM or post-FV, via inflection or clitic. In nearly all cases, aspect is encoded to the right of tense (see 1.4.8). All these structural possibilities can be seen exemplified in (2.2–6, 2.11, 2.17).

As we have seen, the first verb in compound constructions encodes tense, aspect, or other categories, the second (and third) always express aspect, but, as we will see shortly, in some languages, may also have tense reference. In verbs such as those exemplified just above, which include a present component, it is usual for there to be just a single verb, whereas when a reference to past or future is included, the use of compound constructions is more common. No language expressed all, or even a majority of (‘present’, timeless) aspects by the use of compound constructions.

Some writers use ‘aspect’ to refer only to verb forms where the aspect is grammaticalized, that is, expressed by inflection on a single verb. Such writers would be comfortable referring to French *march-ait* as a (Past) Imperfect but might be less happy using similar terminology for English *was walk-ing*, because it involves the use of an

² E55 has both *a-* and *ũ-* marking 3s, depending on the verb form.

auxiliary beside the inflection. I do not make that distinction here. I will not distinguish aspect involving inflection and aspect involving auxiliaries because it will be seen that while one Bantu language uses inflection to express some aspect or other, its closely related neighbour uses a compound construction. If all languages examined used an auxiliary-based construction, I tended to disregard it, but if some used a compound and others a single inflected form, then I included it.

Some of these features can be illustrated by Standard Swahili (G42). It has one past, one future, and has lost the morphemes which occur in other Bantu languages at FV to express aspect. It thus deemphasizes the role of the FV position and at FV has only *-a* ‘neutral’, *-e* ‘subjunctive’, and *-i* in one negative. None of these indicates aspect as its primary function. Consequently, when G42 only marks one category—tense, aspect, or other—it does so at its portmanteau pre-stem position. For example:

- | | | | |
|-----|--------|-----------------------|--|
| (3) | G42 | tu- <u>li</u> -imba | 1p-past-sing ‘We sang’ |
| | Tense | tu- <u>ta</u> -imba | 1p-FUT-sing ‘We will sing’ |
| | | tu- <u>ka</u> -imba | 1p-NAR-sing ‘And we sang’ |
| | Aspect | tu- <u>me</u> -imba | 1p-ANT-sing ‘We have sung’ |
| | | tu- <u>na</u> -imba | 1p-PRG-sing ‘We are singing’ |
| | | tu- <u>ki</u> -imba | 1p-SIT-sing ‘If we sing’, ‘We singing’ |
| | Other | tu- <u>nge</u> -imba | 1p-CND-sing ‘We would sing’ |
| | | tu- <u>sipo</u> -imba | 1p-unless-sing ‘Unless we sing’ |

But when aspect combines with another category, then a compound construction has to be used, and only certain aspects (*me*, *na*, *ki*) can appear on the right, in the second verb, while in the first verb, on the left, any category, including tense and aspect, can occur. The left-hand verb is an auxiliary, most often, as in Swahili, ‘be’, while the right-hand verb is the main or lexical verb. In such structures, aspect is encoded closer to the main verb than tense, suggesting that it is more closely connected to the semantics of the main verb than is tense. Thus Swahili structures such as these are possible:

- | | |
|-----|---|
| (4) | tu- <u>li</u> -kuwa tu- <u>me</u> -imba |
| | 1p-PAST-be 1p-ANT-sing |
| | ‘We had sung’ |
| | tu- <u>li</u> -kuwa tu- <u>ki</u> -imba |
| | 1p-PAST-be 1p-SIT-sing |
| | ‘We were singing, used to sing’ |
| | tu- <u>ta</u> -kuwa tu- <u>me</u> -imba |
| | 1p-FUT-be 1p-ANT-sing |
| | ‘We will have sung’ |
| | tu- <u>ka</u> -kuwa tu- <u>na</u> -imba |
| | 1p-NAR-be 1p-PRG-sing |
| | ‘And we were singing’ |

tu-me-kuwa tu-na-imba
 1p-ANT-be 1p-PRG-sing
 ‘We’ve been singing’
 tu-nge-kuwa tu-ki-kaa
 1p-CND-be 1p-SIT-stay
 ‘If we were to stay’

Such compound structures with any other category in the second position are not allowed. This thus appears to be a good test for what is aspect and what is not.

A similar pattern occurs in Zone S languages, except S10. Zulu (S42), spoken two thousand kilometers south of the Swahili area, also forms compound constructions with *-ba* ‘be, become’. Zulu has two pasts, two futures, and keeps the *-ile* suffix, lost in Standard Swahili:

(5) Zulu

(ngi-∅)b-e ngi-∅-hamba (-e is the conjunctive form of ANT, -ile the disjunctive)
 (1s-null-)be-FV 1s-null-walk
 ‘I have been walking’
 ng-a-b-e ngi-∅-hamba
 1s-PAST₂-be-FV 1s-null-walk
 ‘I was walking’
 ng-a-b-e ngi-sa-hamba
 1s-PAST₂-be-FV 1s-PER-walk
 ‘I was still walking’
 ngi-zo-b-e ngi-∅-hamba
 1s-FUT₁-be-FV 1s-null-walk
 ‘I will be walking’
 ng-a-b-e ngi-hamb-ile
 1s-PAST₂-be-FV 1s-walk-ANT
 ‘I had walked’
 (ngi-∅)b-e ngi-zoku-hamba
 (1s-null-)be-ANT 1s-FUT₁-walk
 ‘I’d have walked, I was about to walk’ (lit. I was I will walk)

As in Swahili, the second verb can only contain certain aspects (IPFV, PER, ANT) but not P₂ perfectives (so not *ng-a-b-e ng-a-hamba). It is also unlike Swahili by allowing the two ‘futures’ in the second verb. Futures often derive from modals or directionals and in this case the two future markers are barely grammaticalized forms of ‘come’ and ‘go’ (Gowlett 2003: 635).

Gikuyu (E51; Mugane (1996)) allows three aspects in the second verb, *-eete* (anterior, functionally like Swahili *me*), *ke* (cognate to Swahili *ki*), and *-a-* ‘just past’:³

³ Barlow (1960: 268, 170ff.) has a few cases of other aspects in the second verb.

(6) E51

ma-a-korwo ma-a-re-a 'They have just eaten' (3p-PAST-be 3p-just-ate)

ma-a-korwo ma-ke-re-a 'They have been eating' (3p-PAST-be 3p-SIT-eat)

ma-a-korwo ma-re-eetε 'They have (already) eaten' (3p-PAST-be 3p-eat-ANT)

Examination of the matrix languages (see Appendices) shows that certain aspects predominate in compound constructions. They are, in order of frequency: progressive, persistive, anterior, and imperfective.⁴ Other aspects are much less frequent (habitual, perfective, inceptive, 'future'⁵). Examination of the same languages likewise shows that in compound constructions certain structures predominate, in order of frequency: structures involving locative (deriving from be+loc+infinitive), *-kI-* (including both meanings set out in 4.8, below), null, and null/*ile*. Structures with *-kI-* and null/*ile* do not occur in the northwest. Other types of structures are much less frequent (structures deriving from *-a/-a*, *-ka-*, *-aga* and 'have' (*-na-*)).

Since inflection at FV or TA and the use of compound constructions are so widespread, the two strategies can likely be attributed to the earliest stages of Bantu.

4.4 Perfective

Perfective can be defined in two ways: (i) semantically, as representing a situation as complete,⁶ as a single bounded whole, without regard to its internal structure or its constituent phases, and (ii) structurally, as contrasting with some form of imperfective.

In the first definition, Perfective answers wh-questions such as 'When did you see X?' or 'When will you see X?', to which the answers 'We saw her (this morning, yesterday, etc.), we will see him (next week, etc.)' present the seeing as a single event.⁷ A glance at the matrices will show that every language in the Appendices is analysed as having a perfective, as are all the other languages in the database but not included in the Appendices. It will also show that perfective is not restricted to past situations but used to refer to future and even present situations as well, because in the sense of (i), future and untensed situations are also represented as complete events ('When will you go to Timbuktu?': 'We will go to Timbuktu tomorrow', 'When do you go to Timbuktu?': 'We go to Timbuktu every week'). Answers such as 'We saw her this morning', 'We'll go to Timbuktu tomorrow', 'We go to Timbuktu tomorrow' do not deny that the acts of seeing and going have beginnings, middles, and ends, but they ignore this and present the situations as a single act. While a perfective used by itself ignores the internal structure of a situation, it is possible to combine perfective with other aspects, even imperfective aspects, to highlight that the single act could have an internal shape ('We

⁴ This order should be treated as generally accurate. Since I am not absolutely sure in some cases about the correctness of the labels PRG and IPFV, it is possible that there might be slightly more or fewer PRGs and IPFVs.

⁵ As mentioned in the text under (5), the tense status of these 'futures' is dubious.

⁶ Note the use of 'complete' here, rather than 'completed'.

⁷ Dahl (1985: 78–101) has a 'proto-typical' set of occurrences for (past) PFV (also PRG, HAB).

have bred goldfish for twenty years' versus 'We have been breeding goldfish on and off for twenty years'). A glance at the matrices will not reveal too many such combined aspects, partly because the sources often were not explicit about such possibilities, partly because space does not allow it. They are nevertheless quite common.

This use of perfective does not correspond entirely to that used by some other writers, for whom it only refers to past events. For them it only refers to past events, because part of their definition includes the word 'completed', and only past events can be completed. By contrast, the definition above uses 'complete', which can refer to past and future events. Nevertheless, past perfectives are commoner than future perfectives just because conversations deal more often with the complete events in the past than in the future.

It will also be seen that perfective is also used to refer to what appear to be 'present/moment of speech' situations, and some readers may be uneasy at this. Locating situations relative to the moment of speech is a narrative, deictic function, so past and future perfectives present a situation as a single bounded whole. But 'present' reference is descriptive rather than narrative: it rarely answers when-questions and seems to refer to unbounded situations, so how can such situations be perfective? The opening paragraph above gives two reasons for treating such forms as perfectives.

If we ask 'What do you do for a living?' and the answer is 'We buy (bananas, cattle, computers)', the time involved is not the present, which is why most matrices in the Appendices have a blank between past and future, instead of the word 'present'. The time of the situation is not mentioned but is understood to have started in the past, to continue through the moment of speaking, into the future. The time is what was earlier called the vast present. Within this vast present, no structure—no beginning, middle, or end of the selling—is mentioned. We know the nature of buying is that it takes place typically at certain times of day, not others, gets intense at certain times of the year and slacks off at others, it occurs in spells and then stops. But by saying 'We buy ...' all this is ignored and the buying is presented as a single act, without explicit reference to the internal structure that we know exists. In this sense, the left-hand forms in (7e) and (7l) are perfectives:

(7) Bukusu (E31)

Perfective	Imperfective (-ang-)
a xw-á-kul-a 'We bought (P ₄)'	xw-á-kul-ang-a 'We were buying'
b xw-aa-kúl-ile 'ditto (P ₃)'	xw-aa-kúl-il-aang-e ⁸
c xu-∅-kúl-ile 'ditto (P ₂)'	xu-∅-kúl-il-aang-e
d xw-aaxa-kúl-a 'ditto (P ₁)'	xw-aaxa-kúl-aang-a
e xu-∅-kúl-a 'We buy (in general)'	xu-∅-kúl-aang-a 'We buy regularly'
f xu-la-kul-a 'We will buy (F ₁)'	xu-lá-bá xu-kul-aang-a 'We'll be buying'

⁸ For most Bukusu speakers, the combination of *-ile* and *-ang-* gives *-il-ang-e*, as shown. A few older speakers have *-ang-ile*.

g	xu-xa-kúl-e ‘ditto (F ₂)’	xu-xa-kul-aang-e
h	xu-li-kúl-a ‘ditto (F ₃)’	xu-li-kúl-aang-a
Lega (D25)		
	Perfective	Imperfective
i	tw-a-bulút-ǐle ‘We pulled (P ₃)’	tw-a-bulút-ág-á ‘We were pulling’
j	tw-ǎ-bulut-ǐle ‘ditto (P ₂)’	tw-ǎ-bulut-ag-ǐlé
k	tw-a-bulút-á ‘ditto (P ₁)’	tw-ǎ-bulut-ag-a
l	tu-ku-bulút-á ‘We pull’	tu-ku-bulut-ag-a ‘We are pulling’
m	tw-ǎ-bulút-é ‘We will pull (F ₁)’	tw-ǎ-bulut-ág-é ‘We will be pulling’
n	tu-ka-bulut-a ‘ditto (F ₂)’	tu-ka-bulut-ag-a

Structurally, it is easy to see these two, and indeed all the forms on the left as perfectives, because they clearly contrast for all tenses with the forms in the right-hand column, marked by *ag* or *ang*, depending on the language. The forms in the left-hand column, here and throughout the matrices, could have been referred to as Simple or Unmarked forms. ‘Simple’ and ‘Unmarked’ are not satisfactory terms, because it is not clear whether ‘simple’ refers to semantic content or morphological composition. The forms on the left may be structurally simpler than those on the right but within the forms on the left some are simpler than others. Semantically they are not so simple. While the left-hand forms may be unmarked or lightly marked for aspect, they are not devoid of aspectual content. And while unmarked for perfective, they are not unmarked for tense—except *xu-θ-kúla*. For these reasons, and because they contrast so often in Bantu with forms such as those on the right, and because the cross-linguistic contrast PFV : IPFV occurs widely, if not universally, Perfective is preferred.

Certain features of these Bukusu and Lega paradigms are common in Bantu. One is a contrast between perfect(ive) and imperfective/imperfectives. A second is that Bantu imperfectives are typically marked and perfectives unmarked, so the forms in the left-hand columns above are marked for tense but not aspect. Thirdly, the non-past, non-future (‘present’) member of the paradigm is the least marked perfective form. Many Bantu languages (52 per cent) are as Bukusu in that they have a null form, with neutral *-a* at FV and no structural indication of tense at TA. This befits a form which is essentially unmarked for time or aspect, and represents the situation as a single undifferentiated unit (3.11, especially 3.33–7).

4.5 Imperfective

Imperfective is widely used in two senses, to: (i) contrast systemically with perfective (e.g. see Bukusu and Lega, in (7)), and (ii) represent any situation that the speaker wants to show as lasting over a period of time, a situation that is typically unbounded, where neither beginning nor end are mentioned, relevant, or known. In the typical imperfective part of the situation is complete, and part not complete. (ii) covers three

different possibilities. Some languages have a single category to express imperfectivity, e.g. Lega, as above, as represented in Meeussen (1971a), although Botne's (2003a) analysis of Lega shows additional imperfective possibilities, having Progressive, Persistentive, and Inceptive, indicated by the use of compound constructions. Other languages have no single imperfective category but only distinct categories such as progressive, habitual, and persistentive. An example would be Giryama (E72):

- | | | | |
|-----|------------------|-------------|--|
| (8) | fu-Ø-gula | 1p-null-buy | 'We buy' |
| | siswí niku-gula | 1p HAB-buy | 'We buy (habitually)' |
| | fu-na-cimbíra | | 'We are running' |
| | fu-ku-gula-ni | | 'We are buying' |
| | fu-ki-gúla | 1p-SIT-buy | 'If we buy, we buying' |
| | hu-chere ku-gula | | 'We are still buying' (E72 has <i>fu-</i> and <i>hu-</i> for 1p) |

In the matrix, these are labelled, respectively: Perfective, Habitual, Continuous, Progressive, Situative, and Persistentive. How do the Perfective and Habitual differ here, since the English translations are identical? Such a distinction—PFV versus HAB, or PFV versus PRG—occurs widely across Bantu. The perfective, the null form, represents a very general situation, where the speaker is essentially interested in the semantic content of subject and lexical verb, and not interested in, or not thinking of the aspectual details of the buying: it translates best as 'We buy', but might cover habitual, continuous, or progressive. The second is specifically habitual, 'regularly, always, habitually, often'. Continuous and progressive are similar in that the situation is presented as going on over a period of time whose beginning and end are unspecified. They differ in that the progressive refers to a shorter period of time closely around the time of reference, whereas continuous covers a longer period: thus, in the past, 'We were buying when you arrived' versus 'We were buying all day'. It is thus similar to the Swahili forms *tulikuwa tu-na-lima* versus *tulikuwa tu-ki-lima*. The difference between the two might be thought of as a short versus a long imperfective, and the difference between the two depends on the situation and what the speaker has in mind. In such situations, in the matrices, the term imperfective may not appear, though collectively these are all imperfectives (Giryama Habitual, Continuous, Progressive, Persistentive).

Yet other languages may have an imperfective side by side with progressive, habitual, participial, and persistentive. The data for Basaa (A43) suggests Perfective, Imperfective, Habitual, Progressive, Persistentive, (and Anterior), although not all are attested for all tenses:

- | | | | |
|-----|---|-----------|--|
| (9) | a | ɛl-ék | 'He was planting, used to plant' (IPFV, -Vk, from *-ag-) |
| | a | é éna jé | 'He used to eat' (HAB, éna: é is a form of 'be') |
| | a | á jé | 'He was eating' (PRG, á is a form of 'be') |
| | a | ngí j-ê k | 'He is still eating' (PER, ngí and -Vk) |

In some cases these different types are clearly based on the data. But in other cases the semantic range of the imperfective forms in a particular language is not clear or not given. At one end of the spectrum, there are languages with distinctive imperfective morphology (e.g. *ang*), only one such category, and translations which suggest a general imperfective. Such an imperfective would be translated into English as ‘We used to buy’ (habitual) and ‘We were buying’ (probably progressive), and even ‘We bought (often, regularly)’. At the other end of the spectrum are languages such as Duala (A24), where the data gives (ignoring non-imperfective categories such as Anterior, Inceptive, and Completive):

- (10) na ma-bola ‘I give, will give’
 na bola ‘I give (repeatedly)’
 ná bola ‘I give (constantly)’
 na ma-béná bola ‘I give (habitually)’
 ne ó bola ‘I am giving’
 na díá na ma-bola ‘I am still giving’ (and/or ‘I still give?’).

A non-native speaker, with a superficial structure knowledge of Duala and little access to texts, is at a loss how to interpret such cases correctly. In quite a number of cases I have presumed to reinterpret and relabel the terms used in the sources, but in these cases these reinterpretations are only assumptions. In some of these cases, I was reasonably confident, and in others much less confident, about the reinterpretation. Where I was reasonably confident, I tried to generalize as much as possible, which meant using the broad term imperfective. In general, the trickiest distinction to make was that between imperfective and progressive. Where a language clearly had both categories, the distinction imperfective : progressive was kept. Where there appeared to be only one category, I generally relabelled it as Imperfective, but there may be some inconsistency, because of semantic indeterminacy. So in the matrices, and in the general database, the term imperfective may have different reference. As a result, statistical claims made here about the incidence of imperfective should be taken as having general validity, not clinical accuracy.

That said, then almost all the languages in the database, and all those exemplified in the matrices, have a contrast between perfective and imperfective, imperfective being used in one of the three ways just discussed. It is common for aspectual contrasts, including imperfective ones, to be best exemplified in the non-past and non-future (‘present’) and to show fewer contrasts in the past and future. The very few languages that appear to lack an imperfective do so because the source data was incomplete.

In the contrast PFV versus IPFV, it is invariably the latter that is marked in Bantu (see (7)) and overwhelmingly encoded by the suffix *-a(n)g/-a(n)ga*. If this suffix covers something other than general imperfective, it is habitual/durative/iterative rather than progressive.

Sections 4.6–10 examine other major imperfective types.

4.6 Progressive

Progressives are the commonest subtype of imperfective and attested as a category distinct from general imperfective in some 66 per cent of the languages surveyed.

Progressive normally represents a situation in progress at and around reference time. The field of reference of progressives varies—in some languages it represents situations that are only ongoing at or just around the time of reference while in others it covers a wider field. In English the Progressive covers ‘She is writing the number one, or a letter, or an encyclopedia’, where the writing is of quite different duration. So what is meant by ‘at and just around reference time’ depends on the activity and also on the language—not all languages would use the same form for the first and the last example. Progressives are unbounded in that the start and finish of the situation are not known or not important. It is the situation in process that is important.⁹

To understand better the reference of progressives, it is useful to consider their sources. The passage of time is hard to represent in language and frequently encoded through concrete spatial terms. Progressives are expressed variously in Bantu: by inherited morphemes at TA such as *-a-*; suffixal *-a(n)ga*; desultory local innovations; constructions deriving from ‘have/be with’; and constructions which visibly derive from locatives. Progressives deriving from locatives are the commonest type across Bantu. Most Bantu languages have three active locative classes, or at least traces of them, used with nouns, and indicated prefixally, either replacing or added on to, the primary nominal prefix. They are **pa-* (Class 16), **ku-* (17), and **mu-* (18), which translate roughly as ‘at, to, in’, respectively, although there is considerable variation in their semantic range from language to language. In a neglected article, Bastin (1989a, 1989b) shows numerous Bantu languages with constructions that derive in one way or other from an original construction *-li+mu+ku-*, where *-li* is a locative verb ‘be (in/at)’, *mu-* is the locative prefix ‘in’, and *ku-* marks the verbal noun (infinitive). This construction can be rendered as ‘be in/at verb-ing’. The general role of *-li* ([*-ri*]) can be seen clearly in this pair of ‘be’-words from Haya (E22):

- (11) *ba-ri* Kampala ‘They are in Kampala (only temporarily, gone tomorrow)’
ba-ba Kampala ‘They are in Kampala’ (they live in Kampala)

Whereas *-ba* refers to a permanent state, *-ri* refers here to a passing phase.¹⁰ As ‘be’-verbs become increasingly grammaticalized as auxiliaries their lexical content is bleached. That the lexical content of auxiliaries is however not entirely bleached can be seen illustrated in English *He has eaten* versus *He was eaten*, and by considering the various functions of *-li/-ri* and *-ba* in the examples in (13), following.

⁹ For the connection between progressive and focus, see 5.3.7.

¹⁰ There are well-known parallels in European languages (e.g. Spanish) between ‘be’-verbs denoting temporary versus permanent state. Some English varieties show a temporary distinction, thus in Newfoundland: ‘I is sick’, meaning ‘I currently have a short term ailment’, versus ‘I bees sick’, meaning ‘I suffer from a chronic debilitating bodily dysfunction’ (H. Johnson, p.c.).

The current survey covers more languages than Bastin but corroborates her data. Fifty-nine of the sixty-six matrix languages with a progressive express it by a construction of this kind—an overwhelming majority. A good illustration of the construction is in Ilwana (E701) (Nurse 2000a: 153), and similarly attested in neighbouring Pokomo (E71) and Giryama (E72 (Nurse and Hinnebusch 1993: 716–22), and the E72 matrix in the Appendices, and (8)). E701 has today a single general suffixal locative (*-e:ni* ‘in, at, to, etc.’), only used with nouns, including the infinitive, and although it is probably a calque on a structure in a neighbouring Cushitic language, it illustrates the principle beautifully:

- (12) E701 *tu-mu-ku-lim-e:ni*
 1p-be.LOC-INF-hoe-locative (lit. we (are) in/at hoeing)
 ‘We are hoeing, we will hoe’

In this Ilwana construction the old locative prefix *mu-* today serves as a locative verb (*tu-mu* ‘We (are) in’ (Nurse 2000a: 153)).

As the meaning widens, the shape narrows. From referring exclusively to ‘be in the middle of an action at the time of speaking’ it can expand time of speaking to time of reference, that is, from present to use with past (especially) and future, it can expand from a narrow time period at the time of speaking to a wider period around the time of speaking, even excluding the time of speaking (‘She is writing an encyclopedia but has gone to buy yams in Timbuktu today’), from progressive to general present, and thence to general imperfective. At the same time the three-syllable shape CV-CV-CV (*-li-mu-ku*) typically narrows to the single CV shape characteristic of Bantu structure and of tense-aspect markers. As a result of these two tendencies, we find a great variety of meanings and shapes across Bantu. As one locative construction is grammaticalized and expands its meaning, it can be replaced by a new one, so there are cases where the locative-based construction no longer means progressive, e.g. D23, E102, G11 in (13). Examples:

- (13) Holoholo (D28) *w-i-mú-ku-keba* ‘She’s searching’
 (*i-mu-ku* < *li-mu-ku*) (-mu- 18 LOC)
- Mwani (G403) *ka-wa-n-ku-fisa* ‘He is hiding’ ([*wa-ŋ-ku*] < *wa-mu-ku*)
- Ha (D66) *tu-ri-ko tu-ra-gura* ‘We’re buying’
 (*ri-ko* < *ri-ku*) (-ri = -li ‘be’, -ko 17 LOC)
- Hangaza (D65) *tu-ri-mw-ó tu-ra-gura* ‘We are buying’ (*ri-mw-ó*) (-mw-18)
- Rwanda (D61) *tu-ri ku-gura* and *tu-ri-hó tu-∅-gura*
 1p-be INF-buy and 1p-be-LOC 1p-null-buy
 ‘We are buying’
tw-á-ri-ho tú-∅-gura
 1p-PAST-be-LOC we-null-buy
 ‘We were buying’

	tu-ra-ba tú-rí-ho tú-Ø-gura 1p-FUT-be 1p-be-LOC 1p-null-buy 'We'll be buying (F ₁)'
Ruri (E253)	ci-a-li cí-Ø-gula 'We were buying' ecí-Ø-ba cí-Ø-gula 'We'll be buying'
Ndali (M301)	ú-li pa-kú-bala 'You are counting' (pa- 16)
Basaa (A43)	a bá jé 'He was eating (P ₃)' (-ba 'be': P ₃ marked by high tone(s))
Yambasa (A62)	a-lé a-núun-ə 'He is watching' (-le 'be': lit. he-is he watches)
Koozime (A84)	bé lí e-fumo 'They are building' (li 'be', e- INF prefix, 5 not 15)
Vunjo (E62)	lw-i-kapa 'We're hitting, we'll hit' (-i- either *-li 'be' or Cl.5 INF)
Duma (B51)	a-lí mû-kéna 'She is dancing' (-li 'be', mu- 17 LOC)
Lingala (C36)	a-zal-í ko-pésa 'He is giving' (-zal- 'be', ko infinitive) a-zal-ák-í ko-pésa 'He was giving (P ₁)' (-ak- IPFV, -i P ₁)
Kumu (D23)	bi-p ^h o-dema 'We are hoeing' (-p ^h o- < 16 LOC) bi-di-dema 'We hoe' (-di- < 'be')
Talinga (E102)	tu-ku-ghenda 'We are going, we go' and tu-li-ghenda 'We will go'
Gogo (G11)	ni-lí-gúla 'I am buying' and ni-ku-gul-á 'I buy'
Kituba (H10A)	béto ké(le) (kú)-dia 'We are eating' (kele < kal+ile)
Kimbunda (H21)	tw-olo-lima 'We are cultivating' (-olo- < kala+o of infinitive)
Meru (E61)	ti-keé-kabá 'We are hitting' (-kee < -kala 'sit, remain')
Mpoto (N14)	ti-yi-li mu-ku-la 'We're eating', ti-ka-yi-li mu-ku-la 'We were eating (P ₂)' t-a-yi-li mu-ku-la 'We were eating (P ₃)', t-á-ya-yi mu-ku-la 'We will be eating'

Many more such examples can be found in the Appendices. For non-Bantuists these examples contain several features that may be opaque. They are only mentioned briefly here. The morpheme **ku* is reconstructed for Proto-Bantu with two glosses, of identical shape 'Class 15 infinitive/verbal noun' and 'Class 17 locative' (the infinitive can be seen in the D28, D61, M301, C36, and G11 examples, while locative *ku* is exemplified in D66 ([ko]). There has been discussion as to whether these were really distinct but for our purposes here it does not matter. Beside the Class 17 locative *ku* there is also the Class 16 locative *pa* (in D61, M301, and D23), and the Class 18 locative *mu* (D65, B51, G403). Bantu has several common morphemes for 'be'. Three with

wide distribution are seen above (*-li*, *-ba*¹¹, *-ikala* (as in E61, H10A, H21)), and one with only local distribution (*-zal-* in C36). Finally it should be mentioned that 'be' has two functions in the data above. One is as central to the locative construction, the other is as an auxiliary, the first member of compound constructions.¹² Both can be seen in the third D61 example in (13), where *-ba* is the auxiliary carrying the tense marking, while *-ri* is part of the locative construction. By contrast, in the Ruri (E253) example in (13), following D61, *-li* is the auxiliary in past compound constructions, whereas *-ba* occurs in the future.

Another source for progressives, which also nicely illustrates typical semantic range and change, is *na*, occurring as a conjunction across Bantu. Widely but not universally across Bantu this *na* forms the basis for the verb 'have' (be with = have). As a progressive source it is less common than the locative construction. It only occurs in one large area in western Bantu (H20, K10-L52, L21, R10, and parts of H30 and K30), a smaller area along the East African coast (E71-72-73, G401-42d), and in two apparent isolates (N44, P22). In its full form and progressive meaning it can be seen in Lucazi (K14):

- (14) ngu-(li-)na ku-tángisa
 I-(am-)with to-teach
 'I am teaching'

Here we see the full shape '(be) with-verbal noun' and the predominant meaning, progressive unmarked for time. Over time phonetic attrition reduces the shape to mere *na*. Various semantic extensions can be seen: unmarked (present) progressive comes to include future; progressive widens to general present or imperfective; progressive is often used as the basis for persistent; and tense markers are added to produce past and future progressives. At an early stage these extensions can be seen but if a new progressive arises, the connection is cut and *na* occurs indicating these other categories without the original progressive reference. Examples:

- (15) Lucazi (K13) ngw-a-pw-anga na ku-tángisa
 'I was teaching (P₂)', etc. (-pw 'be')
- Lunda (L52) wu-di-na-ku-hema
 3s-be-with-to-play/playing
 'He is playing'
- Hungu (H33) tu-na-ku-sumba
 1p-with-to-buy/buying
 'We are buying'
- Nkoya (L62) ní-na-ku-môna 'I am looking' (as previous)

¹¹ *-ba* can take unaccustomed forms: D25 *-bez-* and F21 *-fiiza*.

¹² A cross-Bantu study of the role of the various 'be'-verbs in locative and especially in compound constructions would be worthwhile. Some studies have been done but for local areas (e.g. Botne 1986, 1989b, 1993). Some languages, e.g. E60 (Chaga), have reflexes of *-li*, *-ba*, and *-ikala* in their TA system.

- Kete (L21) cwu-nó-tand ‘We’re burning’
(*nó* < *ná+ú*: [u] likely once a pre-prefix to *ku)
- Cokwe (K11) *ngú-na*-lim-i ‘I am hoeing’
- Mwera (P22) *tu-na*:-lima ‘We are hoeing’
- Pokomo (E71) *hu-na*-gúy-a ‘We buy’, and *hú-na*-guy-á ‘We will buy’
- Swahili (G42) *tu-na*-lima ‘We hoe, we’re hoeing’, but
tu-na-kw-enda ‘We go, are going’
tu-na-ku-ja ‘We come, are coming’ (*ku* kept with short stems)

Heine (Heine 1997; Heine and Kuteva 2002) has suggested two paths from the comitative preposition *na*. One goes straight from preposition to progressive (we-with-going), the other goes via the possessive verb have (G42: *tu na* ‘we with’ > *tu-na* ‘we-have’ > **tu-na ku-lima* ‘we-have going’ > *tu-na-lima* ‘we have going’). In both the infinitive is treated as a noun: ‘We have bread, we have going’. Some of the shapes above (K14, L52) support the ‘be with = have’ hypothesis, because there is a clear ‘be’ in the data, while the others are neutral between the two hypotheses.

Because they have to do with an ongoing situation, progressives, whatever their source, tend to associate with dynamic rather than stative verbs. Not until they expand from progressive to general imperfective or present meaning do they become associated with all verbs. Most analysts make this statement but to demonstrate it for Bantu requires a fine-grained analysis that has rarely been done. One outstanding exception is Contini-Morava (1989). She examines, *inter alia*, the distribution and use of Standard Swahili *-na-* versus *-a-*. *-Na-* was probably once associated almost exclusively with dynamic verbs and activities, while *-a-* was associated with verbs of state (want, know, be able) and states. The *-a-* is older, while *-na-* is newer and expanding its domain at the expense of *-a-*, to the point where *-a-* only occurs in fixed phrases in some Swahili varieties and registers, or doesn’t occur at all. Thus some Swahili speakers distinguish *tw-a-lima* ‘We hoe’ from *tu-na-lima* ‘We are hoeing’. For other speakers the former has been replaced in both senses by the latter. There is no difference in time reference between the two. What Contini-Morava says for Standard Swahili is also true of other Swahili varieties (Nurse 1982: 100).

Wald (1997) points out that the difference between such forms involves not only aspect but also focus. He links constituent focus and aspect focus. This is taken up further in 5.3.7.

4.7 Habitual

Habitual represents a ‘situation...characteristic of an extended period of time’ (Comrie 1976: 27). As a category, discrete from other imperfective categories, it occurs in just under half (43 per cent) of the sample so is less common than general imperfective or progressive.

As a discrete category, it is overwhelmingly encoded by the inherited suffix *-ag/-ang/-aga/-anga*. It will be remembered that the general category imperfective was also predominantly encoded by the same suffix. This suffix only figures in the representation of progressive in a small number of cases. This points to a cognitive connection between imperfective and habitual, excluding progressive. What imperfective, habitual, (and iterative¹³) share is the notion of lengthy and unbounded duration, as contrasted to progressive, which emphasizes a short period of time around the point of reference.

There are apparently some limits on the co-occurrence of habitual with tense. Whether suffixal *-a(n)g-a* is involved or not, four predominant patterns emerge from the data. One, seen well in Kpa and Gikuyu, for example, is that habitual action can co-occur with all or most time divisions. The data is not repeated here, as it is voluminous. A second is that habitual and future are sometimes incompatible, presumably because habits are established by past repetition and extend into the present, but not so predictably or often into the future. This can be seen in Ngombe and Kanyoka.¹⁴ A third has only a general timeless ('present') habitual, seen in Rimi and Cewa, for example. In some of these cases, it is not clear whether the single timeless form reflects the facts of the language or the quality of the data source. Finally, the matrices also suggest that past contrasts are often neutralized with the habitual, and focus on far rather than near pasts, resulting in one or a reduced number of past habitual forms. This is presumably because habits tend to develop over a long period of past time and extend across tense boundaries. A short, recent period of time is not usually long enough to develop a habit.¹⁵ Thus, for example, Kerebe (E24):

- (16) E24 tu-ka-gula 'We bought P₃'
 tu-guz-ilé 'ditto P₂'
 tw-a-gul-á 'ditto P₁', but
 tw-a-gul-ága 'We used to buy'

Kerebe has three pasts but only this one past habitual, not, incidentally, based on the remote past.

Bybee *et al.* (1994: 158) suggest that since the meaning of a general present includes habitual but that of a past does not, discrete habitual markers might be expected to occur more often in the past than the general present. This may be true cross-linguistically and can be found in some Bantu languages, e.g. Ganda and Haya (see the Appendices), and in Swahili, where millions of speakers would use *tu-na-nunua* to render both 'We buy' and 'We are buying', but would have *tulikuwa tu-na-nunua* 'We were buying', but *tulikuwa tu-ki-nunua* 'We used to buy'. However, it is not apparently

¹³ Some forms interpreted as HABs in the Appendices might be iteratives.

¹⁴ However, Lungu (M14), for instance, encodes habitual and future reference by a morpheme of the same structural (but not tonal) shape, suggesting they have a single origin (habitual < the verb 'remain, stay'). This suggests that if a situation is repeated, it is predictable and may therefore be relied on to occur in the future, apparently contradicting the general pattern suggested by most of the data.

¹⁵ Also noted by Anderson (1979: 96).

widespread in Bantu, as can be seen by checking the Appendices. In the Appendices, suffixal *-a(n)g-a* is widely associated with Habitual, and the suffix occurs in certain common patterns: with all or most tenses, or with pasts and presents, i.e. non-futures. But the Ganda/Haya pattern, where it is associated with past (and future) but not present, is not common.

The only other morphological feature associated with habituais is morphemes of shapes such as *-ka(:)-*, *-ika-*, *-ke-*, *-chere/-kele*,¹⁶ etc. These occur much less frequently than the suffixal expression. Three Bantu verbs are associated with the gloss 'be': *-bá-*, *-li*, *ni*, *-yikad-*. All are of very general geographical distribution. The gloss 'be' is underrepresentation, as *-ba* would be better as 'be, become', *-li* as 'be (locative)', *ni* as 'equational be' (X is Y), the last as 'be, live, sit, stay, remain'. Heine and Kuteva (2002: 331) demonstrate that 'live, remain, sit' are frequent sources for morphemes encoding habitual. 'Live, sit, remain' are states usually stretching over 'an extended period of time'.¹⁷ This claim, and the recurring shapes just mentioned, suggest that the verb *-yikad-* is probably often the source for *ka* etc, and has been co-opted into service for indicating habitual. Its haphazard geographical distribution in Bantu suggests further that this grammaticalization has occurred locally at different times and infrequently.

4.8 *k¹⁸

4.8.1 *Persistentive kí*

The persistentive affirms that a situation has held continuously since an implicit or explicit point in the past up to the time of speaking. It is little mentioned in the general linguistic literature, but sometimes occurs as the 'still-tense'. Perhaps this invisibility results from its hardly being a grammatical category in European languages, which tend to express it lexically (German *noch*, French *toujours*, Spanish *todavía*, English *still*) and to treat it as a modification of progressives or other imperfectives (see 1.7.7), as do some African languages (e.g. Swahili *bado*, a loanword which largely replaced an earlier Bantu verbal *-ngali*¹⁹). It is grammaticalized in at least 56 per cent of the matrix languages, that is, it is commoner than habitual. In fact, it may be even more common, because investigators usually find what they are seeking, and if they do not seek a persistentive, it may have been overlooked in some languages. It has been little reported for Zones, A, B, and C.

Since it is widespread in Bantu, and little mentioned elsewhere, it seems advisable to explain this more fully. Consider English:

¹⁶ *-kele/-chere* are likely to be *ile*-forms of *yikad* 'be, live, stay, remain, sit'.

¹⁷ Also 'sleep', see E74a *d-a-lála-ghua* 'He buys regularly' (*-lala* 'sleep').

¹⁸ Güldemann (1996: 29–71, 127–37) discusses subordination and the roles of *ki* at length.

¹⁹ As in *a-ngali a-ki-soma* 'He is still reading' (Ashton 1970: 270).

- (17) English We bought/used to buy bananas and we still do.
 We were buying bananas and we still are.
 We didn't buy bananas in the past and we still don't.
 We didn't buy bananas yesterday and we still haven't/haven't yet . . .
 We weren't buying bananas and we still aren't.
 We bought/used to buy bananas but we don't any more/longer.
 We have lived here for twenty years and we still do.

The first five examples, affirmative or negative, depict a situation represented as obtaining in the past, and the same situation as continuing into the present from in the past. The sixth is the negative: the situation doesn't obtain in the present but did in the past. There is a possible connection here with anterior: both verbs in the last sentence deal with the same situation holding at two times, but whereas the first verb has an anterior, which represents the start of the state and its persistence over time into the present ('We have lived here for twenty years'), the persistive in the second emphasizes the current outcome ('We still do').

Persistive is encoded most often by reflexes of **kI*, high-toned and with the degree two vowel, apparently an inherited morpheme, not obviously resulting from grammaticalization:

- (18) Kaonde (L41) u-Ø-ki-y-a
 3s-null-PER-go-FV
 'She is still going'
 Bungu (M25) tu-li-sh-a tu-Ø-bala
 1p-be-PER-FV 1p-null-go (**kI* > sh²⁰)
 'We're still going'
 Rimi (F32) a-Ø-kítu-qv-righiRya
 3s-PER 3s-PRG-speak
 'He is still speaking'
 Luba (L33) w-aa-dí u-ki-dy-á
 3s-PAST-be 3s-PER-eat-FV
 'He was still eating'

This *-ki-* occurs in thirty-four of the fifty-six matrix languages with the persistive category, in a vast area of the Savanna in Zones D, (E, F), K, L, M, (N, R, and S), where use of brackets indicates distribution in part of the Zone and no brackets indicates presence in all or most languages of the Zone. Also in that area, and especially outside it, to the northwest, the category exists but is morphologized differently and variously. The only other exponent of persistive with more than a local distribution is a set of morphemes possibly derived from **-yikad-* 'be, live, sit, stay, remain' (see Habitual, preceding).

²⁰ The M25 and F32 forms are odd, M25 because PER *sh*, reflecting **kI*, follows *-li-* 'be', and F32 because PER *kII* is taken out of the main verb and put in the independent pre-verbal complex.

The persistent refers to two times so it is not surprising that it often combines -*kí-* with another marker, including the null present. As there is a connection between imperfectives and habituals, so there is a link between persistives and progressives, and persistentive -*kí-* is often built onto a progressive. In such cases, -*kí-* and -*li-* ‘be’ usually form the first, auxiliary, verb, while the second, lexical, verb is either the verbal noun (‘We-still-are at-verbing’ (N44, below)) or, less often, a null present (‘We-still-are we-buy(ing)’ (M42, below)). So:²¹

- (19) Nande (D42) tu-ki-ná-gura ‘We are still buying’
 (*na* probably originally ‘have’)
 Shi (D53) rhw-áa-ci-shakula ‘We are still pounding’
 Rwanda (D61) tu-ra-gura ‘We buy (regularly) > tu-ra-kí-a-gura ‘We still buy’
 Nyoro (E11) tu-Ø-gúra ‘We buy’ > ni-tu-Ø-gúra ‘We are buying’
 > ni-tu-Ø-kí-áa-gúra ‘We are still buying’
 N. Sotho (S32) re-Ø-réka ‘We buy’ > re-sá-réka ‘We still buy’
 Subia (K42) ni-Ø-zaka ‘I build, am building’ > ni-Ø-chi-zaka ‘I still . . .’
 Cokwe (K11) n-á-lima ‘I hoe’ > ci-n-á-lima ‘I still hoe’
 Bemba (M42) ba-cí-li ba-Ø-bomba ‘They still work’
 Sena (N44) ndi-ci-ri ku-dya ‘I am still eating’

D60, E10-20, F10, S30-40, and K20 (an S30 outlier) have reflexes of a shape **kí+a*, included in the figure of thirty-four languages, just above. This shape appears predominantly, although not universally, in the affirmative persistentive, with simple -*kí-* in the negative.²² Thus Haya:

- (20) E22 tu-ki-áa-gura ‘We are still buying’
 ti-tú-ki-gura ‘We are no longer buying’ (also ti-tú-kiáa-gura)

Of the Bantu persistives not involving -*kí-*, some are opaque, but a few show patterns that might be expected from known grammaticalization routes. Thus Giryama (E72, see (8), above) has *hu-chere ku-gula* ‘We still buy’, where *chere* is the old anterior/stative form of ‘be, sit, remain, live’, followed by what was presumably once a locative and verbal noun, so literally ‘We have stayed/we stay a-buying’ (or ‘We are to buy?’).

²¹ There are some obvious morphological complications in (19), which are ignored.

²² Most languages with reflexes of **kí+a* have it in both affirmative and negative, suggesting that is the older shape. The ancestors of Zone S communities were probably south of the Limpopo River by the early centuries AD after leaving eastern Africa in the last part of the last millennium BC, so as a shared innovation, this must antedate that time. So why have some languages deleted the /a/ in the negative? J. Hewson (p.c) suggests that affirmative /*kí+a*/ combines the subject being in a position to continue the situation (*kí*), with a situation underway, having started in the past (*a*). In the negative, if the situation is no longer continued, the fact that it was already underway (*a*) is irrelevant and can be dropped. Furthermore, you want to deny the continuity, not emphasize the fact that you have already been doing it. Cf English *I’m still working* but *I’m no longer working* and *?I’m not still working*.

The combination *kí+a* is itself somewhat unusual. A bimorphemic marker at TA nearly always results from fusion of earlier AUX plus lexical verb. In such sequences, the AUX is tense-marked, the lexical verb aspect-marked, the opposite order of *kí+* situative, and *a* past.

A few languages, where the locative element has been lost, leaving a bare verbal noun, have shifted affirmative meaning to negative inference: ‘We are still to buy’ > ‘We haven’t bought yet’,²³ in which the English translation has a negative where the source structures have no negative. Compare the Sena example above with:

- (21) Ruri (E253) ci-caa-li ku-gula ‘We haven’t bought yet’
 1p-still-be to-buy
 ‘We haven’t bought yet’
 Sukuma (F21) dù-tààli ò ò- òlà ‘We have not bought yet’²⁴
 Langi (F33) tó-káa-rí kó-séka ‘We haven’t laughed yet’

4.8.2 *Situative*²⁵ *ki*

A morpheme of the same segmental shape but different in function appears in a smaller area of eastern Savanna Bantu, in E50-60-70, G23-33-403-42-44, L13, S10, and S20,²⁶ in 11 per cent of the matrix languages.²⁷ These languages are fewer in number than the persistive *-ki-*, more restricted geographically (small parts of eastern Kenya and Tanzania, Zimbabwe, northern South Africa), and largely overlap with the geographical range of persistive *-ki-*. Reliable tonal data for this *-ki-* are too few to permit any comprehensive tonal statement but it appears to be tonally different from persistive *-ki-*. This second *-ki-* represents a situative (or participial). It appears in contexts where the English translation is a participial or an if-clause. The speaker wants to suggest that the situation is open-ended and could continue for a long while. A situative differs from an imperfective in that no part of the situation is complete. As such, it typically appears in hypothetical or possible situations, as backgrounded material, in dependent or subordinate clauses, and as the second member of compound verb constructions, where it behaves as a verb in a subordinate clause (see 2.2.4). Thus all the following contain *3s-ki-go*:

- (22) G42 a-ki-enda utapata nafasi kuzungumza naye
 ‘If he goes, you’ll get a chance to talk to him’
 tulimwona a-ki-enda ‘We saw him going, used to see him going’
 alikuwa a-ki-enda ‘He used to go, was going’²⁸

²³ Also discussed in 4.12, following.

²⁴ Sukuma speakers feel that *taali* is one piece, which contrasts to the analysis of the same sequence in the other languages and runs contrary to linguistic intuition. The *ku-/ugú-/kú-* in E253, F21, and F33, respectively, are infinitive markers.

²⁵ Also referred to as participial, potential, even conditional. See Güldemann (1996); Hewson (2007).

²⁶ This section ignores a few other morphemes with the shape [ki] (e.g. M42 *áci*, P22 *a:(ci)*, P₂ PFV in both), because it is unclear how past perfective relates to the two *ki* being discussed here.

²⁷ In the larger database other languages also have this second *ki*, but all are closely related to the eleven here, so do not change the picture. In dialects of three of these languages, D53, E62, and S10, *ki* also appears with the persistive usage.

²⁸ For many Swahili speakers *alikuwa a-ki-enda* and *alikuwa a-na-kwenda* may differ, in that the first refers to a longer period (‘When she was young, she used to go’) whereas the second, the Progressive, refers to a shorter period (‘When we saw her, she was going’).

In the first example, the subject is in position (*in situ*) to carry out the event and the going is not complete. In the second and third example, the *-ki-* represents extensive events, events of long duration: suppressing the completion of the situation extends the representation of incompleteness, suggesting lengthy or indefinite progression.

This situative *-ki-* is used with a wider range of functions in Shambala (G23) than in any other language examined. In contrast to Swahili, where *-ki-* in the first clause represents a condition in imaginary time and is usually followed by a main clause present or future,²⁹ Shambaa *-ki-* can apparently be followed by any tense. A second difference between Shambaa and Swahili *-ki-* is that, in Shambaa narratives, the distinction between subordination and coordination is blurred. Shambaa has no narrative morpheme, such as Swahili *-ka-*, and *-ki-* appears to take on some of the functions of Swahili *ka*. One (oral) story in Besha (1989a: 289–93) has strings of verbs with *-ki-*, and examination of both the logical sequencing of the events and of the English translations suggests it is hard to tell whether the actions are co- or subordinate. Parts of that story, relating historical events, are reproduced here, starting with the first line:

- (23) G23 Mbegha alawiye na Nguu, aiziye na makuli yakwe
 Mbegha came from Ngulu, he.came with his dogs
 a-ki-iza afikiye hantu heitangwa Ziyai
 When he came (he-ki-come) he.camped at.a.place called Ziyai
 a-ki-fikiya Ziyai ne a-ho-ivighwa ni wantu wa Bumbui
 When he reached (he-ki-reach) Ziyai he.was.heard.of by people of
 Bumbuli
 ... wa-ki-iza atawainka nyama buwe
 ... when they came (they-ki-come) he.gave.them meat free
 Ne Mbegha ahoita Bumbui a-ki-buwa Bumbui a-za-ghosha ndima
 And M went to.B when he reached (he-ki-reach) B he.did.work (hard)
 Wantu wa Bumbui woshe ne-wa-ki-ikaa tundui
 People of B all they.used.to.live (and-they-ki-live) in.the.bush
 Ne-a-ho-koma nguuwe wantu wa-ki-uya na kaya wa-ki-usha ...
 And.he.then.killed pigs, people they-ki-return home, they-ki-remove ...
 I-ki-binda ne-a-ho-kundwa ... a-ki-buiya wantu wa-a-gomba ...
 After all this (it-ki-finish) he.was.liked ... and when he-ki-find people
 fighting ...
 Ne a-hoghuighwa na Vugha a-ki-ikaa Vugha a-ki-ghosha mbui ija ija ...
 And he.was.taken to Vugha, he-ki-live at.Vugha he-ki-do same thing ...

An assumed connection between these two *-ki-* is discussed in 6.2.4(iv).

²⁹ It does occur in Swahili in past situations but less often (Ashton 1944: 257–61). See also Ch. 3, n. 52.

4.9 Reduplication and imperfective

The total array of data shows four varieties of reduplication. One is the conventional form in which most or all of the inflectional stem may be reduplicated:

- (24) Bushoong (C83) -bók 'throw', la-bók-á-bók 'I throw often' (la '1s')
- Swahili (G42) -imba 'sing', -imba-imba 'sing often'
-cheka 'laugh', -cheka-cheka 'keep laughing'
- Kongo (H10) -tunga-tunga 'build fast'
-lamba-lamba 'cook fast'
-keba-keba 'keep carefully'
-lunga 'take care of', -lunga-lunga 'take good care of',
n-lunga-lunga 'I take good care of', n-lunga-lunga-nga 'I am
taking good care of', n-dung-idi-lung-idi 'I took good care
of', n-dung-idi-lung-idi-nge 'I was taking good care of'
(Bentley 1887: 687)
- Zulu (S42) -hamba 'walk', -hamba-hamba 'walk a little'
-osa 'roast', -osa-yosa 'roast a little'
-baleka 'run away', -bale-baleka 'run away a little'
- Yao (P21) tu-dim-ile 'We cultivated', tu-dim-ile-lim-ile 'We cultivated
repeatedly', tu-ku-dim-aga 'We usually cultivate'
tu-ku-dim-aga-dim-aga 'We usually cultivate repeatedly'
- Ndamba (G52) da-tu-kin-i-kin-i
FUT-we-play-SBJ-play-SBJ
'We will keep playing'
ndonya yi-ka-tony-eyi-tony-eyi
rain it-P₂-rain-PRG-rain-PRG
'It was raining on and on'
- Kpa (A53) a-kan-ga 'She wrote (PFV)'
a-kan-ga-ka 'She used to write (HAB)'
a-kan-kan-ga 'She was writing (PRG)'
a-kan-ga-?-kan-ga-ka 'She wrote repeatedly (ITR)'

A second—triplication—repeats the whole stem three times: P21 *-dyaa-dyaa-dya* 'eat repeatedly' (Ngunga 2001: 161), P22 *-lya-lya-lya* 'eat and eat and eat' (Harries 1950). A third type is partial reduplication, whereby the first syllable alone reduplicates: B43 *-fúga* 'cut (hair)', *-fúfúga* 'cut rapidly'. The fourth type, already mentioned in 2.2.5, which involves preposing, consists of a two-word structure, where the first word is an infinitive, the second an inflected form of the same verb:

- (25) Swahili ku-fa wa-naku-fa kwa njaa
 infinitive-die 3p-PRG-die of hunger
 ‘They are really dying of hunger’
- Kongo (Solongo) o-sumba tu-ø-súmb-anga
 Infinitive-buy 1p-buy-IPFV
 ‘We buy regularly’
- Nzebi (null infin.) sú:mbí ba-sú:mbísh-i ‘They (had) just sold’ (ba- ‘3p’)
 só:mbás-á by-â-só:mbás-á ‘They’re selling now’ (by- ‘3p’)
 yé:ndéle-kí-yendé ‘We are just about to go’ (lé- ‘1p’)

Triplication is ignored in what follows, partly because it is uncommon, partly because its occurrence is phonologically dependent (e.g. in P20, B10), rather than morphosemantic. Thus, where most verbs in P20 reduplicate, a small set of CV roots alone triplicate. Across Bantu this same small set of verbs often behaves phonologically differently from other verbs.

Bybee *et al.* (1994: 166–74) present an attractive cross-linguistic scenario with two strands. One is morphophonological, which starts with full reduplication of the whole verb stem, and partial reduplication—of the first syllable—is claimed to be a later, reduced, form. The other is functional, associating reduplication initially with iterative, with two possible paths of development: iterative > continuative > progressive > imperfective, or iterative > frequentative > habitual > imperfective. Reconstructions of Proto-Bantu (Guthrie 1971: 118–44; Meeussen 1980) contain clear cases of partial reduplication in verb roots. If Bybee *et al.*’s scenario is to be believed, these must follow earlier full reduplication. That Guthrie and Meeussen do not show cases of full reduplication is a result of their methods, but the omnipresence of full reduplication across Bantu suggests it is an ancient Bantu feature.

It is clear from Bybee *et al.*’s semantic-functional characterization that reduplication is closely connected to imperfectives: imperfective, durative, iterative, frequentative, continuative, habitual (for definitions, see Abbreviations), and intensive action. Just because there are so many Bantu languages, they would seem to provide an ideal laboratory for investigating Bybee *et al.*’s proposal. Unfortunately, many sources do not deal systematically or at all with reduplication because it is not part of the inflectional system. On top of this, while Bybee *et al.* use these terms carefully, the distinction between iterative (‘situation repeated on one occasion’), continuative (‘keep on doing on one occasion’), and frequentative (‘frequent over a period of time’) is hard to apply in practice, and since most sources that deal with them are only marginally interested in the meaning of reduplicated forms, they tend to use iterative, durative, frequentative, ‘repeatedly’, or various related translations indiscriminately, so it is not always clear what they mean. So Harries (1950, for P22) translates *-lyalyalya* as ‘Eat and eat and eat’ (presumably on one occasion, so continuative), while Ngunga (2001, for P21) translates the same form as ‘Eat repeatedly’, which might be on

the same or a different occasion). In view of this, our presentation is anecdotal rather than processual. A careful cross-Bantu investigation of this topic would pay dividends.

As far as can be established, full reduplication of the (inflectional) verb stem is common and productive across Bantu. Although partial reduplication is also widespread, it is not clear that it is productive everywhere and the limited material examined often shows the same examples so they may be inherited. The preposed form is not often mentioned in the grammars. Nevertheless, because it is attested in geographically quite distant languages, and because it is idiosyncratic, it is reasonable to assume, as Meeussen (1967: 121), that it is a feature of long standing.

It is easy to imagine imperfectivity expressed iconically as reduplication of the verb stem or root. The expansion could take other directions. One would be to expand reduplication from the root to reduplication of some of its inflectional or derivational affixes. An obvious candidate is the *-a(n)ga* suffix but a search failed to show such reduplication, other than in some languages in the imperative (see (6.19) and Rose *et al.* 2002: 40-1), and in a few languages for phonological reasons (see above). Another route is to reduplicate the applicative extension. This is also not widespread but can be found, e.g. in some Zones M and P languages, which reduplicate the applicative extension ('do to or for') to give a repetitive or completive meaning, so P22 (Harries 1950: 76) *-koma* 'hit', *kom-el-a* 'hit for', but *-kom-elel-a* 'pummel', *-lima* 'cultivate', *-lim-ilil-a* 'cultivate again', *-nya* 'excrete', *-ny-ilil-a* 'excrete completely'.³⁰

There are other possibilities. Kanyoka (L32) reduplicates and lengthens the first stem syllable to express progressive:

- (26) tú-túú-túm 'We are sending, will send' PRG
 tú-túú-tum-in 'We were sending' INCE (based on the PRG)
 tú-kaa-dí-dim 'We are already cultivating' PER (also PRG-based)
 tw-áaka-dy tú-ci-dii-dím 'We were still cultivating' (Similar in B82)

In Ndendeuli (N101) full stem reduplication is the regular, fully grammaticalized way of expressing habitual:

- (27) t-aki-hipahipa 'We used to smoke'
 t-i-hipahipa 'We smoke regularly'
 ca-ti-hipahipa 'We'll smoke regularly' (similar in N30)

Ndendeuli *t-i-hipahipa* 'habitual' contrasts with *t-i-hipa* 'perfective', whereas in Hehe (G62), in (28), I found no unreduplicated form. In Ndendeuli and Hehe reduplication has expanded from the optional expression of imperfectivity to grammaticalized imperfectivity. For Hehe I include a second example showing the extension *ang*, here meaning 'do in large quantities', co-occurring with *ag* 'imperfective', just because such examples are not easily found:

³⁰ Reduplication also occurs in other languages such as Ganda (E15) and Pogolu (G51). See also Marten (2003).

- (28) G62 tu- \emptyset -gula-gula ‘We buy regularly’ (there is no *tu- \emptyset -gula)
 nd-a-gul-ang-ag-a ‘I used to buy in large quantities’
 (1s-P₄-buy-inlargequantities-IPFV-FV)

A few languages use reduplication to encode other aspectual or tense categories. Bushoong (in (24), above) has reduplication expressing habitual but also uses reduplication in a different way to express futurity:

- (29) C83 Future la-yée(p)-ká-yéep ‘I will know’ (la- ‘1s’, -yéep ‘know’)

For other (largely phonological) work on reduplication, see Downing (1994, 1997), Mutaka and Hyman (1990), Novotna (2000), Odden (1996*b*), and Odden and Odden (1985).

This can be summarized by saying that reduplication in Bantu, whether full or partial, typically affects the lexical stem or the inflectional stem, and in so doing it typically expresses one form or other of imperfectivity. It does not often or typically affect the inflectional morphemes that themselves express imperfectivity.³¹

Reduplication is widespread in non-Bantu Niger-Congo languages.

4.10 Pluractional

Finally, in connection with imperfectives, the concept of pluractional should be mentioned. Elaborated by Newman (1990), applied to aspect or verb in Chadic languages, its essential characteristic is plurality or multiplicity of the verb’s action. It has since been taken up in analyses of some northwestern Bantu languages (e.g. in Mous (2003*a*) for Nen, and mentioned by Wilkendorf (1991) for Nomaande, though not by that name) for the range of uses of *-a(n)g-. It is mentioned here because while it is most often used to refer to an action being repeated by one subject with one object, in fact plurality or multiplicity of the verb’s action can also be achieved by having a single action made multiple by having several subjects or objects. So Ngunga (2001: 161; see also Odden 2003: 539) has a list of triplicated verbs such as ‘pound, eat, etc. (repeatedly)’, where the action is repeated, and in the middle of the list he has -waa-waa-wa ‘die (everyone)’ and -taa-taa-ta ‘name everyone or name one person repeatedly’, where the first has multiple subjects and the second can have multiple objects (‘name everyone’). This suggests that pluractional in this sense is may be geographically wider than hitherto assumed.

³¹ The very few examples found were in imperatives: E31 *ly-a* ‘Eat’, *li-ch-ák-a* ‘Eat (slightly urgent)’, *li-ch-ák-ák-a* ‘Eat (urgent)’. The -ch- in these forms is a dummy morpheme with no semantic content, that satisfies a prosodic requirement with CV stems alone (Marlo 2006).

4.11 Anterior³² (also 3.5, 3.11.2)

Perfect/anterior denotes 'a situation that started in the past but continues into the present' or the 'continuing present relevance of a previous situation' (Comrie 1976: 52). Different subtypes are recognized:

- (30) 'resultative' (Comrie's 'perfect of result'): 'present state is the result of some past situation' (Bill has gone to Timbuktu (and is still there), He has arrived (and is still here), Swahili *Amefrika* 'He has arrived (and is still here)', *Amechoka* 'He is tired' (because he got tired in the past)).

Most Bantu languages have a contrast between dynamic and 'stative' verbs (see 3.6). Resultatives combine reference to a completed action with some kind of relevance to the current situation (dynamic verbs: *Amefrika*) or indicates the current state resulting from the prior situation (stative verbs: *Amechoka*). In wider Niger-Congo, what is often called the perfective seems to fulfil this role.

'experiential' (Comrie's 'experiential perfect'): 'a given situation has held once during some time in the past leading up to the present' (Bill has kissed the Blarney Stone).

'perfect of persistent situation' (Bybee *et al.*'s 'anterior continuing'): 'a situation that started in the past but continues into the present' (Bill has lived in Timbuktu for ten years).

'perfect of recent past': perfect may be used where the present relevance of the past situation referred to is simply one of temporal closeness, i.e. the past situation is very close (Bill has just arrived).

Bybee *et al.* (1994: 54, 57, 318) also recognize as a separate category the completive: 'do something thoroughly and to completion' (*Eat up, shoot dead, aufessen*). Although it is not obvious at first sight that Germanic examples with prepositional verbs such as *Eat up* or *aufessen* have much to do with anterior, which is mostly expressed inflectionally in Bantu, in fact it is relevant and is discussed further in 4.11.2.

Perfect and perfective refer to different categories and the terms are easily confused, especially as perfective can also be the derived adjectival form of perfect. Because I want to retain perfective (4.4), I follow Bybee *et al.* (1994) in discarding the traditional term perfect and replacing it by anterior. However, I differ from Bybee *et al.* (1994: 318) in the use of anterior. As can be seen above, they differentiate anterior, anterior continuing, experiential, and resultative. I simply do not know how many matrix and database languages make these distinctions but certainly most sources did not make

³² This section deals only with anteriors in affirmative, absolute function, not in relative clauses or negative sentences. I have the general impression that relatives at least contain a higher proportion of anterior/resultative forms than absolutes, because they often imply states, e.g. Luguru (G35) *Imunu ka-ø-z-a* 'The man came', but *Ayu ye imunu yaz-ile* 'This is the man who came' (in state of having come, lit. who has come). I cannot quantify this impression because the comparative data for relative and negative anteriors is poor. This needs investigating.

them³³ and I combine them all in the term anterior. So anterior here is a broad term. Again, I follow the principle of using cross-linguistic labels but adapting them to what is found in the data. The usage here, as with perfective, is therefore not quite that of others, but is useful for categories found in Bantu.

Why treat anterior as aspect, not tense? Many authors have treated anterior as a tense, because its obvious function is relating two times, that of a later situation to that of an earlier, which is in some way relevant to it (see 3.12.2). In 3.6, I suggested four criteria for distinguishing perfective past, especially near past, from anterior: morphological expression, occurrence in the second part of compound constructions (see also 4.3), the behaviour of stative verbs, and the range of reference involved. Those criteria suggest that in Bantu languages, anterior (perfect) behaves as an aspect, combining readily with tenses or with other aspects.

An anterior apparently occurs in some 81 per cent of the matrix languages.³⁴ This figure should be treated cautiously for several reasons. One, mentioned in 3.6, is that it is not always possible to distinguish anterior and (near) past. Thus two very competent linguists analysed Kongo (H16) differently, Carter (1973) seeing three pasts and no anterior, Welmers (1973: 350) interpreting Carter's near past as anterior: in the matrix and statistics I follow Carter but in fact I believe Welmers! Similarly Guthrie (1968) analysed B52 as having four (three?) degrees of past reference and one 'perfect', while Marchal-Nasse (1989) has a similar number of pasts but three perfects. A second reason is that some languages may have lost the anterior, by neutralizing the distinction between anterior and (near) past. There are several such languages in the northeast not shown in the matrices (E701, E71, G412), the only one shown being G44. In the matrices for such languages, the label (past) perfective is used but may be inappropriate, partly because some authors say of past forms, for example, that they refer to discrete past events but may include reference to present relevance, and partly because where the perfective/ anterior distinction is neutralized, the anterior morphology takes over, which implies it is the more powerful category. This is presumably because anterior subsumes past but not vice versa.

Of the nineteen languages analysed as having no discrete anterior, nine are in the northwest, to which the four Zone H languages are adjacent. This might be explained in several ways. One is that they, as the small northeast group, have lost their anterior. Another is that early Bantu possibly had no anterior, as reflected in these northwest languages, and that anterior only developed later, in languages outside the northwest.³⁵ The final reason in the case of the northwest languages has to do with the

³³ Exceptions exist, e.g. Creissels (1998a), Hulstaert (1965), who lists six morphologically distinct 'parfaits', and some combinations of these with each other and with other forms, and Muzale (1998), who distinguishes resultative and 'retrospective' (= anterior, perfect).

³⁴ Languages analysed as having no discrete anterior are: A15-34-44, B73-85, C41-83, D13(?)=23, G44, H16-32-33-41, L53, M25(?), P13, R11-41. Welmers (1973: 350) says of anterior (his 'completive'): 'there does not seem to be any Niger-Congo language that lacks something of the sort'.

³⁵ However, this is unlikely. It is notable that many of the exceptions in the northwest and northeast are in areas much influenced by non-Bantu languages and the absence of the near past: anterior contrast

source descriptions used. Many of these descriptions are francophone and, as set out in 3.6, francophone authors do not always recognize the distinction between anterior and past perfective, so it is possible that the total of languages with the category anterior may be higher. My guess is that the percentage of Bantu languages that make, or once made, the anterior/perfective distinction may be higher than 81 per cent.

At least twenty-five different patterns are involved across Bantu in encoding anterior, but all except three are local and limited, occurring in not more than 5 per cent of the languages. The three with a distribution wider than 10 per cent are: $-\emptyset \dots -ile$ (29 per cent³⁶), $-a \dots -ile$ (14 per cent) and $-a \dots -a$ (19 per cent³⁷). Examples of a representative selection:³⁸

- (31) Londo (A11) a-má³⁹-saká
 3s-ANT-seek
 ‘She has sought’
- Kituba (H10A) béto mé(ne) (kú)-dia ‘We have eaten’
- Mboshi (C25) a-si-yúla
 3s-ANT-grow
 ‘She has grown’
- Lomongo (C61) tó-ó-sola ‘We have washed’
- Kimbundu (H21) tw-a-rim-i ‘We have tilled’, tw-a-sumb-u ‘We have bought’
- Gciriku (K332) tu-na-píng-i ‘We have inherited’
 tu-na-júv-u ‘We hear’ (lit. We have heard)
- Pare (G22) tw-á-imá
 1p-ANT-till
 ‘We have tilled’
- Lingala (C36) a-∅-pés-í
 3s-give-ANT
 ‘He has given’

might be interpreted as neutralization of an inherited category. That being the case, it would support the idea that anterior was an original Bantu category.

³⁶ The figures for both patterns involving suffixal *-ile* include languages such as N101, where the main or the only shape is [ite], but exclude languages which certainly had *-ile* historically, and languages which may have had it historically. Languages which certainly had it historically include languages such as Swahili, which has today *me* (derived from **-mala* plus *-ile*: other (northern) Swahili dialects still have *-ile* today); E72, which today only keeps it in negatives; R41, which has kept it in a single (stative) verb; S10, where it is a remnant in a few languages; and many languages (see matrices) where it no longer encodes anterior but has widened semantically to become a past perfective. Languages which may have had it historically include A15 and other Zone A languages, which have it as an allomorph, with monosyllabic verbs.

Although, as will be seen in Ch. 6, I assume *-ile*, *-I*, and the VC suffix are historically related, the percentages for the latter two are not included under those for *-ile* here. They are few.

³⁷ The 19% includes three questionable languages: R22/R31, because their structural description contains material other than *-a \dots -a*, and M54, because the semantic analysis of its *-a \dots -a* is not clear.

³⁸ The possible role of tone is ignored in (31).

³⁹ Shapes such as [ma], [me], and [mene] probably all derive from **-mala* ‘finish’.

Tonga (S62)	u- <u>ø</u> -nyi-won- <u>ile</u> 3s-me-see-ANT 'She has seen me'
Kanyoka (L32)	tú- <u>ø</u> -tùm-in 'We sent (P ₂)' (L32 loses final -e, and l > n by nasal harmony)
Nande (D42)	tw- <u>a</u> -gul- <u>ire</u> 'We have bought (long ago)' tw- <u>a</u> -gúl- <u>íre</u> 'We have bought (more recently)'
Bende (F10)	tú- <u>ká</u> -ghus- <u>ilé</u> 'We have bought'

The *-ø...-ile* pattern occurs predominantly as a present anterior, where the reference point is the present or some other time established. Where it and *-a...-ile* co-occur, *-a...-ile* always indicates a time further removed, suggesting that *-a* is added to encode the past component. *-A...-ile* has often been recategorized from anterior to middle or far past perfective.⁴⁰ In the opposite direction *-a...-a*, which presumably once encoded a past perfective, occurs as anterior, as indicated above. Where it so occurs, it does so, with a very few exceptions,⁴¹ as a present anterior.

In principle, past and future anteriors may be marked either by use of a compound construction, or by a single verb, with aspect at FV, and tense before the stem.⁴² In the compound constructions the first member, with 'be', is tense-marked, and the second member is usually the present anterior. In practice, both strategies are roughly equally common in the past, but future anteriors, which are much less common than past anteriors, are instantiated mostly by compound constructions. Languages with multiple pasts have sometimes as many anteriors as pasts, but more often fewer. In the following examples, S32 (N. Sotho) and N30 (Nyanja) exemplify languages with a single past and future, Bukusu (E31c) and Ila (M63) languages with multiple pasts and future. E31 has four pasts and three futures but only two degrees of anterior, M63 has two (?) degrees of past and anterior. S32 and E31c exemplify languages with compound constructions, N30 and M63 languages which use inflection.

- (32) S32 re-ø-rék-ile 'We have bought'
re-ø-b-e re-ø-rek-ile 'We had bought' (lit. We were we have bought)
re-tlo-b-e re-ø-rek-ile 'We'll have bought' (We will be we have bought)

⁴⁰ *-ø...-ile* has also been recategorized in some languages as a perfective, but much less often.

⁴¹ Which might be misinterpretations of the source data?

⁴² In several cases, ongoing or recent grammaticalization from compound to single verb is clear. Thus the M63 anterior examples in (32) all have [ku], the infinitive marker: an infinitive marker at TA is always the sign of a former independent infinitive having been grammaticalized.

Zulu has #*be-ngi-ø-hamb-ile* 'I had walked', universally recognized as deriving from *ngi-ø-be* + *ngi-ø-hamb-ile*, lit. 'I was I have walked'.

E31c E31c has two ‘present’ anteriors, *xw-áa-kul-á* and *xw-aa-kul-ile*. Both translate as English ‘We have bought’, the first more, the second less recently. Both can combine with most (all?) of E31c’s pasts and futures, so (partial):

xw-á-b-á xw-áa-kúlá ‘We had bought recently before P₄’, but *xw-á-bá*

xw-aa-kul-ile ‘We had bought less recently before P₄’ (-á- P₄)

xw-aa-b-éélé xw-aa-kul-ile ‘Ditto but P₃’, *xu-b-eele xw-aa-kul-ile* ‘Ditto

but P₂’, *xu-la-ba xw-aa-kul-ile* ‘We will have bought (F₁), etc.

N30 *mw-a-góna* ‘You are asleep’

mw-a-thamanga ‘You have run’

mu-na-a-gona ‘You were asleep’

tí-ná-a-thamanga ‘We had run’

M63 M63 expresses anterior by (pre-stem *-aku-* and) suffixal *-ile/ele*.⁴³ So

tw-aká-p-a ‘We gave P₂’ versus *tw-aká-ákú-p-ele* ‘We have given’

tw-a-p-â ‘We gave P₁’ versus *tw-a-ákú-p-ele* ‘We have given’,

u-lá-p-a ‘He will give F₁’ versus *tu-la-aku-p-elé* ‘We will have given’, etc.

The foregoing says little about meaning. Good semantic analyses are only available for a few languages, so generalizations would be risky. I therefore prefer to present a sketch of one language in some detail. The language chosen is Haya, for which an excellent analysis exists (Muzale 1998). What follows is based on his analysis but modifies some of his terms and other details. Haya has three past tenses (and two futures), corresponding in general to hodiernal, hesternal, and pre-hesternal. It also has four perfective aspects, here called Perfective, Anterior, Perfective Anterior, and Remote Perfective Anterior. Perfectives represent single bounded complete situations without internal shape, and Haya has a basic Perfective which on its own presents a very recent event (P₁), hence the translations ‘We bought, just bought, have bought, have just bought’, even ‘We (have) just finished buying’: *tw-áá-gura*. Anterior combines reference to a completed action with some kind of relevance to the current situation in dynamic verbs or indicates the current state resulting from the prior situation in statives: *tu-ø-guz-îre* ‘We have bought’, *ba-ø-fw-ire* ‘They are dead’. Perfective and Anterior aspects can be combined as in *tw-áá-guz-ire* ‘We have already bought’.⁴⁴ This represents the morphological and semantic fusion of P₁ Perfective (-áá-) and Anterior (-îre). It would be used, for example, if one were going into a bookshop and met friends emerging carrying the last copy of the book one is looking for. It refers to the recent complete act (their buying the book), to the relevance of that to the present (our going in to look for the book), but it emphasizes the completedness of the act (it wasn’t

⁴³ It is unusual for a category to be marked twice in the same word, so it is possible that the combination of *-aku-* and *-ile* adds some meaning to simple anterior.

⁴⁴ As can be seen in the Appendices for E22, *tu-ø-guz-îre* ‘We have bought’ (Present Anterior) and *tw-áá-guz-ire* ‘We have already bought’ (Present Perfective + Anterior) can occur as single forms or as the second member of compound constructions. *tu-ø-guz-îre* ‘We bought yesterday’ is also an answer to the question ‘When did you buy?’, and so has taken on a tense function, a classic case of an aspect functioning as tense.

bought before but it is now, the implication being that there is no point in your going in). There is also a Remote version of this, replacing *-áá-* by *-ra-*. So in *a-áá-fi-ire* ‘She is already dead (and died recently)’ the dying is more recent than that in *a-rá-fi-ire* ‘She is already dead (and died long ago)’. Since the English Perfect and Past cannot by themselves express all of this, we have to resort to adverbs such as ‘already, just’, etc. Even with the help of these adverbs, English has trouble because the English Perfect can co-occur with some adverbials and not with others, so *We have seen him*, *We have seen him recently*, but not **We have seen him at four o’clock/last year/long ago*. So the literal translations of the last two Haya examples would be *‘She has already died recently’ and *‘She has already died long ago’.

These four basic aspects can combine with the other pasts and futures. The Haya Remote Past is expressed by *-ka-*, so using this in the auxiliary verb, together with the perfectives just sketched gives: *tú-ka-bá tu-áá-gura* ‘We had just bought’, *tú-ka-bá tú-guz-ire* ‘We had bought’, *tú-ka-bá tw-áá-guz-ire* ‘We had already bought (recently)’, and *tú-ka-bá tu-rá-guz-ire* ‘Ditto (less recently)’.⁴⁵

The interpretation of anteriori in Bantu is bedevilled by traditions established by over a century of translation into Western European languages. One such difficulty is the lack of semantic distinction in French and German between past and perfect (3.6). Another obstacle is the sequence-of-tenses rule in English⁴⁶—and other European languages—by which a past in a first clause required a past form in the second in reported speech and other contexts. Thus:

- (33) He will go, but He said he would go, and If you went, he would go
 He said ‘I will go’, but He said he would go.
 He is going, but He said he was going, and When you were going, he was
 going, too
 He goes, but He said he went, and When you went, he went, too
 He went, but He said he went/had gone, and When you went, he
went/had gone
 He has gone, but He said he had gone, and When you went, he had gone
 He said ‘I have gone’, but He said he had gone.

No Bantu language with which I am familiar does what English does. Instead of shifting the tenses on the left one step further into the past, as English, Bantu languages would keep the forms on the left in the contexts on the right. Consider Swahili:

- (34) G42 tu-li-kwenda tu-ka-mw-ona a-me-fariki
 1p-PAST-go 1p-NARR-3s-see 3s-ANT-die
 lit. ‘we-went we-and-him-see he-has-died’
 ‘When we went to see him he had died/was dead’

⁴⁵ These examples also illustrate combinations of aspects, and others occur, for instance *tu-ka-bá tu-kiáá-byáám-ire* ‘We were still asleep (when . . .)’ (1p-P₃-be 1p-PER-sleep-ANT), which combines tense, persistent aspect and anterior, the persistent itself combining PER *ki* and *aa*.

⁴⁶ See Palmer (1987: 40–6).

The point of speech is now, the point of reference is in the past, established by ‘went’, continued by ‘saw’, and the dying was prior to that reference point. English ‘He had died’ is labelled a pluperfect. But while the translation into English is correct, and the label pluperfect may be appropriate for English, the Swahili *a-me-fariki* is a present perfect. The translation for *Amefariki* above is ‘He had died, was dead’ but the meaning is ‘He has died, he is dead’, which, not combined with a tense indicator, is its unmarked meaning. Combined with a tense marker, that is still the meaning and the shape doesn’t change, which can be seen clearly in:

- (35) G42 a-me-fariki
 3s-has-die
 ‘He has died, is dead’
 a-li-kuwa a-me-fariki
 3s-PAST-be 3s-has-died = He was he has died/is dead
 ‘He had died’
 tu-li-mw-ona a-me-fariki
 1p-PAST-3s-see 3s-ANT-die = We saw him he-has-died⁴⁷
 ‘When we saw him he had died/was dead’
 a-ta-kuwa a-me-fariki
 3s-FUT-be 3s-has-died = He will be he has died
 ‘He’ll have died/be dead’

So, morphologically, in many Bantu languages (see matrices), pluperfect and future anterior are a time marker plus a (present) perfect. This seems to be linked to their syntax, where clauses are linked asyndetically. In an asyndetic structure such as (34), above, the tense/aspect marking is of crucial importance in determining the relationship between the situations represented by the verbs. In a syndetic language such as English the conjunctions, relative markers, adverbs are important—but in ‘verby’ Bantu, with agglutinating verbs and asyndetic syntax—the TA markers (*li*, *ka*, *me*) are crucial.

Morphologically reduced languages, such as Swahili, will have a single present anterior. But as we saw just above, in languages such as Haya and Bukusu, with two (or more) present anteriors, both may occur in compound constructions, relating actions to some non-present reference point. Nevertheless, they remain present anteriors, whatever the translation or discourse context.

4.11.1 Two anteriors?

Those who have read through the matrices will notice that the anterior columns often jumble two kinds of anterior. One is an absolute anterior, whereby ‘the reference point for the location of a situation in time is the present’ (Comrie 1985: 86), the other is a

⁴⁷ In African English structures such as ‘She said he has come/died yesterday’ are often heard.

relative anterior, in which ‘the reference point . . . is some point in time given by the context, not necessarily the present moment’ (Comrie, *ibid*). A language may have one absolute anterior, as Swahili, Zulu, or N. Sotho (S32: (3), (4), (5), (32)) or more than one, as Bukusu, Ila (M63), and Haya, and the discussion following (32). Readers can find other examples in the matrices. Absolute anteriors usually translate as ‘X has verbed’, relative anteriors as ‘X had verbed, X will have verbed’. The translations reflect those in the sources. Some languages do not distinguish absolute and relative anterior, using the absolute form(s) in all situations (Haya, Bukusu, Sukuma, Swahili, N. Sotho). These languages express the combination of tense and anterior analytically, by compound constructions. Other languages, apparently fewer, have discrete absolute and relative anteriors (Gikuyu, Pare (G22), Nyanja, Ila). They combine tense and anterior synthetically, as inflection.

A few languages seem to have two kinds of anterior but the interpretation is uncertain. Thus Lungu (M14) with an apparent absolute and a relative anterior. For Ha (D66) the data is not as complete as could be hoped for, but forms such as *nd-a-gii-ye* ‘I went/have gone’ and *nd-a-ri nd-á-gii-ye* ‘I had gone’, both near past, suggest absolute and relative past also. Kanyok (L32) has two sets of forms, with the same ‘anterior’ translation (‘We had sent’), different from the forms rendered as ‘We sent’ and ‘We (have) just sent’: I do not know how they differ. The *na*-forms in several languages (e.g. F10, D42) are of uncertain interpretation.

4.11.2 *Similar or related categories*

Two minor categories which appear related to anterior occur scattered across Bantu—inceptive and completive. They are often not defined but apparently so called on the basis of shared intuition of their content, or on the basis of their translation into a European language. Inceptive (also inchoative, ingressive) is the most often mentioned of the minor categories and translates as ‘be just about to, be on the point of, have just, (have) already’. Forms explicitly labelled inceptive or interpretable as inceptive appear in Kom (Grassfields), A24, A53, A72a, B52 (?), B82 (?), B89, C55, C60, D23, D25 (?), D42, D61 (Meeussen 1959: 124–5; Schadeberg 1990b: 8–9), E51 (Mugane 1996), G42 (Marten 1999), L21, L23, S10, S42,⁴⁸ and S53.

But the translations above cover two contradictory notions of inceptive. ‘Inceptive’ is standardly defined as referring to a form used to indicate the coming into being of (with stative verbs) or entry into (with dynamic verbs) a situation or state, often translated by ‘be about to (eat)’, ‘be on the point of (eating)’, or ‘get (eating)’. This implies a point just before, or at the start of the situation. This contrasts with ‘already’, which ‘depicts a state as after its coming-into-being, as subsequent to its beginning’ (Hirtle 1978: 35, also Traugott and Waterhouse 1969), as can be seen in ‘He is already

⁴⁸ The matrix for Zulu (S42) in the Appendices has an ‘Inceptive’ *sé-*, which appears to be the same as the Completive *se* in Tswana (S31, Gowlett 2003: 634). These may be imbricated anterior forms of an older *-*sala* ‘stay, remain’.

here' as opposed to 'He is here', where the first suggests 'He was not here before but is here now' (ibid.). Similarly 'They have already arrived' and 'They have arrived' both refer to a past event and its current consequences (they are here), but 'already' adds the emphatic component of the arrival being complete.

The morphology involved gives some support to this dual interpretation. Examination of the morphemes associated with 'inceptive' in the languages just listed shows considerable diversity, typologically and geographically. This suggests grammaticalization from different source verbs. While some of the morphemes are opaque, both the state-after-its-coming-into-being set ('have already verbed, have just verbed, be already verbing') and the 'state-just-before or at-its-inception' set show a certain correlation with different morphologies. The state-after-its-coming-into-being set are often encoded by (inherited suffixal) anteriors, or by (pre-stem) morphemes related to verbs meaning 'finish' or 'be finished': so anterior or near past in Boma *-e-*, Lomongo *-i*, Gikuyu *-eete*, and 'finish'-verbs (**-mala*, **-cila*, **-cug/-cud*) in Saghala (*-ma-*), Vunjo (*-me-*), Swahili (*-(i)sh-*), probably Lega (*-sa-/-se-*), Kpa (*-mA-*), and possibly Kumu (*-su-*). The 'state-just-before or at-its-inception' set are more diverse but Nande *-li+mu-* 'be+in' ('be starting to'), and Kete *-tsa-* and Shona *-cha-* ('be about to'), from futures are striking illustrations of the correlation of meaning and source. Kete *-tsa-* functions as the regular future as well as 'be about to' and 'have already'.

The other, less frequent, minor category is the completive ('do something thoroughly and to completion'). It appears to be less common than inceptive—being seen apparently only in Koozime, Kako, Vunjo (Nurse 2003b), and Kanyoka—but this may be an illusion brought about by the translations. On the one hand inceptive and completive can be confounded because the apparent anterior form 'They have eaten' might have an inceptive interpretation, 'They have already eaten a few mouthfuls (they have started to eat)' or a completive interpretation, as in 'They have eaten it all (= they have finished eating)', depending on the pragmatic context. Indeed, with the right TA marker a form might translate as either. If the translations for the completives and the state-after-its-coming-into-being inceptives above are examined, it becomes clear that the line between them is thin. Often the source morphology for the completives also derives from a finish-verb (Kako *-me-*, Vunjo *-me-*, Koozime *-si-*, Duala *-bóle*).

On the other hand, inceptives and completives may be hidden under different labels. The discussion in 4.11 above, of Haya (see also the matrix) points out that Haya has past perfectives ('We bought'), present anteriors ('We have bought'), and forms which combine the two. Thus *tw-áá-guz-ire* 'We have already bought' refers to a recent complete act (buying the book), to the relevance of that to the present (someone else is going in to look for the book), but it also emphasizes the completedness of the act (it wasn't bought before but it is now, so no point in the other people going into the bookshop). For Haya I have labelled that as Perfective Anterior, but in fact it could well be called a completive. The database has other such cases.

The suggestions above are tentative. This all needs wider and deeper investigation.

4.11.3 Change of meaning affecting anteriors becoming presents or futures

Analysts (Bybee *et al.* 1994: 81, Heine and Kuteva 2002: 231) concerned with the directions in which anteriors develop, standardly show them becoming perfectives and pasts. While that kind of development undoubtedly happens in Bantu, one kind of change rarely mentioned by those analysts⁴⁹ does occur in Bantu. In a not inconsiderable set of languages, forms with anterior or near past reference have come to refer to present or future. This involves a semantic shift not often mentioned in the general literature. From a morphological point of view, two variants can be distinguished.

The first variant involves pre-stem *-a-*, which represents predominantly past perfective (3.2.1) but also present anterior reference (4.11 just above (31)). However in some 32 per cent of the matrix languages it also or only represents present or future meaning. A past perfective represents a complete past action: a present anterior represents a past action as having consequences that last into the present (or, as we see here, the future). The use of an anterior for future reference first drew my attention in a shop in a Sonjo⁵⁰ village, when a man just about to make a purchase apparently announced that the purchase had just been made: the Sonjo form *n-tw-a-gola* ‘We have bought’ is the anterior,⁵¹ but the customer used it, before having taken possession or paid, ‘We are about to buy, the thing is as good as bought’. That is, he used an anterior (in other languages it might be an immediate past) to represent an event in the immediate future. This rests on the speaker’s certainty that the decision has been taken (in the past), and that the future action is as good as taken, because the consequences of the past decision are felt through the present and into the future. Half an hour later, when I took his form out of context and asked him for a translation, he interpreted it as an anterior, and only reluctantly agreed it might refer to a future event. Speakers of other languages acknowledged the same possibility in their languages in later discussions. Lungu (M14) provides a more complex example:

- (36) M14 *tw-áá-shá tw-áá-lim-a* ‘We’ll soon be farming’
 (lit. we have left ## let us be farming)
tw-áá-shá tú-ø-lím-e ‘We’ll soon farm’ (lit. we have left ## let us farm)

In both examples the first verb is the recent past/ P_1 form of the auxiliary verb *si* ‘leave’. In the first case, the second verb is in the hortative form,⁵² in the second case in the subjunctive.

⁴⁹ But see Comrie (1985: 20).

⁵⁰ Sonjo (E46), more properly called Temi, is spoken by some 20,000 people in several villages in the Maasai Steppe in northern Tanzania. It is most closely related to Gikuyu.

⁵¹ Speakers of other Sonjo varieties used *n-to-ba-gola*.

⁵² This interpretation of the two /a/ may seem odd. See Bickmore (2007).

The second source is suffixal *-ile*, with which I have included suffixal *-i* and *-Vte*, because all three represent primarily anterior (also near past). Examples:

- (37) Shi (D53) rhu-ø-yiimb-íré ‘We are singing’
 Talinga (E102) a-ø-hek-ie ‘He is carrying’
 Uruund (L53) ni-ø-leet-il ‘I am bringing’
 Londo (A11) a-ø-sak-i ‘She sought, she seeks’
 Mituku (D13) tð-ø-bund-í ‘We are catching’
 Bobangi (C32) ná-ø-kát-i ‘I held P₂’
 ná-ø-kát-í ‘I held P₁’
 na-ø-kát-i ‘I will hold F₁’⁵³
 Lunda (L52) keeja ni-ø-y-í ‘I’ll go (very soon)’ (keeja ‘want’, plus P₁)
 Sonjo (E46) n-to-ø-gol-ate ‘We are buying’ (see also (38), below)

The key here appears to be cognitive. As speakers of several languages said explicitly, the anterior denotes a current state of being, because of something that has happened. It happens most obviously in stative verbs but also very often in dynamic verbs (‘We are in a state of having bought, of having come’). In these cases, although the situation is currently taking place, or is about to take place, the decision has already been taken. There is no obvious exact parallel in any Western European language, but a rough equivalent would be ‘I’m gone = I’m leaving = I’m about to leave’, that is, the decision has been taken and I will be leaving very soon, even though I am still here. In the languages above the shift of meaning is fully grammaticalized but in other languages, it is ongoing, that is, it holds for some verbs in some discourse situations, but not for all verbs in all situations. In Sukuma, the *-ø...-ile* form is the regular anterior, but with certain verbs, in some situations it renders a near future: so B. Masele, when first analysing his language, regularly translated *do-ji-ile* (1p-go-ANT) as ‘We are going, we will go (today)’. I have heard this also in other languages. Welmers (1973: 350) cites a good example from the Niger-Congo language Kpelle.

In this respect, the Sonjo form in (37) is worth explaining further, because it illustrates how progressive and perfective past may be related. Apart from B25 (‘inceptive’), C373 (‘yesterday perfect/stative’), and one source for K42 (anterior), the *-V(:)te* suffix as a form independent from *-ile* occurs only in Gusii, Sonjo, and E50 (not E56). The E50 languages (except E56) are spoken in a continuous area in central Kenya, Gusii is today separate to the west, and Sonjo today separate to the south. Gusii *-ete* is a straight past (perfective), Sonjo represents present progressive (*-ate* affirmative, *-ete* negative), and the E50 languages have it as anterior:

⁵³ There is a general process here. C32 uses the same structural form, tonally differentiated, for both pasts, both marked by the perfective suffix *-i*. The same form is then reused as the near (but not the far) future. The order of events seems to be: first a form is used in a new way, second, the new distinction is formally recognized and grammaticalized by giving it a new tone pattern.

- (38) Gusii (E42) m-bá-a-c-éte ‘They came (P₄)’
 Sonjo (E46) n-tu-ø-gol-ate ‘We are buying’
 tw-a-mu-bandre a-ø-sim-ate ‘We have seen him digging’
 Gikuyu (E51) ni-w-on-ete ‘You have seen’
 ni-nog-ete ‘I am tired’
 Kamba (E55) n-u-semb-eete ‘He is running, has been running’
 (Whiteley and Muli 1962: 74, 145)

This appears to contain considerable semantic discrepancy. P. R. Bennett (this is a modified summary of his personal communication) explains it as follows. The original E50 -VVte suffix marked completed action with ongoing state (i.e. anterior, DN), the current meaning in E50 (Gikuyu, Kamba), from which both the Gusii Past and the Sonjo Present Progressive can be reasonably derived: dropping the completed action gives the Sonjo meaning, dropping the ongoing state gives the Gusii meaning.

4.12 Minor categories (aspect or tense)

The general approach in this book is to take the data and analyses presented in the various sources and recast them, when necessary applying concepts and terms used in current general linguistic practice. In the case of some languages, the few general categories that emerge exhaust the data of the sources. In other languages, a residue of categories remains after extracting the widespread categories. These minor categories appear locally and most only occur occasionally: precessive = antecessive = ‘first’ (‘First you do this, then . . .’); iterative; priorative; continuative; preferential; ‘eventually’. Most only appear in one or two languages, are usually not defined and only appear as translations; the examples are few, so it is not sure whether they are the same entity in each language nor whether such categories are absent from the many languages in which they are not mentioned. Thus I do not feel justified in making firm analyses of these categories. A few are better explained, though restricted in their geographical distribution.

One such is what König (1993: 85) calls the proximative. As Heine (1997: 6–9) points out, a construction originating with an independent verb of volition (‘want’) moves through a number of stages to a point where it is no longer an independent item and renders ‘nearly, almost, be about to’. At this point König and Heine refer to it as the proximative. In one or two of the inceptives mentioned in 4.11.2, the morpheme involved might well derive from a verb of volition but not in the others. The proximative has not been attested for many Bantu languages so far. There are two examples (from Swahili and Koti) in Rose *et al.* (2002: 71) and Gowlett (2003: 633) mentions the ‘approximate’ for Sotho. This would be worth more investigation, as would the relationship between proximative and inceptive—not only is the meaning similar but in at least one language (L21, see 4.11.2, above) the source for inceptive is a verb of volition.

Another category recently proposed is counter-expectation ('das Unerwartete'), first put forward by Schadeberg (1990b). He compares Comrie's (1985: 53–5, (39a) below) Ganda example with a semantically similar form from Swahili (39b):

- (39) a Ganda te-tú-nná-génda
 NEG-1p-yet-go
 'We haven't gone yet, still haven't gone, have/are still to go'
- b Swahili ha-wa-ja-fika
 NEG-3p-yet-come
 'They haven't come yet, still haven't come, have/are still to come'

Comrie says of his example: '... a certain situation (our going) did not hold in the past and does not hold in the present', so his explanation is purely temporal (tense), relating a past and a current situation. Schadeberg's explanation differs on three levels. First, he sees only the present as relevant—at present, the situation has not come about, regardless of any past situation ('Perfektum' aspect). Second, he sees the form including the possibility that the situation may occur in the future. Comrie would not deny this possibility but regards it as implicature, something that derives from the basic meaning in a particular context. It is a characteristic of many present forms that the situation they represent may continue into the future. Third, Schadeberg claims that it specifically denies the expectation, not of the speaker, but of the addressee: 'You thought they would be here by now but they are not'. This may certainly be part of the message in certain contexts, but not in all, so appears to be implicature, rather than a necessary and central part of the semantic content. It is rather like the Haya form *tw-áá-guz-ire* (above, 4.11) 'We (have) already bought', primary meaning, 'It wasn't bought before, but it is now', implicature, 'If you are going there expecting to buy it, don't bother'.

Forms such as those in (39a, b), translated by authors as 'haven't yet verbed', are common across Bantu. As the translations imply, there is a formal and functional connection between these negative 'not yet/counter-exceptional' forms and the persistent (see 4.8 (21), 5.2.9 (5.24), and 6.2.4 (iv)).

A final category not often mentioned for African languages is what might be called an evidential (perfective), seen in the first column of the Sukuma (F21) matrix. Our source (B. Masele) says that in a court of law, one form ('direct evidence') would be used if the witness had actually seen the events at issue, whereas the other would imply that the witness was inferring the truth of the events without having seen them. Not surprisingly, it only appears in past reference.⁵⁴

It becomes clear from the foregoing that there are fuzzy edges between some aspectual categories and that more work needs doing on defining and uncovering less familiar and maybe new categories.⁵⁵

⁵⁴ Other analyses of Sukuma or the closely related Nyamwezi do not share this analysis (Batibo (1985); Maganga and Schadeberg (1992)).

⁵⁵ Several groups of languages offer particularly fertile ground for such examination. Zone S languages are described as having many partly grammaticalized aspectual categories (Gowlett 2003: 633–5; Creissels

4.13 The expression of the combination of tense and aspect

In 3.2 we saw that tense was expressed by inflection, predominantly at TA, sometimes at FV, Pre-SM, and, rarely, Post-FV. Past tense is expressed via a relatively small number of morphemes, overwhelmingly at TA or FV and in some languages past contrasts involve the use of tones. Although futures are fewer than pasts, a greater number of morphemes are involved, because morphemes for future more often result from incorporating auxiliaries or other items, which also explains why future markers are sometimes found at the edge of the verb, mostly at Pre-SM, less often at Post-FV.

Sections 4.2 to 4.12 deal with aspect and its expression. While 4.3 treats the general expression of aspect, Sections 4.4–4.12 are more specific and bear summarizing here. Some languages express aspects by inflection, some by the use of compound constructions, some by a mixture of the two. Aspects when not combined with tense are predominantly expressed by inflection, although the place and source of the inflection varies. For imperfective (*-a(n)g-*: both the general category contrasting with perfective and the more limited language-specific imperfectives), habitual (*-a(n)g-*), and anterior (*-ile*), the inflection is overwhelmingly suffixal. For progressive (various) and for *-kI-*, it is mainly at TA. While the markers for imperfective/habitual, anterior, and maybe persistive are apparently inherited, many markers of progressive are visible grammaticalizations of locative or possessive strategies. Since some of the grammaticalization processes are still underway, there is a higher percentage of compound constructions involved in progressives. Reduplication is a minor mechanism for encoding imperfectives.

This general picture contrasts with that presented elsewhere. Table 4.1 summarizes Bybee and Dahl (1989: 56, cited in Heine (1993: 68)). In both columns the figures on the left are their cross-linguistic totals, those on the right in brackets are figures for the Bantu matrix languages.

A caveat is in order here.⁵⁶ Part of the enterprise in this book is to use general aspectual categories and their names, including some taken from Bybee and Dahl and Bybee *et al.* (1994). Nevertheless, the definitions of some of these categories as used in this book differ somewhat from theirs, including those for anterior, perfective, and imperfective/progressive. For instance, my distinction between IPFV and PRG may not be absolutely consistent—in some cases I kept the PRG label from the source, whereas in other cases, when it appeared to be the only imperfective category,

2002b, 2004). Other sources with rich discussion of auxiliaries and aspects: Alexandre (1966); Redden (1979) (both A70 languages); Van Otterloo (forthcoming) (D63). Several languages in the matrices reveal inadequately identified categories, e.g. D42, F10, M14.

⁵⁶ There are two other minor technical differences between Bybee and Dahl and my figures. One is the quality of the sample data: Bybee and Dahl had the luxury of picking and rejecting languages when they found inadequate documentation, whereas I had to deal with a whole set of Bantu languages, whether the data was ideal or not. A second may be that, since aspect marking varies in Bantu languages between tense-marked forms and timeless/‘present’ forms, my figures above are based on including both types for any one language—if only the—usually bound—presents were included, some of the percentages in the bound column above (for progressive, anterior, imperfective, habitual, and persistive) would rise further.

Table 4.1 Relative frequency of expression of tense/aspect markers

	Periphrastic	Bound
Progressive	95% (51%, 32 of 63)	5% (49%)
Perfect (Anterior)	88% (18%, 14 of 80)	12% (82%)
Future	54% (8%, 8 of 100)	46% (92%)
Past	27% (6%, 6 of 100)	73% (94%, 94 of 100)
Perfective	15%	85% (97.5%, see below)
Imperfective	null (17%, 10 of 60)	100% (83%)
Habitual	(21%)	(79%, 34 of 43)
Persistent	(39%)	(61%, 31 of 50)

I replaced it with the more general label IPFV. Similarly, perfective in Bybee and Dahl's sample may differ from the way it is used in this book, where it is defined in such a way as to cover past and future, so its incidence would be the average of past and future, i.e. 93 per cent. As a result, in some cases Table 4.1 compares categories not strictly identical, so the figures should be treated as having general, not absolute validity.

That said, it can be seen that the number of languages with any particular category varies (from 100 per cent for past and future, down to 43 per cent for habitual): the morphological behaviour of a single aspect sometimes varies within a single language between an inflectional (bound) present and compound (periphrastic) non-presents—in such cases I counted 0.5 per cent for both bound and periphrastic—which I find a reasonable reflection of the fact that structures are often in motion, and not clearly bound or periphrastic.

Certain obvious features differ between Bybee and Dahl's figures and those for Bantu. One is the higher level of bound (inflectional) morphology in Bantu. Bybee and Dahl's figures for bound morphology range from 5 per cent to 100 per cent, with an average of 53.5 per cent, with only two figures over 84 per cent, whereas for the same categories the Bantu range is 49 per cent to 97.5 per cent, the average 83 per cent, and all figures except two are essentially over 80 per cent. This proclivity of Bantu for bound/inflectional structures would be even more marked if we had excluded Zone A languages, some of which have few bound structures. A second difference is that tense (past, future, and therefore perfective in this book) is clearly a bound category in Bantu and thereby differs from the aspectual categories, but this is not so in Bybee and Dahl's sample. A third difference lies in the morphological behaviour of anteriors—bound in Bantu but periphrastic in Bybee and Dahl. A shared feature is the fact that progressives in both samples have a higher level of periphrastic expression than the other categories.

How to explain these striking differences between Bybee and Dahl and the Bantu figures?

The main cause is genetic. With the exception of a few northwest languages, Bantu languages are typologically similar, in that they are not just agglutinating but heavily

agglutinating, so very high levels of bound expression are to be expected. By contrast, Bybee and Dahl's findings are based on a more heterogeneous set of languages. What languages of other types express by periphrasis or syntax, agglutinating languages express inflectionally, a tendency carried even further by heavily agglutinating languages. These can be exemplified most clearly in Bantu anteriors, which are encoded overwhelmingly by suffixal *-ile* or prefixal *-a-*, whereas a variety of periphrastic strategies is found in Bybee and Dahl's sample.

Having clarified this, how is the combination of tense and aspect expressed? There is one local pattern and two wider patterns.

The local pattern occurs in the far northwest languages, that is, some Zone A languages (e.g. A22, A40-50, (A70), A80-90), and also in the Grassfields Bantu languages and in many other Niger-Congo languages farther west. Since these languages are structurally different from most of Bantu, they also combine tense and aspect differently. What most Bantu languages express by inflection, these languages have a tendency to express analytically. Thus Kako (A93):

- (40) a ã ké kel-ɔ
 3s be be do-FV
 'She was doing' (PRG)
- a ã ndi kéw-ó
 3s be still be kill-FV
 'She was still killing' (PER)
- mí mɛ kédý-éna
 1s INCE be eat-FV
 'I begin to be eating' (INCE)
- mí mâ tɔl-ɔ
 1s PAST read-FV
 'I had read' (ANT)
- mí mǎ si w-ó
 1s PAST CMP kill-FV
 'I have finished killing' (CMP)
- mí pa mǎ sum-ɔ
 1s Priorative PAST build-FV
 'First I built ...' (Priorative)

The phrase 'have a tendency to' is used advisedly, partly because they don't all behave in the same way, partly because it is necessary to distinguish morphological analysis from writing conventions. Francophone countries in West Africa have a strong francographic convention to write as separate words what would be written as one word in the anglographic tradition. Thus Watters (p.c.): 'In Ejagham (a Cameroon Grassfields language) the French-trained linguists insisted we separate the subject prefix as a separate word orthographically, against our most vigorous arguments.

I suspect that what you have here is a continuation of what you find in Bantu. In fact, in Ejagham a form like *a-ka-bha* ‘3s (did) not come’ is rendered orthographically as *a ka bha*, three words’. This tendency can be seen in Bitjaa Kody (1990) for A43 and Mous (2003a) for A44. Mous writes in English but much of his data comes from French sources. Both authors vary in how they write the single verbal word, even the same word, especially in how they render units occurring at SM and TA, there being agreement that post-radical elements are inflectional suffixes and written as part of the verb. Wilkendorf (1991) is also not explicit about the basis for her segmentation of A46. On the other hand, some Zone A languages seem to genuinely analyse the verbal word as consisting of a combination of inflection and analytic structures. In an email discussion in 1998, Beavon (for A84) and T. Heath (A83) insisted their languages were best analysed as having inflectional suffixes but separate items before the root. They had solid arguments for this position. These arguments include: the possibility of inserting adverbs between some of the pre-radical items, pointing to their independent status; the tonal behaviour of some of the pre-verbal items (they are followed by the same floating tone as occurs verb-finally); the fact that some can function as independent words.

So suffixes in these Zone A languages express a limited range of aspects (mostly *-ak-*, IPFV or pluractional), whereas the independent items before the root express most tense, aspect, and other categories.

The two more general strategies for combining tense and aspect have been mentioned already: inflection and compounding. It is hard to quantify their distribution exactly because the completeness of the data varies a lot across Bantu. Both strategies occur in all parts of the Bantu area. There is a typological continuum, from languages which are largely inflectional at one end, to languages which are largely compounding at the other. Most languages use both strategies. I have not found any language entirely of one type or the other. For instance, grammars of most Central Kenya languages give the impression that they are entirely inflectional—tense pre-stem and aspect at FV—and our matrix for Gikuyu corroborates this impression, but in fact careful perusal of the grammars show some compound constructions, few in Barlow (1960), many in Mugane (1996). Similarly, the D60 languages are heavily periphrastic but a few forms combine tense and aspect in entirely inflectional forms. This typological continuum results from two factors, the grammaticalization cycle and local convention. All languages constantly throw up new combinations of auxiliary and lexical verb. Some remain just that, some fade away, some eventually result in new inflectional forms. Over time some of these inflectional forms become opaque, for one reason or another, and the cycle is repeated. Beside this there are local conventions. This can be seen clearly in the geographical distribution of the two patterns—there are islands, even large areas, which favour inflection and others which favour compounding. So many languages around the Great Lakes (D60, E10-20-30), central and southern Tanzania (G30, G60), southern Africa (R30, S30-40), and some languages known to have been used as lingua francas (Swahili, Kituba) are at the compounding end of the continuum

for tense-aspect combination. By contrast, many languages in Zones C, H, and R, together with E50 and M50-60, are at the inflectional end.

Good analyses of the combination of tense and aspect are available for only a few languages so rather than make possibly shaky typological generalizations, it makes more sense to examine one language in detail. The language chosen is the Kiiya dialect of Sukuma (F21). This is based on many hours of discussion with Balla Masele. I was aware at the time of analyses of other varieties of Sukuma (Batibo 1985; Batibo and Nurse in Nurse 1979a: 52–5) and Nyamwezi (Maganga and Schadeberg 1992; Maganga and Nurse in Nurse 1979a: 61–2; Schadeberg 1989). Readers should consult the matrix and these authors for many details too numerous to include here. The Sukuma tense-aspect system is complicated, so various caveats are in order. The tones marked on forms in the matrix and here are surface forms. Various processes affecting vowel and consonants occur only in the TA system and have not been fully worked out, making some parts of the analysis suspect. Tonological and phonological processes are ignored. The analysis presented here is a step forward but is not complete. And the data presented in the matrix and here is not quite complete—there is no more space in the matrix for this very complicated system and some forms are missing (e.g. *dū-laa-gol-ě* ‘We should buy (F₃)’). The topic deserves a book.

Sukuma-Kiiya has a rich tense system, having in this analysis four pasts and three futures (other analysts have only two futures). P₁, P₂, P₃, P₄ refer to immediate past (‘buying so recent that the change is still clinking in your pocket’), today, yesterday (and maybe a day or two before), and remote past, respectively, which is typical of four-way past systems. The three futures refer to near future, tomorrow and maybe another few days, and remote future, again common for languages with three futures. Masele is firm that these—maybe excepting the two immediate tenses—all have relative time reference.⁵⁷ That is, if they refer to everyday situations, easily relatable to the time of speaking, their reference is as stated, but if they refer to acts of God versus those of humans or to the life span of large trees versus small plants, or if the speaker wants to underline the time focus for the listener, the reference is flexible. The pasts and futures are fixed relative to one another but variable relative to situations.

How are these seven expressed? P₁, P₄, and F₃ are encoded pre-verbally by inherited markers, (analysts disagree about the exact difference between the [a]-vowels in P₁ and P₄, but that is not relevant here). F₁ derives from the combination of ventive and subjunctive (*dū-íz-e dǔ-gǔl-e* ‘Let’s come let’s buy’ > (*íz-e*) *dǔ-gǔl-e* ‘We will buy (today)’). The *-gǔ-* of F₂ is a recycling of a present marker, itself probably an extension of an older locative (*-li* plus *gǔ* ‘be at’). The grammaticalizations that have affected these two futures are well attested elsewhere. Much less common is the apparent innovation that has led to the structure of the three nearest pasts. All are based on the common use of short, pre-stem /á/, which combines with simple *-a* for P₁, with *-aga* for P₂, and *-ile* for P₃. This can be explained cognitively thus (J. Hewson, p.c.). Pre-stem *á* represents

⁵⁷ Haya, by contrast, seems to have absolute reference, at least in the past.

a past event. Combining it with the neutral suffix *-a* gives a form that the immediate memory knows to be complete and over: P₁ (or Memorial Present). Its combination with *-ile*, the Anterior aspect marker, announces that the event is in the past, complete and out of sight to the memory: P₃. Combining it with *-aga*, the Imperfective marker, represents the event as in the past, part complete, part incomplete: P₂, between P₁ and P₃.

In summary, so far, all the seven tenses are expressed synthetically, four by pre-stem inflection, one by verb-final inflection, and two by a combination of inflections in both positions. Some of this inflection is inherited, some comes from expansion of the subjunctive, the present, and two aspects. It might be claimed that P₂ and P₃ are not wholly tenses, but a combination of pre-stem tense and verb final aspect. In principle, tone could have been used to implement the expansion of the tense system.

Aspects are less easily dealt with. Considering only what appears in the matrix—other combinations are possible—there are Perfectives, two Imperfectives, Progressive, Anterior, and Persistentive. The first Perfective is to be expected: the representation of a situation as a single bounded whole, without regard to internal structure or constituent phases.⁵⁸ The second Perfective, looks at first sight like a combination of tense and tense, but that is misleading. In a form such as *d-áá-lí d-áá-golá*, both parts are P₄, and the first auxiliary locates the time of reference as far past, while the second says that the buying occurred before that time of reference and that we no longer have or had what was bought—say, a car—or it is/was no longer relevant. That is hard to translate into English because to render it as ‘We had bought it (long before)’ is to ignore that we no longer have/had it, so we have to say something like ‘We had bought it long before the remote time of reference and no longer had/have it’. By contrast, the equivalent Anterior form *d-áá-lí d-ú-gól-ilě* encodes ‘We had bought it before the remote time of reference and still had it’. In passing, it can be noted that such anteriors are quite common across Bantu.

I am not entirely sure of the semantic parameters of the two Imperfectives. Consider the two presents: *dú-gú-gól-aga* ‘We are buying (and have been for a shorter time)’ and *dú-ga-gól-aga* ‘We buy or we are buying (and have been for a longer time)’. The suffix *-aga* is ambiguous—normally it represents imperfective, but as we saw above for P₂, it also represents an event in the middle past: P₂, between P₁ and P₃. The *-gú-* of the first form is associated with the present, so the combination of the two indicates that the situation is going on now and has been for some time in the past. A clue to the meaning of the second Imperfective is given by the *-ga-*. This *-ga-*, in the Sukuma Past Inferential, refers to a remote past situation, as it does elsewhere in Bantu (*-ka-*), so this Imperfective refers to a general situation (‘We buy’) that has obtained for a longer time,

⁵⁸ There is, incidentally, another P₄, *dú-ga-gola*, also ‘We bought’. Masele explains this as an Inferential—speaker not present but infers the buying from what he has heard—while the first Perfective is an Evidential—knowledge of the buying is based on personal experience, such a form could be used in court. I am not aware of evidentials elsewhere in Bantu.

indeed since the remote past, and even obtains now ('We are buying'). So *du-ga-gól-aga* has clear habitual meaning, while *du-gv-gól-aga* refers rather to a situation that is ongoing and has been for a shorter past period. By contrast, the Progressive represents a situation as ongoing at the time of speech, without any reference to possible past situations leading up to it. The Persistentive, as often in Bantu, is formally based on the Progressive, in this case by the addition of *-taali*, which in turn looks like a frozen negative marker *taa* plus *li* 'be'.

How are the aspects expressed? The basic Perfectives and the present forms of the two Imperfectives, Progressive, and Anterior are relatively unmarked and indicated inflectionally (first row of the second matrix page). All the Persistentives involve analytic structures, which is particular to Sukuma. All other combinations of past and future tense and aspect involve some combination of two words, the first a form of 'be', the second the lexical verb. So all compound constructions express aspect but not all aspects are expressed by compound constructions. Two forms of 'be' are used, *-li* and *-βiiz-a*, in complementary distribution. As most—but not all—other Bantu languages, Sukuma treats the *-li* form of 'be' as morphologically defective, taking (tense) prefixes but not (aspect) suffixes, so it appears as the marker of constructions which have a locative origin (PRG, PER), or as a placeholder to hang prefixed tense markers on, e.g. */-a-li/*. In all other contexts, the majority, where tense and aspect categories are encoded suffixally, the form of 'be' is *-βiiz-*, derived from **-ba* 'be, become'. It can carry prefixes and suffixes and is the only form of 'be' in all future and past Imperfective and Progressive compounds.

So the Bantu generalization is that perfectives, not overtly marked for aspect, and the 'present' forms of the other aspects, not marked for tense, are one-word forms, while combinations of past/future with other aspects are expressed either analytically by compound constructions, as predominantly today in Sukuma, or by combinations of pre-stem and post-stem morphology, as was probably the case earlier in Sukuma.

Some forms have a wider range of use than has been possible to show in the Appendices. A typical example would be in the use of the anteriors not marked for tense. *Dv-gól-ile* most often translates as 'We have bought (we don't know or care when)'. The equivalent form of 'go', *dv-ji-ile*, might be expected to mean 'We have gone', but in fact easily translates as 'We're gone, we have gone, are going, are about to go, will go (today)'. In the early stages of our work, Masele wrote this form with all these translations. Could it have these 'meanings'? The range of meanings comes from the difference between the act of going and the decision to go: although we are still here and have gone nowhere, the decision to go belongs to the past, hence the use of the Anterior—(recent) past act, present (even future) consequences. It would seem that 'buy' ought to lend itself to the same interpretations. While Masele agreed it would be possible, he had to ponder it, while for 'go' it was spontaneous, so the difference is either lexical or conventional.

An interesting set of forms not mentioned elsewhere is *í-d-áá-gólá* (1p, P₄), *í-n-áá-gólá* (1s, P₄), *í-d-áá-góla* (1p, P₁), etc. We have already seen *d-áá-gólá* (P₄) 'We bought',

d-áá-li d-áá-gulǎ (both parts P_4) ‘We had bought (and no longer had)’, and *d-áá-li d-ó-göl-ilě* ‘We had bought (P_4) (and still had)’. These new forms translate as ‘We had bought but ... (new information to follow)’. These forms were probably reductions of **d-aa-li d-aa-gula* but such full forms are not current in contemporary Kiiya. Similar reductions occur in Lungu. Statements can be made into questions by tone changes: *d-aa-gólǎ* ‘We bought (P_1)’ is a statement but as a question ‘Did we buy?’ would be *d-aa-góla*, with a tone change on the last syllable, something observable in other Bantu and Niger-Congo languages.

A number of other details deserve comment. One is that it would seem logical that if this variety of Sukuma, as per the matrix, shows eight tenses (four pasts, three futures, present) and at least seven major aspects, then we might expect fifty-six combinations. In fact, there are fewer, specifically in the past. For several aspects, there is only a binary contrast between forms based on the Immediate and the Remote Past. Two explanations offer themselves. One is the observation that this neutralization of aspects in the past seems to occur often in Bantu and so perhaps reflects a practical lack of need for such a range of distinctions in daily discourse situations. The other, more tempting, explanation is specific to Sukuma. It was suggested five paragraphs above that Sukuma had once, or has underlyingly today, a basic contrast between two forms of past reference, an Immediate (P_1) and a Remote (P_4) Past, and that P_2/P_3 derive from P_1 , semantically and morphologically. If this is the case, then the reduced binary contrasts in the past observable in some aspects reflect this older situation (or, as one referee pointed out, it might be the instantiation in Sukuma of the more general Bantu neutralization of aspects in the past).

Readers may notice that Sukuma-Kiiya operates a little differently from other languages around Lake Victoria. In contrast to Haya, Bukusu, and other lacustrine languages, Kiiya only has one anterior form, *dǔ-gul-ile*, and in compound constructions, e.g. *d-áá-li* (P_4) *dǔ-gul-ilě* (ANT) ‘We had bought (and still had)’ (lit. we were we have bought), indicating a reference point in the far past, and buying preceding that point, but not indicating how far beyond that point the buying had occurred. Haya can indicate two general anterior distances (see 4.11). Further, Sukuma appears unusual in allowing the second member of compound constructions to contain a perfective: *d-áá-li d-áá-gula* ‘We had bought (and no longer had)’ (lit. we were we bought), where both parts are P_4 . In these compound constructions, both members apparently have to be in the same tense.

Most compound forms can or do reduce over time, usually to a single morpheme at TA in the single verb (illustrated in (2.42, 2.43)). This single morpheme usually has the canonical syllable shape (N)CV. A different pattern occurs locally in four scattered pockets: in the DRC, northeast Africa, and Zambia: Nande (D42) and maybe Nyanga (D43); Gusii and Kuria (E42, E43); the E50 languages (E51-55, not E56 or E46), Chaga (E60), Mbugu, Pare (G22), Shambala (G20A, G22, G23); Lamba (M54) and Ila (M63). In contrast to most Bantu, which allows one or at most two pre-stem tense/aspect morphemes, these languages have taken agglutination to an extreme, allowing several morphemes in the TA slot. D42, for instance, starts with forms which are

morphologically and semantically simpler and build more complex forms on them, allowing seven or perhaps even more in the string, as in (41), where the pre-stem TA morphemes are underlined (since not always transparent, they are not all translated):

- (41) D42 tu-ká-gula ehilóle ‘We’re buying bananas (PRG)’ (*tu* ‘1p’, *gula* ‘buy’)
 tu-ká-ndi-gula . . . ‘We will buy . . . (later today, F₂)’
 tu-ká-ndi-sya-gula . . . ‘We’ll buy (tomorrow or shortly thereafter, F₃)’
 tu-ká-ndi-sya-ya-gula . . . ‘We will buy (remote future, F₄)’
 tu-né-mu-ndi-syá-tá-sya-ya-ba-king-ul-ir-an-is-i-á-ky-ô
 ‘We will make it possible one more time for them to open it for each other’
- E62 a-lé-maa-enda-irzérzâ ‘She’d already spoken’
 (*a* ‘3s’, *irzerza* ‘to speak’, rather like ‘had been and gone and spoken’)
 wá-í-ká-ír-cá-zrérza⁵⁹
 3p-PRS-ITIVE-ASP-come-speak
 ‘They were about to speak’ (lit. they were to come here in order to speak)
- E42 ba-tá-á-kó-raa-ná-gó-sang-er-er-ek-an-a (*ba* ‘3p’, *sang* ‘meet’, *an* ‘together’)
 ‘They should perhaps meet together first’
- G22 n-é-kí-na-ra-ima
 1s-PAST-aspect₁(IPFV)-aspect₂(HAB)-aspect₃-(Emphasis, PER)-stem
 ‘I also used to till’

Many of the morphemes involved here are remnants of former auxiliaries (e.g. D42 *-ya* ‘come’, E62 *-maa* ‘finish’, *-enda* ‘go’) and the order of morphemes reflects the chronological order of grammaticalization. For other examples, see (1.2) and (2.17).⁶⁰

Examination of the details of this pattern across the languages mentioned and illustrated shows two general features, which can be seen in the Pare example. The original morphological pattern of formative (tense: mainly *-a-*, represented as [e] in Pare) followed by limitative (*-ka-*, *-ki-*) is not contradicted in any of these languages, that is, it is either kept or changed in transparent ways. But then, because this morphological pattern combines with compound constructions and attaches to the first, auxiliary member of the compound, there arises a sequence such as [formative-limitative-auxiliary] # main verb. The auxiliaries vary from language to language, and the sequence grammaticalizes, fuses, and shortens, and in different ways from one language to another. It may be repeated (e.g. in Chaga, where historically first *enda* fused, then *maa*), leaving endless permutations. Some are transparent, many others are opaque now. The morphological and semantic possibilities in these long strings vary and an attempt to generalize about possible combinations and orderings met with limited success.

⁵⁹ This example and glosses from a paper given by Lioba Moshi at ACAL in Berkeley, 2001.

⁶⁰ Bennett (1969: 132–45) has a general pre-stem template for E50 languages, with five linear TA positions between SM-NEG and OM. As it is not fully illustrated, we give no example.

4.14 Combinations of tenses

Combinations of aspects have been illustrated at various points (e.g. discussion of Haya in 4.11).

In 3.13 and 4.3 it was mentioned that the first member of a compound always expresses tense and while the second or subsequent members always express aspect, in some languages they might also encode tense. This tense may be the same as or different from the tense in the first member. This might seem to contradict the principle (1.4.6) that a verb may only express one tense, but that only applied to one-word verbs. In 2.2.4 compound constructions were defined as two verbs behaving as a sequence of clauses, in which the auxiliary behaves as the main verb and the lexical verb as the verb of a subordinate clause. In languages with multiple pasts or futures, the tense of the first verb establishes a point of temporal reference other than the present, and the second verb may then situate itself temporally relative to the new reference point. The Lungu (M14) examples below make it clear that the tense sequence in a compound (first example) is identical to that in a sequence of main and subordinate clause verbs. Examples:

- (42) Rwanda y^{61} -a-li á-Ø-hiinz-e ibijumba
 (D61) 3s-P₁-be 3s-Ø.CNJ-cultivate-ANT potatoes
 y-á-lí á-Ø-hiinz-e ibijumba
 3s-P₂-be 3s-Ø.CNJ-cultivate-ANT potatoes
 both ‘She had just cultivated sweet potatoes’
 (P₁ today, P₂ before today)
 y-a-lí y-á-a-hiinz-e
 3s-P₁-be 3s-P₁-DIS-cultivate-ANT
 ‘He had cultivated today’
 y-á-lí y-á-a-hiinz-e
 3s-P₂-be 3s-P₁-DISJ-cultivate-ANT
 ‘He had cultivated yesterday (short time before P₂ reference)
 y-á-lí y-á-rá-hiinz-e ‘ditto (but longer time before the P₂ reference)’
 3s-P₂-be 3s-P₂DSJ-cultivate-ANT
 ‘ditto (but longer time before the P₂ reference)’
 Haya tú-ka-bá tú-Ø-guz-ire
 (E22) 1p-P₃-be 1p-null-buy-ANT
 ‘We had bought’
 tú-ka-bá tú-áá-guz-ire
 1p-P₃-be 1p-P₁-buy-ANT
 ‘We had (already) bought’

⁶¹ Rwanda (D61) and other Lacustrine languages mark 3s by *y-* and *a-*, depending on verb form.

Gikuyu	ma-raa-koragwo ma-a-re-a
(E51)	3p-PAST-be 3p-just.PAST-eat ⁶² 'They had just eaten'
Sukuma	d-áá-lid-áá-gwla
(F21)	1p-P ₄ -be 1p-P ₄ -PFV-buy 'We had bought (but no longer had)' d-áá-li d _U -g _U #l-ile 'We had (P ₄) (and still had)'
Lungu	áá'-l-áángá (P ₄) twáálim'á (P ₁)
(M14)	'We had (P ₄) just/already (P ₁ PFV) farmed' yá-a-tú-úvw-ílé (P ₄) tw-áá-láanda (P ₁) 'They heard (P ₄ PFV) us speak (P ₁ PFV)'
Zulu	ng-áá ngí-zo-be ngí-∅-hamba
(S42)	1s-P ₂ 1s-F ₁ -be 1s-PRS-walk 'I'd have been walking' (I was I'll be I walking)
Shona	nd-áká-nga ndí-chá-endá
(S10)	1s-P ₂ -be 1s-FUTURE-go 'I was about to go'
Tonga	a-(a)di-βana a-na-gu-boha
(S62)	3s-PAST-be 3s-FUTURE-IPFV-arrive 'He would have been arriving'

These examples are somewhat anecdotal and do not completely answer the question about what combinations are possible. The following have been found: past and future, future and past, past and same past, past followed by a very recent past (P₁ in the examples), which expresses the idea that some situation had occurred just prior to the past reference point. The sources are largely silent about other convincing combinations, which need more investigation.⁶³

4.15 Conclusions

Several considerations suggest that aspect is more fundamental than tense:

- Cross-linguistically there are languages with no tense contrasts—not the same as saying they cannot indicate time—but there are no languages without overt or covert⁶⁴ aspect in finite forms.
- All Niger-Congo languages have aspect, but only some—including the Bantu languages—also have grammaticalized tense. Bantu languages developed organically out of Niger-Congo and, as we will see in 6.5, they tacked tense distinctions

⁶² It is not easy to characterize the pasts here but they are different. See the two Gikuyu matrices in the Appendices, also Hewson and Nurse (2005).

⁶³ For some examples, see Botne (1983a, 1986, 1987b, 1989b, 1993, 2003b, 2007).

⁶⁴ Covert aspect refers to Aktionsart.

onto an inherited aspectual base. Tense did not replace aspect, it supplemented it. The evidence suggests it is likely that Bantu aspects are largely similar to those in Niger-Congo.

- Aspect distinctions are less variable than tense distinctions, both in their number and expression. The same fairly small central group of aspects recurs across Bantu and although the means of expression does of course vary, the morphology is quite similar.
- Aspect marking occurs closer to the lexical stem than does tense and closeness to the lexical centre is usually taken as a sign of semantic relevance. Aspect suffixes are typically part of the inflectional stem in the single verbal word, whereas tense prefixes are more distant to the left. In compound verbs, the second member, the lexical verb, is marked for aspect, while tense is off in a separate auxiliary verb to the left. The listener hears the time signal first and the more basic verbal information follows.

Most core Bantu aspectual distinctions appear to be inherited from Niger-Congo: perfective, imperfective, progressive. Habitual is close to imperfective, and they often share the same suffixal marking. Within Niger-Congo a discrete anterior may be a Bantu innovation, although the anterior ('perfect') message can be expressed elsewhere in Niger-Congo via the perfective. Persistent is often based on the progressive. Although persistent is widespread in Bantu, it is not clear that it is inherited from Niger-Congo and it is not unambiguously attested throughout Bantu.

5

Other categories

5.1 Which other categories, and why

As mentioned in the opening section of the book, although the original intent was to present solely tense and aspect, that would have meant ignoring other important features and categories which form a fundamental part of the Bantu verbal word. Readers unfamiliar with tense and aspect in Bantu were likely to be equally unfamiliar with these other features, some of which have been of recent interest to general linguists. Consequently, this chapter has an overview of three of these features, negation, focus, and pronominal object marking. While other authors had examined some of these—particularly negation—their results were widely scattered and not easily accessible. So I include them in this chapter, to make them more available, and have indicated what is original and what is the work of others. This chapter is a survey rather than an in-depth investigation.

5.2 Negation

5.2.1 *Previous work*

Although there is a sizeable theoretical literature on negation across languages, this section does not engage directly in that discussion but limits itself to contributing indirectly by sketching an overview of negation in Bantu. It sets out verbal negation in main clauses/indicatives, subordinate clauses, relativized verbs, subjunctives, and imperatives. It mentions only indirectly, if at all, copula, infinitive,¹ existential, or contrastive negation, or the negation of compound forms (see end of 2.9.3). It treats the morphemes and morphology of negation in Bantu, its general functions, the number of systemic negative contrasts in different languages, and briefly the possible origins of negative markers. It ignores issues such as how affirmative and negative verb forms correspond—semantically, what is a negative equivalent?²

¹ The morphosyntax of infinitives deserves a separate treatment. Bantu infinitives can commonly be found with (a) the imperfective suffix *-aga*, (b) pre-stem OMs, (c) negative markers between prefix and stem, (d) the TA *ka*, (e) the nominal pre-prefix. In some areas (e.g. Zone S and N30) other verbal categories also occur on the infinitive.

² Contini-Morava (1989), Fleisch (2000), and Givón (1975) deal with this at some length.

It is appropriate to start by mentioning two major treatments of negation in Bantu. One (Kamba Muzenga (1981), complemented by the smaller Kamba Muzenga (2005)), is huge, its nearly 400 pages presenting enormous amounts of data from ca. 270 languages and concentrating on the morphemes and categories which can be reconstructed historically. The other (Güldemann 1997), while introducing some additional data, is concerned rather with the genesis of negation, related to its function in clause types. He does not treat northwestern languages ('Zones A, B, C, part of D and H'),³ which tend to fit less well with his general conclusions.

5.2.2 Morphology: the morphemes and structures involved in negation

This section begins by examining the morphology of verbal negation because morphology is the door that leads into verbal categories. Across Bantu six morphological strategies for encoding negation in finite forms occur. In rough order of frequency they are:

- (1) Inflectional morphemes at NEG₂ (for NEG₂, see (2.27)), e.g.
- | | | |
|----------------|--------------------------------|----------------------|
| Nomaande (A46) | tu-ŋe-sú kėti 'We believe' | NEG tu-ti-ŋé-su keti |
| | 1p-PFV-1p believe | |
| Ilwana (E701) | ni-Ø-lime 'I should cultivate' | NEG ni-si-lima |
| Zulu (S42) | e-Ø-hámba 'If she goes' | NEG é-nga-hamb-í |
| Lungu (M14) | tú-kú-líma 'We are hoeing' | NEG tu-táá-ku-lima |
| Kota (B25) | á-mo-lap-á 'He disappeared' | NEG já-ká-lapá |
| Dawida (E74a) | bonya 'Do (it)' | NEG ku-sa-bony-e |
| | | or NEG ku-se-bony-e |

This and the next are by far the commonest Bantu patterns. The post-initial occurs in some 74 per cent of the matrix languages and in all fifteen zones. It is the predominant strategy in Zones A, B, D, E, F, and M but is less frequent in H (especially), K, L, and N. Of the morphemes occurring at NEG₂, by far the commonest are reflexes of *ti/ci*⁴ (at least 30 per cent⁵). Less frequent are reflexes of *tá*⁶ (19 per cent), **ka* and **ca*⁷

³ Güldemann has examples from twenty-five languages, a typological overview of 'over 100' Savanna languages, and references to Kamba Muzenga's data.

⁴ **Ti* is also the reconstructible shape of the negative of 'be', so '(to) not be' (Kamba Muzenga 2005: 359), which is probably the source of this verbal negative morpheme.

⁵ As Kamba Muzenga (1981: 140–66) readily admits, it is not easy to calculate accurately the number of languages with reflexes of **ti/ci* (the degree one vowel), and for several reasons. First, in a number of languages, the reflexes of **ti* and **ci* are identical, so **ti* and **ci* are here treated as a single source. Second, in a few languages (e.g. D42) the vowel has 'slipped' to the second degree vowel [i]. Third, consonant reflexes in some languages in Zones A, B, and C depend on whether the consonant is in the first or second stem position, while reflexes for consonants in inflectional morphemes are rarely given (in e.g. Guthrie 1971, but see Hyman 2003: 259). Last, and linked to the foregoing, changes that have affected consonants in grammatical morphemes are not always those of lexical morphemes. Hence it is likely that [i] (A34, C55, M42, M54) and [hi] (B30, P311, R31) also belong here, raising the figure to 37%.

⁶ High tones are indicated, where reasonably certain: absence of marking indicates either low tone or ignorance.

⁷ Kamba Muzenga plausibly suggests deriving **ca* from **ci* (or *ki*) + a.

(both 14 per cent). In this (e.g. A46, M14, above) the negative morpheme is most often added to, and precedes, the TA morpheme, but sometimes (e.g. B25) replaces it.

In the non-Bantu Niger-Congo sample a post-subject negative occurs fairly commonly (often with *ti/tV* or *ka/kV*).

(2) Inflectional morphemes at Pre-SM, e.g.

Bushóóŋ (C83)	ta- <u>ŋ</u> -bók	'We were shooting'	NEG <u>ka</u> -ta- <u>ŋ</u> -bók
Lega (D25)	tw-a-bolót-á	'We pulled'	NEG <u>ta</u> -tw-á-bolota
Haya (E22)	tu- <u>ŋ</u> -gúra	'We buy'	NEG <u>ti</u> -tu- <u>ŋ</u> -gúra
Langi (F33)	tw-a-seka	'We laughed'	NEG <u>si</u> -tw-a-seka

These pre-initial negative markers are predominantly low-toned, with the following SM itself high. This pattern occurs in some 58 per cent of the matrix languages, is present in all Zones except A, and frequent in most Zones except in B, C, and F. Of the morphemes occurring here, by far the commonest are reflexes of **(n)ka* (29 per cent⁸). Less frequent are reflexes of **(n)tI*, **(n)ta*, and **ti/ci*, between 5 per cent and 7 per cent each). It is likely that the last of these, at least, is in many cases a recent grammaticalization of the negative copula,⁹ prefixed to the affirmative form, giving structures of the type *It is not that X* (as in the F33 example, in (2)).

In the Niger-Congo sample a pre-initial or pre-verbal negative occurs (sometimes with *ka*, *ta*, *ki*) but less commonly than the post-initial.

(3) Inflectional morphemes at FV, either as [i] or a vowel copy suffix, e.g.

	Affirmative	Negative	
Zulu (S42)	ŋa- <u>ŋ</u> -thand-a	'They want'	<u>a</u> -ŋa- <u>ŋ</u> -thand- <u>i</u> NEG-3p-null-want-NEG
Mwiini (G412)	si hu- <u>ŋ</u> - <u>te</u> ka	'We laugh'	si <u>ha</u> -sh- <u>ŋ</u> - <u>te</u> k- <u>i</u> 1p NEG-1p-null-laugh-NEG
	chi-nax- <u>te</u> ká	'We are laughing'	<u>nt</u> ^h a-chi-nax- <u>te</u> ka
Ngome (G43D)	tu-na-raw-a	'We go, are going'	<u>ha</u> -tu- <u>ŋ</u> -raw- <u>a</u> NEG-1p-null-NEG
	tu-na-reta	'We bring, etc'	<u>ha</u> -tu- <u>ŋ</u> -ret- <u>e</u>
	tu-na-pik-a	'We cook, etc'	<u>ha</u> -tu- <u>ŋ</u> -pik- <u>i</u>
	tu-na-ona	'We see, etc'	<u>ha</u> -tu- <u>ŋ</u> -on- <u>o</u>
	tu-na-fug-a	'We herd, etc'	<u>ha</u> -tu- <u>ŋ</u> -fug- <u>u</u>
Luyana (K31)	tu-kú-kél-á	'We come'	<u>ka</u> -tú-kú-kél- <u>é</u> NEG-1p-HAB-come-NEG

The examples above show double marking, with pre-initial reflexes of **(n)ka* (or **(n)ta-*) and typically a full range of vowels at FV. This double marking characterizes

⁸ Or 33%, if initial [a] in B73, B82, D13, and D27 is included.

⁹ Also called the negative stabilizer (Guthrie 1971: 145) or negative predicative index (Meeussen 1967: 115).

all the languages having this negative FV morphology. The initial [ha] is the regular negative marker, which represents the non-occurrence of the situation within the given time frame, past, 'present', or future. The FV denies the occurrence of the situation in general, there being no pre-stem tense marker, so these forms are generally interpreted as (negative) general presents ('We never verb, we don't verb', and in some languages 'We aren't verbing'). The FV is never the sole marker of negative, and is associated with non-past and non-future. Double marking general present negatives in this way occurs in few matrix languages, some 14 per cent. The languages so marked are predominantly in two areas, G40 and Zone S, and in related, adjacent or influenced languages (E71-72, G30, K21, K30, M63, P311, R11).

These FV are hard to interpret, because the same or similar vowels occur—although less often—in other similar functions across Bantu, such as apparently negating subjunctives and occasionally other categories. They also occur in different functions in affirmative forms such as near past/ anteriors, statives, and an abbreviated form of *-ile. In some languages they occur in negatives and affirmatives. It does not advance the discussion here to dwell on these details. Suffice it to say that -I and the vowel copy suffix in negative function are likely related and of long standing in Bantu. (See 6.2.1, 6.2.3, also Grégoire (1979), Kamba Muzenga (1981: 271), Nurse and Philippson (2006) for discussion.)

(4) Post-verbal clitics or particles, e.g.

a	Duma (B51)	mɛ yemba 'I sing'	NEG mɛ ki-yemba <u>ɤ</u>
b	Bobangi (C32)	na-ko-yóka 'I hear'	NEG ngai o yóka <u>ka</u>
c	Kongo (H16)	tu-n-sumba 'We buy'	NEG tu-n-sumba <u>ko</u>
d	Hungu (H33)	tu-a-hoh-a 'We speak'	NEG tu-hoh-a ng- <u>etu</u> ¹⁰
e	Gweno (E65)	fw-a-shigha mrínga wéfúlia 'We want water for washing' fw-á-shigha ipfwá <u>fwé</u> NEG 'We don't want to die'	
f	Pogolu (G51)	tu-mw-on-iti 'We saw him'	NEG tu-mw-on-iti <u>ndiri</u>
g	Ndendeuli (N101)	tw-aki-pala 'We wanted'	NEG tw-aki-pala <u>yé</u>

Post-verbals appear in some 35 per cent of the matrix languages. In some cases it is hard to distinguish clitic from suffix. A well-trodden grammaticalization path is AUX > particle > clitic > affix, but the prevalence of post-verbal items in Bantu, whether clitics or affixes, points rather to origins in words other than pre-verbal auxiliaries. The limited geographical distribution of the languages with post-verbals, and their varying shapes, suggests they have arisen in different places and times. They occur scattered across Zones A, B, and C, widely in H often with shapes such as *ve/bi*,¹¹ or *ka/ko/ku*: in L, with various shapes; and in southeast Tanzania (G50, N10-20, P10), with various

¹⁰ The post-verbals visible in H33 and E65 derive from pronouns.

¹¹ Some of these post-verbals are Wanderwörter, occurring in adjacent non-Bantu languages.

shapes. One odd structure, exemplified in (4d, e), involves postposing person or class markers (D14, E60, H21, H33).

In the Niger-Congo sample, post-verbal clitics or particles are the commonest negative strategy (see also Dryer (forthcoming)).

(5) Pre-verbal clitics or particles, e.g.

Ikuhane (K42) ni-ba-zak-i 'I built' NEG kana ni-ba-zak-i

Ewondo (A72) ó-di 'Eat, you should eat' NEG tə w-a-di

Ten per cent or fewer have independent pre-verbals as negatives, this being the least frequent type. As with post-verbals, geographical distribution and divergence of shape suggests these arose independently. In a few languages, pre- and post-verbals may be the same item (in H41 and L13 the particle *lo* may precede or follow the verb). The difference in placing probably reflects a difference in focus. Even differential placement of the post-verbal may achieve the same effect:

(6) Ntandu (H16g) ki-ta-móná mwáná ko 'Je ne vois pas d'enfant'

ki-ta-móna kó mwana 'Je ne vois pas l'enfant'

(7) Use of auxiliaries, e.g.

Kota (B25) n-déka jóká 'Don't listen' (lit. refuse to listen)

Myene (B11) rig-e dyena or rig-e a-yena 'Don't see'

Kaonde (L41) w-á-keba NEG w-á-bula ku-keba

'He has sought' 'He who has not sought'

Matumbi (P13) kaná upíme 'Don't buy' (lit. refuse that you buy)

Hung'an (H42) lo i-Ø-mween kit

NEG 1s-see chair 'I didn't see the chair'

but

tu-Ø-khoon-ak ku-mon

1p-fail to-see 'We don't see/think'

and

K ká-Ø-khóon-ín kusúúm kít 'K didn't buy the chair'

kit ki a-Ø-khoon-in kusuum 'chair that he didn't buy'

Hung'an has a 'regular' negative particle *lo*, but also, as can be seen, the verb *-khoon-* 'fail' is also used in certain situations (Takizala 1972).

Some 20 per cent of the sample are described as using auxiliaries, most often in imperatives or relatives, which are apparently the categories most open to innovation in this area. In the matrix languages the auxiliaries most involved in negation, especially but not only in imperative negation, are 'stop, leave (off), cease, let be' (*-leka* 13 per cent, *-tiga* 6 per cent), 'miss, lack' (*-buga/-búla* 5 per cent), 'refuse' (*-káána* 4 per cent), and 'be+negative'.¹² This is a relatively small set, with obvious negative potential.

¹² These percentages are probably all on the low side, partly because many sources did not treat imperatives in detail, partly because I did not always pay close attention to such auxiliary strategies.

A few general remarks are in order here:

- Some strategies can co-occur in the same word. These are too many to exemplify totally and often seem to indicate change in progress, as one strategy takes over from another.
- Sometimes the TA marker of the negative is the same as that in the affirmative, sometimes not. Thus in (1–5) above in A46, M14, K42, and N101 affirmative and negative TA morphology is identical, whereas B25 and G43D show lack of symmetry. Again, in the lack of symmetry are signs of change: most often change in TA categories occurs first in affirmative main clause indicatives, so asymmetrical negatives occurring in other structures usually point to what once was.
- Sometimes the NEG markers themselves change over time, as can be seen by comparing the markers in (1) or (2). One conclusion about change here is that while the morphological patterns and the categories remain relatively stable, morphemes occupying inflectional slots are quicker to change.
- A feature not immediately obvious from the examples above is that the surface tone patterns of affirmatives and negatives often differ. The tone of NEG₁ is often part of a pattern whereby the morpheme in that position is low followed by a high on the next syllable (Meeussen 1967: 108). The tone of NEG₂ contrasts with that of SM and root (so H-ti-H, or L-tí-L).

The patterns shown above are easily summarized. The first three patterns above are of long standing in Bantu. The role of the first two is fairly clear (as will be explained in 5.2.4, below), while the role of the third is less transparent (mentioned briefly in 6.4.2.7). The other three patterns (post-verbals, pre-verbals, the use of auxiliaries) are local and less frequent, and likely to have resulted from recent grammaticalization, in some cases still underway.

Back in (2.27) Meeussen's original statement of the structure of the Bantu verb was slightly modified, and is repeated here, for convenience:

(8) Pre-SM - SM - NEG₂ - TA - [OM - [[root - extension] - FV]] - Post-FV

Meeussen reconstructs this for Proto-Bantu, with a primary negative as one of the possible components of Pre-SM, and a secondary negative following the subject marker at NEG₂, both inflectional categories, the two not co-occurring in the same word. In fact, as we have seen, the contemporary picture is not so simple, with considerable variation in where and how negation is encoded.

5.2.3 *Major patterns of co-occurrence of negative strategies*

This section examines how the six strategies set out in 5.2.2 co-occur in individual languages. Few matrix languages employ a single strategy for negation. Most have two or more strategies, which carry different kinds of negation. The percentages in the table below are based on examining the data on contrastive negatives and their

Table 5.1 Number of contrastive negatives in the matrix languages

Single negative (less clear in brackets)	16 (7) = 23? A15, 43, 62, 84, (B73, 82), (C25), 32, 36, 83, D23, 53, (E25), F33, G11, H10A, 16, 21, 33, (K31), L13, (L53, N44)
Two negatives:	16 (1) = 17
Main clause versus subjunctive	A22, 53, 72, B302, 43, 52, 63, 85, C55, 73, D14, F10, (L52), M25, N30, P22, R11
Two negatives:	14
Main clause versus subjunctive/relative	E22, 31, 42, 62, 72, 74a, F32, G33, G42, ^a 44, K21, L62, P311, S42
Two negatives:	12
Main clause versus relative	D25, 42, 66, E15, 51, G62, H41, K13, L21, 32, 41, R31
Three negatives:	12
Main clause vs subjunctive vs relative	D13, 28, G23, 403, 51, M301, 42, R22, S10, 20, 31, 62
Several/odd types	21 A34, 44, 83, 93, B11, 25, C14, 41, 61, D33, F22, H32, M11, 14, 54, 63, N101, 21, P13, R41, S53
Very unclear	1 (K42)

^a Swahili (G42) has in fact three negative forms, one for main clauses, one for subjunctives and relatives, and a third (-to-) in the infinitive alone. The latter is extra-systemic and anomalous, and is here ignored, as are other anomalies in a few other languages. As 5.2.1 explains, infinitive patterns are largely ignored.

typical functions in the notes (and their sources) in the Appendices. It assumes the matrix languages are reasonably representative and typical of all Bantu languages, and it goes without saying that although the percentages are roughly accurate, they may need some minor adjustment, because in some cases the sources were incomplete or hard to interpret. Also some functions, particularly negative commands, can be expressed in more than one, often several, ways, so in such cases the data has had to be simplified. Examples, not exhaustive, follow the table.

Examples of each type:

(9) Single negative

Fuliuro (D63)

Relative ú-ta-Ø-yita bwira . . . 'He who does not kill a friendship . . .'

Main clause a-ta-Ø-gwata bundi 'He will not get another (friendship)'

Subjunctive u-ta-Ø-gwat-e ubwira 'Don't make a friendship'

Among the seventeen or twenty-three languages with a single negative marker, four of the six strategies exemplified in (1–7) occur, the only two not or rarely occurring are the use of a final vowel other than [a] and the use of an auxiliary alone. This pattern occurs predominantly in languages in Zones A, B, C, D, H (i.e. the northwest), and a few scattered others.

- (10) Two negatives: main clause versus subjunctive (Tongwe/Bende,¹³ F10, #*te* versus *si*)

	Affirmative	Negative
Main clause	tw-â-ghula 'We bought'	té-tw-a-ghula
Subjunctive	tu-∅-ghúl-e 'Let's buy'	tú-si-ghúl-í

Over half (eleven) of the seventeen languages with this contrast are Forest languages, with both contrastive morphemes occurring at NEG₂. Most of the others are as F10, with the primary negative at Pre-SM and NEG₂ used in the subjunctive.

- (11) Two negatives: main clause versus relative (Nande, D42, #*si* versus *ta/te*)

	Affirmative	Negative
Main clause	tu-ká-gula 'We're buying'	sí-tu-li-gula
Imperative	gula 'Buy'	í-si-wa-guláa or sí-wú-gúl-e (SBJ)
Subjunctive	tú-∅-gúl-e 'Let's buy'	sí-tú-∅-gúl-e
Relative	ba-limu-gula 'They who have started to buy'	ba-te-∅-gula

Most of the languages in this set are Savanna languages¹⁴ and have, as Nande, a structural contrast between a morpheme at Pre-SM and another at NEG₂.

- (12) Two negatives: main clause versus subjunctive/relative (Dawida, E74a, #*nde* versus *se*)

	Affirmative	Negative
Main clause	di-cha-ghu-a 'We'll buy'	ndé-di-cha-ghu-a
Subjunctive	u-∅-bony-e 'He should do'	u-se-∅-bony-e
Hypotactic clause	u-ka-ghu-a 'If you buy'	ku-se-∅-ghu-e (le)
Relative	mundu o-∅-c-eeghe 'Person who came'	mundu u-sé-∅-c-eeghe

These are all Savanna languages and nearly all have a structural contrast between a morpheme at Pre-SM and another at NEG₂.

- (13) Three negatives: main clause versus subjunctive versus relative (Mwani, G403, #*a* versus *si* versus #*sá*)

	Affirmative	Negative
Main clause	wá-∅-fisa 'They hide'	a-wa-∅-fisa
Relative	wa-∅-fisa 'They who hide'	sá-wá-∅-fisa
Subjunctive	tu-∅-fulat-e 'Let's follow'	tu-si-∅-fulat-e

Nearly all these¹⁵ are Savanna languages and involve a structural contrast between a morpheme at Pre-SM (mostly a reflex of *(n)ka-) and another at NEG₂ (mostly a reflex

¹³ Yuko Abe, my source for this data, did not know the form of negative relatives.

¹⁴ Except D25-43-60 and H41. ¹⁵ The exceptions are D13 and D27.

of **-tí-*). As mentioned above, these percentages, especially those for the three middle types, are not totally reliable, resting as they do in some cases on less than complete data. They represent statistical tendencies, rather than absolutes. Nevertheless, 43% have a binary contrast and a large majority ('76%') clearly use different morphological strategies to distinguish two, three, or more kinds of negative.¹⁶ Over a quarter even have three or more strategies and negation types, those labelled 'three negatives' in the table ('12%') and fifteen of those labelled 'several/odd types'. In the latter category, care needs to be exercised, because different strategies may not always mean different negatives. The meanings of these distinctive negatives is now examined.

5.2.4 Meanings and functions of the major negative patterns

Kamba Muzenga's and Güldemann's conclusions about the meaning and function of the various negatives are briefly summarized. Following Meeussen's (1967: 114) historical and structural orientation, Kamba Muzenga (1981: 338, 2005: 343) sees an original tertiary split, in which pre-initial **nka* characterized indicatives, post-initial **tí* (and presumably **ci*) occurred in subjunctives, and post-initial *tá* marked negation in relative clauses and perhaps infinitives. In what follows, most attention is paid to negation in indicatives and subjunctives, somewhat less attention—for want of good data—to relatives and dependent clauses, and even less to infinitives—partly for want of good data, partly because negation in infinitives almost invariably is marked in the same way as in subjunctives or relative clauses.

Paying little attention to specific morphological shapes and more concerned with function and genesis of the pre- and post-initial types, Güldemann (*ibid.*: 551) says that Bantu 'pre-initial negation shows a strong tendency to be confined to unmarked main clauses' and 'proto-typical domains . . . for the post-initial negation are the verbal noun (infinitive), subjunctives, prohibitives, relative clauses, and hypotactic adverbial clauses.' In what follows, Güldemann's 'unmarked main clauses' correspond broadly to Kamba Muzenga's 'indicatives', that negation in 'prohibitives' is generally marked in the same way as that in 'subjunctives', and that negative marking in 'hypotactic adverbial clauses'¹⁷ is generally that found in subjunctives or relatives.

Güldemann's (1999) functional approach starts from Givón (1975) and Horn (1989), who had observed that cross-linguistically many languages distinguish two kinds of negative: denial ('(No,) he doesn't/didn't eat snails for breakfast', as a response to 'He eats/ate snails for breakfast'), and description ('Girls who don't drink enough milk may develop osteoporosis'). Denial usually involves the negation of a previously stated or implied affirmative while description does not. Denial has more to do with the discourse context, whereas descriptive negation has to do with the meaning of the verb, or the semantic relationship between head noun and verb. Including as it does negation in subjunctives, imperatives, irrealis forms, verbs in most kinds of

¹⁶ 76% is the sum of the middle five categories in Table 5.1.

¹⁷ Güldemann's (1997: 557) examples for this have English translations such as 'If I do not verb'.

subordinate clauses, relative clauses, the second member of compound constructions, and infinitives, 'descriptive' is not the best cover term for the negatives in Bantu outside unmarked, indicative, non-relativized main clauses. In what follows, I use the neutral terms primary and secondary negative, whereby primary refers to the form occurring in indicative main clauses (and sometimes, of course, other functions) and secondary refers to the form associated with other functions.

I would modify Kamba Muzenga and Güldemann's views in one way. Both of them, for different reasons, want to present generalizations about negation in Bantu and generalization involves simplification: in fact, the synchronic patterns we see are more complex and messier than Kamba Muzenga, Güldemann, (and Meeussen) allow. If we split the twenty-one 'several/odd types' languages in Table 5.1 above into those with two, three, four, and five negatives respectively, and fold them and K42 into the languages having at least a primary versus secondary contrast, then we find 77 per cent of the matrix languages have more than a single negative. This in turn breaks down into 47 per cent with a binary contrast between primary and a single secondary negative, 18 per cent with a tertiary contrast, 5 per cent with a four-way contrast, and 6 per cent with a five-way contrast. Where languages have a binary negative contrast, it is nearly always between the primary negative and a secondary negative marking subjunctive, relative, or both. Similarly, many of the languages with a three-way contrast distinguish a primary from two secondary negatives, one encoding subjunctive and the other relative. Historically, the percentage of languages with a binary or tertiary split is likely to have been higher, as it is fairly obvious that the languages with a single negative and those with more than a tertiary split have innovated from systems which once had a binary or tertiary distinction.

The synchronic picture is varied but fairly clear, but what can be said of the historical background? It would appear that systems involving a single negative contrast, or a four or five way contrast are mostly likely innovations. In this case, did the original system have a binary or a tertiary contrast? Did two become three or three become two, in some languages? Standing in Meeussen's tradition, Kamba Muzenga opts for an original tertiary system (indicative, subjunctive, relative). This is based on the systemic contrasts he finds today, and on the range of morphemes he finds involved in negation.¹⁸ Even allowing for some to have derived independently from auxiliaries over the last four millennia still leaves several (at least *ka*, *ta*, *ti*) that are so widespread today as to have hardly likely arisen independently in different times and places. Güldemann's binary choice is based on different criteria: he stands in a line (Givón, Horn) that sees a cross-linguistic binary contrast. He focuses on the two structural positions (Pre-SM, NEG₂) in the verbal string, and on two main paths for the genesis of those two positions, but without absolutely excluding a tertiary contrast, talking of 'at least two different ways of expressing verbal negation' (ibid.: 545).

¹⁸ There is an obvious danger in this approach: trying to reconstruct a distinct etymon for each contemporary shape leads to many reconstructions, some unjustified.

The two positions are reconcilable, at least for the Savanna languages, for which the following can be said. Two dedicated sites for negative markers are undeniable and must be ancient. Three morphemes (at least) associated with negation are equally undeniable. The association of main clause indicatives with **(n)ka* at Pre-SM predominates, although not universal. The association of the NEG₂ position with categories other than main clause indicatives is reasonably clear. The association of **ti*, followed by *ta* and *ka*, with the NEG₂ position is undeniable: *ti* is predominantly associated with subjunctives, subordination, hypotactic clauses, and modality. *Ta*, in turn, is associated with relative clauses but not overwhelmingly, that is, while some languages do distinguish the negatives of subjunctives and relatives, the distinction is not convincingly carried by *ti* versus *ta*.

The situation in the Forest languages is somewhat different. The Pre-SM slot does not exist, or rather is not filled morphologically, in any Zone A languages, nor in the western Zone B languages (B10-20-30-40).¹⁹ However, for many Zone A languages, an underlying floating H tone is posited before the SM, which seems to indicate loss of earlier morphology. Even in other Zone B, and in some Zone C languages (and D14), most or all of the morphological material at Pre-SM is innovation. How to explain the difference between Forest and Savanna languages? If one believes strongly in Proto-Bantu, one would be inclined to say that early Bantu once had a Pre-SM slot (probably filled by **(n)ka-*), later lost in the western Forest, and some adjacent, languages. If one believes less strongly in a single common ancestor for all Narrow Bantu languages incorporating as many contemporary features as possible, one would incline to say that the Pre-SM slot was a Savanna innovation, which spread some distance west into the Forest. The close association of post-SM *ta* with relative clauses alone, found fairly widely in the Savanna languages, is absent in the Forest. And although many Forest languages do contrast the negatives of main clause indicatives and subjunctives, they almost all make other and varied negative distinctions.

In summary, (a) negation involving the post-initial position and certain morphemes (certainly *ti/ci*, maybe *tá*, *ka*, and *ca*) goes back to early or pre-Bantu; (b) a binary contrast of indicative versus subjunctive negative is equally ancient; (c) further, a tertiary contrast involving relative negatives is only reliably attested in the Savanna languages; (d) **(n)ka* is and most likely always was associated with the Pre-SM position and main clause indicatives in Savanna languages, but its assumption for Proto-Bantu needs more evidence (see 6.2.1); (e) the main association of post-SM *ti* is with subjunctive negation; and (f) the role of *ta* at Post-SM is not clear. What might be assumed for Proto-Bantu is taken up again in Chapter 6. It is also clear that during the four or more millennia of Bantu development, the morphological, semantic, and syntactic ranges of both main negative types but especially of the secondary /subjunctive negative have changed constantly, in some cases dramatically. At one end are languages where the

¹⁹ See also Kamba Muzenga (1981: 15, 130–2).

traditional ranges are more or less maintained, while at the other end are languages whose domains have expanded or contracted.

5.2.5 Minor patterns of co-occurrence of negative strategies

This section discusses the languages with a single negative and those with what the table calls 'several/odd types' of negatives, that is, the two ends of the spectrum outside the central majority with two or three negative patterns.

Examination of the languages/language groups with a single negative tells us more about geographical than semantic distribution. Nearly all the languages with a single negative are in the Forest (Zones A, B, C, H) or adjacent (D23, D53, L13, L53?), while the rest (E253? F33, G11, K31, N44?) are scattered around haphazardly in the Savanna. This random distribution suggests that outside the Forest, neutralization to a single negative from an earlier binary (or tertiary) negative contrast is a local and recent development, which is supported by the considerable variety of morphemes appearing in each of the strategies involved. As mentioned above under (2), F33 (and adjacent languages such as G11), have a single verb-initial #*si-*, deriving from the negative copula, negating the predicate and presumably replacing an older pattern.²⁰ K31 and N44 have a single pre-initial #*ka-* and #*ha-*, respectively, which must be the older pre-initial morpheme *(n)*ka-* having spread into contexts and functions once expressed by a second, post-initial morpheme or morphemes.

Single negatives in the Forest languages are less transparent. Both the strategies and the morphemes involved are quite variable and what they have to say is apparently more interesting from a historical than a synchronic viewpoint and discussion is deferred to 6.2.3.

Negation in roughly a fifth ('21%') of the matrix languages falls into what the table above calls 'several/odd' types. This is a ragbag collection and does not form a single principled category. It includes three rough kinds of negative, which overlap in some languages: those which have unusual morphology; those which have more than the canonical two or three contrasts; and those languages which have more or less the standard morphemes but use them to make unusual categorial contrasts. That is, we saw above that negatives typically contrast main and dependent clause, or indicative, subjunctive, relative, and imperative. Languages with 'unusual' categorial contrasts introduce other contrasts, not typical of Bantu and not obviously corresponding to general linguistic categories.

A44 (Nen), M14 (Lungu), and M63 (Ila) illustrate unusual negative categorial contrasts. Nen contrasts F_4 (*só*, preposed to the tense marker), $P_2/P_4/F_2$ (*sa*, various tones, replaces the tense marker) to all other categories (*le*, preposed to the tense marker). Lungu uses two clearly inherited negative morphemes to make an unusual

²⁰ This #*si-* characterizes a set of adjacent languages in SW Tanzania: G10, G61-62-63-65, F33, and F31. F31 has verb-initial #*si-ka-*, which is presumably #*si-* prefixed to the older verb-initial negative #*ka*, thus with double marking, now opaque to its speakers. Cf. the Berbice Dutch creole spoken in Guyana, which suffixed Dutch *-ne* to Eastern Ijo *-ka*, to give the double NEG *-kane* (Kouwenberg 1994: 264).

contrast between presents and a future apparently based on the present (*síí*) and all other categories (*tá(á)*), including indicatives, subjunctives, absolutives and relatives. Ila distinguishes non-past (*#ta-*), P₁/P₂ (*-naku-*) and all the rest (*-ta-*), composed of subjunctives, relatives, and past absolutive indicatives. The two *ta* are inherited, the *naku* is inherited but not usually involved in indicating negative.

Inter alia, B25 (Mboshi), C14 (Leke), and R41 (Yei) have multiple negative contrasts. In Mboshi futures, post-initial affirmative *é* is replaced by negative *ádi*. Pre-SM *mbu* appears in P₂ and P₃. For P₁ post-initial *ká* is used. In the present, suffixal *é* replaces the affirmative markers, and *ndéka* (*-leka 'leave off') occurs in the imperative. Since the source shows no data for relatives or subjunctives, other morphology may be involved. With two exceptions Leke can negate any affirmative form by adding pre-verbal *tá*. The general present may take post-verbal *ya*, and imperative and object relative both prepose the auxiliary *-de* 'leave' (from *-leka?) to the main verb. *Tá* may occur at post-initial in relatives. Yei has five contrastive negative markers, some of whose domains are not well defined: pre-initial *ka*: a post-SM morpheme ¹*hu-* (aspirated alveolar click) plus INF: a pre-verbal *yemwa*; another post-initial morpheme *ha*: and imperatives and hortatives use the auxiliary *siya* 'leave off'. While space does not allow discussion of the details of the morphemes and morphology involved in all the multiple contrasts in these examples, they obviously involve a mixture of inherited and innovated morphemes, often contrasting tense or other distinctions.

Cases of unusual and mainly non-inherited strategies are so frequent that only a few examples can be cited. The Yei negative morpheme with the click, just mentioned, was taken from a now extinct Khoesan language. The main negator in N101 (Ndendeule), *yé*, can negate most constituents, noun or verb, follows the target constituent, and is of unknown origin:²¹ N10 and related Zone P languages in general use an unfamiliar set of pre- or post-verbal clitics or particles. Some Forest languages also have pre- or post-verbal clitics or particles, usually monosyllabic, of uncertain origin (*ko/ku/ki, lo, be/ve, etc.*). Some Zone C and a few B languages have a negator of the shape *pa* or *po*, which according to Kamba Muzenga (1981: 146, 2005: 350) originates in the negative form of a copula 'be'. Some Myene (B11) affirmative and negative forms differ only tonally. This list could be extended considerably. All of the examples given—except possibly the tonal distinction—are local innovations.²²

5.2.6 Negative imperatives

Negation of imperatives warrants a separate small section, because negative imperatives depart more often from negation norms than other negatives and because such negatives appear to be a major conduit through which innovation appears.

²¹ Horn (1989: 461) touches on a controversy over whether negation can occur in sentence- or clause-peripheral position. Some languages mentioned in this paragraph and elsewhere among the matrix languages have clause- or sentence-final negators.

²² Readers interested in these should first consult the Appendices for the source(s) and then follow up in the Bibliography.

As in many other languages, the simple affirmative imperative in Bantu typically consists of the stem without a person prefix: also the root keeps its lexical tone, stem final *-á* has high tone, and the extension, if present, has a tonal contrast with the root (Meeussen 1967: 112). Politer requests can be given in several ways, such as using a second person plural form to a single older or respected addressee (P23 *u-suum-e* ‘Buy (to a child: *u-* is singular)’ but *n-suum-e* ‘Buy (to an elder’: *n-* is plural)), or a third person form instead of a second person form to plural respected addressees. Alternatively, the imperfective suffix */-a(n)g-/* may be added (C75 *kend-á* ‘Go’, *kend-ák-á* ‘Please go’). Even commoner is the use of a subjunctive form instead of a direct imperative for a milder or politer request (L13 *swêg-a* ‘Hide’ but *u-swêg-e* ‘Please hide’).²³

Whereas many indicative main clause forms can be negated by adding a negative morpheme, an overwhelming number of Bantu languages do not so negate the affirmative imperative, that is, they have no direct negative imperative but use instead a negative subjunctive, that is, a reflex of **-é*. Cross-linguistically this is also widespread: Horn (1989: 447) says: ‘In three-quarters of the languages surveyed there are no straightforward negative imperatives, the functional gap being filled by special negative markers, non-imperative verb forms, etc.’ (see also Greenberg 1966: 47). Bantu examples:

(14)	Affirmative	Negative
Duala (A24)	kô ‘Fall’	o- <u>sí</u> - \emptyset -kó ‘Don’t fall’
Tsogo (B30)	qutá móyɔ:qj ‘Pull’	o- <u>há</u> - \emptyset -qut-é
Embu (E52)		mú-ti-gaa-tem-é ‘Don’t cut’
Ilwana (E701)	lɪma ‘Hoe’	u- <u>su</u> - \emptyset -lɪm-e
Bende (F10)	ghulá ‘Buy’	[nó- <u>sí</u> - \emptyset -ghúl-í] ([no] < /na+u/)
Umbundu (R11)	tángá ‘Read’	[hú- <u>ka</u> -táng-e] ([hu] < /ha+u/)

That these are negative subjunctives is easily seen in, for example, the Swahili paradigm:

- (15) G42 ni- \emptyset -end-e ‘I should go, that I go, let me go, etc.’
 ni-sí- \emptyset -end-e ‘I shouldn’t go, let me not go, that I not go, etc.’
 u-sí- \emptyset -end-e ‘Don’t go, you shouldn’t go, that you not go, etc.’
 a-sí- \emptyset -end-e ‘She shouldn’t go, that she not go, etc.’
 tu-sí- \emptyset -end-e ‘Let’s not go, we shouldn’t go, that we not go, etc.’ etc.

Although the translations differ for person, the forms are identical. Subjunctive forms are used variously in negative imperatives, hortatives, optatives, certain kinds of subordinate clause, and to express various modalities.

²³ A subjunctive-like form is also widely used in positives with a pronominal object. The obvious parallel with the subjunctive (*-é*) is seen when the two are compared. Examples from Meeussen (1967: 112): imperative *dimíd-á* ‘Cultivate for’, imperative and object *mu-dimíd-ée* ‘Cultivate for him’; subjunctive *tú-dimíd-é* ‘Let’s cultivate’; subjunctive and object *tú-mu-dimíd-ée* ‘Let’s cultivate for him’.

While this use of the negative subjunctive is the majority pattern across Bantu, a solid minority of languages uses auxiliary plus (infinitive of) lexical verb instead, as in French *Cessez de fumer*, or German *Hör auf zu rauchen*. In some languages this is the only negative imperative and has thus replaced the subjunctive, in others it is an alternative to the subjunctive-based form. The percentage of languages using this strategy was estimated above (5.2.2, under (7)), at 20 per cent, but it might well be higher. Examples:

- | | | |
|-----------------|----------------------------------|---|
| (16) Kota (B25) | n- <u>déka</u> jóká | ‘Don’t listen’ |
| Ganda (E15) | t-ó-gúla, or <u>leka</u> ku-gula | ‘Don’t buy’ |
| Tumbuka (N21) | <u>leka</u> ku-luta | ‘Don’t go’ |
| Ruri (E25) | <u>sigá</u> kútéma | ‘Don’t cut’ |
| Gikuyu (E51) | <u>tiga</u> kogwata | ‘Don’t hold’ |
| Yei (R41) | <u>siya</u> kuyima | ‘Don’t stand’ |
| Matuumbi (P13) | <u>kaná</u> u-Ø-pím-e | ‘Don’t buy’
(lit. refuse you buy, refuse to buy) |
| Enya (D14) | <u>búá</u> ó-mina ²⁴ | ‘Don’t swallow’ |
| | t-o- <u>búá</u> ó-lúbé-a | ‘We shouldn’t hit’ |

Where they appear, these auxiliaries occur most often in the imperative negative alone, sometimes in the imperative and other non-main clause situations such as relative, occasionally in all negative forms, but rarely in a non-imperative form and not the imperative. This leads to the conclusion that innovation in negative marking often starts in these auxiliary plus main verb patterns, then spreads to other functions. It may also lead to possible sources for some of the CV morphemes that mark negation in general. Auxiliary verbs that become grammaticalized eventually reduce to a CV shape, which most often is the first syllable of the old auxiliary. Thus *-tíga* (with the degree one vowel) and *-káána* would reduce to *tí* and *ka* (tones unclear) respectively, which are among the commonest negative morphemes (5.2.2).²⁵

5.2.7 Morphological scope of the two negatives

Within the word in many languages there is a certain iconic relationship between type of negative and its morphological scope. The primary negative, involving as it does denial of something that went before, might be expected to occur at the edge of the verb (typically the left-hand edge in SVO languages), as it refers back to the foregoing affirmation, and forward, by having scope over the whole verbal proposition following. That is indeed how it behaves in many Savanna languages. The scope of the secondary

²⁴ No gloss is given for *-bua* but in other languages it is glossed ‘be missing, omit, fail’.

²⁵ Several languages in Zones A and C, at least, have negative morphemes of the shapes [le, de, de, le], which may derive from *-leka*.

type can be seen by considering what it precedes. In languages such as Swahili (G42), where it contrasts with the pre-initial negative, the post-initial negative is not followed by tense-aspect markers, the TA slot being blank when the post-initial negative occurs. Its real scope is the following stem, simple or macro. Here *to* and *si* are the secondary negative markers:

(17) G42

- a ku-to-Ø-pika ‘To-not-cook’ (*to* has scope over the simple stem: IND verb)
- b u-si-Ø-pik-e ‘Don’t cook’ (*si* has scope over simple stem: SBJ verb)
- c ku-to-Ø-m-pik-i-a ‘To not cook for him’ (*to* followed by macrostem: IND)
- d (waambie) wa-si-Ø-i-pik-e ‘(Tell ‘em) they shouldn’t cook it’ (macrostem: SBJ)
- e (waambie) wa-si-Ø-m-pik-i-e ‘(Tell them) not to cook for him’ (as preceding)
- f wa-si-Ø-o-pika ‘(They)-not-who-cook’ (*si* followed by simple stem, [o] REL)

Here the negative has scope over some or all of the macrostem: either the lexical content of the verb (17a, f), or inflectional stem and object (17c, d, e), or verb and mood (subjunctive overtly in 17b, d, e). In most Bantu languages, but not Swahili, suffixal *-a(n)ga* ‘imperfective’ may also occur in most of these contexts (hypothetical example: **ku-to-pik-anga* ‘to-not-cook-ing’), and in a few languages *-ile* ‘perfect, past’ can occur in some of these contexts. That is, some aspects may co-occur with this negative.

This approach founders in a language such as Kikuyu (E51), which has two contrastive negatives but both are expressed at NEG₂: *ta* is associated with verbs in subordinate clauses and relative clauses, while *ti* occurs in main clauses. There are several difficulties here, compared to Swahili. One is that while one would expect *ta*, as the apparent secondary negative, to appear in negative commands and subjunctives, in fact it is *ti* that appears in such constructions. The other difficulty is that both *ta* and *ti* appear in many identical morphological contexts in the verb, thus:

- (18) E51 tɔ-ti-gwat-ire ‘We didn’t take hold’
- tɔ-ta-stem-ire ‘We didn’t take hold’

The only difference is that the first occurs in main clauses, the second in subordinate clauses (relative, temporal, adverbial, and conditional clauses) (Barlow 1960: 119).

5.2.8 Origin of the negatives

Two perspectives on the origin of the negative morphemes are possible, one concentrating on their Bantu distribution, the other on the Niger-Congo connection. Güldemann (1999) takes the first view. He suggests that the main sources from which the pre- and post-initial negatives arose were sequences of auxiliary verb or particle followed by a finite main verb or infinitive. Such auxiliaries are listed in 5.2.2, above. For

the post-initial NEG his main source is a sequence of inflected auxiliary and infinitive. This can be seen in Hungan (H42, Güldemann 1999: 550, also in (7), above):

- (19) H42 beet tu-Ø-khood-aak ku-mon
 1p 1p-Ø-fail-IPFV to-see
 ‘We don’t think . . .’ (lit. we-fail to-see)

In such sequences, all the material (underlined) between auxiliary and lexical verb eventually deletes, and the auxiliary itself reduces to a canonical CV shape (usually that of the first syllable), thus:

- (20) *tu-Ø-káána ku-gula > *tu-Ø-káána-gula > *tu-ká-gula

Güldemann sees pre-initial NEGS as having two possible origins. One would consist of a negative ‘illocutionary particle’ plus inflected main verb, in which the negative particle would have focus over the affirmative form following it. Thus Gogo (G11) and Saghala (E74b):

- (21) G11 ku-Ø-gul-ile NEG si-ku-Ø-gul-ile
 ‘We bought’ (we-buy-past) ‘We didn’t buy’
 E74b t-a(na)-γul-ile ‘We bought’ NEG si-ti-Ø-γúl-ile ‘We didn’t buy’

Si is proposed to the affirmative verb. *Si* is the negative copula, so the NEG here is or was equivalent to ‘It is not that—we bought’.

Most of the postposed particles shown in examples in (4) above probably do not have a verbal origin.

The other origin for pre-initial NEGS would consist of complexes of inflected auxiliary plus inflected main verb, and the general format would be:

- (22) *tu-(TA)-kaana tu-verb > *kaana tu-verb > ka-tu-verb²⁶

The processes can be well illustrated—though negation is not involved—by many languages in southern Tanzania, northern Mozambique, Malawi, and Zambia, which use forms of ‘come’ or ‘say’ (*ti*, *ci*) in various stages of grammaticalization from auxiliary to pre-initial, and then to post-initial.²⁷ Thus Mwera (P22) has:

- (23) P22
 tw-a:-ci (or ti) tu-Ø-uma ‘We were about to buy’ (we were+about+to we-buy)
 tw-a:ci-uma ‘We bought (two days ago)’
 tu-ci-uma ‘We bought (recent)’
 ci-tu-Ø-um-e ‘We will, are about to buy (today, tomorrow)’

²⁶ This and (20) beg certain obvious phonological issues of what is deleted and how.

²⁷ In general the same morphemes occur both at pre- and post-initial across Bantu, so either they followed different paths from the same sources, as in (20) and (22), or morphemes shifted from pre- to post-initial. There is some evidence for the latter.

ci-ka-tu-Ø-um-e ‘ditto, but some little time after tomorrow’
 ci-tu-Ø-jjie-uma ‘ditto, but remote time (-jia ‘come’)’

In the first line *ci* is still an inflected auxiliary, in the last three lines it is at pre-initial, and in the second, it is absorbed into the verb at TA. Since the first two are pasts and the last three futures, the processes leading to them, though similar, must have occurred at different times.

While these are certainly plausible and tempting hypotheses, it is hard to find solid examples of such grammaticalization processes in any current Bantu language data leading to the major negative markers *ka*, *ti/ci*, *ta* (and *ca*). While this may be a case of researchers finding or not finding what they look for, the more likely explanation is that if these morphemes did in fact derive from the auxiliaries suggested in 5.2.2, it happened once or just a few times and so long ago that it is now unrecoverable. That is, the grammaticalization happened at an older pre-Bantu, Niger-Congo stage. In this regard, it bears mentioning that negative morphemes of the shapes *ta/ti/tV* and *ka/ki/kV* occur quite widely in other Niger-Congo branches.

5.2.9 ‘No longer’ and ‘not yet’ (4.8.1, 4.12)

Several authors²⁸ have pointed out that semantically it is not really accurate to speak of negative equivalents because in a discourse context affirmative forms can be negated in different ways. Nevertheless, when speakers of almost any Bantu language are given an affirmative form and asked for the negative equivalent they usually reply without hesitation. For the same reasons, the authors of many of the source materials used for this book regularly give a affirmative-negative pairing for the same tense or aspect.

Two negatives often give authors pause in this pattern, the persistive and especially the anterior. Both, especially the anterior, are often presented as isolated negatives with no affirmative equivalent. Consider Swahili:

- (24) G42 a (bado) tu-na-m-tafuta
 (still) 1p-PRG-3s-look
 ‘We are (still = PER) looking for him’
- b ha-tu-m-tafut-i (tena)
 NEG-1p-1s-look-NEG (again)
 ‘We are not (still) looking for him, no (longer) looking for him, not looking for him (any more)’
- c ha-tu-ja-mw-ona
 NEG-1p-ANTNEG-him-see
 ‘We haven’t found him’

²⁸ See *n.* 2.

d bado ha-tu-ja-mw-ona
 still NEG-1p-ANT-3s-see
 ‘We haven’t found him yet’

In principle, four relationships obtain between past and present situations: a situation obtained in the past and continues to obtain (24a); obtained in the past but no longer obtains (24b); didn’t obtain in the past and doesn’t obtain now (24c); didn’t obtain in the past, doesn’t obtain now, but the possible completion of the situation is extended into the future (24d); didn’t obtain in the past but obtains now. Neither Swahili nor English has any obvious way of encoding this last situation, other than indirectly by the progressive: *We are looking for him now* implies that we weren’t in the past. (24a, b) are persistives, while (24c, d) are possible negations of the anterior *Tumemwona* ‘We saw / found him in the past and that is still relevant up to the present.’²⁹ English *still* and *yet* relate or can relate any past and current or future situation while Swahili *bado* apparently only relates situations with the same polarity value.³⁰

Readers may see in the Appendices that some of the translations and siting of some persistive and anterior negatives are dubious. (25) and (26) show patterns for languages where the data is fairly sure. Affirmative and negative persistives are fairly straightforward:

(25) ³¹	Persistive affirmative	Persistive negative
a Ha (D66)	tu-cháa-soma 1p-PER-read ‘We still read’	nti-tu-ki-somă NEG-1p-PER-read ‘We no longer read’
b Haya (E22)	tu-kyáá-gurá amanémbe 1p-PER-buy mangoes ‘We are still buying’ or ‘We still buy mangoes’	ti-tú-kyáá-gura amanémbe NEG-1p-PER-buy mangoes ‘We are no longer buying . . .’ ti-tú-ki-gura . . . ‘We will not buy . . . any more’
c Gikuyu (E51)	no-tú-raa-ríá ³² PER-1p-PRG(?)—eat ‘We are still eating’	tú-ti-raa-ríá rÍngí NEG-1p-PRG—eat more / again ‘We are no longer eating’

²⁹ Swahili has *Hatujamwona* and *Bado hatujamwona*. The difference between them is very similar to the difference between English *We haven’t seen him* and *We haven’t seen him yet*. The first member of each pair has the present as its term, while the second pushes the term into the future, thus allowing for explicit possibility that the seeing could happen or is expected to happen.

³⁰ See Comrie (1985: 53–5), where the Ganda equivalents of (24a, b) use identical morphology, different from (24c).

³¹ For the data here I am indebted to Henry Muzale (E22), Sam Mugo (E51), Balla Masele (F21), Lee Bickmore and his anonymous source (M14), and Nancy Kula (M42).

³² Barlow (1960: 264) describes *no* as an emphatic form of the focus prefix *ni*. He writes it separately from the verb and with a long vowel.

d	Sukuma (F21)	dʊ-taalí dʊ-g'ʊ-gʊl-aga 1p-PER 1p-IPF-buy-IPF 'We still buy (mangoes)'	dʊ-d'ʊ'ʊ-gʊl-aga iminyembe ihaaha 1p-NEG-buy-IPFV mangoes now 'We no longer buy, no longer buying now'
e	Sukuma	dʊ-taalí dʊ-líí-gʊla 1p-PER 1p-PRG-buy 'We are still buying'	as above
f	Lozi (K21) ³³	ni-sáá-nopa 1s-PER-pick.up 'I am still picking up'	(h)a-ní-saa-bona NEG-1s-PER-see 'I no longer see'
g	Lungu (M14)	tú-cí-lí tú-kú-kálà ³⁴ 1p-PER-be 1p-PRG(?) -buy 'We are still buying'	tú-tàà-cí-ká'lá 1p-NEG-PER-buy
h	Bemba (M42)	tu-cí-li tú-léé-bómba 1p-PER-be 1p-IPFV-work 'We are still working'	ta-tu-cí-li tu-léé-bomba NEG-1p-PER-be 1p-IPFV-work

It can be seen that several of these languages—maybe all?—contrast progressive and general present in the persistent affirmative but neutralize the distinction in the negative, presumably because the negative simply denies that it is now ongoing, whether it used to be progressively, intermittently, or habitually ongoing.

The interpretation of the anteriors is more complicated.

(26)		Anterior affirmative(s)	Anterior negative(s)
a	Ha (D66)	bá-tu-bon-ye 3p-1p-see-ANT 'They have seen us'	ba-tá-tu-bon-ye 3p-NEG-1p-see-ANT 'They haven't seen us' nti-tu-ráa-gura NEG-1p-yet-buy 'We haven't bought yet'
b	Haya	tw-áá-gura machúnkwa 1p-P ₁ -buy 'We have (just) bought oranges'	tí-tw-áá-gura ... NEG-1p-P ₁ -buy 'We haven't bought ...'
c	Haya	tw-áá-guz-ire 1p-P ₁ -buy-ANT 'We have already bought'	tí-tú-ka-guz-ire NEG-1p-P ₃ (?)-buy-ANT 'We haven't bought'

³³ Despite the K label, K21 (Lozi) is a genetic member of S30 (Sotho-Tswana).

³⁴ This can be shortened to *tú-cí-líí-kál-à*.

d	Haya	tu-rá-guz-ire 1p-remote-buy-ANT 'We have bought (remote past)'	
e	Gikuyu	Various, dep. on time	tũ-ti-n-ona Rose 1p-NEG-na-see Rose 'We haven't seen Rose' tũ-ti-on-ete Rose 1p-NEG-see-ANT Rose 'We haven't seen Rose yet'
f	Sukuma	d-aa-gul-aga iminyembe 1p-past-buy-P2 mangoes 'We've (just) bought ...'	dũ-da-gul-ile 1p-NEG-buy-ANT 'We haven't bought ...' dũ-taalt ugũ-gũla iminyembe 1p-still-be to-buy mangoes 'We haven't bought yet = have still to buy'
g	Lungu	Various, dep. on time	tu-ta-li tu-lole John 1p-NEG-be 1p-see 'We haven't seen John yet'
h	Bemba	naa-tu-(mw)-ona Yoaani ANT-1p-(3s)-see John 'We have seen John'	ta-tu-mu-mweene NEG-1p-3s-saw 'We haven't seen him (in a specific past)' ta-tu-a-tala a-tu-mu-mona-po 'We haven't (ever) seen him' ta-tu-laa-mu-mona NEG-1p-yet-3s-see, or ta-tu-laa-ti tu-mu-mone NEG-1p-yet-AUX 1p-3s-see, both 'We haven't seen him yet'
i	Zulu (S42)	u-bon-file 3s-see-ANT 'She saw (P ₁), has seen'	a-si-dl-anga NEG-1p-eat-anga 'We didn't eat, havn't eaten' a-si-ká-dl-i NEG-1p-ka-eat-NEG 'We haven't eaten yet'

A major part of the difficulty here lies in the distinctions between the concepts expressed by ‘already’, ‘still’, and ‘yet’.³⁵ Because most analysts are speakers of European languages that make the distinctions, as does English, via adverbs, they tend to think of verbal forms expressing the distinction as not of much importance. Further, the distinctions between ‘We have eaten’ and ‘We have already eaten’ and between ‘We haven’t eaten’, ‘We still haven’t eaten’, and ‘We haven’t eaten yet’ are not well understood, or are often expressed by intonation, or neutralized in discourse. By contrast, a few years ago, when the current author was part of a group discussing Haya tense-aspect with the source³⁶ of (26b and 26c), it was obvious that the distinction between the two, in both Haya and English, was important for him: (26b) is simply a recent past anterior, where (26c) emphasizes that the buying is completed, from which flow various implicatures (‘no point you trying to buy X because it is finished’). Few other authors in the sources for this book make that distinction clear but it seems probable that many languages in fact make the distinction. Adding ‘already’ or its equivalent to an affirmative perfective or anterior underlines the completion in the past.

As most examples in (26) show, more languages recognize at least the semantic distinction between a plain negative anterior form (‘We haven’t verbed’) and the same form with the addition of the equivalent of ‘yet’. It is less clear that the difference between ‘still’ (time of speech/present as the end point of the situation) and ‘yet’ (end point in a (naturally unspecified) future) was recognized for negatives. So whereas English makes a three-way, lexical, negative distinction between ‘We haven’t bought’ (at any time in the past time), ‘We still haven’t bought’ (at any point up to the present, says nothing of the future), and ‘We haven’t bought yet’ (at any point up to the present but extends the endpoint into the future, making future realization possible), the data above suggests that Bantu languages have grammaticalized a two-way distinction between ‘not at any point in the past’ and ‘not in the past but might in the future’.³⁷ Incidentally, this feature is very much discourse-driven, as such nuanced negative answers are natural and often available to reply to questions containing affirmative forms. Thus the systemic imbalance, where ‘yet’ negatives seem to have no affirmative equivalent, should not be surprising.

5.2.10 Compound negatives

One of the lacunae in treatments of negation is in how to negate verbs with two or three component words. Although most Bantu languages have such compounds and

³⁵ The analysis in this section owes much to Hirtle (1978), who shows that English *already* emphasizes an end point in the past, *still* has the time of speech/present as its end point, and *yet* has its end point in a (naturally non-specific) future.

³⁶ Henry Muzale.

³⁷ Most of the forms above were elicited by email, where discussion of the *still-yet* distinction was difficult and most respondents treated ‘We still haven’t bought’ and ‘We haven’t bought yet’ as equivalent. So it remains to be seen whether Bantu languages have three-way distinction in these negatives.

therefore are likely to be able to negate them in different ways, this is rarely mentioned, and usually anecdotally. The treatment here is therefore also anecdotal. On the basis of the little data available, it seems that commonly in a two-word structure, either member can be negated, but with different meaning. The general difference can be seen via these Swahili (G42) examples:

- (27) a wa-li-kuwa wa-ki-nunua viazi
 3p-PAST-be 3p-ki-buy
 ‘They used to buy potatoes’
 b ha-wa-kuwa wa-ki-nunua viazi ‘They didn’t use to buy potatoes’
 c wa-li-kuwa ha-wa-nunu-i . . . ‘They didn’t use to BUY . . .’

In (27a) a speaker makes a claim, to which (27b) and (27c) are two possible replies. (27c) negates the second, lexical verb and thereby denies its content—they didn’t *buy* potatoes, they stole or begged for them. The negation in (27b) stands iconically at the head of the whole verb, denying the content of the whole of (27a): ‘No, you are wrong, they didn’t use to buy potatoes, they never bought potatoes’. For a few languages such as Swahili (see Ashton (1970); Brauner and Herms (1979); Loogman (1965) for examples) this has been discussed in some detail but in general it has been neglected.

Consider also the negation of compound constructions in a language such as Haya (E22, Nurse and Muzale 1999: 543):

- (28) E22 tu-raa-bá tu-tá-ka-guz-ire
 1p-FUT-be 1p-NEG-P₃(?)-buy-Perfect
 ‘We won’t have bought (contrasted with e.g. sold)’
 versus
 tí-tuu-b-é tw-áá-guz-ire
 NEG-1p-be-FUT 1p-P₁-buy-Perfect
 ‘We will not have bought yet’

Negating the second, lexical, verb denies its semantic content: negating the first verb denies either the whole verb complex or the tense or aspect of the first verb.³⁸ As we see, in such structures, sometimes the first, sometimes the second member (see Ashton 1970: 247–52), sometimes either but with different meaning, can be negated in ways that don’t, at first sight, correspond exactly to the distinction made above between denial and description. More work is necessary here on which parts of the verbal message can be negated in Bantu and the relation between that and morphology.

³⁸ Consider also Swahili *mimi ni-li-kuwa si-ja-vaa kanzu* ‘I had never worn a kanzu’ (lit. I was I have not worn). Cf. Ashton (1944: 249) and Harjula (2004: 153). This is a complicated topic.

5.3 Focus: verbal morphology, tone, function³⁹

By contrast with other studies which have concentrated on focus in particular Bantu languages or groups of languages, this survey offers no new data or theoretical insights. It is at once an attempt to synthesize what others have done and to explore some of the possible historical antecedents of what occurs today. It concentrates on focus marking on the verb, that is, primarily on morphology and to some extent on tonal correlates. It does not deal with syntax, particles, or the noun augment, which all play a role in focus. It looks at morphological features that occur in major blocks of languages and ignores those only found in a few languages.

5.3.1 What is focus?

Concentrating on information, Watters (1979*b*) defines focus as ‘that information in the sentence that the speaker believes, assumes or knows the hearer does not share with him or her’. He and others recognize different discourse functions for focus, such as assertive and contrastive focus. More concerned with the scope of the focus in the utterance, Wald (1997: 57) says: ‘the purpose of a constituent focus system is to assign the maximal focus of a clause to one or another clause constituent.’ In the same vein, Güldemann (2003*a*) distinguishes three types of scope of focus: term, verb, and truth. Term focus refers to a non-verbal constituent, usually post-verbal (‘I’m going to eat porridge’), verb focus refers to the lexical content of the verb (‘I’m going to eat it, not drink it’), and truth focus concerns the grammatical categories attached to the verb (tense, aspect, modality: ‘I’m going to eat it’). Güldemann (2003*a*: 329) acknowledges his intellectual debt to Dik (e.g. 1999) but I cite Güldemann, since I follow him. What follows mainly distinguishes post-verbal (conjunctive) and verb (disjunctive) focus.

5.3.2 How focus is represented

Focus is indicated across Narrow and Grassfields Bantu by some combination of: word order/movement, clefting, particles, tone, reduplication of the verbal word, verb morphology, and object shape. Examples in (29) are from Aghem, a Grassfields language (Watters 1979*b*):

- (29) a *fil á mɔ́ zí kǐ-bé án¹sóm*
 friends 3p P₁ eat fufu LOC farm
 ‘Friends ate fufu on the farm’
- b *fil á mɔ́ zí án¹sóm bé¹kó*
 friends 3p P₁ eat LOC farm fufu
 ‘Friends ate fufu on the farm’

³⁹ I thank Christa Beaudoin-Lietz, Larry Hyman, Sarah Rose, and Thilo Schadeberg for comments on the first draft of this section. This section is almost identical in content to Nurse (2006).

- c kǐ m̃ dzòò ñ
 it be.PAST good FOC
 'It was good'
- d kǐ m̃ dzòò ñé
 it be.PAST good today
 'It was good today'
- e kǐ máā dzò
 it be.PAST.FOC good
 'It was good/came out well' (lit. it was-FOC good)

In (29a, b) the immediate post-verbal constituent is focused (post-verbal focus, word order) and the noun has a different shape, depending whether it is in focus. (29c) focuses on 'good' by postposing the particle *ñ*, and (29e) focuses on the pastness of the verb (verb focus), by its having a different morphology from (29d).

- (30) Kongo (H10) sumba tu-n-sumba
 (to) buy 1p-PRG-buy
 'We are buying'
- Swahili (G42) a-∅-lia-lia tu
 it-cry-cry only
 'It (child) just whimpers'
- Vunjo (E62) ni kiki u-le-soma
 is what 2s-PAST-read
 'What did you read?'
- Ganda (E15) y-a-lába omukázi 'He saw a woman', but
 y-a-lábá múkázi 'He saw a WOMAN'
 (Hyman and Katamba 1993)

Kongo and Swahili reduplicate the verb, Kongo also involves infinitive fronting (verb focus). The Vunjo example involves clefting. The Ganda example involves the presence/absence of the nominal pre-prefix and a tonal difference. Other tone contrasts can be seen in (31) and tone is taken up again in 5.3.8.

Thinking about focus in Bantu has been largely based on, and shaped by its appearance in four groups of languages: Grassfields Bantu⁴⁰ (seen in (29) and (42)); Zone S languages of southern Africa (including K21), discussed in 5.3.4, below; some Lacustrine (D60, E40) and Zambian (M40-50-60) languages, also discussed in 5.3.4; some languages in Tanzania and Kenya (E40, E50, E60), dealt with in 5.3.6. To these I have added languages with metatony (5.3.3) and other possibilities are mentioned in 5.3.5 and 5.3.9. The languages in Sections 5.3.4–6 and 5.3.9—where

⁴⁰ Grassfields Bantu, spoken in the Cameroon, is usually said to be different from Narrow Bantu but the differences are ill-defined (see 1.3).

the surface is only now being scratched—represent under a third of Bantu languages, so more work needs to be done to have an adequate picture of focus across Bantu.⁴¹

5.3.3 Metatony

Many—exact number not known—Forest and adjacent languages show a tonal process called metatony: Zones A, B, C, D10-20-30-40-50, L10-20.⁴² In metatony a verb-final vowel(s) is underlyingly non-high-toned when utterance final, but high when followed by a complement (object, adverbial . . . in the same phrase?) and the high may carry over onto the first tone-bearing unit of the complement. It tends to characterize some tenses/aspects of each language and not others. It is often described as just a tonal process, but it is striking that it has certain characteristics linking it to focus: it seems to affect certain (mostly affirmative) tenses in the language (e.g. Guarisma 2003: 320–7), and it marks a contrast between verb focus and post-verbal focus. This suggests it has a syntactic-semantic function, an opinion shared by Schadeberg (1995: 176; also Dimmendaal 1995: 32; de Blois 1970: 107). Examples:

- (31) Duala wána ‘(To) bring’ but a ma-wána mabato ‘She brings clothes’
 bitó bá-manda ‘Women buy’, but bitó bá-manda mabato ‘Women buy clothes’
- Basaa a bí nujul ‘He sold’, but a bí nujul bíse! ‘He sold baskets’ (metatony)
 but nujul bise! ‘Sell baskets’ (verb but not noun affected)
- Mituku kukúlumanisa ‘To assemble’, but kukúlumánísá bantu ‘To assemble people’

At first sight, this looks as if what was originally a tonal process became used to encode a function, and that function looks like what follows below: verb versus post-verbal focus. However, in all the cases below, it is the post-verbal focus form (conjunctive) that is unmarked or less marked, whereas here the conjunctive is apparently marked (by the high tone). The nature and origin of this whole tonal phenomenon needs more examination, as does the issue of whether other types of focus and other strategies exist in the Forest languages.

⁴¹ I have found reference to morphological expression of focus, assertion, or disjunctive versus conjunctive for present or former states of some or all languages in: Grassfields, languages in Zones A, B, C, all Zone D except D30, all seven groups in Zone E, G23, G42, G60, H10, H40, K20, K30, K40, M40, M50, M60, N10, all Zone P groups, S20, S30, S40, S50. Most of the references in Zone A, B, C, D10, and D20 are to metatony, which I take to be a form of focus.

Data and analysis which go beyond what is found here are in Downing *et al.* (2006).

⁴² Meeussen (1967: 111) thinks metatony can be reconstructed for Proto-Bantu but I am not convinced its current geographical distribution warrants that. For discussion of metatony, see also Hadermann (2005: 404–9).

5.3.4 Tense marker plus focus, binary contrast: conjunctive versus disjunctive focus

Certain Savanna languages contrast post-verbal and verb focus, the latter marked by an inflectional morpheme following the tense marker: D60, M40, (M50), M60, P20-30, S20-30, K21, S40-50. This contrast is talked about in the literature in two slightly different ways: in terms of the relationship between verb and other constituents, or in terms of what is focused. Conjunctive (post-verbal⁴³) forms are said to emphasize the close relationship between the verb and a following constituent, such as object, adverbial, wh-word, or prepositional phrase, in the same clause. Disjunctive (verb focus) forms indicate there is no special relationship between verb and any following constituent. They often stand alone but may be followed by other sentence constituents, provided these do not form part of the same clause. Conjunctive is un- or less marked morphologically, typically there being only tense markers (null in the present and /a/ in the past). Disjunctive is marked by some combination of morpheme following the regular post-subject tense marker (most often *-a-* or *-la-*), depending on tense and language) and tone. Typically, the contrast seems restricted to certain tenses, most often affirmative presents, or affirmative presents and pasts, and also most often does not occur in negatives, relativized verbs, and verbs in certain other clause/sentence types. However, in some southern African languages (Tswana, Zulu⁴⁴), affirmative future and perfect, and some negatives, are also involved. It remains to be seen whether a wider selection of languages will show the same restrictions or not. From my 1970s fieldnotes, some N10 languages may have this kind of contrast, as my source for Matengo, for example, said members of two pairs of past tenses did not differ in time reference but one member of each pair was ‘complete’ while the other ‘required more words’.

Examples of conjunctive/post-verbal versus disjunctive/verb focus.

(32)	Post-verbal focus	Verb focus
Ha ⁴⁵ (D66)	ba-∅-rɪma <u>ibiharagi</u>	ba-∅- <u>ra</u> -rɪma
	3p-∅-cultivate beans	3p-∅- <u>FOC</u> -cultivate
	‘They cultivate <u>beans</u> ’	‘They cultivate’
	ba-a-rɪm-ye <u>ibiharagi</u>	ba-á- <u>ra</u> -rɪm-ye
	3p-P ₂ -cultivate-FV beans	3p-P ₂ - <u>FOC</u> -cultivate-FV
	‘They cultivated <u>beans</u> ’	‘They cultivated’
	y-oo-tee-ye imbutó	y-oo-tée-ye
	3s-POT-sow-FV seed	3s-POT-sow-FV
	‘He would sow the seed’	‘He would sow’

⁴³ Conjunctive (post-verbal) and disjunctive (verb focus) go under a variety of other names, for which see Güldemann (2003a).

⁴⁴ For further analysis of Zulu, see Buell (2006).

⁴⁵ These examples show structural and tonal differences (see Harjula 2004: 100).

Bemba (M42)	bá-∅-bómba ‘They work ...’	bá-∅-lá-bomba ‘They work’
Makhuwa ⁴⁶	ki-n-lówa ...	ki-n-áá-lówa
(P31)	1s-NONPAST-fish	1s-NONPAST-DIS-fish
	‘I fish, am fishing, will fish’	
	ki-∅-low-alé ...	k-oo-lów-a
	1s-null-fish-PAST	1s-DIS-fish-FV
	‘I fished’	
	k-aa-low-álé ...	k-aa-há-lów-a (or k-aa-hí-kówa)
	1s-P ₂ -fish-PAST	1s-P ₂ -DIS-fish-FV
	‘I fished (remote)’	

In a very few languages (E401-402-403-404-43-44, M54, and M60, *la/ra* occurs in what translates as a progressive or general present. Thus:

- (33) Shashi (E404) tu-ra-gura ‘We buy, are buying’
 Lamba (M54) tu-la-cita ‘We do’

Comparing the Lamba ‘present’ with the disjunctive in nearby Tonga (M64) (also Bemba), Güldemann (1996: 236) suggests a plausible connection. He suggests that Lamba once also had a disjunctive (marked by *la*) versus conjunctive (null marking) contrast but neutralized it in favour of the marked form, which thereby became the general present form. This explanation of Güldemann’s would also provide a link from *ra* elsewhere in Lacustrine languages to this ‘present’ in E40 (e.g. Ngurimi). That is, as with the Zone M languages, there are Lacustrine languages with focal *ra* (D60, Ha), the original meaning, and these others with progressive/present *ra* (E40, e.g. Ngurimi), the derived meaning.

5.3.5 Three-way contrast: neutral versus verb versus post-verbal focus

Odden (1996a: 63-5) recognizes three focus types in Matumbi: neutral, verb, and post-verb (‘noun’) focus. Noun focus requires a non-verb to be the pragmatic focus of the clause and to appear in the immediately post-verbal position. Verb focus puts contrastive focus on the verb. Neutral forms do not assert that any element of the clause is focused. Unlike nearby Mwera (Harries 1950: 92–9) where one marker (*ku*) marks focus, several markers operate in Matumbi (P13):

- (34) Neutral focus: ni-ká-ba ka-ni-teleká
 1s-ka-be ka-1s-cook
 ‘I am cooking’

⁴⁶ I am indebted to Jenneke van der Wal for this data.

- Noun focus: ni-∅-kata áanjú
 1s-∅-cut firewood
 ‘I am cutting firewood (not something else)’
- Verb focus: e-endá-teleká
 3s-enda-cook
 ‘He is cooking (not talking)’

Wald (1997: 65) suggests Shambaa (G23) has a three-way contrast, where null indicates post-verbal focus, *-a-* is neutral, allowing the verb to be within the maximal focus of the clause, and *-ta-* has the verb as the maximal focus of the clause. Thus

- (35) G23 ni-∅-dika manga ‘I cook/am cooking cassava’
 n-a-dika (manga) ‘I am cooking (cassava)’
 ni-ta-dika (manga) ‘I am cooking (cassava)’

He suggests Swahili once had a similar system, with ∅, *a*, and *na* corresponding to Shambaa, ∅, *a*, and *ta*, respectively. Since Shambaa and Swahili are related to a large set of other NECB languages (E70, G10-20-30-40), they probably once had the same system, if Wald is correct.

5.3.6 Verb-initial *ni-*: verb focus, progressive (and present?)

Some northeastern languages have reflexes of a verb-initial *ni-*, whose main function is often stated as assertion: E42-43-401, E46, E50 (not E56), E60.⁴⁷ Although differences naturally exist between groups of languages and between individual languages, the similarities between E40 (e.g. Gusii, Kuria), E50 (e.g. Gikuyu), and E60 (e.g. Vunjo) are striking. The various grammars and articles, mostly written in complete or almost complete ignorance of the others, and written at different points in the twentieth century, make very similar statements. The presence of *ni-* is said to represent greater certainty on the part of the speaker about the validity of what is being said, while the absence of *ni-* indicates less certainty. Typically it appears in affirmative statements and questions, and not in relatives, negatives, or most WH-questions. When the possibility of assertion or certainty is not present, there is no contrast between the presence and absence of *ni-*.⁴⁸ Dalgish (1979: 57–63) presents a number of arguments in favour of the proposition that the Chaga (E62) *ni* itself derives from the copula, and in constructions originally involving copular *ni* and a cleft construction (‘It is that X, it is the case that X’), a proposition taken for granted by most of the other authors (Barlow 1960; Bennett

⁴⁷ A set of languages in western Tanzania (F21-22, F24, F31-32) also have initial *ni-*. It translates variously as relative, conditional, and ‘if/when’. The connection between this and the *ni-* of this section needs more examination.

⁴⁸ Larry Hyman has pointed out to me that while there is no assertion contrast in backgrounded clauses, there is a possibility of *some* focus marking: thus ‘the woman who saw THE MAN’ contrasts the referent, not the contents of the clause.

1969; Cammenga 2002, 2004; McWhorter 1992; Moshi 1988; Nurse and Philippson 1977; Whiteley 1960; Whiteley and Muli 1962⁴⁹). The examples are from one or other of these authors (Bennett 1969; Cammenga 2004; Dalgish 1979; respectively).

- (36) Vunjo (E62) *ni wasi n-ulewaawa mdu*
 is clear ni-you.killed person
 ‘It is (abundantly) clear you killed someone’
 ni wasi ulewaawa mdu
 ‘It is (less certainly) clear you killed someone’
- Gikuyu (E51) *ni-maathiire* ‘They went’
 (‘They did go, it is a fact they went’, verb focus)
 maathiire iyo ‘They went the day before yesterday’
 (post-verbal focus)
- Kuria (E43) /*ne-βa-a-soma* / [*m̥baasóma*] ‘Indeed they have read’
 /*βa-a-soma* / [*βaasómă*] ‘They have read’
- Vunjo *ngileona kyelya kilya ulekora*
 1s.saw food that you.cooked
 ‘I saw the food which you cooked’

The last example contains a restrictive relative clause. Since such clauses lack the possibility of an assertion contrast, there is no contrast between initial *ni* and lack of *ni* (**n-ulekora* is impossible here). At first sight the role of this *ni*- differs from what is presented for the languages in 5.3.4 and 5.3.5. There are obvious differences, such as the absence here of the disjunctive : conjunctive contrast and the fact that *ni*- co-occurs with most tenses/aspects, while disjunctive markers are typically restricted to a few tenses/aspects. But the general difference may be less than appears, because the analyses summarized in 5.3.4 and 5.3.5 are recent work, while most of the thinking about the *nI*-languages is older, preceding Dik’s work, and often contained in grammars whose main interest was not focus. Muriungi and Abels’s analysis of Tharaka (2005) may lead to a change of thinking about the role of *nI*-. *nI*- in Tharaka (E54, akin to Gikuyu E51) is clearly a focus marker. While it does not occur with negatives or (most?) relatives, it does occur with most affirmative indicative tenses and aspects, and it also occurs on pre-verbal focused object (and subject) nouns, and with pre-verbal WH-words in some circumstances.

A smaller subset of lacustrine languages (E102 (Bwisi), E12 (Tooro)-13-14-21-22 (Haya)-23-24⁵⁰) use the same morphology to express the difference between progressive (*ni*-) and non-progressive present (pre-stem null) aspect. Thus:

⁴⁹ See also McWhorter (1992).

⁵⁰ It is unclear how to interpret the *ni* in E403 *ni-tu-ku-gura* ‘We buy, we are buying’: focus or progressive? It appears to be the only form in the language with *ni*, which argues for progressive status. But the fact that there is no contrast with a *ni*-less form, and that it is used in the E40 area, which is the *ni*-focus area, argue for its focal status.

(37)	General present	Progressive
E102	tu-ku-ghenda ‘We go, will go’	<u>n</u> -tu- <u>Ø</u> -ghenda ‘We are going’
E12, E22	tu- <u>Ø</u> -gúra ‘We buy’	<u>ni</u> -tu- <u>Ø</u> -gúra ‘We are buying’

Güldemann (2003a) discusses the connection between focal pre-verbal *ni-* and this progressive *ni-*. As Dalgish, he presents arguments connecting copula *ni* to assertive *ni* and then linking assertive to progressive *ni*, and necessarily in that grammaticalization direction: copula became focus marker became progressive marker—following Hyman and Watters (1984), he sees progressive as a category with inherent focus. It is not clear whether there are languages in this subset where progressive has moved on to general present.

5.3.7 Recycling: verb focus to progressive to general present to non-past

The focal strategies in 5.3.4 and 5.3.6 tend in the same direction, as older focus systems disintegrated. Güldemann (2003a) establishes a connection between verb focus and progressives, and a specific direction: verb focus may become progressive. Those concerned with grammaticalization paths (Bybee *et al.* 1994; Heine and Kuteva 2002) point out that progressives may broaden and become general presents, thus: verb focus > progressive > present. Progressives and presents are often extended to future reference, so they would cover non-past, thus: verb focus > progressive > present > non-past (or just future).

Progressives becoming presents is not limited to progressives which derive from focus forms.⁵¹ Across Niger-Congo and Bantu, for example, the commonest form of progressive is based on a structure which is or was of the shape *be+locative+infinitive* (*li-mu-ku*). Over time this reduces to a CV shape, most often *ku* or *ko*, and it is likely that most general presents of that reduced shape today originated as progressives. Bantu examples:

(38)	Holoholo (D28)	w-i- <u>mú</u> -ku-keba ‘She is searching’ (PRG)
	Gogo (G11)	ni- <u>ku</u> -gulá ‘I buy’ (general present)
	Hungu (H42)	tu- <u>ku</u> -sumba ‘We will buy’ (FUT)

The Holoholo word shows a progressive meaning and an almost full (*li-mu-ku*) shape, where Gogo and Hungu shows reduced shapes (**li-mu-ku > ku*) and shifted meanings.

It is interesting that E56, now spoken in NE Tanzania, adjacent to G23, has undergone two changes. It has replaced E50 *ni-* by *na-*, borrowed from G23, and this only occurs in the present, similar to E12-13-14-21-22-23-24. See Nurse (2000a).

⁵¹ Note also Swahili *na*, possibly once focus, now progressive for many speakers, and general present for others (Wald 1997). Philippon (p.c.), suggests that Saghala *-na-* might also be a focus marker today.

5.3.8 Focus and tone

Hitherto the emphasis has been on the morphology of focus and little coherent has been said so far of the role of tone in focus. Hyman (1999b) has the most detailed statement on this. His general conclusion is this: 'In some of the cases we have seen, focus has been morphologized as [+F]⁵² ... In no case however have we seen what can be called a "direct mapping" from focus to tone. That is, I am unaware of a "pure" example where semantic focus (and only semantic focus) unambiguously conditions a [+focus] tonal effect, or where the absence of semantic focus (and only its absence) conditions a [-focus] tonal effect. In each case the grammar mediates between semantic focus and tone.' So, while tone certainly plays a role in Bantu focus marking, the 'relationship is not direct'.

The role of tone can be seen in the examples in (32), although not clearly. While the post-verbal and verb focus forms in the first Ha row have identical surface tones, underlyingly they behave differently (Harjula 2004: 100). In fact, all Ha affirmative forms with a focus contrast are tonally contrastive, but only some (present, the two pasts) are also morphologically distinct, while others (consecutive, potential) are morphologically identical (*ibid.*). No Ha negative or relativized verb form is focally contrastive. In Haya, which is quite closely related to Ha, only one past today retains a tonal and morphological contrast (see (39, 40)).

Creissels's (1996a) study of Tswana (S31) shows only the present affirmative as tonally and morphologically distinct, and in S40 languages such as Zulu and Swati both the present affirmative and the anterior affirmative are morphologically and tonally distinct. He (*ibid.*) shows that other forms (present negative, anterior negative, future affirmative) in S30 and S40 languages also have the focal contrast but it is only tonal.⁵³ No focal contrast of any kind occurs in other tenses/aspects, affirmative or negative, nor in any relativized verb.

The Haya situation is even more curious. Section 5.3.6 and (37) present cases where general presents (unfocused) have become present progressives (focused). No mention was made there of tone because seemingly Haya *tu-θ-gúra* 'We buy' and *ni-tu-θ-gúra* 'We are buying (PRG)' are tonally identical. But, just as the Tswana present, they do in fact differ in their tonal behaviour. Using a different verb (*-kóm-* 'tie' and the name *káto* in the examples below), Hyman (1999b) shows that certain forms in Haya undergo 'tonal reduction'. That is, if anything follows the verb in the same clause, the underlying high tone of the verb (and in fact other highs also) delete: so *ba-θ-kóma* 'They tie (disjunctive)' but *ba-θ-koma káto* 'They tie Kato (conjunctive)'. Tonal reduction does not occur in the progressive: *ni-ba-θ-kóma* 'They are tying' but *ni-ba-θ-komá káto* 'They are tying Kato', nor in negatives: *ti-bá-li-ku-kóma* 'They aren't tying' and *ti-bá-li-ku-kóma káto* 'They're not tying K'.

⁵² [+focus] stands for the syntactic feature, [+F] for its morphologized analogue.

⁵³ Bresnan and Kanerva (1989: 8) show one tense in Chewa, where a high tone appears on the final vowel of the verb and the first syllable(s) of the following object, if it is in the same phrase. It is not clear whether this relates to the Tswana facts and/or the metatony sketched in Section 5.3.3.

So far, tonal behaviour supports the morphologically based assumption that the Haya general present and the progressive differ. But in fact all Haya TA forms divide into two:⁵⁴ those that behave as the general present by undergoing tonal reduction, and those that behave as the progressive and do not:

- (39) Tonal reduction in Haya (E22, adapted from Hyman 1999b: 161):
 ‘They tie’, etc. ‘They tie Kato’, etc.

General present	ba-∅-kóma	ba-∅-koma káto
P ₁	bá-á-kôma	ba-a-koma káto
P ₂	ba-∅-komíle	ba-∅-komile káto
Past habitual	ba-a-kóm-aga	ba-a-kom-aga káto
F ₁	ba-laa-kôma	ba-laa-koma káto
F ₂	ba-li-kóma	ba-li-koma káto

- (40) No tonal reduction (adapted from Hyman 1999b: 161):

‘They are tying’, etc. ‘They are tying Kato’, etc.

Progressive	ni-ba-∅-kóma	ba-∅-komá káto
Anterior	bá-á-kóm-ile	bá-á-kóm-ile káto
Experiential	ba-lá-kom-íle	ba-lá-kom-íle káto
Persistent	ba-kyáá-kôma	ba-kyáá-kóma káto
Subjunctive	ba-∅-kóm-e	ba-∅-kóm-e káto
Imperative	kóma	kom-á káto
P ₃ , etc	bá-ka-kôma	bá-ka-kóma káto

Of the forms with no tonal reduction Hyman says: ‘...such TAMs have an intrinsic morphosyntactic focus [+F], which derives from their marked semantic status... Thus, negation is the marked polarity, subjunctive and imperative are marked moods, progressive and persistent are marked aspects’ (also perfect and experiential).

This Haya data, and to a lesser extent that from Ha and Tswana, raises interesting questions, such as:

- In the Haya data, assuming tonal reduction fails to take place in categories which are intrinsically focused, it is easy enough to accept negatives, subjunctives, and imperatives as marked compared with affirmatives or indicatives, but why should affirmative progressives, anteriors, experientials, persistives, and P₃ have intrinsic focus, whereas affirmative perfective (except P₃), and habitual aspects apparently have no marked semantic status or intrinsic morphosyntactic focus? The perfective and habitual forms in Haya have disjunctive and conjunctive forms, the others do not. In Ha and Tswana, only certain forms have focal contrast: why those forms and why are they not the same categories as those in (39) in Haya? In what sense are all the indicative members of (40) intrinsically focused?

⁵⁴ Hyman (p.c.) says similar tonal marking of focus also obtains in Ganda.

- Since most members of (40) are marked or more marked morphologically than those in (39), why do they also need tonal marking? Similarly in Ha and Tswana: why are some forms only marked tonally, while others are also morphologically distinct? Were such forms once marked tonally and morphologically ('linguistic redundancy?') or did one kind of marking take over as the other faded?
- Which other languages behave like this? It would be desirable to examine a selection of other languages to see how far this behaviour extends.

5.3.9 Other strategies

The content of Sections 5.3.4, 5.3.6 (and in fact 5.3.3) is arbitrary by including only languages using particular morphological strategies. The intention was to concentrate on strategies which are fairly widespread or for which data was available. Languages for which 'focus' is mentioned but which represent it in some other way are: Grassfields (Watters (2003: 253–4) implies that only Aghem expresses it morphologically), D41 (Güldemann 2003a), ?D42 (Mutaka 1994), E74a (Philippson and Montlahuc 2003), G42 (Wald 1997), H10 (Hadermann 1996)⁵⁵, H41 (Ndolo 1972), H42 (Takizala 1972), K30 (Güldemann 2003a), ?K41, N10 (Ngonyani 2001a, 2003), P20 (Harries 1950), and P30 (Kisseberth 2003, Schadeberg and Mucanheia 2000), because the data is unclear or does not fit well into the larger blocks. Two strategies little investigated are infinitive preposing (Kongo example in (30)) and reduplication.

5.3.10 The 'non-past tense marker' /-a/, a recycled focus marker?

Eighty-four per cent of the matrix languages have a pre-stem /a/, making it the commonest morpheme in that position in Bantu. Seventy-eight per cent have it with past reference and twenty-seven per cent with non-past reference: mostly present, some present and future, or, less often, just future. Some languages have /a/s with past and non-past reference. Twenty-seven per cent refers to the 100 matrix languages but prorated to the some 500 Bantu languages, that represents some 135 languages (27 × 5), a considerable number.

Historically, past /a/ is easy to explain because /a/ 'past' can be reconstructed for Proto-Bantu, but where does non-past /a/ come from? It is harder to explain than past /a/, because, as we will see in 6.5, Proto-Bantu had a null vast present (as **tu-θ-lima* 'We cultivate' and a locative-based progressive present (**tu-θ-li ku-lima* 'we are cultivating' < 'we are at cultivating'). There is no obvious role for a non-past /a/ in such a system, so it is unlikely to have been the source of today's non-past /a/s. Some languages today have contrastive past /a/, that is, with different tone or different length, /a/ can represent different degrees of past, e.g. remote versus near past. But no language contrasts temporal non-past null and non-past /a/, nor two non-past /a/ with each other, because different degrees of present temporal reference are impossible.

⁵⁵ De Clercq (1912) hints at the possibility of a disjunctive : conjunctive contrast in H16c when he says that the present is negated in two ways: by *sidi* when the verb stands alone (*tu-sidi-ku-enda ko* 'We are not going') but by *si* when material follows (*tu-si-ku-enda ku buala ko* 'We are not going to the village').

Several possible sources for these non-past /a/ are discussed in 6.2.4(ii). A strong possibility is that this ‘non-past’ /a/, despite its label, did not originate in any morpheme once carrying temporal or aspectual reference. This forces one to consider that it used to represent not tense but focus. For this the evidence would be:

- (a) the fact that over a quarter of Bantu languages have an /a/ associated with non-past time reference, but an /a/ with such temporal reference is not apparently reconstructible for PB;
- (b) the fact that several languages today certainly have it marking not tense but verb (disjunctive) focus, so D60, E22, S20-30-40-50, and K21. In the S languages it is associated with present verb focus, in D60 and E22⁵⁶ with recent past (Harjula 2004: 100; Hyman 1999b):

(41)	Non-verb focus	Verb focus
Ha (D66)	y-a-teeye íbigóori 3-P ₁ -sow maize ‘He sowed <u>maize</u> ’	y-a- <u>a</u> -téeye 3-P ₁ - <u>FOC</u> -sow ‘He <u>sowed</u> ’
Haya (E22)	y-a-koma káto 3-P ₁ -tie Kato ‘He tied <u>Kato</u> ’	y- <u>á</u> - <u>á</u> -mu-kôma 3-P ₁ - <u>FOC</u> -him-tie ‘He tied <u>him</u> ’
Tsonga (S53)	hi-∅-dya vuswa We-∅-eat porridge ‘We eat <u>porridge</u> ’	hi-∅- <u>a</u> -dy-á we-∅- <u>FOC</u> -eat ‘We <u>eat</u> ’
Lozi (K21)	ni-∅-leká nama ‘I buy, am buying <u>meat</u> ’	lw-∅-a-ca we-∅- <u>FOC</u> -eat ‘We are <u>eating</u> ’

- (c) a less certain set of data, where non-focal forms have a short vowel and focal forms involve a long vowel, which might be interpreted as the short vowel plus /a/.⁵⁷ Such cases need more investigation. Examples:

(42)	Non-verb focus	Verb focus
Aghem	o mɔ bo fígâm 3 P ₁ hit mat ‘He hit the <u>mat</u> ’	o má- <u>a</u> bó ghâmfɔ 3 P ₁ - <u>FOC</u> hit mat ‘... <u>did</u> hit the mat’
Shambaa (G23)	n-a-káánga nyama ‘I fried <u>meat</u> ’ n-a-dika nyama ‘I’m cooking <u>meat</u> ’	n-á- <u>á</u> -káánga ‘I <u>fried</u> ’ n-(a)- <u>a</u> -dika ‘I am <u>cooking</u> ’ ⁵⁸

Some of the examples in (41) suggest that this /a/ occurs and occurred as the second in the sequence of pre-stem markers, in Meeussen’s ‘limitative’ position. The fact that

⁵⁶ So Haya (E22) has at least traces of separate tonal (see (40)) and morphological focus.

⁵⁷ Hyphens dividing the long vowel are mine. I have interpreted Aghem *maa* as *mɔ+a*. Larry Hyman suggests that, alternatively, *mɔ* might be a reduced form of *maa*.

⁵⁸ Sources for Shambaa do not totally agree on the lengths of the various pre-stem /a/.

so many languages today have /a/ with (non-past or present) tense reference, and few have it representing focus should not disturb. If the grammaticalization path suggested in Section 5.3.7 is correct, then this present/non-past reference is the final step on the path, but the languages affected have had over four millennia to reach this point. While not all of today's non-past /a/s necessarily originate in this disjunctive /a/, there is a good chance that many do.

5.3.11 Conclusions

This survey suggests that (a) constituent focus exists widely (at least twelve of Guthrie's fifteen Zones) in contemporary Narrow Bantu, and also outside Narrow Bantu in at least Grassfields Bantu, (b) verb (disjunctive) focus is the marked category, post-verbal focus the unmarked (null) category, (c) inflectional morphology and tonal behaviour play a central role in this marking, which is not surprising, given the agglutinating and tonal nature of Bantu, and (d) this system probably goes back to Proto-Bantu in some form, because it is unlikely that so many languages would have innovated morphological focus of this type independently. Section 5.3.10 suggests that today's 'non-past /a/' was once a central part of a focus system, because it is so widespread today. Possibly /la/, present in far fewer languages, and maybe /na⁵⁹/, earlier general role unclear, were also part of the focus system. Both /a/ and /la/ are predominantly associated with present time disjunctive focus reference: it is unclear which was associated with past focus reference, and it is possible, although unprovable, that /a/ and /la/ are related, via deletion of [l].

Where the focus system was maintained, new marking was innovated areally, e.g. pre-verbal *ni*, as in 5.3.6.⁶⁰ Where the system leaked, /a/ and /la/ became used in other ways, in the general direction suggested in 5.3.7: verb focus > progressive > present/future/non-past.

5.4 Pronominal objects (see 2.3.6)

This section deals with pronominal marking on the verb in the OM (Meussen's 'infix') position, or (post)-verb-finally, using either clitics or independent pronouns. It covers many languages and deals solely with pronominal marking and its different types in Bantu. It examines the geographical distribution of the types and also summarizes the results of Beaudoin-Lietz *et al.*'s (2004) initial investigation of similarities between the order of pronominal markers in the types. Reflexives

⁵⁹ Comparative evidence shows *na* associated with verbs as far back as PB but its status is uncertain. Wald (1997) analyzes it as focus/progressive for Swahili.

⁶⁰ Gérard Philippon has suggested that the pre-verbal *ni* strategy might be of Cushitic origin. The area where it occurs is known to have had an earlier Cushitic substratum. On the other hand, forms (-*li*, *ni*) of copula 'be' play a focus role in non-Bantu Niger-Congo languages and also cross-linguistically.

and most locatives are excluded because reflexives always, and locatives often, behave differently from objects. Contrastive emphasis is excluded because of space constraints.⁶¹

5.4.1 Three types of pronominal object marking

The data from over seventy Bantu languages⁶² which was examined is assumed to be typical of all of Bantu. Three different general pronominal object-marking strategies are identified, together with variation and certain restrictions within each type. In particular the applicative is exemplified, because it increases the number of arguments of the verb.

In Type 1, pronominal object marking occurs at the pre-stem position only. These object markers (OMs) are a closed set, distinct in form and syntactic position from pronouns, full NPs, and post-stem OMs. The number of OMs is language-specific, though many languages of this type allow only a single pre-stem marker as in these Kikuyu examples (E51, K. E. Mungai (p.c.)):

- (43) E51 ni-ndi-raa-mu-he-ire
 FOC-1s-P₂-OM (3s)-give-PFV
 'I gave (to) him'
 ni-ndi-raa-ka-he-an-ire
 FOC-1s-P₂-OM (it)-give-ext-PFV
 'I gave it'
 *ni-ndi-raa-mu-ka-he-ire
 'I gave him it'

Occurrence restrictions on the OM are discussed below. Type 1 languages may also use independent pronouns post-verbally together with, or instead of, the OM, to express emphasis.

In Type 2 pronominal object marking occurs only post-finally. In most cases, the distinction between suffixes, clitics, and independent post-verbal pronouns is clear, but not in all. These Basaa (A43, Bitjaa Kody (1990)) examples illustrate two objects as full NPs (44a), then pronominal marking of one (b, c), and (d) two objects:

⁶¹ Pronominal object marking is usually included as a topic in grammars of individual languages. It also appears in studies of applicatives, of the relationship between allowable post-verbal NPs and pronominal object marking (i.e. 'asymmetrical' versus 'symmetrical' languages), and of inherent topicality and contextual topicality hierarchies (e.g. Alsina and Mchombo 1993; Baker 1988a, 1988b; Bresnan and Moshi 1990; Duranti 1979; Wald 1997; Woolford 1999). These studies mostly refer to pre-stem pronominal marking and cover few languages; for a cross-linguistic overview, see Gensler (2003).

⁶² These seventy languages (Table 4.2) are not the same as the 100 database languages (Table 4.1). The two sets partly overlap.

- (44) A43 a *mâna a n-tí nyâŋ pós*
 child 3s P₁-give his mother bottle
 'The child gave his mother the bottle'
- b *malêt a n-tí-nâk ßé mê pêm*
 master 3s P₁-give-IPFV NEG 1s chalk
 'The teacher has not yet given me chalk'
- c *mε n-tí ßó bijêk*
 1s P₁-give 3p food
 'I gave them food'
- d *mε ñ-lóná wê yó lèn*
 1s FUT-bring 2s it today
 'I'll bring you it today'

In these examples the pronominal marking occurs via independent pronouns.

In Type 3, pronominal object marking can occur in pre-stem position and/or post-finally, as OM, and/or as enclitics or as post-verbal pronouns, respectively. Lunda (L52, adapted from Kawasha (2002: 39)) exemplifies one pattern of two pronominal arguments:

- (45) L52 a *n-a-mw-ink-a mukánda*
 1s-P₂-3s-give-FV book
 'I gave him the book'
- b **n-a-w-ink-a kánsi*
 1s-P₂-it-give-FV child
 'I gave it (to) the child'
- c *n-a-mw-ink-á-wu kánsi*
 1s-P₂-3s-give-FV-it child
 'I gave it (to) the child'
- d *n-a-mw-ink-á-wu*
 1s-P₂-3s-give-FV-it
 'I gave him it'

Here pronominal object marking is pre-stem (45a, c, d) and post-verbal (c, d). In locative constructions, Lunda may also cliticize post-verbal pronouns without a pre-stem OM. Locatives are not second objects, however. This third type includes a variety of strategies and restrictions on the occurrence of pronominal forms post-verbally and on their co-occurrence with pre-stem pronominal markers.

5.4.2 Geographical distribution of the three types

Languages representing the three types are not evenly spread across Bantu, but tend to cluster geographically (see map in Beaudoin-Lietz *et al.* (2004: 180)). Type 2

predominates in the northwest, occurring widely across Cameroon, with a few isolated exceptions, and also in neighbouring parts of Gabon, Congo, the Central African Republic, and the Democratic Republic of Congo. Thus, Type 2 languages occupy a mainly continuous area in the far northwest.⁶³

Type 1 is the only pattern in the northeast, southeast, and south. Thus the sources indicate that all Zones E, F, G, M, N, P, and S languages are Type 1. However, languages of this type are spread more widely, since it is the predominant pattern in Bantu. A few Type 1 languages are scattered across the northwest among Type 2 languages (for certain languages of Zones A, B, K, and L described as pre-stem/Type 1, see Polak (1986a)). Because Type 3 languages tend to be geographically intermediate between Types 1 and 2, a few Type 3 languages also occur in the northwest. It has been noted in the literature that languages with multiple pre-stem OMs occur widely among the Lacustrine languages, and special attention was paid to that area, but Type 1 languages with such multiple OMs are not exclusive to that area (for example, Tswana in the south is a multiple OM language). The map in Beaudoin-Lietz *et al.* (*ibid.*) shows the distribution of the different types in broad strokes. The actual languages surveyed are given in Table 5.2.

Beaudouin-Lietz *et al.* were surprised by the size of the three areas and particularly by the large size of the Type 3 area. They assumed that Type 3, geographically and typologically intermediate between the other two areas, would be marginal and small. Several working factors, if re-examined, might change the map and in particular diminish the size of the Type 3 area. One such assumption was that if data was available for one member of one of Guthrie's zones and not for the other members, then they would all behave as that one member. So for K10, reasonably good data was to hand only for Lucazi (K13), a Type 3 language, and it was assumed that all the other K10 languages work as Lucazi. The K10 languages occupy a large area on the map—if new and better data showed that some are typologically different from Lucazi, this would alter the map. Another factor which would alter the shape of the map is the working assumption that if any 'pronominal' morphemes occurred in a language at pre-stem and/or verb-finally, then that language is classified as Type 3. But in fact there are languages with partial paradigm series, where most OMs occur pre-stem but the first person singular occurs verb-finally. Such languages were as Type 3, but might have been better classified as Type 1. On the other hand, certain sources assert that their languages have only pre-stem markers, without giving full examples or considering what happens outside the strict limits of the verb. They consider the possibility of post-verbal pronouns to be outside their scope. Some of those languages may in fact be Type 3, not Type 1, which would again alter the map. So the map should be taken to have broad validity but changing certain assumptions and adding new information might alter its configuration. Polak (1986a), who focuses on pre-stem

⁶³ One language (Nen (A44, Mous 2003a, 2005)), exceptionally, allows not just pronouns but the whole object to appear before the verb stem. Mous stresses that in Nen the verbal string is not a single unit but a string of independent words, and Nen is thus SOV. See 2.10.2(vii).

Table 5.2 Distribution of three types of OM marking

Type 1 (pre-stem)	Type 2 (post-final)	Type 3 (both)
A22 Bakweri	A11a Londo	A11e Mbongo
A46 Nomaande	A15 Akoose	A83 Makaa
A60 Yambasa/Nugunu	A30 Noho, Benga	B85 Yanzi
B302 Himbaka	A40 Bankon, Basaa	C14 Leke/Bamitaba
B43 Punu	A53 Kpaŋ	C36 Lingala? (Dzokanga 1992)
B80 Boma, Mbuun	A70 Ewondo, Fang	C41 Ngombe
C32 Bobangi	A84 Konzime	C60 Mongo
C83 Bushoong	A93 Kako	C76 Ombo ?
D27 Bangubangu	B11 Galwa, Mpongwe	D13 Mituku ?
D60 Rwanda, Rundi*	B25 Mkota	D25 Lega
E15 Ganda*	B50 Duma, Nzebi	D33 Nyali
E20 Nyambo, Haya*	B60 Mbete, Nduumo	D40 Nande, Nyanga
E31 Bukusu	B70 Teke	D53 Shi ?
E51 Gikuyu	C101 Babole	H10 all ?
E62 Vunjo*	C25 Mboshi	H21 Kimbundu
E71 Pokomo	C50 Gesogo, Lokele	H30 Suku, Hungu
F20 Sukuma, Nyamwezi	D14 Enya ?	K13 Lucazi
F32 Rimi		K21 Lozi
G40 Swahili, Comorian		L21 Kete
K33 Dciriku, Mbukushu*		L30 Luba
K40 Subiya		L52 Lunda
L13 Kwezo		L62 Nkoya
L41 Kaonde		R31 Herero*
L53 Ruwund		
M41 Taabwa		
N101 Ndendeuli		
P23 Makonde		
R11 Umbundu		
R22 Ndonga		
R41 Yeyi ?		
S10 Shona		
S30 Tswana, S. Sotho*		

* Indicates multiple pre-stem markers

markers, attributes a much larger area to languages with pre-stem marking (Type 1). Type 3 languages show the most variety in their arrangement. As details are worked out, reclassification of some of these languages is probable.

5.4.3 *The three types in more detail*

Pre-stem pronominal object marking is well documented. Many languages of this type allow one OM, fewer permit multiple OMs. Of those, languages with two or three are commoner. Some writers have supposed the limit on the number of positions of

markers to be three (Rugemalira 1997) but Moshi (1998) has Chaga with four pre-stem marked objects when the verb structure includes an applicative, and five and even six may occur in Rwanda (see (51) for examples). Bukusu (E31, E. Kisembe (p.c.)) illustrates one pre-stem OM:

- (46) E31 a xw-a-w-a omusani sitabu
 1p-P₄-give-FV man book
 'We gave the man the book'
- b xw-a-mu-w-a sitabu
 1p-P₄-3s-give-FV book
 'We gave him the book'
- c xw-a-si-w-a omusani
 1p-P₄-it-give-FV man
 'We gave it (to) the man'
- d xw-a-mu-w-a
 1p-P₄-3s-give-FV
 'We gave him (it)'
- e xw-a-mu-xal-il-a
 1p-P₄-3s-cut-APP-FV
 'We cut (it for) him'

(46e) shows an applicative extension, with the only pre-stem OM expressing the animate object.

Wald (1998: 95–105) discusses the distinction between northeastern and southeastern languages with one pre-stem OM. When the verb is followed by two NPs, one animate and one inanimate, OM is restricted to human OM for northeastern languages such as Swahili, as in (47):

- (47) [HUM] OM-V ... [INAN]NP / * [INAN] OM-V ... [HUM]NP (ibid.: 96)

In southeastern languages animacy restriction is not placed on the pronominal marker but rather on the inherent topicality of the NPs co-occurring with the verbal construction (48). The order of post-verbal multiple object NPs must conform to a decreasing inherent topicality order, i.e. the less inherent topical inanimate follows the more inherently topical human.

- (48) V ... [HUM]NP [INAN]NP / * [INAN]NP [HUM]NP (ibid.: 95)

The OM, however, is not restricted in the same way, but can represent, in co-occurrence with two full NPs, either animate or inanimate NPs, depending on the

contextual topicality.⁶⁴ For Proto-Bantu Wald (1997: 95) has proposed a contextual topicality hierarchy, as in (49), clearly placing OM above the post-verbal NPs:

(49) SM>OM>NP->_NP

Haya (E22, two OMs), Tswana (S31, three OMs), Chaga (E62b, three and four OMs, without and with applicative), and Rwanda (D61, five and six OMs, data from R. Botne and A. Kimenyi (p.c)) illustrate multiple pre-stem OMs:

- (50) E22 a kat' á-ka-ki-mú-h-a
 Kato 3s-P₃-it-3s-give-FV
 'Kato gave it (to) him' (adapted from Duranti and Byarushengo (1977: 60))
- S31 b ke-tla-kwal-êl-êl-a ngwana batsadi lokwalô
 1s-FUT-write-APP-APP-FV child parents letter
 'I'll write a letter to the parents on behalf of the child'
- c ke-tla-lo-ba-mo-kwal-êl-êl-a
 1s-FUT-it-3p-3s-write-APP-APP-FV
 'I'll write it to them for him' (Cole 1955: 431–2)
- E62b d Mangí n-á-lé-zrúm-á máná nyámá kílrí-nyi
 Chief FOC-3s-P₂-send-FV child meat room-in
 'The chief sent the child for (to get) the meat in the room'
- Mangí n-á-lé-í-kú-rń-zrúm-a
 Chief FOC-3s-P₂-it-there-3s-send-FV
 'The chief sent him there with it'
- Mangí n-á-lé-zrúmbú-í-á rńka máná nyámá kíšú kílrí-nyi
 Chief FOC-3s-P₂-cut-APP-FV wife child meat knife room-in
 'Chief cut for the wife for the child the meat with a knife in the room'
- Mangí n-á-lé-í-kú-kí-rń-zrúmbú-í-a
 Chief FOC-3s-P₂-it(meat)-LOC-it(knife)-him/her-cut-APPL-FV
 [meat-room-it-knife-child/ wife]
 'Chief cut it for him (child)/her (wife) in there with it'

These examples are adapted from Moshi (1998: 142–4), who considers locative as an object. The last example, from Rwanda (D61) has only four, not five, pre-stem OMs, the possible two Class 1 nouns being represented by a single Class 1 OM. In this case beneficiary and recipient can only be distinguished contextually. In conversation full NPs would be preferred.

⁶⁴ Hawkinson (1976: 45ff.), who surveys a number of East African languages, has some languages with a conventional ordering, which, however, can be altered by a number of factors. These include 'earlier mentioned, more important', and a correlation between order of OMs and order of objects following the verb (last OM corresponds to first object following the verb, etc.).

- (51) D61 y-aa-bi-ha-yi-mu-mu-h-er-e-ye
 3s-past-it (food)-there-it (food)-her-him-give-APP-APP?-perfect
 ‘He gave it (food) to it (dog) there from her (?) for him (chief)’
 umugoré a-ra-na-ha-ki-zi-ba-ku-n-som-eesh-eesh-er-er-eza
 Woman 3s-FOC-also-there-it-them-3p-2s-1s-read-CAU-CAU-APP-APP-
 IPFV
 ‘The woman is also making them read it (book) with them (glasses) to
 you for me there (in the house)’

Type 2 languages have object marking post-verb-finally. All languages examined have the order Benefactive/Recipient/IO and Patient/DO, when there are two objects. There appear to be no exceptions. As far as can be seen, they can all take two such pronouns. Examples of more than two object pronouns co-occurring post-finally were not found. For this type the marking seems to consist always of independent pronouns. The following examples are from Konzime (A84, adapted from Beavon (1986: 175, 180)), illustrating one post-verbal pronoun (52b, d) and then two (e) with a ditransitive verb. Beavon (1986: 180) says A84 has a special set of pronouns to indicate the replacement of the second object, which may be ‘either the direct object or an object of a preposition’, in this case (52d, e) *má* versus the neutral pronoun *mé* (or the 1s pronoun *me*). So the second object is distinguished from the one occurring closest to the verb.

- (52) A84 a Me á si bee mwân
 1s P₂ PFV see child
 ‘I saw a child’
 b Go á si bee me
 2g P₂ PFV see 1p
 ‘You saw me’
 c Me á si jwe mwân mede
 1s P₂ PFV give child food
 ‘I gave the child some food’
 d Me á si jwe mwân mă
 1s P₂ PFV give child it
 ‘I gave it (to) the child’
 e Me á si jwe nye mă
 1s P₂ PFV give 3s it
 ‘I gave him it’

All the following examples are from Mboshi (C25, Fontenay 1989: 125), showing the recipient closer to the verb:

- (53) C25 a wà á-pe bísí mbóngó
 3s P₂-give 1p money
 ‘He gave us money’

- b bémbá wa mbóngó
 ask 3s money
 ‘Ask him (for) money’
- c pé wa buâ
 give 3s it
 ‘Give him it’

In Type 3 languages, with pre-stem and/or post-final pronominal object marking, object markers can be arranged in different ways. The Lunda examples illustrate first one (54b, c), then two pronominal objects (e, f), where the second object is post-verbal. Lunda (L52) has one pre-stem position (Kawasha 2002: 35, 39).

- (54) L52 a Ø-na-télek-i mbízhi
 (3s)-P₁-cook-FV meat
 ‘He (has) cooked meat’
- b Ø-na-yí-télek-i
 3s-P₁-it-cook-FV
 ‘He (has) cooked it’
- c n-a-mw-ink-a mukánda
 1s-P₂-3s-give-FV book
 ‘I gave him the book’
- d *n-a-w-ink-a kánsi
 1s-P₂-it-give-FV child
 *‘I gave it (to) the child’
- e n-a-mw-ink-á-wu kánsi
 1s-P₂-3s-give-FV-it child
 ‘I gave it (to) the child’
- f n-a-mw-ink-á-wu
 1s-P₂-3s-give-FV-it
 ‘I gave him it’

With applicatives when two pronominal objects occur in Lunda—in (55b) with one inanimate object—the second (patient) occurs post-verbally, while the object whose semantic role can be beneficiary or recipient occurs in pre-stem position (Kawasha 2002: 40):

- (55) L52 a Nswana w-a-send-el-a kánsi kabáka
 Nswana 3s-P₂-carry-APP-FV child maize
 ‘Nswana carried maize for the child’

- b Nswana w-a-mu-send-el-á-ku
 Nswana 3s-P₂-3s-carry-APP-FV-it
 ‘Nswana carried it for her’
- c *Nswana w-a-kí-send-el-á-yi
 Nswana 3s-P₂-it-carry-APP-FV-3s
 ‘Nswana carried it for her’

With two animate objects a similar pattern surfaces. As Kawasha explains, the order of the noun phrases is fixed and pronominal marking in the OM slot is governed by grammatical relations. A similar pattern occurs in Lucazi (K13): one object (in the examples below, the recipient) occurs at OM, while the other object, as well as locatives, occurs post-verbally (Fleisch 2000: 75), as in:

- (56) K13 a u-a-ngu-fuet-ele-io
 3s-P₂-1s-pay-APP.FV-it
 ‘He paid it to me’
- b nji-na-mu-hán-a-io
 1s-P₁-3s-give-ANT-it
 ‘I have given it to her’

In the above examples, the post-verbal object is cliticized. The post-verbal object in Kimbundu (H21) can occur as a phonologically reduced form and be cliticized as in the following examples (Chatelain [1888–9a] 1964: 86):

- (57) H21 a u-ngi-∅-ban’-ě
 3s-1s-give-it
 ‘He gives me it’
- b u-ngi-∅-bana ne
 3s-1s-give na+it
 ‘He gives me it’

In other languages (e.g. Lingala, Hungu, Mbwera) the post-verbal pronominal object can occur as a free pronoun.

5.4.4 Possible common origin of the three types

Güldemann (forthcoming) suggests a hypothesis for the origins of these types, based on considering evidence from Niger-Congo languages outside Bantu. Following Gensler (1994, 1997), he proposes that pre- or Proto-Bantu had two orders for sentence constituents, S (Aux) V O, where the O would have been a full noun, and also S Aux OP V. In these structures there would be a correlation, on the one hand, between the post-verbal position, more salience, and a full noun object, and, on the other hand, between the pre-verbal position, less salience, and a pronominal object. In this schema,

pronominal objects would normally occur pre-verbally, but if additional emphasis is required, a pronoun object could be doubled by repeating it post-verbally.⁶⁵

Type 1 languages have kept a strict correlation between the pre-verbal position and the pronominal form.⁶⁶ Type 3 languages have both possibilities for pronoun placement. Type 2 languages, a minority, presumably once had both possibilities but have generalized the post-verbal strategy and lost the original pre-verbal position.

5.4.5 Conclusions

First, there is a clear geographical pattern. Type 1 (pre-stem) predominates, being the only type in the northeast, southeast, and south, and occurring sporadically elsewhere. Type 2 (verb-final or post-verbal) is restricted to the northwest, with Type 3 (mixed type) intermediate between the other two. The exact boundaries of Type 3 remain to be determined, by having access to more data and by examining restrictions on occurrence for the pronominal markers.

Second, although Bantu languages mark pronominal objects in different positions, certain similarities can be observed. For pre-stem marked verbs especially, these have been in part noted already (e.g. in Bearth 2003; Cole 1955). This study goes beyond that by including languages with pronouns in post-final position and languages which include both positions.

In Type 1, in the east, with one OM followed by two noun phrases, either the OM is restricted (usually human) or the order of the co-occurring noun phrases is fixed. For pre-stem marking with several OMs in the languages considered, the Beneficiary/IO occurs closest to the stem. However, some languages have this order reversed (e.g. Lingala (Dzokanga 1992), Dciriku (Moehlig, p.c.)), and the Patient/DO occurs further left, often depending on the number of OMs.

In Type 2, when two post-final pronominal objects occur, Beneficiary/Recipient/IO precedes Patient/DO, that is, Beneficiary/IO precedes the Patient/DO by immediately following the stem. So Beneficiary/Recipient/IO is closer to the stem than Patient/DO in Types 1 and 2. The general animacy hierarchy, observed elsewhere (Duranti 1979; Woolford 1999) applies.

In Type 3, the most common pattern with two pronominal arguments is again to locate the IO/Beneficiary/Recipient at the pre-stem position, with the other argument (DO/Patient or other object) post-verbally or verb-finally.

Common to all three appears to be the fact that Beneficiary/Recipient/IO consistently occurs closer to the stem than Patient/DO, when both occur. This could be interpreted morphosyntactically or cognitively: the Beneficiary/Recipient/IO is more

⁶⁵ Note the G52 form *vana va-la u-ku-ya-wona-ya* 'The children you see' (lit. children those 2s-PRG-them-see-them). G52 is a Type 1 language, that is, it does not regularly use post-FV object pronouns, but here the use of the final pronoun 'strengthens the degree of cohesion' (Novotna 2005).

⁶⁶ It needs mentioning that many Type 1 languages have the possibility of strengthening the OM by postposing to the verb an independent (often demonstrative) pronoun.

closely tied to the semantic content of the stem, where 'stem' includes bare, derivational, or inflectional stem.

Third, this synchronic survey raises more questions than it answers. One example is the behaviour of Class 1 or 1s pronouns, which tend to behave differently from the other pronouns, a fact noted but not explained by others (Beavon 1986; Woolford 2000). The facts set out here provide a platform for further investigating this and other issues.

Finally, these three types are diachronically compatible with a pre-Bantu functional strategy, as outlined in Section 5.4.4.

6

What can be assumed for Proto-Bantu?

6.1 Preliminaries

6.1.1 *Historical background*

Since the general historical background to Bantu may not be familiar to all readers, it is briefly sketched here, then followed by an outline of the linguistic methodology used.

(Narrow) Bantu languages are said to form a discrete family within Niger-Congo, the largest linguistic phylum in the world with over 1,500 languages (Gordon 2004). Proto-Niger-Congo was likely spoken at least ten thousand years ago.¹ Within Niger-Congo, Bantu is a subpart of a grouping currently called Benue-Congo (Williamson and Blench 2000). In fact, the evidence that Narrow Bantu is a clearly separate family within Benue-Congo is not solid but as that does not really affect the general historical picture presented here the shaky classificatory basis is ignored. The ancestors of the Benue-Congo, farmers, lived between what is now the Ivory Coast and western Cameroon, starting some seven millennia ago. By 3000 BC the ancestors of the Bantu ('Proto-Bantu') had emerged.² They possibly lived in the valley of the Benue River, between eastern Nigeria and western Cameroon (Greenberg 1955), and had probably divided into what were later to become western and eastern Bantu. During the next millennium, they all moved slowly south and east across Cameroon, carrying the West African planting tradition with them.³ By 1000 BC they had moved much further into the rainforest and had reached various points on or near the Congo (Zaire) River in today's DRC, so that there was a wide range of Bantu communities in the forest (Vansina 1990: 51–4). There is a popular myth that the huge equatorial rainforest is uninhabitable and uncrossable. In fact, today it has some twelve million inhabitants, spread across 450 ethnic groups (Vansina 1990: 3) and the early Bantu apparently crossed it easily although slowly, following the major rivers (Congo=Zaire, Kasai,

¹ R. Blench (2006) and C. Ehret (p.c.).

² Some scholars think this estimate is on the high side and would prefer four millennia ago.

³ These movements and dates can be seen graphically in the maps in Vansina (1990: 51, 54).

Sankuru, Lualaba, Lomami, Sangha). By 1000 BC the ancestors of today's eastern Bantu were already at the eastern end of the forest, at the western edge of the Great Lakes region, to the east and south of the forest.

This is necessarily a shortened and simplified version of events. In particular it ignores the northwestern and northern Bantu communities, speaking Forest languages, whose history is somewhat separate and not further followed here (see Vansina 1990).

Ehret (1998) sees the ancestors of today's eastern Bantu communities as having split into two, an incipient northern and an incipient southern group, by three thousand years ago, both in the area west of the West Rift valley in East Africa. The former were likely to the west and south of Lake Victoria, the latter west of Lake Tanganyika. The northern group had reached Lake Victoria by the mid first millennium BC. During this period and later they came across communities speaking Nilo-Saharan, Cushitic, and Khoisan languages, who diversified their agriculture and boosted pastoralism. Iron-working also had appeared in the region by this time but its origins are disputed. During the next five hundred years some communities spread around Lake Victoria, some across Kenya and northern Tanzania to the coast by the early centuries AD, while others spread south and southeast across Tanzania close to northern Mozambique, by a couple of centuries later.

Meanwhile the southern offshoot of eastern Bantu had left the southern fringes of the rainforest and approached NE Zambia by the second half of the last millennium BC. They spread thence into much of Zambia, Malawi, Zimbabwe, southern Mozambique, and eastern South Africa, early Shona societies being established south of the Limpopo River by the third century AD. These early groups came across long-established Khoisan peoples in most of the region. Later movements, even into the second millennium AD, resulted in the current configuration of Bantu communities in South Africa.

Western Bantu likewise splintered. Sections moved east and northeast along the upper Congo River and its tributaries, and then southeast, so nearly all of the rainforest was occupied by western Bantu populations by 1 AD. Once the ancestors of a southern arm had crossed the lower Congo River and moved out of the rainforest into the adjacent savanna, during the latter half of the last millennium BC, one section continued south across the Benguela Highlands in Angola and finally into northern Namibia, while another turned east and southeast and moved as far as western Zambia, along the Upper Zambezi River. Most western Bantu populations were in or near their current locations by the late centuries BC or the early centuries AD.

With a few notable exceptions, most major movements of early Bantu-speaking peoples, east and west, were over by the early centuries AD, and the ancestors of most current Bantu populations had occupied central, eastern, and southern Africa by that time. Minor movements and local dispersals followed, with much contact, interaction, mixing, and assimilation.

The community speaking Proto- or early Bantu can thus be assumed to have existed some four or five millennia ago, which means that, on the one hand, the features reconstructed below are of considerable antiquity, and, on the other, it is not surprising to find such divergence on some levels between Bantu and Bantu, and between Bantu and non-Bantu Niger-Congo. It is easy to think of protolanguages as nodes on a tree diagram, implying they existed for a moment in time. Proto-Romance is usually defined as that form, or those forms, of late Latin that spawned the Romance languages, but Latin itself lasted a thousand years, from 500 BC to AD 500. The development from early to middle to late Latin to the early Romance languages was an organic seamless process. Greek lasted for a millennium in Greece before a late stage bore later varieties in Asia Minor, Egypt, and the Middle East. Common Germanic (1000 to 200 BC) and Proto-Indo-European (5000 to 3000 BC) are currently described in similar terms. If we think of 'pre-Bantu' as an organic development that started some five millennia ago and finally resulted in 'Proto-Bantu', around 2000 BC, that gives a better view of what probably happened. During that period, many of the processes set out in 2.10.2 were set in train.

6.1.2 *Linguistic reconstruction*

The main aim of this chapter is to make proposals about which morphemes, structures, and categories can be reconstructed for the verb in Proto- or early Bantu. It combines older accepted proposals made by others with some new hypotheses, and so is a reference source for Proto- or early Bantu.

Reconstruction of lexical items is based on identifying similar items in related contemporary languages and triangulating backwards from them. The most rigorous form of similarity is cognation: two or more items are considered cognate if they have the same or a similar meaning and can be shown to have descended by direct oral transmission from a single item in an ancestral language. The best test of direct oral transmission is regular phonological correspondence. Reconstructed items are built on today's cognates. So cognation has a semantic and a phonological component, which is not always as clear and simple as it sounds. The difficulties are twofold. One is that with grammatical items, semantic identity and regular phonological correspondence are harder to establish than with lexical items. The second is that grammatical morphemes and cognitive categories are tied into a system, and function together, much less independently than lexical items.

If we compare two lexemes, semantic identity is usually fairly obvious. If languages A and B both have (*ku*-)gulu 'leg', they refer to the same thing, whether we take the stem, or prefix and stem. If we compare two grams (grammatical morphemes), semantic identity varies from the transparent to the opaque. If A and B both have /-a-/ 'far past', we would say they are semantically identical. But what of /-a-/ 'far past' and /-a-/ 'general past', or /-a-/ 'far past' and /-á-/ 'near past', or /-aa-/ 'far past' and /-á-/ 'near past' or /-á-/ 'near past' and /-a-/ 'anterior = perfect', or /-á-/

‘near past’ and /-a-/ ‘present’, or /-á-/ ‘near past’ and ‘near future’? Those cases, and others, are attested in the database.

Similarly, a gram of the shape /la(a)/ (or /ra(a)/, [l] and [r] being non-distinctive in most Bantu languages, occurs across eastern Bantu. Sometimes it refers to future, sometimes to imperfective, sometimes to disjunctive focus, sometimes to other meanings (6.2.4(ix), below). How are such meanings to be reconciled, if at all?

One difficulty here is a typology of semantic or cognitive change. Universals of semantic change are less well established than those in phonological change. Over the last two decades linguists have been elaborating grammaticalization theory, which deals with which kinds of semantic shifts in grams are widespread, and to be expected, and therefore ‘natural’, and which are not. Such semantic chains can be found in the work of Bybee, Heine, Güldemann, and others, but they don’t resolve all the difficulties encountered in the current endeavour.

Since phonological change has been worked on for nearly two centuries now, it might be expected that common phonological paths have been charted, and that regularity might be expected rather than irregularity. That is generally but not always so. The /a/ mentioned above comes in different shapes. In some languages it is always short [a], in some languages long [a:], in some languages both occur contrastively. Proto-Bantu is assumed to have had contrastive (lexical) length. Today in lexemes some languages have kept the contrast, while some have neutralized it in favour of the short one (Schadeberg 1995*b*). But in grams vowel length does not always behave as it does in lexemes. The same is true for the [la(a)] mentioned above. The variant indicating future is overwhelmingly long in those languages which have kept contrastive length, whereas the disjunct/imperfective variant is mostly short, regardless of length in lexemes.

A second pitfall has to do with tone. Some languages have /a/ with high tone, others with low, others with contrastive high tone on one /a/ and low tone on a second. Several other factors play a role. In many of the source grammars tone is not marked, so we don’t know. Surface tone is marked in some grammars, while underlying tone is indicated in other analyses. In some languages tone is a function of the verbal word, not of individual grams.

One feature characterizes the phonological, and maybe semantic, changes here. It is that the phonological change involved in these grams—length and tone—is not regular, that is, it is not always the regular and more or less predictable change found in lexemes. It is rather as if—to paraphrase one of David Odden’s personal communications—speakers in some communities had woken up one morning and realized the expressive and semantic possibilities in varying length and especially tone. When Odden made this observation he had in mind Shambaa (G23), where contrasting surface length in vowels in lexical items has been neutralized, but nevertheless contrasting length plays a role in marking tense, aspect, and focus, and this contrast is apparently the result of innovation, not of retention of inherited contrasts, nor of losing any intervening consonant. He also had

in mind the expanded role of tone for grammatical purposes in the Shambaa verb.⁴

The second general problem mentioned above is that of reconstructing grammatical systems. Statements about what might or might not be reconstructed for an early or the earliest stage of the Bantu verb have often been tentative and impressionistic, based on considering a subset of Bantu languages. For example, having looked at tense reference in languages with which they were familiar, several authors have suggested at various times and places, that Proto-Bantu had multiple tense reference, certainly of past, perhaps of future tense.

The approach taken here is different and leads to different results—certainly in the area of tense reference. The focus is on tense and aspect, but includes other categories as by-products and necessary background. I start by examining the building blocks: pre-stem morphemes (6.2, especially 6.2.4), followed by post-stem morphemes (6.4, especially those representing aspect and mood at final vowel, 6.4.2), and then by combinations of morphemes at pre-stem and final vowel (6.5). Partly on the basis of these synchronic combinations, partly on the basis of which combinations and categories are intrinsically plausible, I then posit which combinations of morphemes representing which categories are probably assumable for Proto- or early Bantu (6.5).

In what follows, and indeed in earlier chapters, it may seem that frequency of occurrence and geographical distribution play a major role in whether an item can be reconstructed. This needs qualifying. Consider final vowel *-é* ‘subjunctive’ and pre-stem *-a-* ‘past, non-past’. Both are very common across Bantu, occurring in 80 per cent or more of the matrix languages and in a wide geographical cross-section of languages. This high percentage might be explained in several ways. They might be borrowed items, having swept across Bantu historically: while in principle this might have happened, there is little or no evidence that it did. They might be phonologically reduced forms of once longer items, via consonant loss: for *-a-* this may have happened once or twice, but it is not a major mechanism for *-a-*, and it never happened with *-é*. They might be semantically shifted forms of some older items: there is no evidence that this ever happened for *-é*, and no evidence that it happened with *-a-* ‘past’ (the most common *-a-* form). This leaves the obvious explanation that *-a-* and *-é* are so widespread in Bantu because they are inherited. In the case of *-a-*, this is supported by its fairly widespread occurrence in non-Bantu Niger-Congo languages. For *-é*, the support outside Bantu is less solid but still there. So the evidence from *-a-* and *-é* supports the connection between high frequency, wide geographical distribution, and reconstructibility. What of the converse: do low frequency and limited geographical distribution argue against reconstruction? Consider *-ki-* ‘situative, persistive’ and *-laa-* ‘future’. As will be seen below, these—especially *-laa-* ‘future’—are of much lower frequency. They only occur in limited geographical areas, in the east and southeast.

⁴ On the relation between length and tone, see Meeussen (1955).

This might seem to argue for their being innovations in the southeast of the Savanna area. If they were innovations, it would be nice to be able to identify a source for them, but no source presents itself. Further, certainly for *-ki-*, largely absent in the west and northwest of the Bantu area, and less certainly for *-laa-*, there are forms with identical or similar shape and the same or relatable meaning outside Bantu in Niger-Congo to the west. This suggests that these are archaisms, kept in the east and south of the Bantu area, and outside Bantu, but widely lost in most of Bantu. So low frequency and restricted geographical distribution are not necessarily in themselves indicators of innovation. Such cases have to be treated on their individual merits.

Since not all readers will be familiar with the material, what follows includes morphemes at each position whether relevant to TA or not, for the sake of completeness. Much of the tense and aspect material, and the material in some other sections is new, but material in other sections is shamelessly lifted from older sources, which are indicated. The synthetic structure assumed for the single-word verb in Proto-Bantu, set out in 2.3, 2.4, and 2.5, is repeated here for convenience:

Pre-SM + SM + NEG₂ + TA + [OM + [[root + extension] + FV]] + Post-FV

6.2 Pre-stem morphemes

6.2.1 Pre-SM (see 2.3.1, 2.9.2, 5.2)

In contemporary languages, various material may occur at Pre-SM. Among the commonest morphemes are *#ka*, *na*, *nga*, *ki*, *pa*. These—and others—are devices which link, or once linked, clauses, often translated in English by ‘if, when, and, although, etc.’. These are translations and not necessarily meanings. All have moved from being independent elements and are not assumed for Proto-Bantu.

The only morphemes at pre-SM with very wide distribution, and thus possibly reconstructible for Proto-Bantu, are those representing the primary negative and the bound (object) relative. Fifty-eight per cent of the matrix languages indicate negative here but that figure includes morphemes at Pre-SM, as well as clitics and morphemes that precede the verb—the sources are not always clear on the distinction. Exactly half of the 58 per cent (29 per cent) have reflexes of **(n)ka*, while reflexes of **(n)ti*, **(n)ta*, and **ti/ci* and other markers are much less frequent and more local. We can therefore assume that, whenever the distinction between two or more negatives arose, the negative prefix **(n)ka* in this position came to negate ‘unmarked main clauses’ (Güldemann 1999: 551). However, as pointed out in 5.2.4, the Pre-SM slot does not exist in Zone A and western Zone B languages, which can be explained in one of two ways: the slot and its constituent morphemes existed in Proto-Bantu and were then lost in the northwest, or they were never there, and the slot and the constituent morphemes were later Savanna innovations that came west into other Forest languages from the east.

Kamba Muzenga (1981) opts to posit **(n)ka-* and the Pre-SM slot for Proto-Bantu. I am inclined to the opposite point of view and for four reasons. One is that while Güldemann (1999: 552) admits that ‘trying to demonstrate that post-initials derive from former negative auxiliaries is problematic from an etymological viewpoint’, he finds plenty of examples of the proposed derivation of the pre-initial. This could well result from the post-initial being older and the morphemes involved more bleached and less transparent, while the pre-initial is younger and more transparent. A second is the range of morphemes involved: at post-initial, reflexes of **ti /ci* (30 per cent) is the commonest, followed by almost equal numbers of **ta*, **ka*, and **ca* (19 per cent–14 per cent) while for pre-initial, reflexes of **(n)ka* are three times more frequent than any of the other morphemes involved. This again suggests that the post-initial morphology had time to develop many variant shapes, while less change has gone on after the emergence of younger **(n)ka*. A third is geographical distribution: while the pre-initial strategy (and reflexes of **nka*) only occurs outside the northwest, the post-initial pattern obtains right across Bantu and is also more common elsewhere in Benue-Congo (Kordofanian, Bijogo, Adamawa, Kwa, Jukun, Cross River, Ekoid, Grassfields). A final reason is frequency: 74 per cent of all matrix languages use the post-SM slot, while only 58 per cent have an ‘initial’ negative, and only some of these are really prefixal at Pre-SM. Taken together, this tentatively suggests the post-initial pattern is older, going back into Niger-Congo beyond early Bantu, while the pre-initial pattern and the use of **nka-* postdate Proto-Bantu. This proposal, if correct, suggests the assumption of pre-initial **(n)ka-* for Proto-Bantu is at least doubtful.⁵ For more detailed interpretations and much more data, see Westphal (1958a), Kamba Muzenga (1981), and Güldemann (1996, 1999).

The relative markers here are morphologically identical to subject markers (except in Class 1). The sequence of Pre-SM and subject marker has the tonal sequence low-high, that is, all subject markers will be high in this context. Again, the same Zones A and B languages have no relative markers here because they do not have this slot, but Nsuka-Nkutsi (1982), aware of this, nevertheless posits relative markers here for Proto-Bantu.

It is not hard to see this object relative marker as also deriving from a once independent pre-verbal, pronominal element. If this is true, I do not have access to enough reliable data on relativization inside and outside Bantu to know at which stage this object marker became one of the two members of the pre-initial set. It is therefore at least possible that this was also not a pre-Bantu development, in which case the reconstruction of a pre-initial inflectional slot for Proto-Bantu would be based on two shaky categories.

⁵ An important piece of counter-evidence to this position, counter-evidence that would support Kamba Muzenga, would be tonal. Meeussen (1967: 108) suggests that when a pre-initial, including the negative, is present, it will be high-toned, followed by a low-toned SM. If **(n)ka-* had once been present in all Zone A and B languages but was lost, one would expect tonal traces. The evidence for this is not clear (see notes in the Appendices).

6.2.2 SM⁶ (2.3.2, 2.9.2(ii))

Sidestepping some details, reconstructions for person markers are: 1s *nI-*, 2s *ū-*, 3s indicative *ū-*, 3s *a-* subjunctive, 3s relative *jū-*, 1p *tū-*, 2p *mū-*, 3p *ba-*.

Tonally, SMs used as relatives are all high-toned, except 3s and Class 9. SMs used as subjunctives are all high. In non-relative absolutes, SMs are all high, except for participants, which are low. The low-high pattern mentioned in 6.2.1 overrides these patterns, where relevant.

No comparative overview of subject affixes in Niger-Congo has been published so I examined subject markers in a selected set of Niger-Congo languages outside Bantu.⁷ Two features characterize these markers. One is that most of these languages have analytic structures, so the subject markers are predominantly independent pronouns rather than affixes, which, surprisingly, seems not to have much effect on their shape and size—most pronouns and affixes are CV or V in shape. The second is that there is a lot of variation in shape in most persons. Most 1s independent pronouns consist of a labial nasal plus vowel—a common feature worldwide—while the (fewer) prefix forms consist just of apical or palatal nasal. Over half the 2s markers, independent or affixed, consist of a single vowel, most often a non-high vowel, most often a back vowel (*ū*, *o*, *ɔ*). Nearly all the 3s markers, independent or affixed, consist of a single vowel, always non-high, usually *ū*, *o*, *ɔ*, or *a*. 1p markers vary so much as to make generalizations impossible. Many 2p markers consist of a nasal, or nasal and vowel. 3p markers show considerable variation but one pattern involves a labial consonant plus [a] or [o], or forms which might derive from that. A few languages⁸ have a tonal contrast between prefixes representing participants (first, second person) and non-participants, and in this contrast participants are usually low, non-participants usually high.

Limited conclusions can be drawn from this about subject marking shared by Bantu and other Niger-Congo. A shared feature is likely to be inherited by Bantu and not innovated. The following features are shared: for 1s, a morpheme consisting of apical or palatal nasal and high front vowel, although not widespread in Niger-Congo (Kordofanian, Cross River, Grassfields); for 2s (*ū*, *o*, *ɔ*) and 3s (*ū*, *o*, *ɔ*, or *a*), a morpheme consisting of a single vowel, in over half the sample; for 2p, a morpheme consisting of nasal, or nasal and vowel, in over half the sample; a 3p with a labial plus [o] or [a], in Kru, Kwa, and Ubangi; a tonal contrast between participants and non-participants, as described above. While it would be unwise on the basis of this superficial survey to attribute any of these features to an early stage of Niger-Congo, it is clear enough

⁶ This largely ignores the agreement of SM and noun classes. See Meeussen (1967), from whom much of this information comes.

⁷ One or more languages from each of: Kordofanian (Orig, Moro, Otoro); Atlantic (Fula, Bijogo, Kisi); Mande (Mende); Ijoid; Dogon; Kru; Adamawa (Doyayo); Ubangi (Gbaya, Zande); Kwa (Ewe); W. Benue-Congo (Igbo, Yoruba); Central Nigeria (Jukun); Cross River (Lokaa, Ibibio); Mambila, Tikar, Ekoid (Ejagham), Grassfields (Aghem, Kom, Dschang), a total of some twenty-five languages. Some overviews (e.g. Welmers 1973) were also consulted.

⁸ Ewe, Yoruba, Igbo, maybe Akan and Grassfields.

that all of them are features which are shared by at least some other Niger-Congo languages, go back beyond Bantu at least some distance into Niger-Congo and are therefore not Bantu innovations.

6.2.3 *NEG₂: NEG₁ versus NEG₂ in Proto-Bantu? (2.3.3, 5.2, 5.2.2, 6.2.1)*

NEG₂ is the commonest negative position in Bantu. Negatives here do not generally co-occur in the same verb form with those at Pre-SM, that is, a verb form typically has one or the other. This negative position and the morphemes occupying it were probably originally associated with non-main clause contexts such as subjunctives, relatives, other subordinate clauses, and maybe infinitives. While that is still widely true today, it is not universally so, the contexts having widened in some languages. Of the morphemes occurring at NEG₂, the commonest are reflexes of *ti/ci*. Reflexes of *tá*, **ka*, and **ca* are less common.

Can we assume that certain morphemes and the contrast between two positions and maybe three functions (main clause, subjunctive, relative/subordinate) go back to Proto- or early Bantu? For such an assumption there are two kinds of support, evidence from Bantu below the Proto-Bantu node, and evidence from the rest of Niger-Congo, above the node. In 5.2.4 and 5.2.8, it was concluded that the Bantu evidence suggests that: (a) negation involving the post-initial position goes back to early or pre-Bantu;⁹ (b) a binary contrast of indicative versus subjunctive negative is equally ancient; (c) a tertiary contrast involving relative negatives is only reliably attested in the Savanna languages; (d) **(n)ka* is and probably always was associated with the Pre-SM position and main clause indicatives in Savanna languages, but its assumption for Proto-Bantu is likely but not sure; (e) the main association of post-SM *ti* is with subjunctive negation; (f) the role of *ta* at Post-SM is not clear; and (g) imperative negatives provide the largest set of innovations, because such negatives easily involve auxiliaries such as ‘stop, leave (off), cease, let be, miss, lack, refuse’, which visibly become grammaticalized over time.

Evidence from non-Bantu Niger-Congo does not clearly support most of these hypotheses. Since no published overview of negation across Niger-Congo exists, I examined negation in a range of Niger-Congo languages outside Bantu.¹⁰ Coverage of negation in the sources was not always complete so the generalizations here may need refining. There is a great range of variation in the structures and morphemes involved. At least half of the languages surveyed distinguish (at least) two forms of negation: most often this contrasts imperative versus main clause, main versus subordinate, or indicative versus subjunctive, although some languages contrast other categories.¹¹ Over half the languages mark negation after the verb root, as suffix, post-verbal or clause-final particle. Most of the languages surveyed are analytic not synthetic, so

⁹ See Güldemann (1999: 580) for a contrary position.

¹⁰ The same languages mentioned in *n.* 7.

¹¹ What these other categories are is particularly crucial but to establish them clearly would have taken more time than was available.

the structural contrast between pre-initial versus post-initial prefix does not apply but is replaced by pre-verbal/pre-subject and post-subject/pre-AUX morphemes, respectively. In the languages examined, the post-subject negative is commoner than the pre-subject position, and includes morphemes of a VC shape, most often [kV] or [tV]. It is thus clear that pre-root or pre-verbal morphemes with a CV structure consisting of [tV] and [kV] exist in Niger-Congo outside Bantu. Superficially, strategies in Grassfields, Bijogo, and Kordofanian most resemble those in Narrow Bantu, although they are not identical.

Some conclusions from this brief examination, although limited, are possible. It would seem that at least a binary negative contrast—probably indicative/main clause versus some other category or categories—goes back beyond Bantu into wider Niger-Congo and is thus inherited in Bantu. That contrast did not necessarily involve pre-initial versus post-initial morphology: it almost certainly originally involved a post-initial morpheme, contrasted either with pre-initial morpheme, or with pre- or post-verbal clitic or particle.¹² Similarly the association with negation of pre-root morphemes of the shape [ta] (or tV) and [ka] (or [kV]) also characterizes Niger-Congo but it is currently difficult to associate them with pre- or post-initial position or with particular functions, because in many Niger-Congo languages they are pre-verbal or pre-root particles, not affixes. They appear to have gone from being pre-verbal particles in Niger-Congo to prefixes in Bantu. Finally, the particular constellation(s) of morphemes, structures and functions that we see in Bantu does not occur as such elsewhere in Niger-Congo and so appears to be innovation in Bantu.

6.2.4 TA (*Meeussen's 'formative' followed by 'limitative' and focus, 2.3.4–4, 5.3*)

In Bantu languages today this slot contains morphemes representing tense, aspect, mood, modality (Bybee *et al.* 1994: 319–23), and focus. Some contemporary Bantu languages have just one TA morpheme here, while others allow two, three, four,¹³ even five morphemes in a sequence. Comparative evidence suggests Proto- or early Bantu allowed a possible sequence of two: null, *a*, (and maybe *laa*) occurred first, followed by *ka* (maybe *ki*)¹⁴ and *a* (and maybe *la*).

Sections 6.2.4(i) to 6.2.4(ix) set out those morphemes which occur at TA today with more than a local distribution. Some are primitives (null, *a*₁, *ka*, *?laa*, *?ki*, *a*₂, *?la*) that is, they are morphemes inherited from Proto-Bantu in the shape cited below, while others (*li+ku*, *na*, *nga*, *ma*) are secondary forms derived or derivable from auxiliaries

¹² There is also a pattern in which a post-initial and a post-verbal bracket the verb or the verb phrase, rather as in French *ne V(P) pas*.

¹³ For a detailed discussion of four, in E50 languages, see Bennett (1969: 219, 297).

¹⁴ It will be seen in 6.2.4(iv) and 6.2.4(v) that some of the 'meanings' of *ka* and *ki* involve itives, conditionals, and related categories. Bybee *et al.* treat itives and ventives as modalities (1992: 320) and conditionals (ibid: 322) as moods. Whether that is accurate, they are clearly different from tense (and aspect).

or particles. Some occur mainly independently today (null, *a*, *ka*, *la(a)*, *li+ku*, *na*, *ma*), others (*nga*) occur mainly in dependent or subordinate clauses, and some occur in both (null, *ka*, *na*). The final section investigates which of these morphemes might be assumed for Proto-Bantu.¹⁵

6.2.4(i) *Null (and neutral final vowel -a) ‘unmarked/general/vast/zero present’
See, for example,

(1) Haya (E22) tu-ø-gur-á ‘we buy’ (underlying form; [tugúra] surface form)

Since this form was discussed and exemplified at some length in 3.11 it is only summarized here. It is characterized by an absence of structural marking for aspect or tense and the high tone on the final syllable has no demonstrable grammatical or lexical value.¹⁶ It is thus the ultimate unmarked form. It refers to no particular time, so highlights the action (‘buying’), and if there is a time it is the ‘vast present’ (J. Hewson, p.c.), stretching on either side of the time of speaking. So there is a pleasant fit between form (no marking) and meaning (no particular time). Such forms have four typical uses: besides referring to the vast present, they are one way of representing narratives; occur in subordinate clauses (as participials): and are often the unmarked, low-focus conjunctive member of the conjunctive-disjunctive pair.

The position of such null forms in any system is language-specific. In Haya, it is Perfective, because it contrasts with Progressive (= imperfective) *ni-tu-ø-gur-á* ‘We are buying’, but in other languages it might behave differently. The ‘general or “vast” present’ may include the here and now, so Ganda, a close relative of Haya and geographically near, has *tu-ø-gul-a*, translating ‘We buy’ and ‘We are buying’.

Such null forms are widespread in Bantu. They occur in matrix languages of all zones except F, although in the larger database they do occur in some F languages. They also occur in some Grassfields languages and elsewhere in Niger-Congo. They occur in 50 per cent of the matrix languages as vast present, and in 10 per cent as past, but as there is partial overlap between the two sets,¹⁷ the total is 57 per cent. I assume the absence of null presents in any language or group of languages results from their having been replaced by another marker, e.g. Swahili (G42 *tu-na-nunua* ‘We buy, are buying’), where the *na* may originally have been a focus marker (Wald 1997). Its semantic range has been expanded in some languages in ways largely predictable from grammaticalization theory. Thus it occurs in other imperfective categories such as habitual or durative and in other tense reference such as near future or non-past (present and future).

In 10 per cent of the database languages a null form occurs with reference to one or other degree of past (A43, 72, 84, B52, C25, 36, eastern G11, 33, 401, 51). Some of these (eastern G11, 33, 401, 50, also E71) can probably be plausibly explained

¹⁵ Guthrie (1971: 145) and Meeussen (1967: 109, 113) both contain lists of morphemes at TA that might be assumed for PB.

¹⁶ See 3.11 for a brief discussion of ‘melodic high’.

¹⁷ C36, G33, and G51 have a null present and a null past.

as deriving from simplification of historical vowel copy forms (so **tu-Ø-lIm-I* ‘near past/anterior’ > *tu-Ø-lIm-a*).¹⁸ Similarly, what appear as null pasts in the Zone A languages (A43, 72, 84) may in fact be *Ø-I* near past forms disguised by assimilation or deletion affecting the final vowel.

A null present can certainly be assumed for Proto-Bantu. This assumption is buttressed by what occurs elsewhere in Niger-Congo. A survey of the languages mentioned in n. 7 and in Welmers (1973: 346–7, 380, 391, 396, 408–9, etc.) shows similar null forms in Niger-Congo.

6.2.4(ii) -a₁- ‘past’; -a₂- ‘non-past’/disjunctive focus? The discussion and exemplification in 3.2.1, 3.6, 3.9.1, and 5.3 are summarized here. A morpheme with [-a-] as its only structural component occurs in at least 84 per cent of the matrix languages and in all zones, although less commonly in Forest languages. It is the most widespread of all markers at TA. In 78 per cent of the matrix languages it has past reference, in another 27 per cent of the survey languages it refers to other categories, predominantly non-past, present, future, imperfective, disjunctive focus, and in about a dozen it apparently encodes anterior. Most of the 27 per cent are languages which also have it in past reference. Only 6 per cent of these do not also have it in past reference, so the total percentage of languages with *-a-* in some kind of tense reference is 78 + 6 = 84 per cent. Some languages have more than one /a/, one referring to past, the other not. Other languages have more than one past /a/, in fact, an amazing proliferation of tonal and vowel length variants of past /a/. I assume earlier stages of Bantu had less semantic and phonological variation of /a/ than exists today. Several explanations for this proliferation offer themselves. This topic deserves a book, but what are seen as the main possibilities are outlined here.

One possible explanation is semantic shift from an older anterior *-a-*. A link between those *-a-* which today refer to non-past (mainly present) and those representing past might seem to derive from older forms with anterior (‘perfect’) reference. An anterior involves two situations, a previous situation and a later or present state or situation, chronologically ordered, in which the present situation is the result of the previous situation, or in which the previous situation is in some way still relevant to the current one. Remove the present result or relevance component and the result is a past tense. This can be seen in modern French (*Nous avons mangé*) and many varieties of German (*Wir haben gegessen*), where what used to be anteriors a few centuries ago have straight temporal reference today, at least in speech. On the other hand, remove the past requirement and what remains is a present. In many Bantu languages, the anterior used with dynamic verbs represents a past situation with some present relevance but with inchoative verbs such as ‘know (come to know)’ or ‘sleep (fall asleep)’, the anterior form represents the result of the past action, that is, a present (‘we know, she

¹⁸ The connection between vowel copy and null pasts is strengthened by the shape of the SM for 2/3s. As can be seen in (25), the SMs for 2/3s in the anterior/near past in G43 and G44 are *ku/ka*, rather than the usual *u/a*, found with other tenses/aspects. In these neighbouring languages the null past also has *ku/ka*, found rarely or not at all in other tenses or aspects.

is asleep'). If such anteriors were generalized from inchoative to all verbs, that would give the present meaning we see today in some languages (4.11.3).

Although at first sight this seems plausible, there are several objections. In most Bantu languages today, and as far as can be judged, also in the past, *-a-* represents past, not anterior, and while a path from anterior to present may be plausible, a path from past to present is not. The major works on grammaticalization paths (Bybee *et al.* 1994, Heine and Kuteva 2002) nowhere mention a line from past to present. Further, nearly one third (27 per cent) of Bantu languages have an *a*-present, an amazingly high percentage if it is claimed they derive from *a*-pasts, in view of the fact that such a path of change is not apparently attested anywhere else in the world. Finally, given that a third of Bantu might have undergone this shift, we might expect to see at least a few languages where the change is still going on, but we do not. It is therefore reasonable to seek another explanation for the non-past *-a-*.

A second possible explanation, also rejected, is phonological: an original morpheme of the shape [Ca] (or [aCa]), which would lose its consonant to produce a new [a] or [a:]. Sections 6.2.4 and 6.5 set out the common pre-stem tense-aspect morphemes occurring today across Bantu and assumable for Proto-Bantu. They are, with approximate incidence of occurrence across Bantu in brackets after each: /ka/ (71 per cent), various meanings, never present or non-past; /na/ (40 per cent), various meanings, rarely present or non-past; /nga/ (29 per cent) 'concessive'; /ma/ (25 per cent) 'anterior, past'; /laa/ (17 per cent) 'future'; /la/ (5 per cent) 'disjunctive, present'. A very few other such morphemes occur, with an incidence under 5 per cent, and with only local distribution. Examination of the reflexes of these consonants across Bantu (in e.g. Guthrie 1967–71) shows that while two (*k, l) are lost locally, there is no consistent, Bantu-wide intervocalic loss of the units (k, n, ng, m, l) involved.¹⁹ This effectively eliminates the possibility of a single morpheme of the shape /-(a)Ca-/ as the source for /a/ or /a:/.²⁰

Other explanations are more valid.

A third kind of explanation, discussed in 3.9.1, is phonological in origin: a short past [a] following the consonant and glide of subject marker could lengthen and eventually become reinterpreted as an independent long /a:/, used to carry a new past meaning. Tense-aspect morphemes follow the subject marker. Most subject markers consist of (consonant and) tone-bearing [i] or [u]. When these are followed by a vowel such as [a], the [i, u] typically become glides, lengthening the [a], and their tone is displaced onto the [a]. Thus over millennia /a/ developed several tonal and length alloforms. Languages seized on this as a means of expressing new grammatical distinctions, and

¹⁹ Could *la/ra* 'disjunctive, present' have once been more common and become /a/ by deleting the liquid? Yes, but such deletion is not otherwise attested in most languages with only /a/ today.

²⁰ Two lesser arguments would support this conclusion. One affects non-past *-a-* (incidence of occurrence 27%): with the exception of /la/ (5%), none of these represents a present or non-past meaning, so could hardly provide a plausible semantic source. The other affects past *-a-*: while *-ka-* and *-ma-* do have past meaning, and occur fairly widely, it is not obvious why they would so often drop their consonants to provide a second morpheme with past reference.

gradually the alloforms became phonologically and semantically distinctive. Twenty-two per cent of the matrix languages have contrastive /a/, that is, it is the tone or the length of the /a/ that distinguishes two tenses, but very few languages distinguish two past forms on the basis of a prosodic contrast between two different /a/s alone. A length contrast for /a/ is less common than a tone contrast, but then there are many more Bantu languages with tones than with a length contrast in general. Tone and length contrasts are exemplified in Nande (D42, tone) and Koti (P311, length):²¹

- (2) D42 tw-á-gúla ‘We bought (P₄)’ versus tw-a-gula ‘We bought (P₃)’
 P311 k-aa-xiciyé puúzi versus k-a-kholá warákha
 ‘I killed a goat (P₂)’ ‘I took a letter (P₁)’

Although it is tempting to want to draw conclusions about a general correlation between tone (high versus low) and past meaning (recent versus less recent), the available data does not so far provide a firm basis for such conclusions.²²

While this explanation is plausible for the proliferation of past morphemes, it is an unlikely source for the non-pasts for two reasons: one is that such a process would represent past, not present time, and second, the result would be a long vowel, but the non-pasts nearly all have short vowels.

A fourth explanation is that combinations of /a/ and other morphemes could produce further past reference.²³ Thus past -a- could be followed immediately by itive -ka- (i.e. a+ka), giving forms translatable as ‘went and verbed’. Since itives tend to remove the time and place of the situation far from the present, the combination of past and itive may give a remote(r) past (or future), which is a minor source for such pasts. In some cases, there is reason to think that /ka/ ‘past’ derives from earlier /a+ka/. A major source is the combination of pre-stem -a- ‘past’ plus the final vowel -ile ‘anterior aspect’ (i.e. -a-verb-ile): such a combination would give a pluperfect reading (‘had verbed’), where -ile would indicate that one past situation had occurred earlier than, and was relevant to or its results continued into, the later past situation represented by -a-. Removing the relevancy or continuation requirement simply leaves -a-...-ile referring to a second, more distant past. Other combinations of /a/ and morphemes originally having no past reference provide further minor sources: so Swahili /li/ ‘past’ (see 3.2.1 and 3.4) comes from /a+li/, where /a/ originally represented ‘past’ and /-li/ ‘locative be’.

²¹ Underlying length contrast is often hard to judge because /a/ typically occur after SMs containing a glide, which automatically lengthens a short vowel, thus neutralizing the surface length difference).

²² See 3.9.1 and Nurse and Philippson (2006). A proposal was made by Meeussen (1967: 109), and following him, Bastin (1994), who tentatively suggested reconstructing an inherited contrast between low-toned *a* (P₁) and high-toned *á* (P₂) for PB. This is proposed on the basis of a rather small and geographically restricted (‘central’) set of languages. In the database used here, and in Nurse and Philippson (2006), for languages with a two-way contrast in past reference (P₂/Far/Remote versus P₁/Near/ Hodiernal), the number of languages with high-toned *á* representing Near Past actually exceeds those with *-á* representing Far Past. So it would be unwise to automatically correlate high-toned *-á* with Far Past reference.

²³ Discussed also in 6.2.4(iii) and 6.5.

A final explanation is that the null and /a/ ‘past’ tense markers can and presumably could be followed by disjunctive focus markers, /a/ and /la/. In 5.3 it was suggested that many of today’s /a/ ‘non-past’ can be derived from the focus marker /a/, via the grammaticalization path traced by Güldemann (2003b): \emptyset ‘present’ plus /a/ ‘disjunctive’ would give first a progressive, then /a/ ‘present’ or ‘non-past’. /a/ ‘past’ plus /a/ ‘disjunctive’ would give a source for long-vowelled /a:/ ‘past’.

While the foregoing suggests several plausible paths for deriving today’s many /a/ from a simpler earlier Proto-Bantu situation, it is also possible that past and non-past /a/ were both inherited in Proto-Bantu from Niger-Congo. A morpheme /a/ with past reference exists in Niger-Congo outside Bantu, as does *a* with non-past/present reference. A cursory search of non-Bantu Niger-Congo languages showed this. I found /a/ with exclusively past or anterior reference in Bijogo (Atlantic), Kpelle (Comrie 1976: 57; Welmers 1973: 396), Nupe (Welmers 1973, as the following), and Kru: with past and non-past meaning in Fante (Akan), Zande, Senari and Senufo, and Grassfields Bantu: and as non-past in at least Mende, Ewe, Jukun, and Otoro (Kordofanian). This survey is not meant to be exhaustive but if a cursory search can reveal this range, a more thorough one would certainly reinforce the point that *a* with a range of reference, past and non-past, can be found across Niger-Congo outside Bantu.

This suggests that more than one **a*, most likely short-vowelled, tones uncertain but surely contrastive, can be reconstructed for Proto-Bantu, one with past, the other with focus reference, both possibly with tonal and semantic variation. Since most non-Bantu Niger-Congo languages are aspect, not tense, languages, it seems likely that as past tense reference burgeoned in Proto- or early Bantu, one of its vehicles was a multiplication of original **a*.

On the preliminary basis of what exists outside Bantu in Niger-Congo, can we assume a third marker /a/ ‘present or non-past’ for Proto-Bantu? In 6.5 below, this possibility is rejected for systemic reasons: if null represented ‘non-past, (vast) present’, and /a/ represented ‘past’, it is not clear that there was any place for another temporal /a/.

These are areas for more comparative work, especially within wider Niger-Congo.

6.2.4(iii) **-ka-* ‘itive, narrative (3.12.1), far future and far past (3.2)’ (Botne 1999)

As not all of the various *ka* have been mentioned yet, and even those mentioned have not been discussed in detail, this section is longer than the two preceding.

More variables are involved in discussing *ka*-forms than with the preceding formatives. First, while some *ka* are doubtless of long standing in Bantu, others are likely—and in some cases are stated by authors—to derive more recently from auxiliaries such as **-yikala* ‘be, live, stay’, **-yika* ‘come/go down’, and possibly other motion verbs such as **-genda* ‘go’. The connection with **-yika* is asserted without much proof in some cases. Second, since **k* is lost in some or all environments (Guthrie 1971: 30–43) in nearly all languages in Zone C, many languages in Zone A, B20, and parts

of Zone D (D30, 50, parts of D10 and 20), reflexes of **ka* may be indistinguishable structurally, though in principle not tonally, from those of **a* in those languages, so we cannot always be completely sure in those languages whether we are dealing with *a* or *ka*. Third, whereas the other formatives discussed here occur in one position, *ka*-variants occur verb-initially and at two different pre-stem positions ('formative', 'limitative'). In some languages with these two positions, *ka* usually occurs in the second, limitative, position, following other TA markers, whereas in other languages, which have neutralized the contrast between formative and limitative, *ka* occurs in the same single position as other TA markers.

- (3) a Haya (E22)²⁴ ká-tu-Ø-gura ébitabo 'When(ever) we buy books ...'
 b ká-tu-raa-gya Torontó ... 'If we go to Toronto ...'
 c Ila (M63) ka-tu-vumba maanda 'and we thatched houses'
 d Nyamwezi (F22) ka-lol-ag-é '(Go and) look'
 e a-ku-ka-mala
 3s-FUT-Itive-finish
 'He will go and finish'
 f a-ka-ka-mala
 3s-NAR-Itive-finish
 'and he went and finished'
 (Maganga and Schadeberg 1992: 108)

Fourth, *ka*-morphemes vary considerably in meaning and function. Two of these, and the obvious issue of to what extent the *ka*-forms are relatable, are discussed at length in Botne (1999), also Güldemann (1996: 138–43).

Six main *ka*-morphemes were identified: negative, itive, narrative, (far) future, (far) past, and 'if/when/conditional/situative/persistent'. There are a few minor functions, such as habitual. What follows ignores negative and minor functions, negative *ka* because it is not a TA marker and does not occur in the same slots in the verbal string as the other *ka*,²⁵ the minor functions because it is not clear how to relate meanings such as habitual to the others, and also because in some cases this *ka*-habitual may derive from *-*yikala* 'be', as some sources suggest. After sketching 'if/when/conditional/persistent' below, it is also largely ignored because, although it may be connected to the four main *ka*-forms, that is hard to prove conclusively.

²⁴ Haya has several *ka*, some pre-initial (e.g. *ká*- 'if/when', *ká*- in hortatives), others in the TA slot (e.g. *-ká*- P₃). All are structurally and tonally identical so Hyman (p.c.) thinks they may be, or derive from, one and the same morpheme.

²⁵ Ka-NEG occurs in fifteen languages, all except C101 spoken in East and South Africa. Strictly speaking, they do not occur at TA but at NEG₂, but are mentioned here because of their shape. I assume they are a local innovation or local innovations in negative marking and are not connected with the other /ka/ below. As nearly all languages with this /ka/ NEG also have some other /ka/, discounting this /ka/ does not reduce the almost universal distribution of non-negative /ka/.

Itives, also called *ka*-movendi and andative, indicate ‘location of the event away from the deictic center’ (Botne (1999), who calls it distal).²⁶ *Ka*-itives occur in at least 33 per cent of the matrix languages—‘at least’ because the data is likely to be incomplete in some cases—and are thus the most widespread *ka*-forms. They occur in all zones but predominantly in a broad swathe of Savanna languages from the Atlantic (Angola, DRC) across to the Indian Ocean and north to the Great Lakes and east (Zones (H), K, L, M, N, P, R: see Botne’s map (1999: 475)). Itives occur most often with imperatives and subjunctives, but also with indicatives. Botne suggests the imperative or subjunctive may have been the point of origin of this *ka* (see (3d), above).

In narratives²⁷ containing a string of situations, the general time framework is established initially, subsequent actions being indicated by the use of consecutive, narrative, subsecutive, or sequential (3.12.1). The narrative tense is here used as a cover term for all of these (Rose *et al.* 2002). So the narrative is a relative tense. *Ka*-narratives occur in 29 per cent of the languages, in all zones except A and L, but predominantly in the northeast (E, F, and G) and infrequently in K, P, and S. Narrative-*ka* occurs mostly with indicatives but also with subjunctives.

A *ka*-future occurs in 25 (perhaps 29) per cent of the database languages, in all zones except G, N, and S.²⁸ It is commonest in zones D, K, L, and M (see map in Botne (1999: 497)) — central languages—and scantily represented in B, C, E, and F. It occurs predominantly with indicatives but also with forms that are subjunctive in shape. It refers mostly to far futures. Botne thinks that this *ka*, but not itive *ka*, might be assigned to early, even Proto-Bantu. Examples:

- (4) Umbundu (R11) tw-aka-rima ‘We will (F₂) cultivate’
 Mbala (H41) ga-ga-loomb-ulula
 REL.3s-FUT₂-request-again
 ‘... which she will request again’

²⁶ Cross-linguistically, itives are often connected to a verb ‘go’. ‘Go’ itives also occur in Bantu, as in e.g. G22 *a-nde-kaba* ‘3s went there and hit’, where the *nde* is clearly related to common Bantu *-genda* ‘go’.

²⁷ It is not clear that itives and narrative are really distinct. The central meaning may be that of the itive, ‘location of event away from the deictic center’, and the narrative meaning ‘A then B then C...’ an implicature. The only language known to Schadeberg (p.c.) and myself where they are today clearly distinct is Nyamwezi (see (3f), above, where two *ka* differ tonally, both being L, but the narrative apparently lowering the tone of the SM, and occur in sequence.

²⁸ With Schadeberg (1980b), I treat Akoose (A15) *-a-* as reflecting **ka*, not **a*, for two reasons. The first is phonological. As mentioned earlier in the section, Guthrie points out that in many (not all) Forest languages PB **k* weakens or deletes. In some languages it deletes in all non-prenasalized positions, while in others it only deletes in C₂ or C₃ of the stem. Guthrie has no discussion of the reflexes of **k* in prefixal TA morphemes, so I interpret this to mean that **k* may also weaken or delete in such morphemes in these languages (see Hyman 2003b: 259). The second reason has to do with meaning. We have seen the typical range of meanings of *a* and *ka*. While *a* typically represents past and almost never future, *ka* quite often represents future. When I find in Akoose *a* as future, I am suspicious, especially as a corresponding *ka* ‘future’ occurs in some neighbouring languages, and when we know that **k* deletes in Akoose.

This is not a major issue, because neither *a* nor *ka* is frequent as a future marker in the Forest languages (*ka* is a little more frequent than *a*). Nevertheless all estimates of the frequency of /*ka*/ may be underestimates, especially those referring to ‘past’, because the loss of [k] in the northwest (and elsewhere such as P30) would lead to past and past narrative falling together, or at least escaping the analyst’s eye.

Lucazi (K13)	tu- <u>ka</u> -ímba ‘We will (F ₂) sing’
Lozi (K21)	ni- <u>kaa</u> -bóna ‘I will see’
Subia (K41)	<u>ká</u> -tú-nyw-e ‘We will drink’
Bukusu (E31)	xu- <u>xa</u> -xul-e ‘We will buy (F ₂)’

A *ka*-past occurs in only 15 per cent of the database languages. It predominates in an area centred on southwestern (F10, M11, M14) and southern (G11, G62, M25, M301) Tanzania, northern Zambia (N14), and northern Malawi (N21). It is absent from zones B, C, D, P, R, and S, and infrequent elsewhere. The *ka*-past occurs overwhelmingly with indicatives and refers mostly to far pasts. It sometimes co-occurs with other markers of pastness (so *-iti* in N14, and *-a-* in Kete (L21), in the examples). Examples:

(5) N21	ti- <u>ka</u> -himba ‘We struck (P ₃)’
N14	ti- <u>ka</u> -hik- <u>iti</u> ‘We came (P ₂)’
L21	cw-a: <u>ká</u> -tand- <u>il</u> ‘We burned (only past)’

#*ka-*/*-ka-*, translated by English ‘if/when/conditional/participial/persistent’, assuming this is a coherent grouping, occurs in 12 per cent of the database languages. It is absent from six zones (B, H, K, L, M, R), infrequent in most others, and is apparently a local development, the centre of relative frequency being a thin continuous strip of languages along the east coast and just inland, from Kenya through central and southern Tanzania, Malawi, Mozambique, and into northern South Africa. While some of these *-ka-* may derive from **yikala* ‘be’, others have a clear functional overlap with *-ki-*: dialects of some northeast languages have *-ki-*, while others have *-ka-*, or some languages have *-ki-*, while their neighbours have *-ka-*. For a partial list of such these, see Güldemann (1996: 143).²⁹ Examples:

(6) Makonde (P23)	ni- <u>ka</u> -súma 1s-if-buy ‘If I buy ...’
Langi (F33)	o- <u>ká</u> -tó- <u>on-é</u> 2s-when-1p-see-FV ‘When you saw us ...’
Ruri (E25)	ci- <u>ka</u> -gura ‘If we buy ...’

²⁹ This is really a ragbag collection, which I have some trouble relating to the other *ka*, and for three main reasons. One, I am unsure how to relate the range of meanings and functions of this set to the other meanings and functions within the set and to the other meanings of *ka* under consideration. An obvious difficulty is the syntactic difference between Bantu languages and English: where English and other European languages require a conjunction (‘if, when’), Bantu languages are notoriously short of conjunctions. Being thus asyndetic, they treat the relationship between the part of the sentence verbally so the frequent ‘if, when, etc.’ are often artifacts of the translation. Two, in some cases there is an alternation with *ki*, which I cannot explain. Three, the geographical distribution does not correspond well with boundaries between subgroups of Bantu, established on other bases, leading to the conclusion that its current distribution may have partly to do with borrowing across language boundaries. Hence these *ka* are ignored in what follows. They are anyway infrequent and their omission does not disturb the overall picture.

If the five categories above are totalled (33, 29, 29, 15, 12 per cent) they exceed 100 per cent. That is explained by some of them co-occurring in individual languages. So, for example, narrative and itive co-occur in F22 ((3f), above) and middle past and middle future involving *ka* occur in:

(7) Mpototo (N14) ti-ka-hik-iti 'We came (P₂)' and ti-ka-hék-ayi 'We will laugh (F₂)'

If we look rather at languages in the database which have at least one of the five categories, the percentage is 71 per cent. With a couple of exceptions, the 'if/when/conditional/situative/persistentive' languages overlap with the others, so if they are excluded, some 70 per cent of the languages still have one or more form of *ka*. *Ka* occurs in all zones but is relatively sparse in the Forest languages.

What evidence is there for relating *ka*-itive, *ka*-narrative, *ka*-future, and *ka*-past? Others who have considered even parts of the data (Güldemann 1996; Botne 1999) concede the possibility that they are cognate but have been reluctant to reach a firm conclusion. Two kinds of evidence are relevant, tonal and semantic-functional.

Nurse and Philippson (2006) examined the tonal data for all four categories, insofar as it was available. For itive and narrative, *ka* was overwhelmingly L tonally. For the other three categories—past, itive, future—the number of languages with tonally reliable data was small, and the data itself inconclusive. Thus tonal information does not help us much here.

A general semantic and functional connection is possible, based on the definition of itive: location of the event away from the deictic centre, away from the here and now.³⁰ Itives, as seen in the common translation 'Go and X' or 'Go X', involve a most obviously physical relocation from the deictic centre. Narratives involve a mainly temporal move from the deictic start: 'He came, (then) he saw, (then) he conquered'. The futures and pasts might be handled in similar fashion. They are predominantly remote futures and pasts, that is, futures and pasts which have come to refer to temporal situations as far as possible from the present, the deictic centre. While some of these semantic-functional extensions might be recent and local developments, the geographical pervasiveness of *ka* in Bantu suggests that a common core—away from the here and now, and probably originally occurring as an add-on at limitative—might be assigned to Proto-Bantu, with different later and local centres of semantic-functional expansion.

In some languages it would move imperceptibly from limitative into the TA slot and independent function. We might call it a 'shifter': adding it moves the locus of the action away from the here. But physical movement, away from the here, comes

³⁰ Talking of Lucazi, Fleisch (2000) says: 'Itive *-ka-* is widely used. It occurs with past tenses, to indicate further geographical or temporal distance, and in the subjunctive with the same function. Its use in the so-called (past) narrative is an extension of the same function, as it indicates "away from the end of the situation represented by the previous verb". Since the future marker *-ka-* has the same tone, and possibly the same semantic range ("away from the present"), it and the itive may have the same origin.'

to represent temporal movement, removed from the now. So the shifter *-ka-* comes to represent time far removed from the present, that is, to future and past, not any future or past, but especially to far future and far past, as far away as possible from the present. As we saw above, these are the kinds of futures and pasts predominantly represented by *-ka-*. It is not surprising that it appears so widely in (past) narratives, where the time of a first action is established and all subsequent actions lead away from it in space and time. It is also not surprising that in straight tenses (and imperatives) it should lead away from the present, the here and now, towards the far future.³¹ This argument is bolstered by the variety of morphemes which co-occur with *-ka-* (*-ø-ka-*, *a-ka*, *ri-ka*, *na-ka*, etc.)—they suggest that *ka* was tacked onto existing tense markers, giving a compound marker.

While this seems like an intuitively attractive and cognitively transparent proposal, it needs anchoring in a linguistic framework. Heine and Kuteva (2002) set out common grammaticalization paths worldwide, which, while not infallible, offer useful directions. The single source for itives (ibid: 328, 155) is a verb ‘go (away)’. One of four possible sources for narratives (‘consecutive’) is also ‘go’ (ibid: 329, 156), and Heine (p.c.) adds ‘more specifically in contexts where the original meaning was “go and do”’. Twelve sources are given for futures, one of which is ‘go to’ (ibid: 331, 161). Common pathways to future involve intention, obligation, and subjunctive (Bybee *et al.* 1994: 253–80) and it should be noted that some Bantu futures involve *ka* with the subjunctive suffix *-e* (see the Subia example, in (4), above), so a possible grammaticalization path for the futures led from ‘go with the intention of’. So far, I have tried to indicate that *ka* ‘itive, narrative, (far) future’ could originate in ‘go’. The fourth meaning ‘(far) past’ is at first sight less amenable to such a suggestion. Neither Heine and Kuteva (2002: 321, 333) nor Bybee *et al.* (1994, although note pp. 56–7) mention ‘go’ as a major source for pasts. In most *ka*-pasts today, *ka* is the only structural marker of past. However, in a few languages (see Kete and Mpoto examples in (5) and (7)), *ka* is associated with other markers of pasts, such as pre-stem *a* or suffixal *-ile*. Heine (p.c.) suggests that ‘go’ might provide a source for past ‘if the original construction involved a past tense marker plus “go”, meaning something like “He went and did”’. That is, *ka*-pasts might have originated in compound markers such as *a-ka*, where *-a-* originally carried the past reference.

The preceding paragraph does not offer a watertight way of connecting the four major (affirmative) *-ka-* in Bantu nor of linking them to ‘go’. But I propose the following hypotheses. If there was a single lexical source for many of these Bantu *-ka-*, it was most plausibly **(y)ika*, glossed by Guthrie as ‘come or go down’.³² From this

³¹ Some languages present particularly good data for the path itive > future. Forms with *-ka-* in Halme (2004) for Kwanyama are translated as future or ‘go to’, apparently synonymous.

³² Although Guthrie glosses it as ‘come or go down’, at least some database languages have it as more general ‘go’ or ‘come’, without ‘down’. Outside Bantu, a presumably related verb is glossed as just ‘go’, e.g. *yak* in the Central Nigerian Jukunoid language Hone (Storch 1999a).

to itive seems to have involved an imperative or subjunctive context, pace Botne. ‘Go’ to narrative would have occurred most likely in an indicative context, with an original meaning ‘Go and do’. For *ka*-future, the path from ‘Go to’ might have passed through indicatives, as Botne suggests, or via a subjunctive context, as scattered Bantu data suggests. Finally, if *ka*-past is indeed part of this general scenario, then the scattered bits of data mentioned at the end of the previous paragraph suggest a scenario from ‘past tense of “go” plus “and”’ to (far) past.

These proposals are tentative. To support or reject them we need more: (a) investigation of possible semantic reflexes or cognates of *yika* in Bantu and Niger-Congo; (b) concrete studies of possible sources of *-ka-* in individual languages; and (c) investigation of whether the four grammaticalization paths suggested above are independent or can be linked processually and chronologically—since *ka*-itive is the most widespread geographically and statistically, it would be the best candidate as an initial stage. Finding evidence to support or falsify these ideas will not be easy. Since Bantu languages have been evolving and spreading for four millennia, the intermediate stages from a form of ‘go’ to the present are no longer available in many cases.

Even allowing for the possibility that some current *-ka-* might be unrelated and derived from ‘be’ or ‘go’, TA morphemes of the shape *-ka-* are widely enough spread across Bantu to make its assumption for PB very likely. What was its meaning, or meanings? Few contemporary languages have more than two morphemes of that shape. Reconstructed languages should be broadly similar typologically to natural languages so it seems unlikely that PB was graced with five morphemes of the same structure but different reference. In view of the tentative scenario above, it is likely to have had itive and narrative meaning first, with (far) past and (far) future developing later, but still quite early, given their distribution.

A survey of the Niger-Congo languages mentioned in footnote 7 revealed few convincing examples of [ka] representing itive, narrative, (far) future or (far) past, or of ‘go/come’ verbs of that shape. A survey of Welmers (1973) revealed slightly more, all in Benue-Kwa languages, that is, in languages fairly closely related to Narrow Bantu and not too far removed from the northwestern languages. A more detailed examination is needed of this whole topic, of the reason for the occurrence of these morphemes in these languages, and of whether they are cognate or not. Meanwhile, a cautious conclusion would be that a morpheme of the shape [ka], representing some of the meanings discussed here, goes back beyond Bantu into Niger-Congo at least a short distance. If this is true, it confirms the assumption of **ka* for Proto-Bantu and suggests it is not a Bantu innovation.

6.2.4(iv) **-kí-* ‘persistive, situative < imperfective’ (see 4.8) Forty-two per cent of the matrix languages have a morpheme of the shape **kɪ* (degree two vowel) or shapes derived from it, with voiced or palatalized consonants such as [g, s, c, ʃ, j]. Although, as mentioned, **k* has been lost in some or all environments in Forest languages, that

is hardly relevant, as a morpheme of the shape [ki/ki] or [i/I] occurs in very few languages in Zones A, B, C, or H.

Thirty-four per cent of the languages have a meaning interpretable as persistent, 11 per cent as situative. Together these give 42 per cent, because varieties of at least three languages/dialects (D53, older E62, S10, perhaps M40) have it with both interpretations. Languages with the persistent interpretation occur in a large Savanna area from the eastern DRC (D20-40-50-60), the Lacustrine area (E10-20-30-40, F10), and scattered languages in northern Tanzania (F30, E60), Zambia, Zimbabwe, Malawi, and southeast Tanzania (Zones K, L, M, N, P10) and into southern Africa (R30-40, (S10), S30-40). Languages with the situative interpretation are fewer in number and confined largely to parts of eastern Kenya and Tanzania, Zimbabwe, and northern South Africa.

This picture depends on including two shapes other than simple [ki]. Around southern Lake Victoria (D60, E10-20, parts of E40, F10, also N21) the underlying persistent shape is /-kí+a-/, giving palatalized forms such as [kjá:]. Further south, K20-S30-40 (and maybe the S62 negative 'not yet?') have [sa] or [sa:], predominantly phonetically high, which can also be interpreted as deriving from /-kí+a-/. I am at a loss to explain the sequence *kí+a* (see Chapter 4, n. 22). Examples:

- | | |
|-----------------|---|
| (8) Yei (R41) | ndi-shi-yivwá
1s-PER-hear
'I still hear' |
| Pokomo (E71) | hu-wa hu-ki-cheza
1p-be 1p-SIT-play
'We used to play' |
| Nyankore (E130) | ni-tu-kyáá-gúra
ni-1p-PER-buy
'We are still buying' |
| Zulu (S42) | u-sa-hamba
3s-PER-go
'She still goes, is still going' |

Another 4 per cent (A53, B40-50, R31) have a morpheme of similar shape but with meanings (e.g. future, present, 'eventually') which are hard to connect to the main concentration.

While reliable tonal data for the situative variant are too few to permit a comprehensive statement, persistent *-kí-* is mainly high-toned and the tone of final *-a* is not significant. In what follows, both are treated as high-toned *-kí-*.

There are reasons to think persistent and situative *-kí-* are semantically or functionally connected. One reason is the few languages with both interpretations. Another is the semantic overlap between the two. The situative stresses the ongoing, totally incomplete nature of a situation. The speaker wants to highlight an open-ended

situation which has continued or could continue for a long while. As such, it appears in hypothetical situations, as backgrounded material, in dependent or subordinate clauses,³³ and as the second member of compound verb constructions, where it behaves as a verb in a subordinate clause. The persistive denotes that an open-ended situation held in the past and continues to hold at the time of speaking. Although it can and does occur in independent main clauses, it implies a dependence on a previous situation. While they differ along the parameters syntactically dependent versus independent, and totally open-ended versus inception in the past, they share the representation of an ongoing and incomplete situation. They are classic imperfectives. What was the original ‘meaning’? If we only had the eastern and southern Bantu data, it would not be easy to decide between persistive and situative as the original form. But forms of the same shape and relatable meaning exist outside Bantu, in several Bantoid languages in Cameroon and Nigeria: Obolo (Cross River, Faraclas 1984b) -*ki-* ‘imperfective’; Ejagham (Ekoid, Watters 1981) -*ki-* ‘progressive’; Bafut (Eastern Grassfields, Watters 1981: 379, 2003: 247³⁴) -*ki-* ‘imperfective’.³⁵ In all these languages, high-toned -*ki-* ‘imperfective, progressive’ contrasts with a null form ‘perfective’, as in, for instance, the Obolo pair in (9). In Ejagham in (9) it contrasts with perfective and anterior:

- (9) Obolo *ń-ø-ge íkpá* ‘I write/wrote a letter’ (PFV)
 n-ki-ge íkpá ‘I am/was writing a letter’ (IPFV)
- Ejagham *ó-ø-gbô* ‘You fell’ (PFV)
 o-ø-gbô ‘You have fallen’ (ANT)
 o-ki-gbô ‘You are/were falling’ (IPFV/PRG)

The existence of these morphemes outside Narrow Bantu but in closely related languages changes the whole interpretation. Without these attestations in West African Bantoid, and assuming the few cases of [ki] and [i] in Forest languages are irrelevant,³⁶ then -*ki-* ‘persistive, situative’ appears to be a local innovation in the Savanna languages from eastern DRC, Uganda, and Kenya down to South Africa, and not attributable to Proto-Bantu. But the parallel existence of the forms with identical shape and similar meaning in Bantoid makes the alternative interpretation more likely: -*ki-* can in fact be attributed to Proto-Bantu and even further back, is kept in Bantoid and eastern and southern Bantu but lost over the past four or five millennia in the Forest languages. The Bantoid attestations also make the issue of meaning and function easier to resolve. Bantoid -*ki-* is a general imperfective (the ‘progressive’ in Ejagham would not be hard to reinterpret as an imperfective), is a central part of the aspect system in the languages where it occurs, and occurs in main clauses. By contrast, situative

³³ The widest scope found for situative -*ki-* is in Shambala (see Besha’s (1989) grammar).

³⁴ I am indebted to John Watters for information on this and other data on Bantoid languages.

³⁵ Güldemann (2003b: 186) cites the verb *ke* ‘be still’ in Tikar, another Cameroonian Bantoid language. This and a possible connection to -*ki-* and/or to PB *-*yikad-* need further investigation.

³⁶ Forms translated as ‘encore, toujours, still, yet’ were rarely found in the literature examined for Forest languages, so I was not able to judge how, if at all, they render persistive.

-kí- is not a central part of the aspect system and occurs in subordinate clauses, and persistent *-kí-* is also not a central component of the system, and while it occurs in main clauses, it does depend on an earlier situation. Subordinate and dependent clauses are known to be repositories for archaic forms, which have been sidelined by new structures in main clauses. This all makes it likely that the aspectual meanings (general imperfective) and functions (main clause) in Bantoid represent the original situation, while those in eastern and southern Bantu are relics, restricted in form and function.

6.2.4(v) *Progressive, based on 'be+locative+verbal noun' (see 4.6 and 4.13) At least 66 per cent of the matrix languages have a progressive, and fifty-nine have a construction of the shape 'be+locative+verbal noun' or a shape reasonably derivable from this, and a progressive meaning or a meaning reasonably derivable from progressive. It is common in all Zones, although sparse in B and S. In her 1989 work (1989a, b), Bastin suggests they can all be derived from a Proto-Bantu form of the specific shape *-'be'+*mu*+*ku*-, where *mu*, *ku* represent 'in' and 'verbal noun', respectively, so the whole form would be akin to German *Ich bin am Lesen* or Dutch *Ik ben ann het lezen* 'I am a-reading'. While agreeing with Bastin's general position, I would add three riders. One is that consideration of the great variety of shapes of these progressive constructions today suggests the original shape need not have included the locative *mu*, because at that point in the past *ku* probably marked both verbal noun (Class 15) and locative (Class 17). As the two meanings became separated, individual languages added to *ku*-infinitive forms a new locative, mostly *mu*, sometimes *pa*, very occasionally suffixal *-ni*: that is, the category itself was kept but remorphologized. The second point is that cross-linguistically this kind of construction is very common (Heine and Kuteva 2002: 202). Not all progressive constructions of this shape in contemporary Bantu need necessarily derive from an original protoshape, indeed, the variety of shapes today and the obvious fact that they are in different stages of grammaticalization supports this. So while some current constructions might in fact go back to the protoform, the passage of several millennia has undoubtedly thrown up new progressives of this kind. Thirdly, cross-linguistic data suggests that progressives may develop into more general imperfectives, 'presents', and futures, which, while a minority, are also included in the figure of 59 per cent above.

The argument for assuming such a construction with such a meaning for Proto-Bantu is based not only on the ubiquity of the construction but also on the ubiquity of the category, and the associated fact that the latter is expressed overwhelmingly by the former. But to assume this construction with this meaning for Proto-Bantu does not have to mean it formed part of the interlocking tense-aspect system. As we will see in 6.5 below, I assume it was in fact extra-systemic.

This kind of construction occurs widely across Niger-Congo outside Bantu. Welmers (1973: 324) says: 'An underlying relationship and near identity between expressions of location and present action has been noted in a number of other

Niger-Congo languages; it would appear that the association of the two has its roots in proto-Niger-Congo . . .'.³⁷

A past progressive might be expected to be a single-word combination of past *a* and be+locative+verbal noun, or a form reasonably derivable from it. Such forms can be found, as in:

- (10) Lyaa (B73) bisí di-ø-li-mu-sála
 1p 1p-null-be-at-work
 'We are working' but
 me n-a-bá-mu-sála
 1s 1s-PAST-be-at-work
 'I was working'

In fact, synchronically such forms are not common. Rather, most languages use compound constructions, where the first part is a past time-marked form of 'be' and the second is marked for imperfective, including progressive, as in Songye (L23):

- (11) L23 tu-ø-dim-anga
 1p-null-hoe-PRG
 'We are hoeing' but
 tu-báá-di tu-ø-dim-anga
 1p-PAST-be 1p-null-hoe-PRG
 'We were hoeing'

Since single-word past progressives are uncommon and compounds much more common, it seems likely that if Proto-Bantu had a past progressive it was formed by a compound structure.

6.2.4(vi) -na- (see 2.2, 4.3, 4.5–6) A verbal morpheme of the shape *na*, often followed by the remnants of an infinitive, occurs in at least 40 per cent of the matrix languages and is scattered, although thinly, across all Zones except B. It shows significant differences from *li+ku*: it does not appear so frequently, nor so widely, tending to appear areally, and has no obvious semantic core, being present in verbal forms translated by 'narrative, progressive/imperfective, not yet, future, past',³⁸ the latter two often in conjunction with other tense markers. A broad explanation for this diversity can be seen in the fact that Heine and Kuteva (2002: 79–90) show comitatives (prepositions, conjunctions) giving rise to ten different constructions cross-linguistically. Bantu has only one widespread 'comitative', *na* 'and, with'. The conjunction *na* links not

³⁷ While the predominant be-verb in Bantu locative constructions is *-li/-ri*, elsewhere in Niger-Congo it can be other be-verbs, thus Yoruba *-n-* (high) from *ni* 'be': Igbo and Senufo *na*: Jukun *-I* (from **-li?*): Kpelle *ke*. Within wider Niger-Congo there are clear traces of be-verbs similar in shape and meaning to Bantu *-ba* 'be', *-li* 'be at', the affirmative equational *ni*, and the negative equational *ti/si*. I am not sure whether the Kpelle form just cited relates to Bantu **-yikad-*.

³⁸ Other minor functions also occur. As mentioned in 6.2.4(i), Wald (1997) suggests it might earlier have encoded focus in parts of the Bantu area.

just nouns but also verbs in clauses and so comes to be a narrative marker; 'be+with (+verbal noun)' gives 'have'; 'be with' or 'have' give progressives, which may become imperfectives; 'not be with now' or 'not have now' may give 'not yet'; and 'was with' and 'will be with' form the basis for pasts and futures.

The diversity of shapes and meanings suggests that many of these constructions arose at different times and places. This is also supported by the fact that between a quarter and a third of the constructions have *na* (or a derivable shape) at Pre-SM, as prefix or clitic: as a common grammaticalization path in Bantu is independent item > clitic > prefix > TA, these forms with *na* at Pre-SM must be fairly recent in origin.

The conjunction *na* and verb 'have' based on it belong not only in Proto-Bantu but also across Niger-Congo. Just as *na* appears in Bantu verbal constructions, as sketched, so it also appears widely in Niger-Congo as conjunction and with a verbal role in at least some Niger-Congo languages, for example, as progressive in Igbo, which is fairly close geographically and genetically to Bantu, and in Senufo and Suppire, which are more distant. Is it there because the grammaticalization paths are common, suggesting it arose independently in parts of Niger-Congo and Bantu, or because it played a very old verbal role in Niger-Congo? Given our lack of overview of verbal constructions across Niger-Congo, we have to say that *-na-* playing a verbal role in Proto-Bantu is a possibility but can say no more than that.

6.2.4(vii) *-nga-* 'concessive, conditional, potential, irrealis, may, if/when' (2.9.2)
Morphemes of or derivable from the shape *nga* occur in at least 29 per cent of the matrix languages, widely in Zones M, N, and S; areally in: A60-70-80, B30, Botswana, Namibia (R31, R41), the northeast (E50, E70, G23, G41-42-43); isolatedly in D42, E15, G62, K13, and P13.

Beside the geographical distribution, three other variables occur. One is the meaning: while the majority (twenty-two of the twenty-nine languages, all in the eastern and southern Savanna languages, Zones E, G, M, N, S) have a range of reference easily gleaned from the English translations or glosses ('conditional, potential, irrealis, may, would, could, if/when'), a small number have meanings less easily or not at all connected to this (past, hortative, negative, future). All the Forest languages have *nga* in meanings not easily linked to the rest ('past, future'³⁹) and are ignored hereafter. A second is the structure: of the twenty-nine, twenty-one have *nga* at TA, while at least eleven have it at Pre-SM, which means that it occurs in both positions in a few languages, such as Shambaa (G23) and Bemba (M42):

- (12) G23 anga ti-za-dika or t-angá-dika
'We would have cooked'
- M42 nga chakuti tw-inga-senda aya malata
'If we could take these roofing materials ...'

³⁹ Maybe 'future' in the Forest languages relates to 'irrealis, potential, etc.'

As just mentioned, a common grammaticalization path is from independent pre-verbal item to clitic to prefix at Pre-SM to TA marker. That over a third of the attestations are at Pre-SM points to ongoing and recent grammaticalization. A third variable is its shape: the core shape *nga* occurs as such but also quite widely with particles, tense markers or derivatives of *-li* 'be', so *I-nga*, *a-nga*, *nga-li*, *nge* (probably from *nga-li*).⁴⁰ This common co-occurrence with *-li* 'be' suggests a route: *tu-li nga (ku-verb)* 'we-are as if (to-cook)' > *tu-li-nga ku-verb* > *tu-li-nga-ku-verb*, and then, by deletion of material seen as empty, > *tu-nga-verb* 'if we verb, we would verb'.

Meeussen (1967) and Guthrie (1971) both have *-nga-* in the TA position, Meeussen as 'conditional' (high-toned), Guthrie as 'potential' (no tone indicated). Both also have low-toned *nga* as an independent extra-verbal item, Meeussen as 'non-predicative index', glossed 'like', Guthrie as 'particle' and 'affix', glossed 'as, like, if'. Without being able to quote actual figures. I have the impression that this non-verbal *nga* is widespread across Bantu, with translations such as 'as, like, as, though'. Thus Ndamba (G52):

- (13) G52 litava lyenu likomi nga (litava) lyawu
'Your field is as big as theirs' (lit. field your big like (field) their)

This non-verbal *nga* is surely the origin of verbal *nga*: from an independent particle with linking function and concessive meaning, it became progressively attached to the verb, as *na* preceding. Do the facts above justify assigning this to PB at the TA position? At present, the best answer to that question is no. The small number and the restricted geographical distribution of the *nga* with conditional meaning argue against that, as does the sizeable minority of languages where it remains at Pre-SM, only partly assimilated to the verb. If there were obvious semantic paths to some of the other meanings, that might raise the absolute number and the geographical spread, but at present it is hard to see semantic connections. This suggests that either this was an innovation at a rather late stage in the eastern Bantu expansion, or that it was a local innovation that has diffused since the initial Bantu expansion. This is provisionally supported by what Welmers (1973: 364) says 'I know of no (Niger-Congo) case outside the Bantu languages where a concessive idea is incorporated into a basic verbal construction.'

6.2.4(viii) *-ma-* 'past, anterior' Twenty-five per cent of the matrix languages have a morpheme of the shape *ma*, *me*, or *maa*. Eighteen of these have the meaning anterior or past, six future or habitual, and one ill-defined.⁴¹ Of those with anterior

⁴⁰ A few of the [nga] forms may not really belong here, partly because [nga] can come from [nga] and [nka] by voicing, partly because in some NW languages original [*nga] has a regular reflex other than [nga], leaving open the question of the origin of contemporary *nga*-forms.

⁴¹ The futures and habituais (C14, L13, M11, M14, N30, R31) are ignored as they are semantically and geographically separate from the others, and two (L13, R31) are at Pre-SM, not at TA. The ill-defined one is G23 (*Ati mwaa-má-dika* 'If you are cooking' and *mù-me-dika* 'You be cooking, when ...'), to which we can add E102 (*Ndi ama-ghenda* 'I+am at-going').

or past meaning there is a large group spoken in a more or less continuous area in the northwest, in Cameroon, Gabon, Congo (and small parts of the CAR and the DRC: A22, 34, 43, 53, 83, 93, B25, 302, 43, 52, 63, 73, 85, C83), which has the look of a single common historical innovation. The other cases (E253, E60, G42, H10A) are discrete.⁴² This distribution, plus the fact that at least in some cases—probably in all—the morpheme clearly derives from the verb **-mala* ‘finish (tr.)’ plus lexical verb suggests it arose at different times and places in these areas. The grammaticalization path from ‘finish’ to anterior/past is well attested worldwide (Heine and Kuteva 2002: 134–8), supporting the case for independent and fairly recent development, perhaps less recent in the northwest, as it is so widespread there.

It is not plausible to reconstruct this for Proto-Bantu.⁴³

6.2.4(ix) *-laa-* ‘future’, and other *la(a)* (see 3.2.2) Twenty-two per cent of the matrix languages have a morpheme of the shape *-laa-* or *-la-*.^{44,45} Seventeen per cent (12 per cent sure, 5 per cent less sure) have it as a future. The other morphemes of this shape are divided into four sets. All are infrequent (see the figure after each below) and at first sight they seem to total more than 22 per cent. In fact they do not because the languages in which they occur largely overlap with those with future *-laa-*, which suggests a connection with the future marker. All occur in a broad swathe of Savanna languages stretching from the Lacustrine region (D13, D60, E10-20-30-40, maybe E50-60) through western Tanzania (F20, maybe F32, G11, G60, M10, N11), and down into Zambia (M40-50-60). Possibly related outliers occur in C55 (*la* Future), H16c (*ela* Future), and G22 (*ra* and *ere* Persistentive), which are not further pursued here. In the discussion below, I bring in other languages from the larger database, because they shed light on the issues.

-laa- ‘future’

I assume the historical shape of the future to be *-laa-*, with vowel shortening in those languages which have neutralized the vowel length distinction. Tonally [laa] is predominantly underlyingly low and the tone of the final vowel is variable. It is overwhelmingly associated with final vowel [-a] but a few languages can have [-e] (e.g. F21-22). Interestingly, although *laa* itself is not frequent, it co-occurs with suffixal *-a(n)g-a* in six of its twelve clear occurrences.

⁴² Among both the northwest group and the discrete languages, there are others not mentioned here, because they are not matrix languages. So in the northwest, for example, A11 (but not A15) and D43 (but not D42), and further east, E30 and E71. In the latter, *ma* appears to be borrowed from or calqued on northern Swahili (G42a). See Nurse and Hinnebusch 1993: 431, 444).

⁴³ Welmers (1973: 409) has low-toned *ma* for Senari (a language related to Gur) ‘remote past’. Jukun has *máá* ‘conditional’ (Storch 1999a: 198). Schadeberg (forthcoming) has *ma* ‘completed action’ in at least one Kordofanian language (Otoro). Whether these are linked, independent innovation or coincidence is unclear.

⁴⁴ Many Bantu languages do not distinguish /l/ and /r/, so use of /l/ here subsumes /r/.

⁴⁵ For discussion of the future *-laa-*, see Ch. 3, Table 3.2.

Around Lake Victoria,⁴⁶ *-laa-* always refers to near future (except E101, where it is the only future), as also in F32 and M60. In E50, G11, and M40 it marks middle future, and in F20, G11, G60, and M40 it indicates far futures. Thus:

- (14) Hehe (G62) tu-la:-gúl-aga ‘We will/might be buying (F₃)’

Outside Narrow Bantu, some Grassfields Bantu languages have a future morpheme of similar shape, for example, Aghem *lɔ* and Kom *læ*.⁴⁷

-la- ‘disjunctive’

In a very few languages (D60, M40; also E42-43, some M60) *-la-* ‘disjunctive’ contrasts with \emptyset ‘conjunctive’. Examples (see also 5.3.4):

- (15) Ha (D66) tu- \emptyset -gura versus tu-ra-gura ‘We buy’
 Bemba (M42) ba- \emptyset -bomba versus ba-la-bomba ‘They work’

The limited data suggests the vowel here is short and the tone low. A contrast between conjunctive and disjunctive occurs in dozens of Bantu languages—exactly how many is unsure—but use of this *-la-* is not frequent (see 5.3.4).

-la- ‘present’

In a very few languages (E401-402-403-404-44, M54, M60) *la* occurs in what translates as a present, either general or progressive. Thus:

- (16) Lamba (M54) tu-la-cita ‘We do’
 Shashi (E401) tu-ra-gura ‘We buy, are buying’

Following Güldemann (1996: 236), 5.3.4 suggests that such progressives and presents in M50 and E40 originate in disjunctive forms, marked by *-la/ra-*, found in neighbouring languages. In Lacustrine languages, at least, both are short (and low?).

-la(:) ‘past’?

Among the same general set of languages, some have a morpheme of the same shape referring to past. Only 5 per cent of the matrix languages have this (E22, E51, E62? F32? maybe E74) but other languages in the larger database also show it. Examples:

- (17) Gikyu (E51) to-ráa-rúg-íre ‘We cooked (P₂)’, also
 to-ráa-rúg-á ‘We are cooking’⁴⁸
 Kamba (E55) to-náa-tál-ilē ‘We counted (P₂)’
 tó-náa-tál-á ‘We are counting’

⁴⁶ Prefixal *-la-* ‘future’ is even borrowed from a Lacustrine language into the Nilotic language Adhola, spoken in Uganda.

⁴⁷ Bamileke-Dschang has a F₄ *a'á lá?é 'táy* ‘He will bargain’, where the first /a/ represents 3s, the second /a/ a general future marker, followed by an auxiliary verb *lá?é*.

⁴⁸ The semantic connection between the two E51 (also E55 and all E50) forms, at first sight odd, can be explained. See Hewson and Nurse (2005).

Haya (E22)	a-fi-ire ‘He is dead, has died (not specified when)’ a-áá-fi-ire ‘He is dead, had died (recently)’ a-rá-fi-ire ‘He is dead, had died (remote)’ ba-rá-kom-íre ‘They have died earlier/before’
Shashi (E404)	tú-ra-gúr-anga ‘We used to buy’
Sumbwa (F23)	tw-a:la:-gól-a ‘We bought (P ₂)’ tw-a:la:-gúz-ile ‘We had bought’
Vunjo (E62b)	lu-le-kapa ‘We hit (Far Past)’
Rimi (F32)	náa n-gó-hanga FAR PAST 1s-PRG-get ‘I was getting’

The coherence of this group is doubtful—the languages are put together on the basis of some kind of past reference and occurrence in the same geographical area as the other formatives of similar shape discussed here. The most serious doubts are: (i) In the E50 languages, when *-raa-* combines with suffixal *-a*, it has a present meaning (in this case, progressive) but when it combines with any other aspectual suffix it represents a middle past: this has to do with the internal structure of E50 systems. (ii) Some of these languages clearly have two formatives—E24, for example has *-rá-* ‘Remote Anterior’ (as in the Haya example in (220)) but in *-raa-* ‘Near Future’ (Odden, p.c.). Is it possible that the long variants once derived from the shorter by the addition of [a] (as also with a/a:, ka/ka:), and if so, how? (iii) What is the origin of (Vunjo) Chaga [le]? Chaga has shortened vowels and most [e] in pre-stem formatives originate in [a+i]. (iv) Does the Rimi proclitic belong here?

-laa- in ‘not yet’

A few languages in the same area (D60, E20-40, M40) have a morpheme *-laa-* appearing in negatives with translations such as ‘not yet, have not...already’. The vowel seems to be long, the tones are not known. Since my data sources were sometimes deficient for negative forms, this may have a slightly wider distribution. Examples:

(18) Ha (D66)	nti-tu-raa-maa NEG-1p-raa-buy ‘We have not bought yet’
Suba (E403)	ti-tú-raa-góra ‘We haven’t bought yet’
Bemba (M42)	ta-u-laa-samba NEG-2s-laa-bathe ‘You haven’t bathed yet’

I do not know how this relates to the affirmative uses of *-la(a)-*, above, and include it for the sake of completeness.

In sum, I would consider that the geographical overlap in distribution between future *-laa-* and disjunctive *-la-* cannot be an accident, although I do not know how to explain the difference in meaning, function, tone, and vowel length.⁴⁹ The present meaning in E40, M50 and M60 is probably derivable from the disjunctive, as Güldemann proposed. It is not clear how, if at all, the past and ‘not yet’ forms relate to the others.

Whether to reconstruct a morpheme of one of these shapes for PB poses a nice problem for the comparativist. Strict application of the comparative method to currently available data appears to cast doubts on its reconstructibility, for several reasons: a TA morpheme of this shape and meaning occurs in very few Niger-Congo languages, e.g. Edo *rá* ‘future/irrealis’, Ewe (*l)á* ‘potential (future)’, sometimes with modal, sometimes with tense, meaning; its distribution is, almost without exception, limited to Savanna languages from the eastern DRC, to Lake Victoria, through western Tanzania, and down into Zambia, suggesting it is a Savanna innovation; the semantic, tonal, and vowel length disparities between the variants here are hard to explain.⁵⁰ But there are nagging doubts about this position. Why does it occur in two languages much further west (D13 [lo:] ‘future’, C55 [la] F₂)—independent innovation seems unlikely, especially since no obvious source presents itself. Why do some Cameroonian Grassfields languages (*n.* 47) have a morpheme of similar shape and (future) meaning? Kropp Dakubu (2000) discusses a *la* in one Gur language, which functions as marker of predicate focus, topic clause, and definiteness and mentions a similar definite marker in the Kwa languages Ga and Ewe (Kropp Dakubu 1992). Childs (2005: 33) shows a focus marker *laa* in the Atlantic language Wolof, far to the west. Güldemann (2003a: 194) cites a possible connection between the Bantu disjunctive [la] and a similar phenomenon in Nupe (West Benue-Congo): Heine and Kuteva (2002: 287–91) construct cross-linguistic grammaticalization paths from the verb ‘take’ to several grammatical categories, including completive, completive focus marker, future, ‘have’, and others possibly relevant—and various verbs for ‘take’ in non-Bantu Niger-Congo having shapes such as [la, a da, de]. This suggests it would be imprudent to deny a possible connection at least between the morphemes encoding future and disjunctive, and a path to them from ‘take’. So I take the tentative position that morphemes of the shapes [laa] and [la] may have existed before and at the Proto-Bantu period, encoding potential/future and disjunctive/focus, respectively. This means the future *laa* is lost in all northwest languages except C55, and disjunctive *la* even more widely.

6.2.4(x) Summary: which morphemes at TA can be assumed for Proto-Bantu?

We can say with reasonable confidence that \emptyset ‘vast present’, *a* ‘past’, *ka* probably ‘itive, narrative’, *-ki-* ‘imperfective’, and be+locative+verbal noun ‘progressive’ can be reconstructed for the Proto-Bantu tense-aspect system. Proto-Bantu seems to have allowed

⁴⁹ Does future *laa* consist of disjunctive *la* + *a*?

⁵⁰ Incidentally, this geographical distribution is not dissimilar to that of *-ki-* ‘situative, persistent’

Table 6.1 Current distribution and reconstructibility of pre-stem morphemes for PB and NC

Morpheme	Distribution, level	Degree of reliability of reconstruction
∅ 'vast present'	PB, PNC	High for both
<i>a</i> 'past'	PB, NC	High for PB
<i>ka</i> 'itive, etc.'	PB, NC	High for PB
<i>ki</i> 'imperfective'	PB, some Bantoid	High for PB
locative = 'progressive'	PB, PNC	High for both
<i>a</i> 'disjunctive'	?PB, some NC	High for PB
<i>laa</i> 'future'	?PB	Medium
<i>la</i> 'disjunctive'	?PB, a few NC	Low
<i>na</i> 'various'	?PB, some NC	Low
<i>a</i> 'non-past'	Exists in Bantu and NC	
<i>nga</i> 'concessive'	Savanna	
<i>ma</i> 'anterior, past'	local Bantu, local NC	

sequences of two morphemes at TA, in which case *ka* and probably *a* 'disjunctive focus' occupied the second position,⁵¹ after ∅ and *a*. Future *laa* can be asserted with less confidence, and disjunctive focus *la* with even less. The earlier status of *na* 'various' (from *na* conjunction or 'have') and the earlier meaning of a second temporal non-past *a* are unclear. There is no good reason to think that *nga* 'concessive' (from particle *nga*), or *ma* 'anterior, past' (from *-*mala* 'finish'), can be so reconstructed, though the sources indicated in brackets can be assigned to Proto-Bantu. *Nga* 'concessive' have a distribution which points to their being Savanna innovations. *Ma* 'anterior, past' appears to be a local innovation although the presence elsewhere in Niger-Congo of a morpheme of similar shape should be recalled (*n.* 43).⁵² This can be summarized as in Table 6.1.

6.2.5 OM (2.3.6, 2.9.2(v), 5.4, Beaudoin-Lietz et al. (2004))

There is a fairly clear geographical distribution of three types of pronominal object marking. The first type, pre-stem marking, predominates, being the only type in the northeast, southeast, and south, and occurring sporadically elsewhere. Strictly (post-)verb-final marking occurs in the fewest languages, being restricted to the northwest, with languages having both types being intermediate between the other two. The exact boundaries of the mixed type remain to be determined, by having access to more data and by examining restrictions on occurrence for the pronominal markers.

In the first type, when one OM is followed by two noun phrases, either the OM is restricted (usually human) or the order of the co-occurring noun phrases is fixed.

⁵¹ Limited evidence (from D60) suggests that *la* also occurred in second position.

⁵² These conclusions do not agree entirely with those of Guthrie (1971), for Common Bantu, nor Meeussen (1967), for Proto-Bantu. Both reconstruct **a*, *ka*, *nga*. Guthrie also has *∅, *li*, *ja*, *aku*, *laa* 'future', *ma*, *na*, *ny*. Meeussen also has **la* 'disjunctive', and **ki*.

For pre-stem marking with several OMs in the languages considered, the Beneficiary/IO occurs closest to the stem. However, there are languages with this order reversed, and the Patient/DO occurs further left, often depending on the number of OMs.

In the second type, when two pronominal objects occur post-finally, the Beneficiary/Recipient/IO precedes the Patient/DO by immediately following the stem. So Beneficiary/Recipient/IO occurs closer to the stem than Patient/DO in both these types. The general animacy hierarchy, observed elsewhere, applies.

In the third, mixed, type, the most common pattern with two pronominal arguments is again to locate the IO/Beneficiary/Recipient at the pre-stem position, with the other argument (DO/Patient or other object) post-verbally or verb-finally.

Common to all three appears to be the fact that Beneficiary/Recipient/IO consistently occurs closer to the stem than Patient/DO, when both occur.

The last two types seem to allow only two pronominal objects, whereas pre-stem marking Savanna languages allow more: apparently up to three in southern African languages, and up to six, in somewhat artificial contexts, in a few East African languages.

A possible common origin for these three types was mentioned in 5.4.4 and is repeated here. Güldemann (forthcoming) suggests a hypothesis for the origins of these types, based on considering evidence from Niger-Congo languages outside Bantu. He proposes that pre- or Proto-Bantu had two orders for sentence constituents, S (Aux) V O, where the O would have been a full noun, and also S Aux OP V. In these structures there would be a correlation, on the one hand, between the post-verbal position, more salience, and a full noun object, and, on the other hand, between the pre-verbal position, less salience, and a pronominal object. In this schema, pronominal objects would normally occur pre-verbally, but if additional emphasis is required, a pronoun object could be doubled by repeating it after the verb. Type 1 languages have kept a strict correlation between the pre-verbal position and the pronominal form. Type 2 languages, a minority, presumably once had both possibilities but have generalized the post-verbal strategy and lost the original pre-verbal position. Type 3 languages have both possibilities for pronoun placement. Type 3 languages may have kept the dual strategy from Proto-Bantu but as they are sandwiched geographically between the other two types, they may have been influenced by them. The few Niger-Congo languages examined and most Bantu languages permit at most two pronominal objects, either pre-stem or post-verbally, so these long strings with up to six in East Africa are innovations.

6.3 Radical = root

It is not intended to expand here on what is sketched in 2.3.7. Meeussen (1967), Grégoire (2003), Hyman (2003*a, b*), Kisseberth and Odden (2003), Schadeberg (2003*a, b*) all have more detail.

Table 6.2 Extensions reconstructible for Proto-Bantu (Schadeberg 2003b)

*-i/ici-	causative
*-il-	dative (also referred to elsewhere as applicative, directive)
*-ik-	impositive (also causative)
*-il-	neuter (also intransitive, potential, static, stative)
*-am-	positional (static, stative, neuter)
*-an-	associative (reciprocal, corporate, neuter)
*-ag/ang-	repetitive (also imperfective, durative, iterative, habitual, progressive)
*-al-	extensive
*-at-	tentive (contactive)
*-ɔl- ; -ɔk-	separative transitive; intransitive (reversive, converse, inversive)
*-ɔ/ibɔ-	passive

6.4 Post-radical morphemes

6.4.1 Extension

No originality is claimed for this section, which is included for the sake of completeness. The content and labels in this section are taken literally from Schadeberg (2003a). He reconstructs extensions for PB as in Table 6.2.

Of the extensions collectively Schadeberg says: ‘The canonical extension has the shape -VC-; the two with the shape -V- have -VVCV- allomorphs. Extensions have a reduced five-vowel system; the mid vowels (*e, o) only occur as the result of vowel harmony with extensions having a second degree vowel (*I, ɔ); the absence of *u may be accidental since it occurs in expansions. Nasal harmony affects the consonants *l and *k. Extensions of the shape -VC- are tonally neutral (or, alternatively, Low); there is some slight evidence that the tone of the two extensions with the shape -V- may have been High’ (Meeussen 1961).

Selected comments, from Schadeberg (2003a), on individual extensions:

Causative. Two PB causative extensions have been reconstructed with an original complementary distribution (Bastin 1986): *-i- after C and *-ici- after V... this means that the long extension was used after short roots of the shape =CV- and the short extension after the longer stems of the shape =CVC(-VC)-. Later developments have generally extended the range of environments in favour of reflexes of *-ici-... (cf. passive, below). The environment for this allomorph is also that suggested for the allomorphy of -e /-I and -il-e in 6.4.2(v and vii), below.

The element *-a(n)g- behaves tonally as an extension, but it often enters into the inflectional paradigm (with various imperfective meanings such as durative or habitual)...

Passive. Two allomorphs have been reconstructed... and the conditioning of the allomorphs find their parallel with the causative construction.

Some of these extensions are currently very or quite productive in Bantu (e.g. causative, dative/applicative, passive) while others are hardly productive (impositive, positional, extensive, tentive). In some languages, the pre-stem reflexive, occurring at

OM, has absorbed the functions of the reciprocal (e.g. in Zones F, H, K, R, some C), or vice versa (e.g. A53).

Several extensions may co-occur, and when they do, there is a widespread order for some, encapsulated by Hyman's (2004) formula CARP: causative, applicative (dative), reciprocal (associative), passive.

Many Niger-Congo languages have extensions (Williamson and Blench 2000: 19–36), so while not all the Proto-Bantu morphemes above can necessarily be reconstructed for Niger-Congo, the extension position (derivational stem) is certainly a Niger-Congo feature. Welmers (1973: 341) says there is no passive in Niger-Congo outside Bantu.

6.4.2 *Final vowel*

6.4.2(i) The Niger-Congo background to final vowels As indicated in 2.10.1, many Niger-Congo families have the sentence structure S Aux O V, probably assumable for Proto-Niger-Congo. The V has three components, which form one agglutinating piece across Niger-Congo and later come to constitute the inflectional stem in Narrow Bantu languages. They are root, extension, and final vowel. This is not the place for a comprehensive analysis of the final vowel across Niger-Congo, nor does the database (see *n.* 7) allow it. Nevertheless, certain generalizations are possible. Within Niger-Congo there is great variation in what may appear after the root. At one end of the scale, Nigerian Benue-Congo languages such as Yoruba and others have eliminated final vowels and extensions, and their functions have been replaced by auxiliaries. At the other end are languages such as Fula (Atlantic), which use a large number of extensions and final vowels, the latter consisting mostly of single vowels, a few being longer, to express many categories. Between the extremes are languages such as Igbo and Ijo, which seem to have at some point lost their final vowels but meanwhile replaced them with new suffixes or post-verbal elements derived from auxiliaries, and other languages which have a reduced number of final vowels, supplemented by new morphemes derived from auxiliaries.

In this typological welter, languages in families such as Kordofanian, Atlantic, Mande, (Dogon, Kru), some Ubangian and some Cross River languages, and Narrow Bantu are useful by shining light on Proto-Bantu and Proto-Niger-Congo because they retain final vowels likely to be old. Proto-Niger-Congo is likely to have been an aspect, not a tense-and-aspect, language. Central to this was a notional contrast between perfective and imperfective.⁵³ This contrast is carried by different single-vowel suffixes, prominent among which are [a], [i], and a vowel copy suffix, sometimes more or less complete, often incomplete. Although I do not have access to enough data to be able to state definitely which category was carried by which vowel, it is highly unlikely that such a system would have been innovated independently in different places and times,

⁵³ Sometimes referred to in different terms, such as past versus present, past versus non-past, perfect versus past, or accompli versus inaccompli.

and so can be tentatively assumed for Proto-Niger-Congo. So the final vowels [a], [i], and a vowel copy suffix are probably old Niger-Congo features inherited by Bantu.

6.4.2(ii) *-a 'neutral, default' This occurs in some 85 per cent of the matrix languages, that is, in nearly all Narrow Bantu languages. The few exceptions are some Zone A (10, 40-50, 70-80) and B (70-80) languages, C83, L32, and L53, where it is lost completely or conditionally on the surface, as part of a general loss of phonological and morphological material. In a few Forest languages, vowel harmony raises [-a] to the degree 3 vowels by assimilation to the stem vowel.

It is termed neutral or default because it is assumed to be the unmarked final vowel, being replaced by other final vowels in more marked categories. Neither 'neutral' nor 'default' is entirely satisfactory. Some have said its main function is phonological—to make a regular series of canonical CV syllables after a CVC root, so CV.Ca, but that is too simplistic. In many languages it and the other suffixes below contrast with subjunctive *-é* and so are associated with the indicative mood. Then, as can be seen in 6.5, it can be interpreted as having an aspectual function ('perfective'). As can be seen in Hewson and Nurse (2005), it can have more than one aspectual message. I use the term neutral here because I have simply not been able to do a more detailed examination of the meanings of *-a*.

Imperative *-á* is high-toned, but otherwise no generalizations can be made about the tone of *-a*.

Roughly half of the twenty-five non-Bantu Niger-Congo languages surveyed (see *n.* 7) had suffixal *-a*. It plays a prominent part in the aspectual contrast between perfective and imperfective, where it is associated mostly, but not exclusively with imperfective. It does not seem to have a 'neutral' role as in Bantu. The safest statement would be the suffix of the shape [-a] in Bantu is inherited from older Niger-Congo but that it probably once represented an active aspectual function, not its current 'neutral' role.

6.4.2(iii) *-é subjunctive This occurs in nearly all the matrix and nearly all Bantu languages, except A15-43-44-53-62-(72)-83-84-93, B25-302-52-62-73-83, C(25)-32-36, 83, D33, H10A-(32), and L32, some 20 per cent (plus three doubtful cases). At least some of these languages without [e] often retain segmental and especially tonal traces. It is subject to vowel harmony in some northwestern languages and the front degree 2 vowel is a particularly common general variant.

Two common tone patterns for subjunctives can be assumed for PB because they are widely attested across Bantu today. If nothing intervenes between SM and root, then root and extensions are low, while SM and final *-é* will be high.⁵⁴ A second pattern obtains if e.g. an OM is inserted (Meeussen 1967: 112).

The subjunctive is involved in future morphology widely in Bantu. It so occurs in several languages in Zones D, G, K, M, and S, and in A70, L30, N20, P20, and R40(?). This distribution gives the impression of a process (subjunctive = non-factual > future

⁵⁴ For examples, see 2.1; 2.3.10.

= non-factual) that can and has happened often over time and space and more often in negatives than affirmatives.

There is evidence for this outside Narrow Bantu. A final vowel suffix of this shape and approximate meaning certainly occurs in Kordofanian.⁵⁵ Igbo⁵⁶ has *-é*, with subject pronoun and the suffix both tonally high, as Bantu. Jukun (Storch 1999a: 178–216) has interesting reflexes:

- (19) Jukun kú-yak ‘She may go’ SUBJ kú-ká-yag-é NEG SUBJ
yág-é ‘Go’, mag-é ‘Help’ IMP ká-yagh-é ‘Don’t go’ NEG IMP

The affirmative subjunctive has a high-toned subject marker. Affirmative imperatives have a high-toned subject marker and NEG *ká*, and most, but not all, have high-toned final *-e / -é*. Negative imperatives have high-toned *ká* and final *-e / -é*. Welmers (1973: 132) shows something similar for the Kpelle ‘hortative’. Igbo and Jukun are Benue-Congo languages, genetically and geographically fairly close to the nearest Bantu languages today but Kpelle and Kordofanian are not. A subjunctive [é] occurs in at least some Grassfields Bantu languages, but as an independent particle before the verb, not verb-finally (Anderson 1979: 103–11). When the imperfective suffix [á] occurs on the lexical verb following it, it is high-toned, as is the Bantu subjunctive suffix. These attestations suggest this final vowel has clear relatives within Niger-Congo, although it would be interesting to know to explain the connection with the Grassfields particle and to know why this suffix is so widely absent from most of Niger-Congo. As [-a], this Bantu final vowel, as a subjunctive, is inherited from older Niger-Congo.

6.4.2(iv) *-a(n)g- ‘habitual, iterative, durative, (pluractional)’ (see 4.5, 4.7, 4.10, Sebasoni (1967)) This occurs in nearly all Bantu languages, as extension and/or final vowel. It is lost locally, especially but not exclusively in southern Africa (Zones R, S, and adjacent K, M, and N). It occurs in unambiguous shape in 66 per cent of the matrix languages, and as a trace in another 3 per cent⁵⁷ (A15, D42, E42).

It seems likely to have started life as an extension (‘pre-final’, Meeussen (1967: 110)). Traces of its original status can be seen for example in the fact that the passive extension usually occurs between *-a(n)g-* and final *-a* (so *-a(n)g-w-a*)—atypical for extensions, most of which occur before the FV. From extension it migrated to act as ‘pre-final’ or FV. In some languages the extension and the ‘pre-final/FV’ co-occur (see (4.28)). Tonally, as extensions, it was originally low or toneless but raised to high in certain contexts (Meeussen 1967: 110).

As FV it can occur in the whole range of imperfective meanings: habitual, iterative/durative, progressive, generic, and general imperfective. Its exact reference is not

⁵⁵ It is notable that several of these final vowels assumable for at least early Niger-Congo show up in Kordofanian, though less consistently present in much of the rest of Niger-Congo.

⁵⁶ For much of the information on Igbo here and following I am indebted to Victor Manfredi.

⁵⁷ Some matrix languages, picked to represent their group, do not show it, while other members of the group do in fact have it. Thus E62a has it but not E62b, G43d but not G42d, the rest of K10 but not K13, etc. If the percentage of groups with one or more languages having reflexes of **a(n)g-* were counted, it would be above seventy.

always easy to deduce from the descriptions in some grammars. It occurs frequently with habitual, iterative, and general imperfective reference, but rarely with progressive meaning. It almost never occurs with progressive meaning alone.

It has two shapes, *ag* and *ang*. The *ag* shape is slightly more frequent, occurring in Zones (A), C, E, F, G, and P, while *ang* occurs in B, (K), L, and (R). Both occur in D, E, H, (M), and (N). Neither the geographical nor the phonological reasons for this distribution are clear. If we assume, with Meeussen (1967: 110) that **ag* was the original shape and *ang* is an innovation and/or variant, then, since not all the languages with *ang* are today adjacent, we must assume that either they once were, or that today's distribution represents haphazard retention of an older variant, or that the nasal arose independently. Two issues deserve further investigation: (i) the exact distribution and possible reasons for the two shapes, and (ii) are there reasons to think the extension and the 'pre-final/FV' had the same or independent origin?

This suffix can co-occur with *-a*, *-e*, *-i*, and, less commonly, *-ile*. In the latter case, *-a(n)g-* either precedes *-ile* or bisects it (*-il-ang-e*).⁵⁸ It appears across Bantu not only in conjugated forms but also in infinitives and imperatives. In the latter, it is sometimes the only marker, and sometimes replaces *-a*. In imperatives, it adds some kind of imperfective meaning. Examples:⁵⁹

(20) Infinitives

- Benga (A34) o-kal-a or o-kal-ak-a 'to speak'
 Kongo (H16) kang-a 'to tie', but kang-ang-a 'to tie continuously'
 Bena (G63) uku-gul-a 'to buy', but uku-gul-ang-a 'to buy regularly'

Imperative

- Akoose (A15) dy-é 'Eat', but dy-ág 'Keep eating'
 Bukusu (E31) ly-a 'Eat', li-ch-ák-a 'Eat (slightly urgent)'
 li-ch-ák-ak-a 'Eat (urgent)'

Sukuma has reversed the situation. The usual imperative is *gul-ag-á*, *gul-á* being rarely used but it could be used as a marked form to indicate emphasis. That is, after several requests using *gul-ag-á*, one could simply say *gul-á*, as a final firm attempt at persuasion (Herman Batibo, p.c.).

It occurs with straight (middle) past reference in a limited set of languages, apparently centred on F and parts of D, and some (more or less) adjacent languages, E10-20 (negatives), K10, L53, and M11-12. This appears to be a local innovation (see 3.9.3).

This suffix occurs outside Narrow Bantu. With one suffixal exception, Grassfields Bantu languages do not have final vowels with grammatical meaning but they do have [a] 'imperfective'. Watters (2003: 245) says this is the Grassfields Bantu reflex of **ag* but there is also iterative *kV*, of which Watters (p.c.) says: 'I suspect you are right in suggesting the possibility that *-kV* 'iterative' is a reflex of **-ag(a)* as well as the

⁵⁸ N. Mutonyi (p.c.) pointed out that while most Bukusu (E31) speakers today have the bisected form, some older speakers have *-ang-ile*, which suggests it was the original Bukusu situation.

⁵⁹ For other examples, see 2.3.9–10 and elsewhere.

commonly found *-a* IPFV'. In this case, the retained velar may have come to distinguish iterative in some languages from imperfective, in which case **ag* has double reflexes in Grassfields. These 'double reflexes' may be related to similar imperfective forms in A15, in nearby Ejagham (Ekoid, another branch of Bantoid), where most verbs have just [a] or [a:] but have an allomorph *-(V)g-* after CV roots, and in Tikar (*-ag/-é-*). In southern Igbo a suffix of this shape marks the normal progressive (Emenanjo 1984). The Adamawan language Mundang, spoken in Chad and Cameroon, has a pluractional extension with a double reflex *-aa-/-ak-* (the latter shape apparently frozen: Elders 2000), while the Gur language Kulango, spoken in the Ivory Coast and Ghana, has a pluractional extension *-ag-* (Elders forthcoming). In Mundang and Kulango it occurs to the left-hand edge in a series of extensions. Whether it is more widespread in Gur and Adamawa is not known.

Most, but not all of these non-Bantu languages with forms of *ag* are spoken in areas of Nigeria, Cameroon, and Chad close to the nearest Bantu communities. Was this a Bantu innovation that spread to adjacent languages, or an innovation that started at a slightly higher node than Bantu? Its fairly widespread distribution outside Narrow Bantu suggests the latter. The fact that its non-Bantu form has no nasal supports the assumption that its older shape, and that of Proto-Bantu, was **-ag-*, not **-ang-*, and the fact that its non-Bantu status is that of extension and not final vowel, supports the assumption that its starting point was as extension.

6.4.2(v) **-ile* 'anterior' This occurs widely and clearly, in full form or a phonetic variant, in the Savanna languages (Zones D to S). It is lost locally in a few languages in these zones.

The situation in the Forest languages of Zones A, B, and C is different. In parts of Zone C (e.g. C14, 36, 41, 60) I found no traces of *-ile*: however, Bastin (1983a) cites clear cases in C30 and C80. In Zone B, she and Guthrie found no languages with unambiguous *-ile*. In Zone A, she cites only A81 with an independent *-ile*. However, that does not mean there are no traces of *-ile* in A and B. Parts of A (A10, see Hedinger (1985) for one set of details, A20, A40), of B (B10, B50, B80), and smaller parts of C are characterized by a situation in which *-ile*, or a shape like it, occurs but in a close relationship with *-I*, most often as an allomorph of *-I*. In this situation *-ile* is less frequent, and *-I* more frequent. This contrasts with what occurs in Zones D-S, where *-I* is less frequent and, where it occurs related to *-ile*, is usually an allomorph of it. In Zones D-S *-ile* and *-I* occasionally co-occur contrastively. Further, in Zones A, B, (and C), though the data is not always clear, the *ile*-allomorph tends to occur in specific contexts, prominent among which are verbs with CV stems (**di* 'eat', *nyu* 'drink', *ku* 'die', etc.).

The total is 66 per cent if the fairly clear cases are included, but might well be higher if all the traces were included.⁶⁰

⁶⁰ 66% consists of fifty-seven which are unambiguous; four where I found traces (A15, A22, C83, S10); three where the main or only shape is [ite] but which have no contrastive [ile]; and two from Bastin (1983a)

It has many reflex shapes. The consonant can be (t), d, l, r, n, y, or null. Across Bantu the first vowel, originally high and thus causing mutation of the preceding stem-final C, can be the degree 1 vowel, or the degree 2 vowel, and is often subject to vowel height harmony with the stem, thus appearing as a degree 3 vowel. The final vowel also appears in a range of non-low, front, shapes. When the C deletes, the two vowels may fuse as a single front vowel. The C-deletion does not always follow phonological processes found elsewhere in the language. Bastin (1983a)⁶¹ sets out most of this in detail, with contexts provided, and analysis. These examples of **-ile*, taken from various languages, are not exhaustive but illustrate the general range of shapes:

(21) Language	Root	Gloss	-ile shape	Comment
Ilwana (E701)	-e:da	go	-e:z-ie	l-loss, palatalization
	-vul-a	rain	-vuz-ie	ditto and l-loss
	-cek-a	laugh	-cek-ie	l-loss
	-bokok-a	swell	-bokok-ie	ditto
	-iv-a	steal	-iv-ie	ditto
	-lɔt-a	pass	-lɔt-ie	ditto
	-li-a	eat	-lile	
	-nw-a	drink	-nw-e:le	
	-aban-a	fall	-ebe:ne	imbrication
	-im-a	stand	-im-e	irregular
Lega (D25)	-bolot-a	pull	-bolot-ele	vowel harmony
Ruri (E253)	-jom-a	be pleasant	-jom-ere	ditto
	-tem-a	cut	-tem-ere	ditto
Swahili (G42a)	-elew-a	understand	-elew-ee	ditto
	-pat-a	get	-pet-e	imbrication
Ndendeuli (N101)	-li-a	eat	-lile	
	-li-h-a	make eat	-li-h-ite	devoicing
Gweno (E65)	-yend-a	go	-Yend-ie	l-loss
	-rem-a	cultivate	-rem-ie	l-loss, (cf. E253)
	-ku-a	grow	-ku-rie	r-insertion
	-la-a	sleep	-le-e	imbrication
Gciriku (K332)	-mon-a	see	-mon-ine	nasal harmony
	-yend-a	go	-yend-ire	
Pogolo (G51)	-gend-a	go	-gend-iti	devoicing, FV raising

(A81, C30). Sixty-six includes *-ile* in affirmatives, negatives, relatives, main and subordinate clauses, and remnants. As with *a(n)g*, there are groups with the suffix (e.g. G40) but whose representative language chosen (G42d) did not have it. If these and some of the cases mentioned by Bastin were included, the percentage of groups with *-ile* would top 70%.

⁶¹ See also Hyman (1999a).

Giryama (E72)	-gul-a	buy	-gul-ire	rhotacization
Rwanda (D61)	-gur-a	buy	-guz-e	palatalization
Zalamo (G33)	-gul-a	buy	-gul-ile	
Ngoni (N12)	-gul-a	buy	-gul-i	

What work has been done suggests it is difficult to attach a single tone pattern to **-ile*, as it occurs in some languages with contrastive tone patterns referring to different times (e.g. *-á . . . ile* versus *-a . . . ilé*, see Bastin (1994)).

It occurs in some languages with anterior reference, in others with past perfective, and in yet others with both. It is the morpheme most widely used in encoding anterior. With a null tense marker at TA, it is more common with reference to near than to other degrees of past: with a 'past' at TA it refers to more remote pasts. Given what we know now of general grammaticalization paths, the anterior meaning is likely to have been earlier. Did the shift from anterior to past occur just once or several times? Since the semantic shift from anterior to past is very common cross-linguistically, it seems likely that over the five millennia since Proto-Bantu, the shift from anterior to (near past) to past occurred often, at different places, times, and languages. It has a larger range of meaning, shape, and geographical distribution than the vowel copy or *-I* suffix. In most of the few languages where it refers to a category other than anterior or past, it is not hard to see the probable semantic path of development (see 4.11.3).

There being no convincing cases of *-ile* in non-Bantu Niger-Congo,⁶² it can be considered a Bantu innovation. There are two current proposals about the origin of *-ile* within Bantu. One dates from the 1970s. First, Givón (1971) proposed that Bantu aspectual suffixes derived in general from older auxiliaries, and Mould (mentioned in Givón 1971: 155) specifically suggested that **-ile* was the grammaticalized form of a verb 'finish'. Semantically plausible, this follows one of Bybee's grammaticalization paths: 'finish' > anterior > past tense. I am sympathetic to this idea but sceptical about the specific source, partly because the verb proposed as source is of very limited distribution, partly because it presupposes the order V + Aux, which is not proven.

Another suggestion has been to relate *-ile* and *-I*. In various authors (Schadeberg 1980*b*; Bastin 1983*b*; Hedinger 1985), the weight of suggestion is on having *-I* and *-e*

⁶² Senufo languages have a common allomorph *-li* of a suffix of similar shape but it is a 'present' so the meaning is hardly appropriate (Welmers 1973: 387). Similarly, Ngomba, a Grassfields language, has *-le*, apparently fossilized and denoting repeated action (Scott Satre, p.c.). More plausible are the Southern Igbo dialects, which have a suffix, denoting present perfect, whose allomorphs are *ele*, *ole*, *ala*, *ɔla*. The choice between the two final vowels depends on the ATR of the root vowel: the nature of the first vowel depends on the ATR and backness of the root vowel: and some dialects have nasal harmony, giving [n] for [l]. See Emenanjo (1984), Green and Ikwe (1963), Swift (1962), Welmers (1973: 347, 404). Is this southern Igbo suffix really related to *-ile*, and if it is, why is it restricted to certain dialects, and could it not have spread thence once from Bantu, the nearest Bantu communities being only some 150 kilometres to the east today?

derive from *-ile* via C-loss, V-assimilation, and V-shortening. While this undoubtedly happens, it is also possible to relate *-ile* and *-i* by doing the converse, by deriving the longer form from the shorter, as Bastin admits. Thus for example, some A, B (and other?) languages⁶³ have many CVC verbs, which have *-CVC-i* as their past form, and just a small set of CV verbs, which have *-CV-il-i* (or *-el-i*), in which latter the *-il-* is inserted in certain contexts, the suffix is then reinterpreted as *-ili*, and increasingly used by analogy in longer roots. This suggestion is taken up further, in 6.4.2(ix).

6.4.2(vi) *-Iite/-iite* ‘anterior’⁶⁴ (Bastin 1983a: 62–77) This occurs in affirmative and negative forms in few languages, just over a dozen matrix languages, and several dozen languages in all: some A30, D13, D40-50, F23, F30, G23, G50, some G60 (after alveolar fricatives (and elsewhere)), H30, K20-30-42, M20-301, M61 (but not M63), N10-P10, P23, R20, S30, S60. In many of these languages *-ite*, *-ile*, and other shapes coexist as allomorphs of *-ile* (see (22b), G62). In some languages in southern Tanzania and Zambia, *-ite* is the main or only shape, where adjacent languages have *-ile* (see (22b)). In G62 (Hehe) *-ile/ite* has many allomorphs, depending on variables such as consonant, vowel, and vowel length:⁶⁵

(22)	a	G50	Root	Gloss	<i>-ite</i> shape
			-hemer-a	buy	-hemer-ite
			-lum-a	bite	-lum-iti
			-gend-a	go	-gend-iti
			-pat-a	get	-pat-iti
			-iz-a	come	-iz-iti
			-sek-a	laugh	-sek-iti, etc.
			but		
	b	G62	-gul-a	buy	-gus-ile
			-kov-a	dig	-kof-ile
			-lek-a	leave	-les-ile
			-det-a	lie	-des-ile
			-fwa:ta	follow	-fwa:t-ite
			-tun-a	swell	-tun-ite
			-imb-a	sing	-imb-ite
			-wu:sa	ask	-wu:s-i:se, etc.

It occurs as an independent morpheme in very few languages: E50, E51-55, E46 (Sonjo, genetically part of E50), and E42. In E50 it refers to anterior, in E46 to Progressive, and in E42 to regular past events. Outside E50, E42 is thus the only language to have this independently.⁶⁶ In the E50 languages *-ite* and *-ire* are contrastive, having

⁶³ See the A22 example in (23).

⁶⁴ Reflexes in most languages today can be derived from **-Iite*.

⁶⁵ G60 also has imbrication, ignored here. G50 has final vowel raising.

⁶⁶ Motingea Mangulu (2003b) has a *-é-té* ‘anterior’ or ‘hodiernal past’ in C373. Not clear if this is related.

different meanings. A likely semantic path between these is sketched in 4.11.3. For further examples, see (4.38).

The widespread connection to *-ile* ANT, and the wider distribution of *-ile*, suggest an ultimate origin in *-ile*: **-ile* developed allomorphs, and either the allomorph with [t] took over as the main or only form (e.g. G50), or *-ile* and *-ite* each took on independent existence in the same languages, as in E50, where *-eete* now represents ANT and *-ire* is Perfective.

Unsurprisingly, no form of this suffix was found outside Narrow Bantu.

6.4.2(vii) **-I* ‘affirmative near past’ (Gregoire 1979) This suffix is harder to deal with than the others in this section, and for two reasons. One, the general data is less good; two, and related to one, there are several suffixes, possibly discrete today, of this shape.

One of these suffixes encodes negatives, rarely with past reference. A second is a shortened allomorph of *-ile* in some Savanna languages (a variant *-e* also occurs). A third is a ‘subjunctive’ [i], occurring in a few languages, usually due to vowel raising. A fourth is a stative with the shape *-i* (E62b example in (24)). A fifth only occurs in relatives, affirmative or negative. Nsuka-Nkutsi (1982) shows that final vowels in absolutes and relatives are usually but not always the same. The sixth has affirmative past reference and is the commonest of the six.

This section is concerned here only with the first and the last. The second is excluded because it gives the appearance of a local and fairly recent phonological development of **-ile*, its geographical distribution being quite limited and haphazard, although, as will be clear in 6.4.2.8, below, I think it likely that **-ile* and **-I* are ultimately related at a more remote point in time. The third, the subjunctive, is excluded because it is a local variant of subjunctive **-e*.⁶⁷ The fourth, stative *-I*, may well be ultimately related to the sixth one, because there is a well-known cross-linguistic semantic connection between near past, perfect, and stative. However, our current knowledge does not permit such a firm historical connection yet so I largely also ignore it here. The fifth is not treated here, because my data on relatives is far from complete, but it is probably related to the sixth one also. So various forms of *-I* are excluded here, for want of data or of a clearly perceived connection with forms that are included.⁶⁸

The *-I* ‘non-past negative’ occurs in a mere 11 per cent of the matrix languages, all Savanna languages, mainly in South Africa and a few on the East African coast (see (5.3)), plus three doubtful cases (B43, D14, D28). The geographical distribution of this [i] suffix has practically no overlap with that of [i] ‘affirmative past/anterior’. It co-occurs predominantly with pre-stem null:

⁶⁷ Both *-I* as subjunctive and as allomorph of *-ile* can be illustrated via G52. G50 has a general vowel-raising process, where final [e, o] raise to [i, u]. So the G52 subjunctive is *-i*, while suffixal *-ite* ([-iti] by vowel raising) can reduce to [i] with some verbs and some speakers. F10 *-ile* becomes [e] after stems with more than three syllables.

⁶⁸ If all matrix languages with any of these final vowel *-I* are included, they total over 50%. The relationship between them all needs more investigation.

- (23) Shona (S10) ha-ndí-∅-end-í 'I don't go'
 Venda (S21) a-ri-∅-rém-í 'We don't chop'
 Tsongo (S53) a-hí-∅-dy-í buswa 'We don't eat porridge'
 Tonga (S62) kha-hi-∅-hoj-í 'We don't eat'
 Holoholo (D28) a-to-∅-lól-í 'We won't look (F₁)'
 a-to-ká-lól-í 'We won't look (F₂)'

-I 'affirmative near past' occurs in 28 per cent of the matrix languages,⁶⁹ nearly all Forest languages and their neighbours. So it is largely in geographical complementary distribution with *-ile*, which characterizes Savanna languages today.

It sometimes occurs in two patterns of alternation. The first is described in Grégoire (1979), who points out that it or the vowel copy suffix outlined in 6.4.2(viii), following, and *-a* are in complementary distribution in some languages, in tonal and/or segmental contexts, the alternation being conditioned by the shape and tone of the preceding stem. Vowels other than [a] were originally low-toned and occurred after high-toned, non-extended stems of the shape CVC, by contrast with *-á*, which occurs in all other contexts, particularly low-toned stems of the shape CVC, or stems having a shape other than CVC, or any stem with an extension (see L11 example in (23)). This alternation of (affirmative) *-a* and *-I* (or the vowel copy suffix) does not seem to occur in Forest languages⁷⁰ (Zones A, B, C), and so is an innovation in Savanna languages.

In the second alternation the high front vowel is in complementary distribution with *-ele/-eli/-ede/-edi* (e.g. Hedinger (1985), Kuperus (1985), Gensler (1980), the source of the A22 example in (23)) and its geographical distribution is different (see next paragraph). Here the shorter variant, *-I*, occurs after most stems (CVC or longer), whereas the longer form occurs after short stems. Such a context also plays a role elsewhere in Bantu morphology, for instance, in determining the distribution of the shorter and longer variants of the causative extension. The result of these two kinds of alternations is that in fact geographically there are three sets of languages: those where *-I* alternates with *-a*, those where it alternates with a suffix of the shape *-VCV*, just described, and those for which the source is silent on such alternations.

The total geographical distribution of *-I* 'affirmative near past' is some or all languages in the following groups: A10-20-30-50-74, all zone B except B20, all zone C except C80, D10-23-311, (E62 and E74a 'stative'), H32, K42, L10, 31, 33, and 52.⁷¹ Older descriptions of G22 (Kotz 1964: 13) also mentioned an *-i* 'past' occurring with monosyllabic stems. The alternation of *-I* (or *-e*⁷²) and *-a* occurs in at least D10, K40, L10, L30 (and G22). I found the alternation with *-ele/-eli*/etc. in at least A10-20-30 (Meinhof 1889-90b: 274).

⁶⁹ This figure includes E62, where it is a stative, and D14, where its function is unclear.

⁷⁰ This needs thorough checking, as does the status of the D12 form, which is a subjunctive.

⁷¹ N11 and some P20 also have [i] but it is likely the main or one surface realization of *-ile*.

⁷² This section and the next imply that languages either have *-a* alternating with *-I*, or with the whole set of vowels. In fact, a very few languages have intermediate situations, where *-a*, *-e*, and *-I*, for example, alternate. See Grégoire (1979).

Most languages with *-I* have seven (or more) distinctive vowels, and in those languages the suffix has the highest front vowel in the system. For the relatively few current five-vowel languages with /-i/, one would therefore expect Bantu Spirantization to have first applied during their earlier seven-vowel stage, causing the appropriate stem-final consonants to mutate to fricatives, but there are no traces of this. This is explained by the order in which consonant spirantization applies (Hyman 1997; Bastin 1983a): it applies last, and is lost first, before the inflectional suffix *-ile*, and presumably also *-i*.

Nurse and Philippson (2006) found two tonal patterns. Suffixal *-I* occurs predominantly with pre-stem null, less often with *a*, rarely with any other pre-stem marker. Where the pre-stem marker was null, high-toned final *-I* outnumbered the low-toned variant by three to one. There were far fewer cases of *a* as the pre-stem marker but here there were roughly equal numbers of high- and low-toned final *-I*.

Most languages with suffixal *-I* have two or three degrees of past reference. In such systems, forms with pre-stem null and suffixal *-I* overwhelmingly represent the nearest past, the present anterior, the only past, or they occur in all past tenses. They very rarely represent remote past alone. There are various ways of representing more remote past(s), of which a common one is to combine pre-stem *-a-* with suffixal *-I*. So in these cases, the *-a-* acts as a shifter, moving the reference further into the past. There are also sources which had trouble deciding whether *-I* represented near past or anterior. In some cases it was possible to distinguish them, in others not.

- (24) Pende (L11) *tw-a-jid-í* ‘We refused’, *tw-a-kwec-í* ‘We tied’, *tw-a-hw-í* ‘We gave’, *tw-a-kwac-í* ‘We seized’, *tw-a-túm-í* ‘We sent’, but *tw-a-túm-ish-íl-á* ‘We made . . . send for’, *tw-a-dim-ish-íl-á* ‘We made . . . cultivate for’ (all examples in the Hodiernal Past; L. Hyman, p.c.)
- Vunjo (E62b) *ngí-∅-wóny-í mndu ulálu* ‘I see (= have seen) a person now’, but *ngí-∅-’m-bon-íé úkou* ‘I saw him yesterday’
- Bakwiri (A22) *a-∅-kók-i* ‘He just bit’, but *a-∅-l-éli* ‘He just ate’, *a-∅-j-éli* ‘He just came’
- Ombo (C76) *to-∅-kóng-ol-í (P₁)*, *t-á-kóngol-í (P₂)* ‘We picked up’
- Mituku (D13) *tũ-∅-bund-í* ‘We are catching’

A survey of verbal suffixes in Niger-Congo outside Bantu found various final vowels playing aspectual roles in the languages of some groups. The vowels included *-i* and the language groups with *-i* referring to past, perfective, or anterior included at least Atlantic, Mande, Dogon, Ubangi, Kwa (at least Akan), Upper Cross, and Ekoid.⁷³ This

⁷³ In Zande (Ubangi) [i] is one of several vowel copy allomorphs, occurring after stems with vowel [a] and a final non-labial consonant. Bijogo (Atlantic) and Gbaya (Ubangi) appear (?) to have *-i* as imperfective. Lokaa (Upper Cross) has *-i*, apparently low-toned, ‘perfective’, added to the root, and *-i*, apparently high-toned, ‘imperfective’, added to stem-final *-a*.

includes languages not particularly close genetically nor geographically within Niger-Congo, so the possibility of this having disseminated from Bantu is excluded. Thus *-I*, probably anterior or perfective, can be assumed for Proto-Bantu and back into Niger-Congo.

6.4.2(viii) Vowel copy suffix (-VC) ‘near past’ (Grégoire 1979) Eight per cent of the matrix languages have a suffix consisting of a single vowel reflecting the height of the vowel of the root and with affirmative past (occasionally anterior) meaning.⁷⁴ This is a small group or more or less adjacent languages in Namibia, Botswana, Angola, and Zambia (H20, K10-30, L10-23-62, M62, R20-30-40), with outliers nearly two thousand kilometers away to the east, in southern Swahili (G43) and Comorian (G44).

Used affirmatively, it occurs predominantly with near past reference.⁷⁵ When it so occurs, it co-occurs with pre-stem \emptyset , *na*, or *a* (almost equal numbers of each). When forms with \emptyset and another pre-stem marker co-occur in the same language, the null form always indicates a present or a time nearer the present, while the forms with *na* or *a* indicate a more remote time, thus acting as shifters. It also occurs negatively, in which case—as the */-I/* suffix—it has usually has non-past reference and the pre-stem marker is always null. It occurs in all the languages mentioned as an affirmative and only in some as a negative, that is, the affirmatives and negatives co-occur in some languages but not others.

It only occurs in five-vowel languages today, and as with *-I* preceding, there is no sign of stem-final vowels having mutated before it. In most of the languages in which it occurs, it is in clear complementary distribution with *-a*: [á] typically occurs after extensions and/or high-toned roots, whereas the other vowels, low-toned, occur after, and reflect the vowel of high-toned, non-extended -CVC- roots. Both these claims—the alternation with [a] and the alternation in tone, depending on context—come from Grégoire (1979) but Nurse and Philippson (2006) found that the tonal evidence for this suffix was not solid and did not allow of an overall generalization. Example from southern Swahili (most G42 and G43, except G42d, Standard Swahili):

- (25) G42H kw- \emptyset -aw-a ‘You came out’, kw- \emptyset -end-e ‘You went’, ku- \emptyset -pik-i
 ‘You cooked’, ka- \emptyset -ngoj-o ‘He waited’, ka- \emptyset -uz-u ‘She sold’
 but
 ku- \emptyset -ni-pik-i-a ‘You cooked for me (with applicative -i-), ku- \emptyset -ni-uz-i-a
 ‘You sold to/for me’, etc.

⁷⁴ Some northwest languages replace final [-a] by a copy of stem vowels, especially of mid vowels. In some languages this is consistent, in others partial. In general this copy does not have grammatical meaning, and does not characterize only the near past, so such languages are not included in the 8%. At least languages in the following groups are affected by this in one way or other: A11-20-30-40-85, B40-51-60-70-82, C101-25-6-41-55-60, D311-33. For examples, see Ittmann (1939, for A24), Meinhof (1889–90b, for A34), Atindogbé (1996, for A42).

⁷⁵ In R20 and 30 it is an imperfective, which must have involved a semantic shift, if, as seems likely, the original meaning was anterior.

While vowel harmony certainly operates on suffixes, including final vowels, in Niger-Congo languages outside Bantu, I did not find any convincing case of a vowel copy final vowel linked to near past or perfective reference.⁷⁶

6.4.2(ix) A probable historical connection between the suffixes treated in

6.4.2(v–viii) I would like to propose that the four suffixes/‘final vowels’ outlined in the previous sections are historically connected and share an ultimate common origin. The proposal here consists of a set of plausible suggestions and does not offer absolute proof of the connection. Such proof is currently impossible because it depends heavily on the availability of general comparative data from (the 1,000 or so) Niger-Congo languages outside Bantu, which is largely lacking, and crucially on detailed data, likewise not available, from the northwestern Bantu languages and Grassfields Bantu and Bantoid languages in western Cameroon and eastern Nigeria. On top of this, the detailed presentation of the data would take much more space than is available here. I would ask readers to keep this in mind over the next pages and invite them to work on the difficulties involved. Givón (1971: 162) says, ‘The value of a farfetched hypothesis is often due to its usefulness in explaining a wide range of phenomena which until then seemed unrelated’.

To start, these four share striking features: all are verbal suffixes, consist of or contain a high front vowel, and cluster semantically around near past and anterior reference. Anterior, near past, (and stative) reference are known to be frequently related cross-linguistically. Since *-i* goes back into Niger-Congo, and non-Bantu Niger-Congo languages are aspect, rather than tense-and-aspect, languages, with an original perfective-imperfective contrast, *-i* may originally have represented perfective. These obvious features are joined by two less obvious: the facts of geographical distribution and the existence of plausible grammaticalization paths linking them.

The suffix *-ile*, widely referring to anterior, near past, or past, in affirmative and negative forms, occurs in full form in most (66+ per cent) Savanna languages and is today the most widespread of the four in Bantu. Its non-occurrence locally (at least bits of E60, G40, H32, most N, and S20) results from fairly recent loss. It occurs as a trace in some Forest languages (Zones A, B, C) but with one questionable exception,

⁷⁶ Thus, as mentioned in *n.* 62, Igbo vowel harmony affects the present perfect, but it is a general process, also affecting other final vowels, such as subjunctive (‘hortative’) and consecutive (Welmers 1973: 357, 365). In Moro (Kordofanian) the perfective ends in *-a*, *-o*, or *-u*, the imperfective in *-a*, but it turns out that the perfective is unmarked, the [a, o, u] being part of the lexical stem, replaced by [a] in the imperfective.

The only convincing case is Zande, a Ubangian language in the DRC, which has vowel height and ATR harmony with the stem vowel in the suffix of its perfect aspect. Where the stem vowel is [a] and the stem-final consonant labial, the final vowel is [u], and [i] with stem vowel [a] and non-labial final consonant (Tucker and Bryan 1966: 142). Zande is not particularly closely related to Bantu. The facts are strikingly similar although not identical to those across Bantu. But Zande itself is a strange case. It is atypical of Ubangi languages in general (R. Boyd, p.c.) and its verbal morphology and categories show certain striking similarities to Bantu languages in Zone C adjacent to it. The similarity could result from common inheritance with Bantu but it might equally well have resulted from a contact situation—recent research suggests that in principle such morphological details can be transferred. The evidence from Zande is thus suspect and needs more investigation.

it does not occur in Niger-Congo outside Bantu (see *n.* 62) so it is reasonable to think that Proto- or early Bantu is its limit.

The suffix *-I*, representing predominantly an affirmative near past in binary past systems, or the nearest pasts in ternary past systems, less often all pasts or anterior, occurs in northwestern (most B and C languages, some A, D10-20-30, H32) and a few adjacent languages (K40, L10, L30), questionably in G22, and as stative in others (e.g. E60/74a). Thus its geographical extent (26 per cent) is more restricted today than that of *-ile*. On the other hand, its roots go back beyond Bantu into Niger-Congo (see 6.4.2(vii)). Outside the Forest, *-I* and the vowel copy suffix following, alternate with *-a* in certain contexts set out in 6.4.2(vii) and (viii): within the Forest they do not so alternate.

The vowel copy suffix, with predominantly affirmative (near) past reference, occurs mainly in a small set of Savanna languages (8 per cent) to the southwest of the Rainforest (H20, K10, K30, L23, (L31 in one source), L60, M62, and most of Zone R, with an outlier on the east coast). A similar suffix occurs outside Bantu, in only one language, Zande, for which the explanation is unclear (see *n.* 73).

Finally, *-(I)Ite* occurs in affirmative and negative forms in some (12 per cent?) eastern and southern Savanna matrix languages, mostly as an allomorph of *-ile* 'anterior'. In a very few languages, it has ousted the other allomorphs, becoming the only shape, and in Central Kenyan languages, it developed an independent existence beside *-ile*, which shifted to perfective. It is unknown outside Bantu.

These geographical facts suggest that while *-I* predates the emergence of Bantu within Niger-Congo and *-ile* may be traced to early or Proto-Bantu, the vowel copy suffix and *-(I)Ite* with independent existence postdate Proto-Bantu and are regional and more recent developments, the latter most likely more recent than the former. Proto-Bantu did not have several anteriors or pasts, and therefore did not have or need several suffixes to express them. A possible scenario, positing one original suffix consisting of the front vowel [i], and two major paths of development, runs as follows.

The first major path of change produced *-ile*. It is likely to have been the earliest change, because *-ile* or traces of it, exist all across Bantu. An allomorphic situation arose, in which the single vowel [-i] occurred after most kinds of verb stems but an allomorph of the shape [-eli, -ili, -ile, etc.⁷⁷] emerged after short (CV) stems, as seen in the A22 example in (228).⁷⁸ In a few languages, mostly in the northwest in

⁷⁷ If the VCV shape is the addition of [i] to another morpheme, our first instinct might be to see the combination as consisting of [i+IV]. The opposite makes more sense: [-il-i] would explain why many languages today allow the passive morpheme, always the last of the extensions, to occur before the last vowel (*-il-w-e.-il-w-i*), and would explain *-il-* as a frozen extension.

⁷⁸ That stem length (CV versus CVC) provided and continues to provide a context for this kind of allomorphy is well known (for further discussion of *-i/-ile*, see 6.4.2(v, vii)). The causative and passive extensions reconstructed for PB had two allomorphs, the longer occurring after short (CV) stems, the shorter elsewhere (see 6.4.1). In contemporary languages the *-ag-* suffix has a long and shorter version with a similar distribution (see Notes for M25, in the Appendices, and others languages: also 6.4.2(iv)). In Luhya (Marlo 2006) some extensions have additional material after CV stems (see the insertion of *ch* in the Bukusu/E31 example (19)). In Zone P languages, CV stems behave differently in reduplication (see 4.9).

Zone A, this allomorphy still exists. Elsewhere, in a language or languages ancestral to many of today's Savanna languages, the *-ile* variant prospered and spread. It either replaced the older single vowel entirely, or, in some languages (e.g. E62b, in (24), they went their separate ways, became semantically distinct and coexisted. On the other hand, in many Forest languages, the *-I* variant prospered at the expense of the *-ile* variant.

Separately and later, and perhaps more than once, *-(I)ite* emerged as an allomorph of *-ile*. In some language they remained as allomorphs, in a few cases *-(I)ite* replaced *-ile* entirely, and in even fewer they came to coexist and contrast semantically.⁷⁹

The second major path involved two steps. Initially there developed an allomorphy of *-I* and *-a*, in the recent past affirmative, and then assimilation of [-i] to an increasing range of root vowels, producing alternations not just of [i] and [a], but of [-e] and [-a]; [-i], [-e], and [-a]; [-i], [-e], full vowel copy,⁸⁰ and [-a]; full vowel copy and [-a]. This second path, and especially the development of the end stage, the full vowel copy, must have postdated the emergence of *-ile*, because it is geographically much more limited. Suffixal *-I* does not apparently so alternate in northwestern languages, so the alternation, first of *-a* and *-I*, later of *-a* and an increasing number of other vowels up to complete vowel copy, seems to be a Savanna innovation. The alternation of *-I* (or *-e*) and *-a* occurs in at least D10, K40, L10, L30, (and G22). The alternation of *-a* and the vowel copy suffix occurs in G43-44, H20, K10-30, L10-23-62, M62, R20-30-40. With the exception of the G43-44 outliers on the east coast, these two geographical domains are largely adjacent so it is not surprising that some languages are described as having one of the variants, while an adjacent language is described with the other.

This proposal is similar to, but different from, Grégoire's (1979: 168), who proposes that 'Proto-Bantu or one of its later subdivisions'⁸¹ had an original situation similar to that in Luba Shaba (L30) today, whereby a recent past affirmative was expressed by two main suffixal variant shapes. One was **-e* (L, toneless), occurring after non-extended CVC (tonally high) roots, the other was **-á*, occurring in all other (segmental and tonal) contexts, the majority. An original alternation of [-á] and [-e] developed phonologically, the final front vowel assimilating to an increasing range of root vowels. The original segmental and tonal contexts for [á] and [e] have often changed and fluctuated across the millennia.

The main difference between the two proposals is the starting point. Seen from a (central) Bantu viewpoint, development of the alternation of *-e* and *-á* looks like the starting point. Given the overall Niger-Congo perspective, and the presence of *-I* but absence of alternation in the northwestern languages, an initial alternation of *-I* and *-a* looks more likely.

⁷⁹ It is unclear why the first vowel should differ in the two suffixes. Also unclear why E50 languages have a long first vowel, as *-ete*.

⁸⁰ A few languages (e.g. D12) have vowel copy but involving fewer than all vowels.

⁸¹ Translations from Grégoire's original French are mine.

The two paths of phonological development proposed from **-I* can be diagrammed thus:

- (26) 1a. *-I* > *-ile* after CV roots, *-I* kept elsewhere.
 1b. Later, some languages keep both, some keep *-ile*, others keep *-I*.
 1c. Later, in some languages, *-ile* > *-(i)ite*.
 2a. *-I* > *-I* in most contexts and *-a* in others.
 2b. Later, in some languages, this widened to the alternation of *-a* with a larger or full range of suffixal vowels.

The two paths of change led to *-ile* co-occurring and contrasting with *-I* or the vowel copy suffix. In such languages the *-a/-ile* combination is commoner than the simple *-ø/-ile* form, and typically *-a/-ile* represents a remoter past, and *-I* or the vowel copy suffix a nearer past. The two suffixes mainly contrast in languages in Zones K, L, and R, south of the rainforest.

Once any of these allomorphies emerged, it would take centuries or millennia for the allomorphs to start an independent semantic, categorial, and geographical life of their own. They had four or five thousand years to do it and changes are still ongoing. Neighbouring languages are sometimes described today as one having *-I* where the other has the vowel copy suffix. For some languages with two data sources, one often describes a language as having *-I* while the other has the vowel copy suffix, which presumably means that two different dialects are being presented, and in such a situation one is likely to eventually win out over the other.

This series of hypotheses contains obvious phonological and semantic difficulties. Phonologically, which front vowels were involved? First, assuming the derivation of *-ite* from *-ile* is correct, then why are the first vowels different? Second, evidence from outside Bantu in Niger-Congo suggests [i] as the starting point of the alternation with [a], whereas Grégoire's Bantu-based scenario suggests [e]. In either case, how did the one get to the other? Third, how did the alternation of [a] and [i] or [e] start? Fourth, the *-I* suffix more often has the lower high, or even mid, front vowel, that does not cause C-mutation of the stem-final vowel: that being the case, and if this indeed is the source of *-ile*, which typically does mutate stem-final Cs, whence the vowel change? One answer to that would be that the original suffix had the lower high [ɪ] and the new syllable had the high back vowel, which did produce mutation. And what was the source of the new [il] syllable?⁸² We would profit from more complete knowledge of vowel assimilation work across all central, western, and northwestern languages, from an in-depth study of all forms of *-I/-e*, similar to Grégoire (1979) and Bastin (1983a) and from more knowledge of the other suffixes with [-i].

Semantically, comparative evidence from across non-Bantu Niger-Congo suggests that early Niger-Congo had a basic binary aspectual contrast between perfective and imperfective, a contrast indicated at FV, in which perfective was frequently linked

⁸² One possibility is the applicative extension, reconstructed as **-il-*. Arguing against this is its having the lower high back vowel, which does not produce mutation.

to *-I*.⁸³ Many non-Bantu Niger-Congo languages still have this basic contrast. By contrast, most (at least 81 per cent) Bantu languages have introduced the category of anterior, giving a three-way contrast of perfective, imperfective, and anterior. In most Forest languages, *-I* represents near past, the linear descendent of perfective for dynamic verbs. In those Forest languages which have an anterior, it is encoded in a variety of ways, there being no uniformity of expression.⁸⁴ The scenario above proposes that *-I* gave rise to *-ile*, the main form of anterior in Savanna Bantu. Many Savanna languages encode near past by *-a/-a*. This seems to suggest that anterior encoded by *-ile* can be readily assumed for early Savanna but the status and expression of anterior for early forms of the Forest languages needs more investigation. It also raises the issue of how to get semantically from Niger-Congo perfective (*-i*) to Bantu anterior *-ile*, as current grammaticalization theory suggests that the most plausible path would be rather anterior to (near past to) perfective, or anterior to near past and separately anterior to perfective.

In what follows the single vowel suffix proposed as being the origin of the four suffixes will be referred to as *-i(le)* 'anterior', to indicate what I regard as the likelihood that *-I* and *-ile* were allomorphs in early Bantu.⁸⁵

6.4.2(x) Summary: which morphemes at FV can be assumed for Proto-Bantu?

We can say with confidence that **-a* 'neutral', **-é* 'subjunctive', **-ag-* 'habitual/iterative', and **-i(le)* 'anterior', can be reconstructed for Proto-Bantu. Proto-Bantu probably allowed **-ag-* to combine with the other three. Guthrie (1971) and Meeussen (1967) agree on these four. The three single vowels, and maybe *-ag-*, go back past Proto-Bantu into Niger-Congo. It is proposed that the suffix *-ile* derives from *-I* at the level of Proto- or early Bantu.

There is no good reason to claim that *-(I)ite* 'anterior' or the vowel copy suffix can be assigned to Proto-Bantu. Both started life after Proto-Bantu, the former as a scattered Savanna allomorph of *-ile*, which it largely remains, while the latter probably originated as an offshoot of *-I*, in a language ancestral to the languages spoken today south of the rainforest.

6.4.3 Post-final **-Vn(V̄)* 'plural imperative (?)' (see 2.3.11)

In contemporary languages, a variety of material may occur at post-final. Among the commonest are markers of: negation, different degrees of time, location, pronominal objects, interrogatives (WH-forms), and relativizers. Even subject markers may occur here in relativized forms in some languages. All these have moved from being independent post-verbal elements.

⁸³ Apparently not everywhere in Niger-Congo. John Stewart (p.c.), for example, points out that Akan contrasts anterior and past, where past is marked by a suffix whose base form is the high front vowel [-i].

⁸⁴ By *-i* in A53, B82, D14; by [ma] in A22, A43, A83, A93, B52; and in a range of other ways in Zone C and other Zones A and B languages.

⁸⁵ This phonological explanation for *-ile* runs counter to the explanation current since the 1970s that it derives from a verb 'gide + Perfect' (Givón 1971; Mould 1972; Voeltz 1977, 1980).

The only morpheme with truly Bantu-wide distribution is $-(V)n(\acute{V})$.⁸⁶ Arguments in favour of its great age are its semantic and phonological variation across Bantu and its geographical presence in every zone. While these would argue for its assumption for Proto-Bantu, little is known of its status outside Narrow Bantu elsewhere in Niger-Congo.⁸⁷ The fact that it is the only morpheme possibly assumable for this slot might argue for or against its assumption. Until more is known about its presence in Niger-Congo, I would prefer to put a small question mark next to its assumption for early or pre-Bantu. Its shape strongly suggests it started life as an independent 2p pronoun.

6.5 Synchronic combination patterns of tense and aspect, and combinations and categories assumable for Proto- or early Bantu

I examined for the hundred matrix languages all co-occurrences of the various morphemes at TA (6.2) and FV (6.4). The procedure deliberately ignored occurrences of *na*, *nga*, and *ma* at the Pre-SM position, since it was assumed that such occurrences represented morphemes only partly and recently grammaticalized. The procedure was quite revealing, in that *na*, *nga*, and *ma* co-occurred overwhelmingly with final *-a*: either they did not co-occur with other FV morphemes or the percentages of co-occurrence did not exceed 5 per cent. This failure to co-occur might result from semantic incompatibility between the categories represented by the morphemes, or from the suggested fact that these pre-stem morphemes are of recent provenance and have not had time to integrate more fully with the categories represented by the FV morphemes. In the latter case, I assume it supports the hypothesis that these are relatively recent, post-PB innovations. So Table 6.3 excludes combinations involving *na*, *nga*, and *ma*.

This table represents the synchronic situation, the relative frequency of the main combinations in today's languages. The suffixes carry aspectual or modal meaning, the pre-stem slot carries tense, aspectual (or discourse) information. Any generalizations have limited validity for two of the anterior suffixes (*-I* and the vowel copy suffix) and *-laa-* 'future', because they themselves are low frequency.

Not surprisingly, *-a-* 'past' co-occurs with all the (aspectual) suffixes, but not with the subjunctive, because very few Bantu languages have past subjunctives. The pre-stem null marker has a similar distribution, except that it combines in most languages with the subjunctive, subjunctives being typically timeless. The figure of 80 per cent reflects its segmental loss in northwestern languages today. In combinations involving the pre-stem null marker, the suffixes carry the (predominantly aspectual or modal) meaning. The other obvious difference between the patterns for pre-stem *-a-* and null lies in the

⁸⁶ The commonest of many shapes is $-(e)ni$. Especially in the Forest languages, other forms occur, such as *-enu*, *-inu*, *-anu* (or [o] for [u]), and $-(V)na$.

⁸⁷ Welmers (1973: 357–8) says Igbo uses an independent pronoun /*nu*/ for the plural imperative.

Table 6.3 Percentages of matrix languages with various combinations of morphemes at TA and FV

	<i>-a</i> neutral	<i>-ile</i> ANT or past	<i>-I</i> ANT or near past	<i>-VC</i> ANT or near past	<i>-a(n)g-a</i> HAB/ITR	<i>-é</i> SUBJ
<i>-a-</i> past	78%	43%	9%	4%	38% past	–
<i>-∅-</i> present	50%	47%	23%	3%	30%	80%
<i>-ka-</i> various	71%	3%	–	–	17% = 12% future 5% past	22+%
<i>-ki-</i> PER, SIT	46% = 34% persistive 11% situative 4% other	1%	–	–	2%	–
be+loc+infin PRG	59%	1%	–	–	14%	–
<i>-laa-</i> future ^a	13%	1% ^b	–	–	8%	2%

^a Sixteen languages are included, F32 is omitted.

^b For both PRG and FUT plus *-ile*, M63 is the (same) 1%.

lower figure for the combination of null and suffixal *-a*. The lower incidence of null here is explained by it having been replaced over time by more marked forms involved in general present reference, deriving principally from progressives, imperfectives, *-a-*, and even disjunctives.

It should be remembered that *ka* has several meanings, so the first figure above in the *ka* row (71 per cent) is the total of all meanings combining with final *-a*. Most meanings of *ka* are semantically incompatible with suffixal *-ile/-I/-VC*, whereas in its tense (future, past) meaning it can combine with IPFV *-a(n)g-a*. The final figure in the *ka*-row (22+ per cent) is probably much too low. Since it typically occurs in the subjunctive with meanings such as ‘Go and verb’ or ‘Go in order to verb’, it can be expected to be common but the sources were often simply silent on this.

‘Future’ *-laa-* co-occurs mainly with neutral *-a* and habitual/iterative *-a(n)ga*.

As persistive/situative, *-ki-* really only occurs with neutral *-a*. As imperfective in Bantoid, it is also only recorded with a neutral suffix.

The progressive is anomalous. It is morphologically anomalous, being in many languages not an inflection consisting of a V or CV shape, but consisting of, or derivable from a fused locative string. It is structurally anomalous, because as an aspect it would be expected to show at FV, with tenses in the pre-stem position. Finally, it is systemically anomalous, as its past equivalent would be assumed to be **tv-a-li(mu)kú-góla*, but in fact most languages today create tensed forms by use of compounds, giving little justification for a **tv-a-li(mu)kú-góla*.

Partly on the basis of the synchronic combinations seen in Table 6.3, and of which combinations and categories are intrinsically plausible, and of systemic considerations,

Table 6.4 Tense and aspect in Proto- or early Bantu

	(PFV)	IPFV <i>-kí-</i>	HAB/ITR <i>-ag-a</i>	ANT <i>-i(le)</i> ^a
Past <i>-a-</i>	tū-a-gūl-a 'We bought'	See below	tū-a-gūl-ag-a '...used to buy, were buying'	tū-a-gūl-i(le) 'We had bought'
'Present' <i>-∅-</i>	tū-∅-gūl-a 'We buy'	tū-∅-kí-gūl-a We (are, were) buying'	tū-∅-gūl-ag-a 'We buy regularly'	tū-∅-gūl-i(le) 'We have bought'
? Future <i>-laa-</i>	tū-laa-gūl-a 'We will buy'	See below	tū-laa-gūl-ag-a 'We will buy regularly'	See below

^a Whether this FV already had the value anterior is debatable (see 6.4.2).

we now examine which combinations and categories can reasonably be assumed for Proto- or early Bantu.

Using low-toned *gūl* 'buy' as the sample verb, together with *tū-* 'we', and FV *-a*, also both intrinsically low or toneless, the system probably looked like Table 6.4.

It can be seen that Tables 6.3 and 6.4 agree and differ in certain ways.

Suffixal *-a* and *-a(n)ga-* appear in both with identical meanings, as do pre-stem *-a-*, *-∅-*, and *-laa-*. The role of *-∅-* has changed from Niger-Congo to Proto-Bantu. In Niger-Congo outside Bantu it occurs in two typical situations. First, in many Niger-Congo languages aspect was marked suffixally so the pre-stem position was occupied by an auxiliary or was simply not occupied (*∅*). Second, in languages geographically and genetically close to Bantu, as can be seen exemplified in (9), pre-stem *-∅-* represented the unmarked (perfective) member of the aspectual system. In early Bantu it had acquired a tense value: in the system in 6.4 it is an unmarked (present) member of the tense system. 'Future' *-laa-* may have had a combined tense, mood, and focus role (see end of 6.2.4(ix)). The doubt about its reconstructability is indicated by the use of the question mark. Suffixal *-ile*, *-I*, and the VC suffix are combined as **-i(le)* ANT, following the discussion in 6.4.2(ix). Pre-stem *-kí-* is in both tables, but for Proto-Bantu is assumed to have a general imperfective role, as discussed in 6.2.4(iv), not the dependent situative/persistive role it has today in some eastern and southern languages. Suffixal *-é* does not appear in 6.4 because it marks subjunctive, not tense or aspect.

Bearing in mind that as early *ka* probably had itive or narrative function and followed other TA morphemes, then **tw-a-ka-gula*, **tu-∅-ka-gula* and maybe **tu-laa-ka-gula* would have been possible but are not shown in 6.4, because *ka* was not a regular part of the tense-aspect system. Also not in this display are non-past/disjunctive *a* (6.2.4(ii)), *na* (6.2.4(vi)) and disjunctive *la* (6.2.4(ix)), because their meanings or functions are currently unclear, or because they did not mark tense/aspect.

An explanation is necessary of the various imperfectives, and of the absence of the locative-based progressive construction from 6.4. Such a construction is widespread in Bantu and in parts of Niger-Congo, which would seem to justify its assumption for

Proto-Bantu, even for Proto-Niger-Congo, as Welmers suggests (6.2.4(v)). Two factors argue against its assumption for the Proto-Bantu inflectional system. One is that it is anomalous in several respects, as just indicated. The other is the crowded semantic space: the system in Table 6.4 has *tu-θ-gola* ‘We buy’, *tu-kí-gola* ‘We are/were buying’, and *tu-θ-gol-ag-a* ‘We buy regularly’. It is difficult to imagine the meaning and role of *tu-θ-l(mv)kú-gola* in the system in Table 6.4. In view of this, it is preferable to assume that the locative-based construction was ever present, before, during, and after Proto-Bantu but remained extra-systemic.

This raises the issue of compound constructions in general. Three boxes in 6.4 contain the words ‘See below’, because evidence for combining past and future with *-kí-*, and anterior with *-laa-* ‘future’ in single-word inflected verbs is thin, most contemporary Bantu languages preferring compound constructions. Similar compound constructions exist throughout non-Bantu Niger-Congo. On these bases, compound constructions can be assumed for Proto-Bantu, alongside synthetic forms.

Given that most morphemes involved in the schematic reconstructions above are low-toned or toneless,⁸⁸ it might be thought that the forms above would be all low-toned. In some languages today, a tonal phenomenon known as the Melodic High⁸⁹ then intervenes. There is no consensus on whether that would have happened in Proto-Bantu.

The final word of explanation is that, as mentioned in 2.10.2(vii), we cannot be sure that the verb in Proto-Bantu was synthetic. The forms in the table are written synthetically: an analytic version would separate stem from what precedes (thus *tu-a gola*, *tu-a golanga*, or *tu golanga*, *tu a golanga*, etc.), and would have involved some cliticization.

The system of temporal reference in Table 6.4 is quite simple compared with most of the contemporary systems seen in the matrices. The aspectual picture has not changed so much, this system having the common aspects found across Bantu (Chapter 4)—although not all with exactly the same functions—and encoding them much as they are commonly encoded today. It is tense representation that has changed. This system, for example, has a single past and future, whereas in Table 3.3, the average of 2.4 pasts and 1.6 futures per language today suggests a massive expansion of degrees of tense representation, some languages having three, four, even five degrees of past and future.

If we accept the *laa*-future for PB, and thus a symmetrical system with one future, one past, and a null present, then the same Table 3.3 shows just 15 per cent of today’s matrix languages with such a balanced system (A15, 93; G42, 51; H10A; K21, 42; L21; N101, 30, 44; S20, 30, 50, 60). Nine of the fifteen have the null present,⁹⁰ but not a single one has the PB past and the future morphology, although there are

⁸⁸ A probable exception is *-kí-*, and a possible exception *-ile*. ⁸⁹ See 3.11 and 6.2.4(i).

⁹⁰ The 9% with a null present today have not necessarily inherited it from PB.

languages with multiple pasts and futures which combine a past *-a-* and a future *-laa-*. None of the fifteen has future *-laa-*, and only the Zone S languages have even simple *-a-* marking past, although a few others have combined *-a-* with another marker. In all cases, there has been massive replacement of tense morphemes, and especially of *-laa-*.

On the other hand, if we reject the *laa*-future for Proto-Bantu, then we have a system with a binary contrast, past *-a-* versus non-past null. Since the same table suggests that 17 per cent of the matrix languages today have a single past, and 9 per cent have no discrete future, it might be thought that the languages with such representation, at least, have kept the ancient situation. That might be argued for some of the nine with no future: a few of them (A22, C25, G403, maybe D23) have a null non-past, which is what the proposed system above has, while the other five (B63, G33, H10A, R41, P311) have a non-past, expressed in some other way. But it cannot be realistically argued that the languages with a single past have kept the single *a*-past above, because most of them express their single past quite differently, and even the few that show an *-a-* have it supplemented by some other morphology (N101, N44, S31, maybe S20 [o]). There is no way of telling, without a lengthy micro-examination, whether those that replaced *-a-* did it in one step, or whether they first expanded and later contracted again. It is not to be expected that many languages would keep the original system from four or five millennia ago. So while a very few languages may have kept something like the original tense situation, most have clearly expanded the representation of future time modestly, and past time considerably.

Consideration of other non-Bantu Niger-Congo languages in West Africa supports the notion that pre- and early Bantu was poor in tenses and rich in aspects. An ongoing investigation of over twenty non-Narrow Bantu Niger-Congo languages⁹¹ suggests that certain generalizations are possible about the analysis of aspect (and tense) systems in Niger-Congo. Most Niger-Congo languages can be analysed in terms of aspect alone, having no tense distinctions. They show a classic basic division between perfective and imperfective,⁹² with additional aspects. Aspects may have general time reference, e.g. past versus present, in certain contexts, and detailed time reference is made by use of time adverbials, as in Yoruba or Slavic today. Because so many Niger-Congo families are 'aspect' languages and because the path from 'aspect' to 'aspect and tense' is fairly clear, we can assume that Proto-Niger-Congo was aspectual.⁹³

A minority of Niger-Congo languages and families have introduced tense beside aspect. That is, they have not just tacked on a past or a future here or there to an essentially aspectual system, but have a complete system that has to be analysed in terms of

⁹¹ The members of the investigating group are C. Beaudoin-Lietz, J. Hewson, D. Nurse and S. Rose. The languages so far investigated are listed in *n.* 7.

⁹² Other labels are also used, e.g. perfect versus imperfect, accompli versus inaccompli.

⁹³ Nurse (2007a).

tense and aspect.⁹⁴ In many cases the distinction between an ‘aspect’ and ‘aspect and tense’ language is clear but in a few cases it is not. This could be because a language is en route from aspect to aspect and tense or because the data in the source did not allow a firm judgment. Languages/families that have formally grammaticalized tense are (use of brackets around Tikar, Ijo, and Jukun⁹⁵ indicates doubt about how best to analyse them): (a) Narrow Bantu; (b) some, perhaps many Bantoid languages, certainly Grassfields Bantu, some (all?) Mambiloid languages, (Tikar, others?) but not Ekoid; (c) some Benue-Congo languages, including some Nupoid varieties (and Jukun), maybe Igbo, maybe some Cross Rivers varieties (Ibibio); (d) (Ijo); (e) some eastern Kru varieties (e.g. Godie): Supyire (=Gur?); (f) Zande. It will be seen that some of these are adjacent, or more or less adjacent, and fairly closely related—Bantu, the Bantoid languages, Lower Cross, Jukun, Ijo⁹⁶—while others, such as eastern Kru, Supyire, and Zande are clearly separate. But if we step past that general statement and examine the details, we see considerable variation. Thus, while Narrow Bantu, some Cross River, and Zande have synthetic structure and prefixed morphemes, Grassfields, Tikar, Ijo, and eastern Kru have analytic structures, with Grassfields relying largely or completely on independent pre-verbal auxiliaries or morphemes, and Tikar, Ijo, and eastern Kru having some suffixed material. Further, while most Narrow and Grassfields Bantu languages have multiple pasts and futures, Tikar, Lower Cross, Ijo, eastern Kru, and Zande have fewer pasts and futures.⁹⁷ Finally, even if we compare the pre-stem material in those languages which have it, some of it is shared, and some is not. I would conclude that what occurs (i) in Zande,⁹⁸ Ijo, and eastern Kru is independent, and (ii) in Narrow Bantu, Grassfields, and Lower Cross is similar in nature. It would seem, assuming the linguistic ancestors of these three communities, and maybe others, were in the same area of Cameroon and SE Nigeria when the early Bantu moved out, that this the area where tense as a phenomenon started. Whether it started in one of them and spread to the others later, or whether it was an innovation shared at some level of the Bantoid-Cross River tree cannot be determined until we know more of the distribution and nature of tense in Grassfields and southeastern Nigeria. It is unlikely that different subsets of Bantu innovated the general phenomenon of tense reference at different times and places in eastern and central Africa. Since we can be fairly sure of that, but not sure when tense was innovated in Grassfields, Bantoid, and Cross River, it would seem most likely in the present state of knowledge that tense

⁹⁴ One odd feature should be noted here. Ijo, Ewe, Yoruba, (Kru), and maybe others are aspect languages but appear to have a future tense, or future tenses. Cross-linguistically this is quite unusual. Creissels *et al.* (2007) note exactly the same phenomenon in ‘many’ Chadic languages. Chadic languages are located in northeastern West Africa, not so far from these Niger-Congo languages, so this appears to be an areal feature, and needs more investigation.

⁹⁵ Storch (1999a) has two futures but their translations suggest a strong modal component.

⁹⁶ In current classifications, Ijo is not closely related to the others.

⁹⁷ One Grassfields language examined (Aghem) has just two pasts and futures, and Zande has a single future.

⁹⁸ Zande behaves anomalously in several ways. See *nn.* 73 and 76, and Ch. 3, *n.* 33.

was innovated within the community ancestral to today's Bantu languages (2.10.2(iv, vii)). The innovation of multiple tense distinctions characterizes all Bantu languages, but not in the same way. This suggests that once tense distinctions had developed while early Bantu communities and their languages were still in western Cameroon and eastern Nigeria, some five millennia ago, they were then carried and elaborated as communities moved east and south. The table above is based on comparative Bantu internal evidence and suggests that a single simple pattern developed initially and ramified subsequently and kaleidoscopically.

The mechanisms for the emergence of tenses were sketched in 3.2 and are listed formally in the next chapter.

7

Processes of change

7.1 Change

Whereas much of the nineteenth, and the first two-thirds of the twentieth century were involved with comparative work, that is, triangulating backwards from contemporary languages to reconstruct earlier language stages, the last few decades have seen mounting interest in examining downstream change from earlier to more recent language states and in the processes involved. This book does both. This chapter is a summary and arrangement of the processes of change mentioned in the body of this book, particularly in Chapters 3–6. It builds on the work done by other Africanists¹ in the last thirty years. These changes are roughly divided into typological (7.2), grammatical (7.3), and categorial (7.4). Typological change drastically alters the general architecture of language structure. In grammatical change, an item external to the verb becomes part of the verb, that is, it becomes grammaticalized. Categorical changes generally affect the systemic and semantic value of inflectional morphemes already in place. The distinction between these three levels is done for practical reasons of presentation and is often artificial, because a change at one level often has consequences at the others. Thus, for instance, in 7.2, below, there are two changes described as typological: the change from a pre-Bantu analytic structure to the synthetic structure seen in most Bantu languages, and the change from an aspect-prominent system to a tense-aspect system. Those ‘typological’ changes entailed grammatical changes, as many independent pre-stem morphemes became affixed to the verb, and altered their status from pronoun, particle, conjunction, adverbial, or auxiliary verb to being inflectional markers of agreement, negation, aspect, tense, mood, direction, and discourse status, often bleached to the canonical V or CV shape. At the same time, in the shift from aspect to tense-aspect language and also independently later, many morphemes were recycled semantically: subjunctive, anterior, directional, and progressive morphemes became futures, pasts, pasts/futures, and general presents, respectively. The processes include, but are broader than, those that have come to be known under the rubric of grammaticalization. Many of these processes are fairly widespread and already well known but there are certainly some which are less widespread and less well known, because it is by considering such cases that grammaticalization theory advances. The

¹ Particularly, but not only, Creissels, Givón, Güldemann, Heine, also Bybee *et al.* (1994).

processes include not only those resulting in tense and aspect but also in the other categories dealt with in the book.

The treatment of these processes is deliberately brief, because most have already been discussed. Readers will need to consider each process in conjunction with previous chapters (references are given), with the Appendices, and with the sources for each language mentioned there and in the Bibliography. Most are based on data from the 100 matrix languages (see Appendices) but examination of languages in the larger database other than the matrix languages shows that they exhibit much the same general features as the matrix languages. There is a slight bias in the examples and discussion in favour of Savanna languages, because often the source of a tense or aspect is an auxiliary verb and I have found such auxiliaries easier to identify in Savanna than Forest languages. Words such as ‘probable/probably, likely, may, perhaps, possible/possibly’ are used advisedly in this chapter.

7.2 Typological change

7.2.1 *The original Niger-Congo aspect system added tense in Bantu (2.10.2(iv), 6.5)*

Most non-Bantu Niger-Congo languages can be or have been analysed systemically in terms of aspect, not tense and aspect, and we may assume that Proto-Niger-Congo, probably spoken some ten millennia ago, was an ‘aspect’, not a ‘tense and aspect’ language. A minority of Niger-Congo languages and families have meanwhile introduced tense beside aspect. In some of these (Zande, eastern Kru, Ijo) the introduction of tense distinctions was undoubtedly or probably independent, but since the others (Narrow Bantu, Grassfields Bantu, Tikar and maybe other Bantoid, and Lower Cross) are or were all spoken in an area in SE Nigeria or Cameroon, we may assume that tense contrasts as a phenomenon emerged in that area, at a point before Bantu communities moved away, that is, four or five millennia ago. Whether it developed at a single node in the Bantoid-Cross River tree, or later, in early or Proto-Bantu, and then spread, is currently unclear, although the early or Proto-Bantu hypothesis is most plausible. Although this change eventually made a drastic typological difference between Narrow Bantu and most other Niger-Congo languages, it need only have happened once, at the point where early Bantu (or some branch of Bantoid-Cross River) split from its relatives.²

Although most Bantu languages have multiple pasts and futures today (3.4, and Table 3.3), careful examination of what can be reconstructed for Proto- or early Bantu suggests it most likely had a single past tense, and possibly one future. That is, it seems most likely that a simple tense system developed first and became progressively and differentially more elaborate.

² It goes without saying that this analysis depends on the acceptance of the genetic tree model.

7.2.2 *The original Niger-Congo analytic structure became synthetic in Bantu (2.10.1, 2.10.2)*

Proto-Niger-Congo and early Niger-Congo had a syntagma SP AUX OP V Other, where AUX stands for a string of morphemes (words, particles, auxiliaries, adverbs) representing mood, aspect, negation, and other categories, and V stands for the inflectional stem, consisting of a root and two bound suffixes: root-extension-final vowel. All five components of the syntagma were discrete. Most Niger-Congo languages and branches still have a similar isolating (analytic) structure today. Most Narrow Bantu languages, along with some Bantoid and nearby Benue-Congo languages, some Atlantic languages, and Kordofanian, have moved to an agglutinating (synthetic) structure. I assume that at least late Proto-Bantu had developed the agglutinating template proposed by Meeussen and shown at various points in this book.

Some northwestern languages spoken in Cameroon are exceptional in having an analytic structure. Either they once had a synthetic structure and replaced it, or they are not and never were Narrow Bantu languages.³

7.2.3 *SVO > SOV (2.10.2(vii))*

One Bantu language (Nen), and possibly a few of its neighbours, have changed the inherited SVO structure to SOV, described by Mous (2005).

7.3 Grammatical change

7.3.1 *New aspectual suffixal inflection in Bantu (6.4.2(iv, v, ix))*

Data from a survey of non-Bantu Niger-Congo languages suggests a widespread aspectual contrast between perfective and imperfective. The contrast was marked suffixally, and the suffix *-i* played a prominent role, often, although not exclusively as perfective marker. There is more limited evidence for a separate anterior across non-Bantu Niger-Congo, and where it exists, it is predominantly an auxiliary, not part of the stem. 6.4.2(iv and v) show the emergence of two new suffixes in Proto- or early Bantu, **-ag-* ‘habitual, iterative’ and **-ile* ‘anterior’. The latter probably derives from inherited **-I*, the former is of unknown origin. These are not new categories but new morphology, so part of the move to a synthetic verb structure.

7.3.2 *Compensation for phonological and morphological attrition in the northwest (2.8)*

Hyman (2004) details the restrictions on the number of syllables allowed in the stem and the number of derivational suffixes allowed in a selection of Niger-Congo

³ Several colleagues who read preliminary versions of this text urged me to expand at this point on the classification of Bantu and Bantoid, on the criteria used, and the possible role of the analytic versus synthetic distinction. Pandora’s box: I do not want to open it.

languages. These range from virtually no restrictions in many Savanna Bantu languages to a maximum of one syllable per stem and two inflectional extensions in a Kwa language such as Ewe. Although not part of Hyman's focus, these restrictions also affect the expression of aspect and mood in northwestern languages, because they are largely expressed at the FV position at the right-hand edge of the verbal string and phonological and morphological attrition works from right to left across the inflectional stem. The details are set out in 2.6, 2.8, and 2.10.

The categories threatened with loss by phonological attrition are /-a/ 'neutral', /-é/ 'subjunctive', /-ile/ 'anterior', and /-ag-a/ 'imperfective'. The two single-vowel suffixes often devoice, delete, or reduce to schwa, /-a/ in a limited area around A40, A50, and A70, /-e/ in a wider area (A40-50-60, many B, and a few C languages). In many cases, the high tone associated with /-é/ is retained, pointing to its former existence. The longer anterior shape /-ile/, seen in many Savanna Bantu language, hardly occurs in the northwest, most Zone A, B, C, and some D languages having only shorter /-i/.⁴ Significantly in some languages (A10, A20), the two co-occur, with longer [ile] after monosyllabic roots and shorter [i] after longer ones. /-aga/ is lost less often, often kept as just shorter, final [ak]. Examination of the matrices for these zones shows that the categories do not disappear but are carried by different strategies. One is an enhanced role for tones, and especially floating ones, which are left when the morphological units once bearing them are lost (e.g. in the subjunctive). It is my unquantifiable impression that tones play a larger role in the expression of tense and aspect in the northwest languages (see Beavon (1991)). A second strategy is an increased role for compounds involving auxiliary and modal verbs. Thus anterior is represented by verbs deriving from 'finish', while imperfectives are expressed by the by now familiar use of various forms of 'be' followed by verbal noun or inflected verb. These impressionistic connections between morphophonological loss and the increased use of tones and auxiliary verbs need confirmation.

As 3.14 sets out, the average number of discrete tenses per language in the northwest is no fewer than elsewhere in Bantu, and a rapid count suggests the same for aspectual distinctions.

As most Bantu languages are visibly not affected by this phonological attrition, it must have radiated out at a fairly late date, after the ancestors of most Bantu communities had migrated south and east from the Cameroon.

7.3.3 *Independent (non-verbal) item > clitic > affix (> TA) (2.9.2)*

There are three main sources of verbal inflection in Bantu. One is non-verbal material preceding the verb, listed just below in this section. It follows the general route: non-verbal item > proclitic > prefix, and maybe > TA. A second, minor, source is

⁴ It was proposed in 6.4.2(ix) that original /-i/, kept in parts of the northwest, gave rise to /-il-e/. Later and independently, this /-ile/ spawned a number of contextual allomorphs in Savanna language, of which a minor one was /-i/.

non-verbal material following the verb (7.3.4): non-verbal item > enclitic > suffix. A third, major, source is auxiliary verbs preceding the lexical verb (7.3.5).

7.3.3(i) Independent subject pronouns > proclitics > subject prefixes (2.9.2(i), 6.2.2) This was part of the Proto-Bantu development of a synthetic verb structure (7.2.2). There is evidence that it also occurred later and independently in at least some northwest languages, and it also occurred elsewhere in Niger-Congo. Relativized subject pronouns occur enclitically in some Bantu languages (2.9.2(ii)).

7.3.3(ii) Negative copula, negative particle > negative prefix (5.2) There are two non-verbal sources for the negative prefixes so common in Bantu. Clearest are independent negative copulas (e.g. *ti/-si-*), which eventually become treated as part of the verb (5.2.2, (5.2)). Less clear are pre-verbal particles seen in 5.2.2 (5.5) and 6.2.3. It has been claimed that these derive from auxiliaries but the evidence for this is not solid and if it is so, in most cases the derivational process itself is opaque, because it is ancient (Niger-Congo).

7.3.3(iii) Equational copula > focus prefix (2.9.2(i), 5.3.6) In some languages, mostly in the northeast, the equational copula (*ni*) has prefixed to the verb, predominantly in focus constructions. The other functions (progressive, relativizer, conditional) most likely derive from the focus. This focusing device also occurs widely in Niger-Congo, e.g. Yoruba:

- (1) Yoruba ta ni ó ra iwé adé ni ó ra iwé
 who FOC 3s buy book Ade FOC 3s buy book
 ‘Who bought the book?’ ‘Ade bought the book’

7.3.3(iv) Comitative > various (2.9.2, (2.31, 2.34), 3.12, 4.6, 6.2.4(vi)) Bantu *na* appears as conjunction (‘and’), preposition (‘with’), and as the basis for ‘have’ (‘be with’). As preposition and conjunction, it primarily links nominals, including the verbal noun (infinitive: *ku-*). As ‘have’ it is followed by nominals, including the verbal noun. In some cases it is clear whether the preposition or ‘have’ is the source, in other cases less so. Likewise some of its derived functions (progressive, narrative) are clear, while others (in pasts, futures, subjunctives) are not. This also occurs in wider Niger-Congo (e.g. Kordofanian (Moro), Gur (Supyire), and Ubangi (Zande)).

7.3.3(v) Conjunction (?) nga > conditional (2.9.2(i), 6.2.4(vii)) A conjunction *nga*, ‘as, like’ is found in Bantu but not in wider Niger-Congo. Although its original status is not clear, occurring today with nominals and verbs, the evidence suggests it moved from nominal to verbal function, and its predominant verbal function is conditional, from which its other verbal functions derive fairly easily.

7.3.3(vi) Pa- locative agreement > where > when, if (2.9.2(i)) In most Bantu languages many nouns can be locativized by recategorizing them in a locative class. The locative prefix then appears as concord marker on the following verb. Two of the three locative classes (Classes 16, 17) are semantically broad and one of these (Class 16 **pa-*) appears in verbs in a large set of eastern and southeastern languages independent of any preceding noun, along the general route: locative concord > ‘where’ > ‘when’ > ‘if’.

7.3.4 Independent non-verbal item > enclitic > suffix (2.9.2(ii))

7.3.4(i) Independent 2p pronoun > -VnV̄ ‘2p imperative’ (2.3.11, 6.4.3) The only post-final morpheme with truly Bantu-wide distribution is -VnV̄. Its semantic and phonological variation in Bantu and geographical presence in every zone argue in favour of its deriving from an independent 2p pronoun long ago. How long ago is not clear, because it occurs in a few non-Bantu Niger-Congo languages, we do not know in how many and how widely.

7.3.4(ii) Negative (or other) particles > enclitic > suffix (2.9.2(ii), 5.2.2, and (5.4)). Verb-final negatives appear in some 35 per cent of the matrix languages. In most cases the distinction between independent post-verbal (or clause-final) and bound morphemes is clear but that between suffix and clitic is less clear. Some twenty-five languages have an independent post-verbal or clause-final particle, and most of these appear to have a non-verbal origin (so particle or adverbial). This suggests a grammaticalization path: particle > clitic > affix, but this is not a path followed by many languages (at most 10 per cent). These particles/clitics/suffixes often co-occur with a second negative marker occurring earlier in the verb, as French *ne . . . pas*. This appears to be an areal feature in West Africa, occurring inside and outside Niger-Congo, e.g. Ewe:

- (2) Ewe nye mé ga le tsitsi-m o
 1s NEG intransitive be growgrow-LOC NEG
 ‘I’m no longer growing’

7.3.4(iii) Object pronoun (or demonstrative) > enclitic > suffix (2.9.2(ii), 2.10.2(v), 5.4) Section 5.4 does not give an overview of all 100 matrix languages. If the incidence of the three patterns of pronominal marking in all the matrix languages is calculated, then 62 per cent have Type 1 (pre-stem marking), 16 per cent have Type 2 (post-final), and 22 per cent allow both patterns. Type 2 occurs almost exclusively in the far northwest, Type 3 in the Forest languages in general, while Type 1 characterizes the Savanna languages but also occurs in some scattered Forest languages. Types 2 and 3 together give 38 per cent, thus the total for the post-final position. ‘Post-final’ includes suffixes, clitics, and independent post-verbal pronouns. The data in the sources was often not explicit about the status of these ‘post-final’ items, especially about the distinction between clitic and suffix, less often between independent item

and clitic/suffix. Allowing therefore for some indeterminacy here, twenty-eight of the thirty-eight had independent post-verbal pronouns, two are definitely clitics (A43, H32), five are apparently suffixes (K13, L21, L32, L52, L62), the other three (A32, H21, H33) are of uncertain status. Thus, of some thirty-eight languages with post-final pronominal marking, ten have cliticized or suffixed the pronouns.

7.3.4(iv) Locative enclitics < post-verbal pronouns/demonstratives (2.9.2(ii))

Locative enclitics are related on the one hand to object clitics and on the other to the relativizing enclitics. However, they are treated differently from object pronouns because as far as the available data indicates, they have a quite different geographical distribution, occurring only in at least twenty-two Savanna languages (D60, E10-20-30-40, F20, H20-30-40, K13, L41-52, M302-54, N21-30, P22-301, R11-30, S42) and in Savanna languages which do not have enclitic object pronouns. In all cases they share with relativizing enclitics the deictic formative [-o], so Class 16 =*po* (pa+o), Class 17 =*ko*, Class 18 =*m(w)o*, but again their geographical distribution is different, occurring widely in Savanna Bantu by contrast with the relativizers, which occur only locally. Although they may have started life as relativizers, they now function independently in many languages, as place (and often as temporal) markers.

7.3.4(v) Relativizing enclitics < post-verbal pronouns/demonstratives (2.9.2(ii))

Nsuka-Nkutsi (1982) examines the typology and history of relativization in Bantu. He considers three kinds of relativization: subject relativization ('Man who verbs'), object relativization with pronominal subject ('Man whom we verb'), and object relativization with nominal subject ('Man whom woman verbs'). He concludes that originally, that is, in Proto-Bantu, all three shared certain features, principally a (pronominal) prefix at the onset of the verb, and specific tonal patterns. In object relativization with nominal subject, the latter is postposed to the verb ('Man whom verbs woman'), and there are languages where pronominal subjects are also postposed ('Man whom verbs she'). These original features did not include the obligatory use of relative pronouns. However, during the development of Bantu, while some languages kept this older pattern, others introduced new features, including the use of independent relative pronouns or demonstratives, often containing the deictic formative [o]. In a very few languages these are attached to the end of the verb, as illustrated in (2.41) and appear to have the status of clitics: A20, E72, G23, some G40, besides some other non-matrix languages, and as can be seen, they are mostly in northeast Africa.

Relativizers from pronominal demonstratives are well known cross-linguistically (Heine and Kuteva 2002: 113–15).

7.3.4(vi) Interrogative enclitics/suffixes (2.9.2(ii))

A variety of other categories occur as verbal enclitics across Bantu. Because some sources mention them and others don't, it is impossible to treat them systematically. They fall into three broad categories: tense, dealt with in 7.4.3(viii); interrogatives; and a collection of other items

so haphazard that to generalize that would be difficult. The interrogatives occur in the Savanna languages, covering items such as ‘What, what kind of, where, how’ and derive from particles, demonstratives, or adverbs, which in some cases can also occur independently. Examples (Giryama (E72)):

- (3) E72 si-manya w-aku-dza-dze
 1s.NEG-know 3s-PAST-come-how
 ‘I don’t know how he came’
 i-na-tsama-t^ho
 it-PRG-be.sweet-very
 ‘It tastes really sweet’
 henda here ni-henda-zho
 do here 1s-do-how
 ‘Do as I do!’
 u-n(a)-enda gula-ni
 2s-PRG-go buy-what
 ‘What are you going to buy?’
 u-n(a)-enda-hi
 2s-PRG-go-where
 ‘Where are you going?’

7.3.5 Auxiliary verb + main verb

7.3.5(i) Auxiliary verb + main verb > inflected main verb (especially 2.9.2(iii) (2.4.2, 2.4.3)) The incorporation of auxiliaries has been productive for millennia in Bantu. As 2.9.2(iii) points out, it takes two forms: the incorporation of original strings of inflected auxiliary plus infinitive ([tense + AUX] + infinitive), or inflected auxiliary plus inflected main verb ([tense + AUX] + [aspect + main verb]). These strings finish up as (mainly) aspect markers at the TA position. The former has apparently been more common and productive than the latter. This may be partly due to the incorporation processes involved. To go from AUX + INF is morphologically relatively simple, so, for example: *tu-li ## ku-verb* > *tu-li* (or *-ku-*)-verb involves only deletion of one CV string. But to go from *tú-cí-lí ## tu-ku-kál-a* > *tú-cí-lí-kál-a*, as in M14, is more complex, and if only the end stage can be inspected, it is not always transparent.

7.3.5(ii) Auxiliary verb + main verb > negative imperative (5.2.2, 5.2.6) As pointed out in 5.2, two strategies are very widespread in Bantu for indicating negation: a morpheme of the shape CV at Pre-SM or at NEG₂. This suggests they are ancient strategies and indeed they go back beyond Bantu into Niger-Congo. At the same time many languages use auxiliary verbs to negate relative clauses and especially imperatives. Doubtless this has been going on throughout Bantu history, during which time

many auxiliaries have been reduced to the canonical CV shape. Although it is tempting to link today's VC shapes to full auxiliary verbs (e.g. **-kaan-* 'refuse, deny' > NEG *-ka-*, in most cases it is hard to do convincingly. Clear examples of the use of auxiliaries in imperatives and relatives are in (5.16). Others can be found in the Negative sections for the matrix languages in the Appendices.

7.3.5(iii) Be + locative > progressive (4.6, 6.2.4(v, x)) Progressives based on be + locative + verbal noun are common all across Niger-Congo, in Bantu and non-Bantu, so such progressives have existed for a long time, and such a progressive is reconstructible for Proto-Bantu. However, creation of such progressives did not stop at Proto-Bantu but has continued ever since. Inspecting them (e.g. see (4.6, 4.13)) usually makes it clear how recently they were grammaticalized. Older progressives have often moved on semantically to general present or future meaning. Examples can be seen in (4.13) and (8), below.

7.3.5(iv) Be, live, remain, stay, sit > habitual (4.7) As 4.7 points out, there is much overlap between habitual and general imperfective and both are expressed overwhelmingly by reflexes of inherited **-a(n)g-* in all zones. All other patterns are local and must be recent. Heine and Kuteva (2002: 331) show that 'live, remain, sit' are frequent sources for morphemes encoding habitual, and Bybee *et al.* (1994: 154) also mention this. 'Live, sit, remain' are states usually stretching over 'an extended period of time'.⁵ The Bantu verb widely associated with all these glosses is **-yikad-*, which occurs across Bantu as 'be, live, remain, sit': five matrix languages have habitual forms⁶ which might be linked to this (*-kala*, *-ka(:)-*, *-ika*, *-ke-*, *-chere/-kele*⁷), but it should be emphasized that these languages are few, many fewer than those with **-a(n)g-*, and in some cases the connection with **-yikad-* is tenuous. All this, the haphazard geographical distribution of the forms, and the partial grammaticalization of some forms suggests further that this incorporation occurred locally at different times and infrequently. Examples:

- (4) Vunjo (E62) ló-ke-kápa
 1p-ke-hit
 'We hit regularly'
- Giryama (E72) f-á-kala⁸ fu-ka-gula
 1p-PAST-be 1p-ka-buy
 'We used to buy'
- Shambala (G23) mu-ka-dik-e 'You used to cook'
- Lungu (M14) tú-káá-lima 'We (always) farm'

⁵ Also 'sleep', see Dabida (E74a) *d-a-lála-ghua* 'We buy regularly' (*-lala* 'sleep').

⁶ There are also a few languages where a reflex of **yikad* appears as a general imperfective.

⁷ G41 has a frozen form: *u-kee na-vi* 'He is ugly' (lit. He-has.remained with-badness).

⁸ Reflexes of **ba* 'be' have disappeared in E72, because **b* is lost, which would leave only [a], insufficient to carry meaning. It has been replaced in most functions by *-kala*.

Umbundu (R11) e-v-eka okwenda
 ci-3p-do.habitually to.travel < ci-va-ika + okw-enda
 ‘They travel’

7.4 Categorical change

7.4.1 Sources of presents and imperfective aspects (see 4.5, 6.2.4(ii, v), 6.5)

All matrices, between their past and future tenses, have an unlabelled row, the present. This section is based on examining all the forms in the 100 matrix languages in that row, except present anteriors and minor related categories such as inceptives and completives. So it includes the present of perfectives, imperfectives, progressives, habituals, and persistives, and of less frequent categories such as iterative and pluractional. It also includes non-present forms in the columns for imperfectives, progressives, habituals, and persistives. All these present and aspectual forms were extracted and considered. Importance was attached to both forms and categories. This was because in some cases identical forms might be assigned to different categories in different languages. For example, a null present in many languages is considered a perfective, and in others an imperfective, depending on the system of a specific language or the information in the data source.

The discussion here rests on assumptions made in 6.5, that Proto-Bantu had a null ‘vast present’; another non-past, probably focus *-a-* (and maybe *-la-*), a suffixal habitual/iterative *-a(n)g-a*: a progressive based on a locative construction: and *na* playing an uncertain verbal role.

Many languages still have large vestiges of this system. Over 50 per cent of the languages have a null present, the *-a(n)ga* suffix, and the locative-based progressive. Over 20 per cent have an ‘*a*-present’, and a trace of *na*. Both the null present and the *a*-present can be used to refer to future, especially near future, situations, and some languages have grammaticalized them as such.

7.4.1(i) Progressive > general present (4.6) Where a language has no null present or no *a*-present today, it is most commonly replaced by a form clearly or likely derived from a locative-based progressive. Such a progressive is reconstructable for Proto-Bantu and so widespread in Niger-Congo that Welmers (1973) thought it assignable to PNC. Heine *et al.* (1991*b*) found it in over 100 African languages in their sample.⁹ Locative-based progressives are amazingly productive in African languages in general, including in Bantu. In not all languages with such a progressive today does it necessarily go back to Proto-Bantu. New locative-based progressives are constantly being thrown up. As older progressives shrink in shape or move semantically to another role, they are often replaced by a new locative-based progressive. They can even be formed as calques or borrowings from other languages. Newer progressives

⁹ Pan-African features may in fact be Niger-Congo features that have disseminated. Niger-Congo is a linguistic giant that bestrides the continent, abutting on all other language phyla.

of this kind can be recognized by having a full form, older ones are worn away phonologically.

At least 15 per cent of the matrix languages have a general present of progressive origin. Almost always it has the shape [ku] or [ko], that is, it is very eroded phonologically, older **li+mu+ku* having given *ku*.¹⁰ As pointed out in 4.6, most but not all progressives originate in locatives. Others are innovated constructions deriving from 'have/be with'. Whatever their origin, progressives readily widen into general presents and imperfectives cross-linguistically (Bybee *et al.* 1994; 140ff., see (4.13)). As other presents, such forms can take on future reference, and eventually become grammaticalized as such, thus Hungu (H33):

(5) H33 *tw-a-sumba* 'We buy' but *tu-ku-sumba* 'We will buy'

7.4.1(ii) Non-locative sources of progressives (5.3.4, 5.3.10) Where do progressives themselves come from, other than locative constructions? They have few other sources, only two exceeding 5 per cent of the matrix languages: from the conjunction *na* (4.6) or from focus forms (5.3.4, 5.3.10). At least 10 per cent of the matrix languages have a progressive involving *na*: it is not clear whether they derive straight from the preposition *na* or from 'have = be with'.¹¹ They all occur in Savanna languages and in virtually all cases *na* is followed by *ku*, the verbal noun, or shows signs of having once been followed by it.

5.3 deals with the various tonal and morphological manifestations of focus. Only two of these (*-a-*, *-ra-*) might be reasonably assumed to go back any distance within Bantu and only *a* is widespread, over 25 per cent of the matrix languages having it as a 'present', only 6 per cent as disjunctive focus. If *-ra-* and non-past *-a-* both once represented verb/disjunctive focus, then both have since broadened semantically to general present, possibly by way of progressive. Progressives are themselves [+ focus]. This then gives a chain of development: (disjunctive) focus > progressive > general present > future or non-past (see 5.3.7).

7.4.1(iii) Sources of habituais (4.7) Habituais behave differently. In Proto-Bantu, habitual/iterative/durative meaning was probably subsumed under the range of meanings of the general imperfective suffix **-a(n)g-a*, and where it is a discrete category today that is often still so. Where forms with general habitual or iterative reference, once based on *-a(n)g-a*, have been replaced, they have done so by extending a general present form, on the basis that general presents include a habitual component (see 4.6).¹² This can be seen nicely in the matrices for closely related

¹⁰ Reduction of these progressives almost always ends up as *ku/ko*, much less often as *mu* or *li*. It would be interesting to investigate why.

¹¹ Typically in the present they are not time-marked, while pasts and futures are marked accordingly.

¹² Only very occasionally do habituais take over general present functions. A case in point is the Swahili dialects of northern Kenya and southern Somali. Where Standard Swahili distinguishes *-na-* (*tu-na-cheza* 'We are playing' or 'We play') and *hu-* (*sisi hu-cheza* 'We play habitually'), these northern dialects have only *hu-* (e.g. G41 *isi hu-tedha* 'We play, we are playing').

E15 and E22: in most other related languages *-a(n)ga* occurs with past, present, and futures, but E15 and E22 allow the suffix only in past and future, having replaced it in the present by the general, unmarked, form. Replacement forms from the present include null, *a*, and a few progressives, but it should be emphasized that none of these is common. As also indicated in 4.6, habitual morphemes deriving from forms of ‘be’, as in ‘be, sit, remain, stay’ also appear but in Bantu they are infrequent.¹³

7.4.1(iv) Imperfective *-kí-* > situative/persistent (4.8, 6.2.4(iv)) For the reasons set out in 6.2.4(iv), *-kí-* is assumed to have been inherited in Proto-Bantu from a pre-Bantu phase and to have most likely represented imperfective in the system. In that case it has undergone a semantic and functional narrowing. Since persistives connect two times, *-kí-* has often combined with other morphemes, being particularly parasitic on the progressive.¹⁴

There is a clear connection, on the one hand between persistent and situative *-kí-*, and on the other hand between them and the older imperfective. Did the imperfective change independently from imperfective to situative and persistent, or was there a chain with three links? The most plausible explanation suggests general imperfective to situative to persistent. The imperfective represents any situation that the speaker wants to show as lasting over a period of time, a situation that is typically unbounded, where neither beginning nor end are mentioned, relevant, or known. The situative also stresses the ongoing, incomplete nature of a situation. The speaker wants to highlight a situation with neither beginning nor end mentioned, which has continued and/or could continue for a long while. Thus imperfective and situative are semantically similar, the main difference being that the situative appears in hypothetical situations, as backgrounded material, in dependent or subordinate clauses, and as the second member of compound verb constructions, where it behaves as a verb in a subordinate clause. So the situative is an imperfective reduced to a dependent, subordinate role. The persistent likewise represents an open-ended situation that could continue into the future but adds the specific feature that the current situation has held continuously since some point in the past. Although it can and does occur in independent main clauses, it implies a dependence on a previous situation. While situative and persistent differ along the parameters syntactically dependent versus independent, and totally open-ended versus inception in the past, they share with each other and with imperfective the representation of an ongoing and incomplete situation.

¹³ Heine and Kuteva (2002: 193) have ‘lie down’ as a possible source for their ‘continuous’. Bantu ‘lie down’ and ‘sleep’ are the same verb (*-lala), which can be seen in E74a as an Habitual.

¹⁴ The *ki*-persistent is not the only one to co-occur with the progressive. Languages such as F21, F33, G11, G33, G403, M11, and M302 have what seems to be or have been a compound persistent marker, whose second morpheme is *-li* or *-ri*, and whose first morpheme is opaque. Similarly, most other languages with a (non-*ki*) persistent apparently involve ‘be’ or a locative-based construction. See the Appendices.

7.4.1(v) Reduplication and imperfectives (2.2.5, 4.9) Two general processes have also contributed to the production of presents, imperfectives, and futures.

One is reduplication, a derivational process discussed and exemplified in 4.9 in four morphosyntactic variants (also 2.2.5). Reduplication expresses iconically categories such as imperfective, durative, iterative, frequentative, continuative, progressive, habitual, and intensive action. Because repeated action can lead to or imply something being done thoroughly, well, or occasionally, reduplication also expresses these notions and related notions, often depending on the meaning of a particular verb. Only four languages (A53, G62, L32, N101) show the use of reduplication in major aspects (progressive, habitual, iterative). However, if readers peruse the Appendices carefully, and especially if they take time to read the sources, they will find that reduplication is very common in Bantu, although not always in grammaticalized form or a form that can be reproduced in a matrix. With the possible exception of triplication, which appears to occur only locally, the other types of reduplication go beyond Bantu into Niger-Congo.

7.4.1(vi) Anterior/near past comes to include and then refer to present (4.11.3)

The second process, which produces presents and futures—the latter being an extension of the present—is the use of a near past or anterior form to refer to present or future situations. This is an anterior usage in that the decision to do something is in the past, and the result of the decision is understood to persevere into the present or future, even though the actual result has not yet come about. This is only formally grammaticalized in ten or so matrix languages, but seems to be a functional possibility in at least several more. As Welmers (1973) cites an identical example in Niger-Congo Kpelle, I assume this is a longstanding functional possibility in Niger-Congo.

7.4.2 Sources of futures (2.9.2, 3.2.2, 3.11, 4.11.3, 6.2.4(iii), 6.2.4(ix), 6.4.2(iii))

The question of assuming a future tense for Proto-Bantu has been discussed (6.2.4(ix), 6.5): if a future formative can be assumed at all, it is *laa*, but that assumption is tentative. However, since a derived origin for *laa* cannot be found, it is not further discussed here. Other conclusions about Proto-Bantu from Chapter 6, relevant to futures, are the assumption of: (a) a null vast present, (b) a non-past, probably focus, *a* and maybe *la* (non-past subsumes future), following a tense marker, (c) an itive or narrative *ka*, following the tense marker, (d) *na* in the verbal system, function unclear, (e) subjunctive *-é*, (f) *-ile* ‘anterior’, and (g) *-i* ‘near past’.

The sources below are arranged in order of decreasing frequency. Excluded are phenomena occurring in fewer than 5 percent of the matrix languages.¹⁵

¹⁵ These are: the verbs ‘go’, ‘want’, ‘be able’, and ‘say’; the suffix *-a(n)g-*; and verb-initial *na*. This latter, which also occurs sporadically in past reference, presumably derives originally from the linking function

Each is exemplified, where possible using languages not already featuring in the literature.

7.4.2(i) A *ka*-source (3.2.2, 6.2.4(iii)) From *ka*, assumed to have been originally an itive or narrative (in 29 per cent of the matrix languages),¹⁶ two paths appear possible. One derives directly from the occurrence of itive/narrative *ka* after a present tense marker (Proto-Bantu null or *a*) in the indicative: ‘X (go and) buy’ > ‘X will buy’; X verb (and then) verb (and then) verb’ > ‘X verb and will verb and will verb’. A second derives from a similar structure, but in the subjunctive: ‘X will go (in order) to verb’, or ‘Go (in order) to verb’ (e.g. in Nasi, (*Nenda*) *u-gul-e* ‘(Go and) buy’ > (*Nenda*) *u-ka-gule* ‘(Go) that you buy’). Because they arise by being added to other forms and remove the situation away from the present, futures with *ka* usually indicate more remote time.

- (6) Kanyoka (L32) u-Ø-ka-tuma ‘You will send’ (only future)
 Nomaande (A46) u-Ø-ká-a námb-áka
 3s-null-F₂-3s prepare-PLU
 ‘She will (F₂) prepare’
 u-Ø-ka-á kóç-ak-a ‘She will (F₃) pick’
 Kwanyama (R21) há-ndí-Ø-ká-dénga ‘I will meet, go and meet’
 Kimbundu (H21) tw-a-ka-rima ‘We will (F₂) cultivate’
 Bukusu (E31) xu-xa-kul-e ‘We will ((F₂) buy’
 (Bukusu [x] corresponds to [k] elsewhere)
 Ruri (E253) ci-a-ka-gur-e ‘We will (F₁) buy’ (see also below)

In some languages *ka* acts as a shifter¹⁷ by being added to a near future to form a more remote future:

- (7) Bende (F10) tu-lo:-ghúlá ‘We will buy (F₁)’, but
 tu-lo:-ká-ghúlá ‘We will buy (F₂)’
 Lucazi (K13) na-va-tangisa ‘They will teach (F₁)’, but
 na-va-ka-tangisa ‘They will teach (F₂)’

7.4.2(ii) Semantic extension of the present (3.2.2, 3.10, 3.11) Twenty per cent of the matrix languages have a future originating in a semantic extension of the present (‘We are seeing them tomorrow, We see them tomorrow’). This figure ignores forms in *a* or *na*, which might have once been presents extended to future. It also excludes the many languages which have a present, part of whose semantic range

of *na*: ‘We will do this AND (*na*) do that’. Not common for future or past, it is slightly more common in future reference, presumably because other traditional devices are available for past narratives.

¹⁶ Watters (2003: 247) also mentions futures from ‘consecutives’ (= narratives) in Grassfields.

¹⁷ Other shifters have been mentioned in 2.7, 3.9.3, 6.2.4(iii, vii), and 7.4.3(viii). They are also found at various places in the Appendices, e.g. [ci] in M14, [a] for P13 and P22, and two different devices for future reference in Lunda (L52).

covers future reference (e.g. E102 *tu-ku-ghenda* 'We are going, we will go'). It thus only includes forms clearly different from any current present. By far the commonest source here is a progressive. Since the origin of this is assumed to be a form such as *li(+mu)+ku* 'be(+locative)+verbal noun', many of these have the shape *ku* or *ko*, a few have *li* or *ri*. A very minor source is the old null present. Not surprisingly, since these are extensions of a former present, they tend to refer to near or nearer futures:

- (8) Gogo (G11) *ci-ku-gula* 'We will (F₁) buy'
 Kela (C75) *a-ko-kadanga* 'We will roast' (only future)
 Langi (F33) *boka tu-∅-ri* 'We will dig' (lit. (to) dig we-are)
 Hehe (G62) *tu-∅-gúla* 'We will (F₂) buy'
 Pokomo (E71) *h-a-cheza* 'We will play' (only future)

7.4.2(iii) Grammaticalization of 'come' (3.2.2) Sixteen per cent of the matrix languages have a future originating in 'come (plus original infinitive)',¹⁸ whose original shape was **(y)ija*. The infinitive is often gone, or only retained in special contexts. The first vowel is also often gone or elided, and the second ([a]) elides with the initial vowel of the infinitive. The [j] appears as any of a range of palatal or alveopalatal consonants. Futures from 'come' usually represent nearer time:

- (9) Nyankore (E13) *ni-tu-∅-iza kugura* 'We will (F₁) buy'
 Ruri (E253) *eci-∅-ijo(ku)gula* 'We will (F₁) buy' (see also above)
 Daisu (E56) *ti-sa-remá* 'We will hoe' (only future)
 Chaga (E60) *lw-eci-kapa* 'We will (F₁) hit'
 lu-ci-ce-kapa 'We intend to hit'
 Lugulu (G35) *tu-tso-gula* 'We will buy' (only future)
 N. Sotho (S32) *tu-tlo-reka* 'We will buy' (only future)

7.4.2(iv) Origin in a subjunctive (3.2.2, 6.4.2(iii)) Ten per cent have a future deriving from the subjunctive. Few involve the subjunctive (-é) alone. The few that do probably originated in itives, as in the *ka*-examples above ('go in order to verb'): the M301 examples below seem to show a language in process of change, where the forms can be used with or without *gwiise*, where *iise* is a remnant of *-isa* 'come'. More often they seem to have originated in compound structures, where the first member was an auxiliary verb of volition, command, saying, or the like, of the sort: 'X wants/says/etc. (that) X or Y should go'. Some examples, for instance, combine several of these possibilities (P22, N14 in (10)). The futures represented by the subjunctive vary: the subjunctive used alone represents the near or the only future, but combined with other mechanisms, it can also represent middle or far futures.

¹⁸ Note Shakespeare 'I come to bury Caesar, not praise him'.

- (10) Gusii (E42) á-∅-gor-e 'He will buy' (only future)
 Ndali (M301) m-∅-bál-e 'I'll count' (F₁) (also gwíis-e mbále)
 n-gá-bal-e 'I'll count' (F₂) (also gwíise ngábale)
 Sukuma (F21) ÷e d_u-∅-göl-e 'We'll buy' (F₁), ize < 'come'
 d_u-∅-βííz-e d_u-l_u-góla 'We'll be buying' (-βííz- 'be')
 Ndamba (G52) da-tu-∅-telek-i 'We will cook' (#da- < 'want'¹⁹)
 Mwenyi (K352) tambá²⁰ ni-∅-món-e 'I will see' (F₂)
tamba mbá ni-món-e 'I will see' (F₃)
 Mwera (P22) ci-tu-∅-lim-e 'We'll cultivate' (F₁, ci < 'say' + SBJ)
 ci-ka-tu-∅-lim-e 'We'll cultivate' (F₂, ci + ka 'itive' + e)
 ci-tu-∅-ji-e-lima 'We'll cultivate' (F₃, ci + come + e, lit.
 'We'll come to cultivate')
 Mpoto (N14) ya-ti-∅-hik-ay-i 'We will come' (F₁, #ya = ? + ay + i SBJ)
 ti-ká-hek-ay-i 'We'll cultivate' (F₂, ka + ay + i,
 ay probably originally imperfective *ag)
 t-á-hek-ay-i 'We'll cultivate' (F₃, a + ay + i)

7.4.2(v) Origin in near past or anterior (4.11.3, 7.4.1(vi)) Although this occurs with future reference in fewer than 5 per cent of the matrix languages, when combined with anteriors/P₁ with present reference, it exceeds 5 per cent. This may be a more frequent process than these figures suggest, because, as pointed out in the discussion of Sonjo and Sukuma, anteriors and recent pasts may be used with present or future reference but have not been grammaticalized as such.

7.4.2(vi) Exemplification of future reference in Tumbuka Finally, to illustrate some of these and other possibilities for futures, I set out some of the possibilities for future reference for Tumbuka, as listed in the Anonymous (1970) sketch. Although Tumbuka (N21) has only one temporal degree of future, the author lists the following as having future reference. Glosses are as given in the sketch:

- (11) a ti-∅-lut-eng-e 'We will go' ('regular' future: subj. -e, plus -ang-, probably originally imperfective, as N14 -ay-, above)
 b ti-∅-ti ti-∅-lut-e ditto, 'strong future, emphasis' (-ti 'say')
 c ti-∅-ti ti-∅-lut-eng-e 'as first, but with emphasis'
 d t-a-m(ku)-tol-a 'We will take' ('elsewhere' future, not here: m is a locative, and ku the remnant of the verbal noun)
 e ti-za-m(ku)tola 'We will (come here to) take ...' (ventive, or distant in time)

¹⁹ The suggestion that da- is from *daghaya* 'want' is G. Philippson's.

²⁰ I do not know the meaning of *tamba*, but its auxiliary status is unmistakable.

- f kuti ti-za-ka-pokera ‘so that we will receive’ (‘simple future, or come to do’)
 g t-a-ya-ku(m)sopa ‘We are going to worship’ (*a* + *ya* ‘go’ + locative)
 h mw-enda-ku(m)-pima ‘You’ll feel cold on the way’ (*enda* ‘go’ + locative)

The matrix for N21 gives (a) as ‘the’ future, partly because that appears to be the feeling of the anonymous author, partly because there seem to be no other modal or deictic categories involved. On the basis of (d) and (g), and of the third example in Mpot0, preceding—Mpot0 is a nearby language—it seems equally or more likely that basic future involves or once involved *-a*. (11a, b, c) involve a subjunctive. (11b, c) involve ‘emphasis’. (11d, e, f, g, h) involve deixis (ventive, allative, en route) or narrative/purpose (*ka*).

7.4.3 Sources of anteriors and pasts (see 3.2.1, 3.9.1, 4.11, 6.2.4(ii), 6.4.2(v, vi))

Since, along with other scholars, I assume that there is a connection between anteriors and pasts/perfectives, and a path from finish-verbs to resultative/completive/anterior (perfect) to past/perfective, anteriors and perfectives/pasts are treated together here.

Although many morphological markings of anterior occur in Bantu, only three occur really widely: *-θ-...-ile* (by far the commonest, 29 per cent), *-a-...-ile* (14 per cent), and *-a-...-a* (19 per cent). An alternative way of seeing this is to say that the morpheme most often associated with the category anterior is the suffix *-ile*.²¹ These are all inherited patterns. Forms of ‘finish’ are the only non-inherited, grammaticalized source of anteriors, although minor. Although, as mentioned in 4.11.2, several verbs for ‘finish, be finished’ have been reconstructed for Proto-Bantu, reflexes of only one, **-mala*, have more than a very local distribution in anterior forms. They occur as anterior, inceptive, or completive in 9 per cent of the matrix languages (thirteen database languages), mostly in the northwest. There are many local encodings of anterior.

Likewise, few morphemes or combination of morphemes are involved in a major way in past reference. They are, in order: *-a-...-a* (61 per cent, by far the commonest), *-a-...-ile* (30 per cent), *-θ-...-I* 19 per cent), *-θ-...-ile* (14 per cent),²² and suffixal *-I* with any pre-stem morpheme. These are the same morphemes and combinations that indicate anterior, although in reverse order of frequency. The combination *-a-...-a* refers predominantly to near or middle past; when they co-occur, *-a-...-ile* (and *-a-...-I*) always refer to a more distant past than *-θ-...-ile* (and *-θ-...-i*); *-a-...-ile* (and *-a-...-I*) refer predominantly to middle or far past (P_2 , P_3 , P_4); *-θ-...-ile* (and *-θ-...-I*) refer predominantly to near past (P_1); when *-a-...-ile* co-occurs with *-a-...-a*, it refers predominantly (80 per cent) to a past further removed than that of *-a-...-a*. There are

²¹ Ch. 6 proposed that suffixal *-i* and the vowel harmony suffix are related to *-ile*: if they are included, the 29% rises to 36%.

²² Suffixal *-i* also occurs with *-a-* (7%) and *-na-* (1%), so total 27%, nearly all Forest languages.

few cases of *-a...-a* and *-θ...-ile* co-occurring, with no obvious pattern of relative time reference.

The number of ways of encoding past are limited, and account for most past forms across Bantu, whereas anteriority is encoded in many ways, mostly local.

The discussion following rests on certain assumptions in 6.5, that Proto-Bantu had a past perfective in *-a/-a*, a present anterior in *-θ...-i(le)*, and a past anterior in *-a...-i(le)*.

7.4.3(i) From anterior aspect to (near) past tense, and from near past to anterior (3.2.1, 3.3, 6.2.4(ii), 6.4.2(v, vii, ix)) If suffixal *-ile* originally represented the category anterior, but 14 per cent of the matrix languages now have *-θ...-ile* as near past and 30 per cent have *-a...-ile* as middle or far past, then how do we get from anterior to past reference? Two general paths suggest themselves.

One, set out in 3.2.1, is repeated here. An anterior involves two situations, a previous situation and a later or present state or situation, chronologically ordered, in which the present situation results from the previous situation, or in which the previous situation is somehow still relevant to the current one. If the present result or relevance component is removed the result is a past tense. That takes us from *-θ...-ile* ‘anterior’ to *-θ...-ile* ‘(near) past’. This kind of semantic shift is widely attested (Bybee *et al.* 1994: 81; Heine and Kuteva 2002: 231). Many relevant or continuing situations are recent, so it is not surprising that *-θ...-ile* tends to refer to near past.²³

Second, a similar path takes us from *-a...-ile* ‘past anterior’ to *-a...-ile* ‘middle or far past (perfective)’. In this case, a past situation, indicated by the *-a-*, is preceded by an even earlier situation, in some way still relevant or continuing. If the relevance or persistence requirement is removed the outcome is an even earlier past tense, ‘middle or far past’, which might be P₂, P₃, or P₄, depending on the language structure. The structure *-a...-ile* nearly always refers to a time earlier than *-a...-a*.

If these shifts are regarded as anterior (aspect) to perfective (aspect), that is not a shift from aspect to tense, but as long as these shifts are regarded as anterior to past, then they can be interpreted as individual aspect going to individual tense. This differs quantitatively from the contents of 7.2.1, where a whole aspect system added a tense component.

²³ In most E50 languages, anterior is represented not by *-ire*, but by *-eete*. In a 1990 message, Patrick Bennett (p.c.) said this about the development of the E50 suffix. I have modified some of his terminology. ‘In E50 *-eete* is used of continued states, not actions—and present continuous marking is very varied. In Gikuyu *ny-a-tenger-eete* is ‘He is running’—maintaining constant speed being felt to be stative. In Gusii (E42) *-ete* (short vowel) is used as a neutral past marker, so Gusii *-ire* corresponds to Gikuyu *-eete* and Gikuyu *-ire* to Gusii *-ete*. This bothered me when I was working on verbal systems. The fact that the Sonjo (E46) suffix is limited to non-future continuous and the prevalence of overlaps in E50 between present continuous and perfective markers suggests the E50 meaning is the original—from which both straight past and simple continuous can be reasonably derived, since E50 *-eete* marks completed action with ongoing state. Drop the completed action and you get Sonjo; drop ongoing state and you get Gusii.’

Conversely, how do we get from past (perfective) to anterior *-a-*? While the major sources are eloquent on anteriors going to perfectives and pasts, they are silent on perfectives and pasts going to anteriors. But clearly, assuming the data is correct, there are languages (19 per cent) in which *-a-* represents anterior, while originally it represented (general) past (perfective), and today still represents past, either general or near past. As set out in 3.6, while in principle any past situation could have consequences for the present, in practice it is predominantly recent situations that do: if we are sitting now, that is most likely because we sat down recently, not two weeks or two years ago. So there is a close connection between recent pasts and anteriors, and it is therefore not surprising that some instances of *-a-* have come to represent anterior. This tendency is exacerbated by what is set out in the preceding paragraph. Originally *-a-* represented general past but if middle or far pasts developed as described, then *-a-* became restricted to representing just near past, facilitating the shift to anterior.

7.4.3(ii) One *-a-...-a* ‘past’ to several, via prosodic distinctions (3.9.1) 3.9.1 reports that 22 per cent of the languages in the sample languages used in Nurse and Philippson (2006) made a distinction between two or more pre-stem /a/. That is, in pairs of words containing pre-stem /a/, structurally identical and semantically contrastive, the only difference is made via a tone or vowel-length distinction, either directly on the /a/ or in such a way as to think that underlyingly the /a/ are different. Twenty-two per cent is a conservative estimate because it included only languages for which the tonal details were certain. Examination of details of the matrix languages in the Appendices suggests in fact that a minimum of 38 per cent of the matrix languages makes such a distinction. Of these 32 per cent make a binary distinction, 6 per cent at least a three-way distinction.²⁴ A few languages in the matrices have /a/ in different past forms and we might think they also have contrastive past /a/, but cannot tell because tones were not marked in the source. There are also languages without tones today which show signs of having once had two or more /a/, thus Swahili has *tw-a-nunua* ‘We buy’ and (older and dialect) *tw-a-li-nunua* ‘We bought’.²⁵ So contrastive (past and non-past) /a/ is widespread in Bantu: prorating these percentages to all 500 Bantu languages would suggest that around 200 languages have contrastive /a/. Since present methods only allow the reconstruction of one past /a/ for Proto-Bantu,

²⁴ The most extreme example is D33 (see the Appendices).

²⁵ There is a certain correlation between loss of tones (and/or V-length) and loss of contrastive /a/. Of the languages in the larger database, at least these are toneless: E11-12, G32-33, probably G36-7-8-9, G41 (but not G412), G42, most but not all of G43, both G50, G67, H10 Solongo and Ndibu, M31, N11-12 (other N10?), N21, N44, P14-15 (David Odden, p.c., says P11-12 are on their way to replacing tones by penultimate stress). Some adjacent languages have reduced tone systems, that is, pitch accent or predictable tones (E22, G412, G43c, etc.). Of these, E11-12, the H10 varieties, N21 seem still to have multiple past contrasts—maybe they only lost tonal contrasts recently? Others have few tense contrasts: G33 (1 past, also probably G36-7-8-9), G41-2-3 (1), G51 (1), G52 (2), G67 (?), M31 (2?), N11-12 (2), N44 (1), P14-15 (?), P10-11 (1?). So although there is not an exact one-to-one fit between loss of tones and loss of tense contrasts, there is a tendency: loss of tones leads in general to loss of past tense contrasts, especially where /a/ is or was involved.

these others have developed meanwhile. While we cannot be sure of the details of the development, one general mechanism is suggested in 3.9.1 (see also 7.4.3(v)).

7.4.3(iii) Past meaning from original combinations of /a/ and other categories

(6.5) Past /a/, occurring at TA, could originally have co-occurred with morphemes marking categories other than tense: at limitative, *a* ‘focus’, *ka* ‘itive, narrative’; auxiliary *na* ‘various’; and various suffixes, including *-ile* and *-i*. Over time, the original non-past morpheme was interpreted as having past meaning, and the past marker could be deleted, along the lines of: *a-ka* ‘past narrative’ > *aka* > *ka*; *a-na* > *ana* > *na*; *a-a* > *a* : (> *a* in languages which lost the length contrast in vowels), etc. The last example would provide a second possible source for some of the cases of contrastive /a/, especially long /a:/, mentioned in the preceding section. The shift from the VCV shape to CV might take place for phonological reasons—shift to the canonical syllable shape—or semantic reasons, in which the non-past morpheme was felt to mark past. The semantic shift from anterior (*-ile*) to past is mentioned in 7.4.3(i), (and 7.4.3(iv)). The commonest shifts are those based on *-a-...-ile* ‘past anterior’, *a-ka* ‘past itive/narrative’ (3.2.1, 6.2.4(iii)), and possibly *a-a* ‘past and disjunctive focus’ (5.3).

As set out in 6.2.4(vi), *na* might in principle derive from conjunctive *na* or from ‘have = be + with’. Conjunctive *na* might be expected to occur pre-verbally, then to cliticize, then prefixation of the conjunction. Of the ten matrix languages with *na* in past reference, only two (Lozi (K2), Tswana (S30)) have a *na*-derivative in prefixal position, while most of the others have shapes such as *a+na* ‘past + na’ and/or *na+ku* ‘na + infinitive’, at TA. This points strongly to an origin in verbal *na*, that is, ‘have’, rather than the conjunction *na*. Even in Lozi and Tswana, while apparently prefixal, the *ne* is the end result of grammaticalization of a verb.

7.4.3(iv) The Sukuma pattern: /a/ complemented by aspect suffixes (3.9.3)

As Bantu languages evolved over the last five millennia, tense-aspect development was like a kaleidoscope, with new patterns and contrasts constantly emerging. 3.9.2 suggests one in Zone C, Bastin (1994) another in some Zone L languages. This section and the next deal with two others, less well known.

A number of Zone F languages would seem to once have had a binary past tense opposition, based on two different pre-stem /a/. The original near past tense had short, high-toned /á/. They have expanded their system of past reference by expanding the range of original short, low-toned /a/ ‘near past’ into two new intermediate past tenses (P₂, P₃). All three are based on the common use of the pre-stem *-á-*, which combines with simple *-a* for P₁, with *-aga* for P₂, and with *-ile* for P₃. A cognitive explanation is offered in 3.9.3. Pieces of this development are present in some adjacent or nearby languages, and in others not adjacent or nearby to the southwest, such as the K10 area.

How to explain the geographical distribution of this pattern, or that of other patterns such as that in Zone C—is that due to the all pervasive influence of Lingala,

or is it common ancestry? The presence of this feature in five Zone F languages might be explained as accident, the result of contact and diffusion, or the result of inheritance from a single ancestor language. Accident is unlikely as the likelihood of five adjacent and related languages all innovating independently in such a unique way is low. Transfer resulting from contact might work for the Zone C languages but for the Zone F pattern, if it occurred at all, it must at least have occurred earlier as not all the communities are adjacent today. Although the data is not complete, the forms in the five F languages appear to be cognate, which seems to exclude transfer, as borrowing would lead to at least some irregular correspondences. This leaves a single common innovation inherited by the five F daughters as the best explanation.²⁶

7.4.3(v) An E50 development: a systemic split of /a/ (Hewson and Nurse 2005)

Most E50 languages have a three-way past opposition, as exemplified in Gikuyu (E51) *tw-a-rúg-ágá* ‘We were running long ago’, *to-ráa-rúg-ágá* ‘We were running yesterday’, and *tóo-ko-rúg-ágá* ‘We were running earlier today’. In this opposition /-a-/ represents the remote past, when used with the Perfective (*-ire*), Imperfective (*-aga*), and Anterior (*-eete*). However, when used with suffixal *-a*, all three pasts are shifted forward in time, so *tw-ǎ-rúga* ‘We just ran’, *to-ráa-rúga* ‘We are running’, and *toó-ko-rúga* ‘We are running, we will run’. Here /-a-/ has visibly shifted from remote to near (‘just’) past reference. Why?

E50 languages have a more crowded representation of the intersection of past tenses and aspects than most other Bantu languages. As can be seen from the examples just given, a past tense can co-occur with any of four aspectual suffixes. In this system, complete past events are adequately represented by the Perfective and the Anterior, so that past forms such as *-a-...-a* (also *-raa-...-a*, and *-ko-...-a*) are systemically redundant.²⁷ They have been recycled within the system and *-a-...-a* has come to represent a situation that has just ended, as above or in:

- (12) Gikuyu (E51) *ma-raa-korwo ma-a-ríá* ‘They had just eaten’²⁸
 3p-P₂-be 3p-a-eat lit. they were they just eat

This semantic-functional shift characterizes all E50 languages, including E56,²⁹ but not the genetically related E46, and so can be assumed to be an early shared innovation.

7.4.3(vi) Past meaning from narrative *-ka-* (2.9.2(iii), 6.2.4(iii)) Beside the *a-ka* ‘past narrative’ mentioned in 7.4.3(iii), many languages also have a simple narrative

²⁶ In that case this would be one of the few clear innovatory features defining a putative Zone F. See Nurse and Masele 2003.

²⁷ It is the introduction into the system of *-líte* as anterior marker that has produced this situation. Only the E50 languages have systematically introduced this.

²⁸ Compare this with: *ma-raa-korwo ma-ri-eete* ‘They had already eaten’ (lit. They were + they have eaten) (they-P₂-be they-null-eat-ANT). The second element in this example contains the real anterior suffix, with anterior meaning: ‘They had already eaten, so they didn’t need to again’. In (12), the second verb contains the perfective *a*, literally: They were + they (just) ate. The English translation does not do justice to the fact that the *a* here is not an anterior, as can be seen by comparison with *ma-raa-korwo ma-ri-eete*.

²⁹ See Nurse 2000a: 48–9.

marker (\emptyset -*ka*), where the first verb in an account is tense-marked, the following verbs in the account having no encoding of tense and marked mostly commonly by tense-neutral \emptyset or \emptyset -*ka*. Across Bantu today there is much variation in whether and how and whether this is done. Since most narratives treat past events, it is not surprising to find past markers (e.g. *a*) replacing narrative markers in discourse in some languages, and, conversely, narrative markers (e.g. *ka*) broadened to represent general past. At 15 per cent, past *ka* is much less frequent than future *ka* (29 per cent). Roughly half of the (few) cases involving past *ka* occur with *ka* as the only marker at TA, together with suffixal *-a*, while the other half have *-a-ka-a* ... *-a* or *-ka-*...*-ile*. In languages with some form of *ka* representing past, it represents predominantly far past.

Without having access to historical facts, plain narrative *ka* as a source of past is in practice hard to distinguish from the final stage of the scenario outlined in 7.4.3(iii), which can also finish up as *ka* (*-a-ka* > CVC *-aka* > CV *-ka*).

7.4.3(vii) Anterior and past from grammaticalization of **-mala* ‘finish’ (3.7.1, 4.11 (n. 39), 6.2.4(viii)) Eighteen per cent of the matrix languages have a morpheme of the shape *ma* or an obviously related shape, and an anterior or past meaning. Nine per cent have it as ANT, 12 per cent as past, making a total of 21 per cent but three languages have it as both, tonally and/or structurally distinct.³⁰ The past meaning is predominantly near or middle past, and some pasts look as if they consist of the anterior preceded by a past morpheme *a*. Fourteen of the eighteen languages with *ma* are in the northwest (Zones A and B). I assume that all these cases derive from the transitive verb **-mala* ‘finish’: it is a common phonological pattern that C_1VC_2V roots reduce to C_1V .³¹ A cross-linguistic path from ‘finish’ to anterior/completive to past perfective is well attested.³² Why does *ma* < *mala* occur slightly more often as past perfective than as anterior, especially in the northwest languages? Outside the northwest, in languages such as G41-2-3 (Swahili, *me* in most dialects, *ma* in a few), Pokomo (E71, *ma*), Chaga (E60, *me*), H10A (Ki-tuba, *mene*), and maybe A74 (*man-*), we know or may assume that these structures are recent, and not surprisingly they are all anteriors. By contrast, since many adjacent northwest languages in Zones A and B have a reflex meaning anterior or past (or apparently both in A22, A83, and A93), we may assume grammaticalization was an earlier development in the northwest and has had more time to pass to the end point, the past meaning.³³

³⁰ A93 has two tonally distinctive forms of *ma*, a *me*, and a *si*, all from one ‘finish’ verb or other.

³¹ The only other candidate would be *-manya* ‘know’, for which there is no evidence that it so functions.

³² See e.g. Bybee *et al.* (1994: 55–61, 70–3, 81–7).

³³ There appear to be other factors, which need more investigation. One is that, by contrast with their Savanna cousins, where past tense marking is fairly uniform, Forest languages show more variation. Is this because they have had longer to develop diversity from earlier uniformity, or is it because at the time the ancestors of the Savanna communities moved away from the northwest, past tense reference had not stabilized? A second factor may be that, whereas Savanna languages mark anteriority predominantly by suffixal *-ile* (or *-I* or *-VC*), this is much less true of languages in Zones A and B. So perhaps the system outlined in 6.5 is a post-Proto-Bantu situation, based largely on Savanna languages, whereas what we find in A and B represents an earlier situation, where the distinction between anterior and past had not crystallized?

7.4.3(viii) Past tense enclitics/suffixes from non-verbal sources (3.8.2) So far, 7.4.3 has shown that by contrast with future tenses and with aspects (e.g. ANT)—which have drawn quite widely on sources outside the tense-aspect system for their innovations—past tenses have relied more on reinterpreting internal resources, on reinterpreting the tense-aspect system, and particularly on reinterpreting anteriors as perfectives. There are a few exceptions to this general claim. They are mainly Forest languages in one area, the northeastern part of the DRC (D10, D30, some D20), with a few outliers further west (C40,³⁴ B25). Examples:

- (13) a Kota (B25) *by-á-lap-á-sá* ‘They disappeared (P₃)’, *m-é-dumj-εk-a-sá*
 ‘I’ll hit (F₃)’, *m-a-bɛp-é-ná* ‘I carried (P₂)’, *min-é-lén-ak-a-ná*
 ‘We’ll cut (F₂)’, *m-é-kón-ak-a* ‘I will plant (F₁)’
- b Ngombe (C41) *l-a-í-hélej-a-bí* ‘We didn’t help (P₂)’, *l-aa-hélej-a-bí*
 ‘We will help (F₂)’, *l-aá-hélej-a* ‘We will help (F₁)’
- c Mituku (D13) *to-∅-bund-íyε* ‘We (had) caught’,
 to-∅-bund-íyε-bí ‘ditto (yesterday)’
- d Enya (D14) *b-a-kókól-a* ‘You won (P₁)’,
 b-a-kókól-a-mó(nɔ) ‘You won (long ago)’
- e Nyali (D33) *bi-∅-támb-í* ‘We walked (P₁)’, *bi-∅-támb-í do*
 ‘We walked (P₂)’, *bi-∅-támb-í do* ‘We walked (P₃)’,

Although the details differ, the general idea here is the same, and can be seen in each language exemplified. To a tensed inflectional stem is added one or more ‘final’ morpheme—whether clitic or suffix is not clear. The extra morpheme acts as a shifter, moving the time further back or forward, or to a specific time frame. Thus in the D10 languages, and maybe B25 and D311, *mó(nɔ)* means ‘far’ (past, or past and future) whereas *bí* represents one day either side of today (also C41). They derive from non-verbal sources: *mónɔ* is the qualifier ‘very’, and the full form of *bí* is the adverb *obí* ‘yesterday, tomorrow’.³⁵ Other details can be found in the Appendices and in the source materials. While the principle is transparent enough, the process is restricted to this area of Bantu, and since this is and has long been an area where Bantu and non-Bantu communities mix it is likely to have been induced by contact with outsiders.

7.4.3(ix) ‘Come (out)’ > near past (3.7.1) Heine and Kuteva (202: 333–4) give four lexical sources for past³⁶ and just two for near past, of which one is ‘come from’. This does not appear to be common in Bantu. One example was cited in (3.22), repeated below as (14a). The only other—questionable—case was found in a very few, related East African coastal languages:

³⁴ Including C373 (Motingea Mangulu 2003b).

³⁵ Many Bantu languages use the same word to refer to ‘yesterday’ and ‘tomorrow’.

³⁶ One is ‘get’, attested as partly grammaticalized *-par(o)* with past reference in G44a, the language in (14c).

- (14) a Kongo (H16) tu-fuma-sumb-i ‘We’ve just bought’ (-fuma ‘come from’)
 b Swahili (G42) ha-tu-ja-nunua ‘We haven’t bought’ (ha- NEG, -ja ‘come’)
 c Comorian (G44a) ka-ri-ja-hula ‘We haven’t bought, didn’t buy’,
 (ka NEG, -ja ‘come’)
 d Giriyama (E72) fu-dza-gula ‘We bought’
 k^ha-fu-dza-gula ‘We didn’t buy, haven’t bought’
 (k^ha NEG, -dza- ‘come’)

The last three cases are questionable because the unextended verb *-(i)ja* means ‘come’, not ‘come from’, and that, while in all three the verb appears in the negative, it only occurs in the affirmative in (14d). The latter objection might be overcome by assuming that it once occurred in affirmative and negative forms in all three and became restricted in (14b, c).

This short chapter has dealt with the major sources and mechanisms of change³⁷ for the multiple tenses that came to characterize Bantu, that is, it has dealt with *how* from a likely earlier situation with few or no tense distinctions the current situation developed. It has not touched the *why*, still to be explored.³⁸

³⁷ Although the use of contrastive tone cannot be described as a source, it is certainly a mechanism in the marking of new tenses, and more productive than some of the segmental markers. See 3.9.1.

³⁸ The initial acquisition of tense can be attributed to early or Proto-Bantu, presumably at the time when the early community or communities were still on or near the Benue River (see 6.1.1). Thus this initial acquisition does not seem to have been stimulated by a change in external—economic or geographical—circumstances. I assume therefore that it had rather to do with internal cognitive forces.

Definitions

Main sources are: Bybee *et al.* (1994), Comrie (1976), Heine and Kuteva (2002), Meeussen (1967), Rose *et al.* (2002), Schadeberg (2003a), Trask (1997). See also Hewson and Nurse (2005).

absolutive: any non-relative form of the verb (2.3.2).

agglutinating (language): a type of language that attaches affixes to roots, bases, or stems to express grammatical information. Most morphemes in agglutinating languages are relatively transparent, having one (or few) allomorphs and carrying one (or few) meanings (2.1, 2.3).

Aktionsart: a German word denoting the aspectual distinctions lexically inherent in the meaning of the verb itself. Lexicalized aspect. (See dynamic verb, stative verb).

antecessive = precessive, which see.

anterior (aspect): here used as similar or synonymous with retrospective and the more traditional term perfect, that is, it refers to a past situation with current relevance (mostly for dynamic verbs), or to a situation which started in the past and continues into the present (mostly for stative verbs). This usage differs somewhat from that in e.g. Bybee *et al.* (1994), who use anterior only for the first of these meanings, and resultative for the second. This book combines their anterior and resultative as anterior because across Bantu the relevant morphemes carry both meanings. Perfect is not used in this book because experience shows that readers have trouble keeping perfect and perfective, which are not synonymous, apart.

applicative (extension): adds the concept of 'to', 'for', 'with' to the verb. Adds an argument with various semantic roles including beneficiary, instrument, location. See extension and 2.3.7–8.

aspect: verbal category that expresses the 'internal temporal constituency' of a situation (Comrie 1976: 5). Expressed morphologically in Bantu via inflection or the use of auxiliaries. All finite verbs have aspectual meaning, marked or not. Verbs may have more than one aspect.

auxiliary (verb): see lexical verb.

base: refers to a 'verb stem minus the final vowel' (Meeussen 1967: 89, also Schadeberg 2003a). Thus it refers to bare root, root plus expansion, or root plus extension(s). Modified base (MB) refers to a base whose final consonant has been modified by the initial vowel of the *-ile* suffix: *-fik-* 'arrive' but *-fis-ile*.

causative (extension): expresses the idea 'make someone do something'. See extension and 2.3.8.

Central Kenya languages = Dhaagicw, which see.

cessative (aspect): 'indicates that an event stops but not necessarily that it is completed' (Heine and Kuteva 2002: 18).

clitic: a morpheme intermediate in status between (independent) word and (fixed) affix. Clitics cannot stand on their own, being structurally dependent on a neighbouring word. Proclitics occur at the initial, Pre-SM, position, while enclitics occur in the final, Post-FV, position.

completive (aspect): 'to do something thoroughly and to completion' (Bybee *et al.* 1994: 318).

compound (verb construction): used in this book to refer to multiword structures, comprising inflected auxiliari(es) and inflected main (lexical) verb, both/all having the same subject, and analysed as a sequence of clauses, in which the auxiliary behaves as the verb in the main clause and the lexical verb as the verb of a subordinate clause. See lexical verb, Section 2.2.4, and Harjula (2002: 106–7).

conditional: may refer to either a clause or verbal morpheme(s) which expresses or implies a condition. Often translates English, 'If, when, would (have), could (have), etc.'. See Potential.

conjunctive (1) (Fr. *conjonctif*). This is quite confusing. Where some languages (e.g. English) use the term subjunctive, others (e.g. German, Czech) use *Konjunktiv*: these refer to the same category. But Tervuren (e.g. Spa (1973) for D14, Meeussen (1971a) for D25, Coupez (1980) for D61; see also E15 and E22) and some French scholars use conjunctive and subjunctive to refer to different although similar categories. I can find no discussion of meaning or use, and the French translations are often identical. In this case, *conjonctif*/conjunctive refers to an inflectional category, or categories, which indicate primarily the dependent syntactic status of the clause: co-ordinate status, co-occurrence, rather than the subordination of the subjunctive. A clause with a conjunctive verb typically will not occur as the only clause of a sentence. This definition was suggested by T. C. Schadeberg. This needs more investigation.

conjunctive (2) (focus marker, pragmatic function) (Fr. *conjoint*): refers to verb forms which focus on a post-verbal complement/constituent, such as object, adverbial, second verb, or new material. In this sense it contrasts with disjunctive, which see. Conjunctive can be expressed segmentally, tonally, or by an absence of marking. Conjunctive forms are also referred to as zero, null, unmarked, or indefinite (object) forms, or as term, noun, or complement focus.

A contrast likely to be a form of the distinction between conjunctive and disjunctive occurs in most Zone P and S languages, and also in at least Grassfields Bantu, A11-24-53-64-84, B304?, C25, D60, E101, (E22), E40-50-60-74, G23, probably historical G42, G60, H10-40, K20 (historically an S language), K30-40, M40-(50)-60, and N10. The distinction possibly occurs in other languages but went unobserved by the source author. See Hyman and Watters (1984), Watters (1979a, 1979b, 2003), Güldemann (1996, 2003a).

In most matrices showing this distinction, I have predominantly used the terms found in the source, so the matrices in fact rarely show the terms conjunctive and disjunctive.

In a few languages (e.g. D61) conjunctive (1) and (2) co-occur.

consecutive (relative tense): in narratives containing a string of situations, the general time framework is established initially, subsequent actions being indicated by the use of consecutive, narrative, or subsecutive. Strictly, if the subjects of the first and subsequent clauses are identical, the form used is the consecutive or narrative. If the subjects are different, the form is called subsecutive or sequential. Narrative may also be used as a cover term for consecutive, subsecutive, and sequential, the position taken in this book. The narrative is regarded as a tense

because narrative morphemes occur in the general pre-stem ('TA') slot where tense markers occur and because they replace regular tense markers in a discourse context, so following the principle that tense is marked only once in a single-word verb.

contactive (extension): the few verbs with this extension have the common element of 'actively making contact' (Schadeberg 2003a). Also called tentative. See extension, extensive, and 2.3.8.

continuative (aspect): 'to keep on doing' (Bybee *et al.* 1994: 127).

continuous (aspect): for most authors continuous and durative are synonymous (but see Comrie (1976)).

crastinal (future tense): of tomorrow.

dative = applicative, which see.

degree (in vowels): see vowel.

dependent, or non-independent (tense, or aspect): dependent forms are those which occur or mainly in subordinate clauses. Also used in discourse analysis to refer to verbs containing backgrounded material. See Güldemann (1996).

derivation: derivation and inflection are methods of word formation. The differences between them are generally but not always clear. Derivation is a process whereby new bases/stems/ words are created from existing roots/bases through affixation. Derivation usually changes the class of a word, adapts units to a new syntactic function, or changes argument structure. Whether it changes the grammatical category or not, it changes the meaning. Derivational affixes occur nearer to the root than inflectional ones. Extensions are considered as derivational in Bantu. See Inflection, also Rose *et al.* (2002: 27).

Dhaagicw: also Thagicu or Central Kenyan languages. Cover name for E50 languages and E46.

directional: cover term for categories such as itive and ventive, which see.

disjunctive: disjunctive verb forms indicate that there is no special relationship between the verb and a following constituent. Emphasis is on the verb lexeme or one of its categories. The verb often stands alone, following constituents being optional. Before pause, disjunctive is the norm, whereas in other contexts conjunctive or disjunctive often occur. Disjunctive forms are also referred to as long, marked, strong, weak link, verb focus, independent, assertive focus, predicate focus, (just) focus, etc., forms. They may be expressed segmentally or tonally.

durative (aspect): refers to a situation that 'lasts for a certain period of time' (Comrie 1976: 41).

dynamic (verb): one of two broad categories of verbs, the other being stative. Denotes a process, activity, action, or event. See Aktionsart.

enclitic: see clitic.

evidential: form used to represent a situation the speaker has witnessed.

expansion: some roots constructable for Proto-Bantu and found across Bantu consist of apparent root and suffix. In these cases the bare root is not attested and many expansions are not

identical in shape to contemporary and productive extensions. E.g. *-tákun-* ‘chew’, could be seen as *-ták-* plus *-un-*, except that *-ták-* doesn’t exist and *-un-* has no independent meaning and so is an ‘expansion’. See extension.

experiential = (semelfactive): (Comrie 1976: 42) defines semelfactive as referring to ‘a situation that takes place (or has taken) once and only once (a single cough)’. A type of anterior. See iterative and Welmers (1973: 351).

extension (derivational): the Bantu verbal base can consist of just root or of root followed by one or more productive derivational suffixes known as extensions. They change the valency and meaning of roots. Common extensions are causative, application, reciprocal, and passive (see 2.3.8). Also refers to the eighth of eleven positions in Meeussen’s schema of the Bantu verb 2.2.6, 6.4.1.

extensive = contactive = tentative (extension): represents the notion of ‘be in a spread out position’ (Schadeberg 2003a). See 2.3.8.

final = final vowel: the tenth of eleven positions in Meeussen’s template of the Bantu verb. Some morphemes at FV consist of more than a single vowel (see 2.3.10).

focus: ‘special prominence...given to some element...to mark it as expressing the most important new information or to contrast it with something else’ (Trask 1997: 87). It highlights foregrounded/important/new as opposed to backgrounded/presupposed/old information. Focus may contrast with non-focus; high with low focus; one kind of focus (verb, auxiliary, predicate) with another (post-verbal constituent, either noun, adverb, second verb); assertive with contrastive focus. It may even involve a three-way contrast (Odden 1996a). See conjunctive (2) and disjunctive.

formative: the fourth of eleven positions in Meeussen’s template of the Bantu verb. Also called TA in this book (see 2.3.4, 2.4).

frequentative (aspect): adds to habitual the requirement that the situation be frequent during a period of time (Bybee *et al.* 1994: 127).

habitual (aspect): refers to a ‘situation...characteristic of an extended period of time, so extended...that the situation...is viewed...as a characteristic feature of a whole period’ (Comrie 1976: 27–8). Bybee *et al.*’s (1994: 317) definition ‘repeated on different occasions over a period’ brings out the iterative nature of habitual.

hesternal (past tense): of yesterday.

hodiernal (past or future tense): of today.

hortative: refers to a command in which ‘the speaker is encouraging or inciting someone to action’ (Bybee *et al.* 1994: 119, 179). As a function or form, it is often used to refer specifically to 1p forms (‘Let us verb’). It is however used very variably in descriptions of Bantu. Not clear that most languages really distinguish hortative and subjunctive (but see Notes for e.g. H16, M14).

imbrication: a phonological process which occurs in many Bantu languages when the final suffix *-ile* attaches to, or slides into, the verbal base. It has several forms. See Bastin (1983a).

imperative (mood): used in two ways, either to refer to verb forms used to issue a direct command to a second person (though there can be first or third person forms), or used as a cover term for a range of categories such as admonitive, hortative, jussive, optative, and others. Many Bantu languages issue 2p commands in two ways, by using either a bare stem (root and final vowel: more direct) or a subjunctive (more polite).

imperfective (aspect): used in two senses, (1) to contrast with perfective (e.g. see Meeussen's (1971a) analysis of D25), (2) to represent an unbounded situation that lasts over a period of time. A typical imperfective represents a situation as part complete, part incomplete. Some languages have a single category to express imperfectivity, whereas in others imperfective is a cover term for distinct categories such as progressive and habitual, and sometimes continuous and persistent. In some analyses, as reflected in the matrices, I have used the term imperfective for the most general imperfective, where I felt the data justified this. See perfective.

impositive (extension): the central meaning of the impositive is to 'put something into some position'. It is represented by the shape *-ik-*, also shared by the stative.

inceptive, same as inchoative (for some authors): change of, entry into, start of a state. See next.

inchoative (aspect or Aktionsart or verb type): as traditional terms for grammaticalized aspects, inceptive, inchoative, and ingressive are used identically by some authors (e.g. Bybee *et al.* 1994: 318). They refer to any form used to indicate the beginning of (with stative verbs) or entry into (with dynamic verbs) a situation or state, often translated by 'be about to (eat)', 'be on the point of (eating)', or 'get (eating)'. For other authors (Bussmann 1996) the Aktionsart inchoative indicates the coming into existence of a state (bloom, wilt) while the ingressive indicates the sudden start of an action (burst into flames).

Many Bantuists distinguish stative from inchoative verbs, thus Cole (1955: 276ff.) says inchoative verbs 'indicate an action which can continue for only a limited period of time before attaining completion of the action, whereupon some type of mental or physical state results'. In combination with aspects such as anterior, inchoative and stative verbs typically denote the idea of becoming or entering into a state, or a completed action and thus a resultant state. 'Die' and 'become full' would be typical inchoative verbs, while 'like' and 'know' are stative verbs (D. Gowlett, p.c.).

independent (tense, or aspect): independent forms are those which occur in main and subordinate clauses. Also used in discourse analysis to refer to verbs containing foregrounded material.

indicative (mood): one of a small set of verbal contrasts indicating mood. Indicatives are used in statements and questions, in which the speaker believes the utterance to be factual or true, or represents it as such. Indicatives typically contrast with subjunctives. Most Bantu languages mark indicative by final *-a* (or *-ile* or *-aga*), contrasting with subjunctive *-e*. Also called neutral.

inferential: speaker makes a statement about a situation based on inference, not on having witnessed it. See evidential.

infix (position): the sixth of eleven positions in Meeussen's template. Also called OM in this book (see 2.3.6, 2.4.1).

inflection: a morphological process by which affixes are added to stems (base or extended base) to express grammatical categories. In Bantu, these affixes typically express agreement

(person, number, class), aspect, conditional, degree of certainty in affirmation, focus/assertion, mood, negative, number, object, relative, subject, tense, and some discourse features. See derivation.

ingressive = inchoative (for some authors).

initial (position): the second of eleven positions in Meeussen's template. Also called SM in this book (see 2.3.2).

irrealis: largely used in this book for formatives translating into English as 'if, when', and conditionals, although that is not its only use in general linguistics.

iterative (aspect): refers to 'a situation that is repeated' (Comrie 1976: 42). An incomplete series of complete events. See semelfactive.

itive (directional): 'agent moves away from the deictic centre in order to do something . . . to be going there to do something . . . such forms are often related to the verb "go" and may also have uses of intention and future' (Bybee *et al.* 1994: 320). Movement away from the here-and-now.

Kinasi: an atonal Bantu language with one speaker and much flexibility. Not in Maho (2003).

lexical verb: many languages have constructions consisting of one or more auxiliary verbs and a main or lexical verb. The auxiliaries carry mostly grammatical meaning, while the main/lexical verb contributes the lexical or dictionary meaning to the whole construction and may also contribute some grammatical meaning.

limitative: the fifth of eleven positions in Meeussen's template. Folded into TA in this book.

metatony: a tonal phenomenon whereby a final vowel, often *-a*, is underlyingly low when utterance-final but high when followed by a complement (object). Its main function is to indicate a relationship between verb and following object. In a few languages it may be associated with certain tense-aspect functions.

modality: for some authors mood and modality are synonymous. For others, mood covers the 'older' categories, indicative, subjunctive, (optative), and imperative, while modality is used of the 'newer' categories such as ability, desire, intention, obligation, permission, possibility, probability, and others.

modified base: see base.

mood: traditionally, moods were a small set morpho/semantic/syntactic categories indicating the speaker's attitude towards the status or factuality of the utterance. There are three traditional moods: indicative, subjunctive, imperative.

narrative (relative tense): see consecutive.

NECB (group of languages): cover term for E71-3 (and maybe E74b) and G10-20-30-40, deemed to be a genetically coherent group (see Nurse and Hinnebusch (1993)).

negative (polarity): 'Many Bantu varieties show a regular, syntactically conditioned distribution of pre- and post-initial negatives' (Güldemann 1999: 550), that is, they have two negatives. Two negatives are also assumed for Proto-Bantu (Kamba Muzenga 1981). Today there is more variation in the number of negative morphemes—some languages have one, some two, some

three or even more. Some of these are marked as enclitics or post-verbal particles. This book sometimes refers to the pre-initial one as the primary, the post-initial as the secondary negative.

northwest(ern) (Bantu) languages: the term northwest(ern) Bantu languages is used variously. All Bantuists would consider its core to consist of the languages of Zones A, or A and B, while others would include most of Zone C, D10, D30, H10, H40, parts of D20 and D40, and even the languages of Mamfe and Grassfields Bantu, spoken in west central Cameroon.

optative: see subjunctive.

participant or speech-act participants: the participants in a dialogue are the first (English I, we) and second (you, older thou and ye) persons. These are represented in the verb structure at subject marker (SM) and object marker (OM), or post-verbally (2.3). Non-participants are people (third person, classes 1 and 2) and objects (other classes). Subject participants and non-participants behave different tonally (2.3.2, 2.3.6).

participial (sometimes called situative): 'Having the nature or functions of a participle, indicating concomitant state, situation, or action' (Doke 1935: 160). Participials only occur in dependent clauses, while the regular indicatives to which they often correspond 'can constitute the predicative core of independent assertive clauses' (Chebanne, Creissels, and Nkhwa 1997). Prominent in descriptions of southeast Bantu languages (K20-31, L30, N44, P, S). See situative.

passive (extension): considered a voice in other languages, in Bantu it is one of the extensions, 'in which the logical object of the verb becomes the surface subject and the logical subject is deleted or reduced to a periphrastic phrase' (Trask 1997: 163). In Bantu the agent of passive sentence is usually mentioned. See extension and 2.3.8.

past (tense): Bybee *et al.* (1994: 82–3) contrast perfective and past: past says an action occurred before the moment of speech, saying nothing about its internal profile, whereas (past) perfective represents a situation which has 'temporal boundaries . . . a single, unified, discrete situation'.

perfect: see anterior.

perfective (aspect): is widely used in two senses, (1) to contrast with imperfective or progressive, (2) to represent a situation as a single bounded complete whole, without regard to its constituent phases. In this book I expand the definition because I wanted a term for the contents of the various left-hand columns in the matrices. They are typically morphologically relatively unmarked, in addition to (1). (2) is usually but not always true. Perfective is here used to refer to pasts and futures. Perfective is similar or identical to what others call ponctuel (Aroga Bessong and Melcuk 1983), factitive (Welmers 1973), performative (Hewson and Bubenik 1997), accompli (Francophone writers), completive (Bybee *et al.* 1994: 57).

persistive (aspect): a kind of imperfective that denotes that an open-ended situation held in the past and continues to hold at the time of speaking. Also called the 'still' form (*We are still buying, we still buy*). Two possible negatives: We are no longer buying (did in the past but no longer) and We are still not buying (weren't then, aren't now).

pluractional (aspect, or verb): the essential characteristic of such verbs is almost always plurality or multiplicity of the verb's action (see Newman 1990). Used for some northwestern languages (e.g. in Mous 2003a) for the range of uses of *-aga.

polarity: mainly used for the system of affirmative/negative contrasts found in a language. Negative is the marked member of the pair.

polar tone: a morpheme with polar tone is realized as H before a following L, and vice versa.

post-final: the last of eleven positions in Meeussen's template. Also called post-FV in this book (2.2.6, 2.3.11).

post-initial: the third of eleven positions in Meeussen's template. Also called NEG₂ in this book (2.2.6, 2.3.3).

potential: be able to, can, or equivalent to 'would, would have, etc.'. Often used interchangeably with conditional.

precessive = antecessive = priorative = 'first': marks the first verb in a series of situations.

pre-final: the ninth of eleven positions in Meeussen's template. Folded into final in this book (2.3.9).

pre-initial: the first of eleven positions in Meeussen's schema of the Bantu verb. Also called pre-SM in this book (see 2.3.1).

preterite (past: tense): for languages with two degrees of past, some authors, mainly francophone, refer to the nearer one as the recent (also *hodiernal*, *d'aujourd'hui*) and the further one as the preterite (also *hesternal*, *remote*, *d'hier*).

primary negative: see negative.

proclitic: see clitic.

progressive (aspect): progressive represents an unbounded situation as in progress at and around reference time. The field of reference of progressives varies: in some languages it represents situations that are only ongoing at the time of reference while in others it can cover a wider field. Progressives tend to be associated with dynamic rather than stative verbs (Contini-Morava 1989 for Swahili *na* versus *a*). Progressives develop predominantly from locatives (Bastin 1989*a* and *b* for a Bantu view of this). Progressives tend to widen to general imperfectives, including present.

proximative (aspect): 'be about to verb, be on the verge of verbing' (Heine and Kuteva 2002: 24).

radical: the seventh of eleven positions in Meeussen's template. Also called root in this book (see 2.3.7).

recent (past: tense): see preterite.

reciprocal = associative (extension): 'reciprocal verbs require more than one agent, and the agents are at the same time mutual patients of their action' (Schadeberg 2003*a*). See extension and 2.3.8. In some languages in Zones C, F, H, K, and R the notion of reciprocal is taken over by the reflexive (object marker).

reduplication: in Bantu the term refers to partial or complete repetition, and may affect phrases, words, verb stems, or syllables. It is used to strengthen or weaken an expression and is associated with a range of imperfectives (iterative, continuative, frequentative, habitual (and pluractional?)).

relative: a. refers to qualificative clauses, or the verb forms used in them, referring to an antecedent: the 'who, which, that, etc.' clauses of English; b. relative tenses involve the ordering of one event relative to another (before, simultaneous, after); c. Bantu tenses are often regarded as having fixed time reference (so Hodiernal = Near Past, Hesternal = Middle Past, etc., but experience shows these are more often relative, that is, events in the Near Past are nearer those in the Middle Past, but are not necessarily restricted to today.

repetitive (aspect). For many authors repetitive = iterative but Schadeberg (2003a) uses repetitive to refer specifically to the morpheme *-(a(n)g-* at pre-final. In some languages it patterns with the extensions. Often treated in this book as a final vowel. See iterative and 2.3.8.

reversible = conversible = inversive = separative (extension): there are transitive and intransitive reversives and the common semantic element from which the various senses can best be derived is 'movement out of some original position' (Schadeberg 2003a). See extension and 2.3.8.

root = radical. Most Bantu verb roots have the shape CV(N)C. Less common shapes are CVVC, CVVNC, CV, (j)VC, (j)iCVC.

Rutara (group of languages): cover term for E11-12-13-14 and E21-22-23-24, deemed to be a genetically coherent grouping.

Ruvu (group of languages): cover term for G10-301-32-33-35-36-37-38-39, deemed to be a genetically coherent grouping. See Nurse and Hinnebusch (1993).

Sabaki (group of languages): cover term for E701, E71-72-73, and G40, deemed to be a genetically coherent grouping. See Nurse and Hinnebusch (1993).

secondary negative: see negative.

semelfactive: refers to a situation that takes place once and only once (Comrie 1976: 42), so contrasts with iterative, which see.

Seuta (group of languages): cover term for G23-24, G31-34, deemed to be a genetically coherent grouping. See Nurse and Hinnebusch (1993).

shifter: a clitic, which, added to an existing tensed form, shifts its reference further away from the reference point (past or future).

situation: as in Comrie, and Bybee *et al.*, used in this book as a cover term for action, process, state, or event.

situative = participial (aspect): an imperfective which stresses the ongoing, incomplete nature of the situation. The speaker wants to suggest that the situation is open-ended and could continue for a long while. In a situative no part of the situation is complete. As such, it typically appears in hypothetical or possible situations, as backgrounded material, in dependent or subordinate clauses, and as the second member of compound verb constructions, where it behaves as a verb in a subordinate clause (see 2.2.4). As such, it appears in hypothetical situations, as backgrounded material, in dependent or subordinate clauses, and as the second member of compound verb constructions, where it behaves as a verb in a subordinate clause. A part of the South African tradition (Doke 1935), it has recently been revived (Güldemann 1996; Schadeberg and Mucanheia 2000).

static = positional (extension): its meaning has been described as ‘assuming a position’ (Schadeberg 2003a). See extension and 2.3.8.

stative = intransitive = neuter (extension): ‘verbs with this extension indicate that the subject is potentially or factually affected by the action expressed by the verb’ (Schadeberg 2003a). It is an intransitivizing suffix, with which it is typically impossible to express the agent of the action (cf. passive). See extension and 2.3.8.

stative (verb): one of two broad categories of verbs, denoting an ongoing state of affairs (e.g. be rotten, be seated, be sick, be upright/standing, be fat, know, like), rather than an action (hit, kiss, play). See Aktionsart, dynamic, inchoative.

stem: for some linguists (Meeussen 1967: 89; Schadeberg 2003a), the minimal verbal unit is the root/radical; to this may be added expansion or extension, giving the base; to this is added the final vowel, giving the verb stem. Other linguists, all phonologists, use a slightly different set of terms (see 2.4). They also start with root/radical and add extension, giving the derivational stem; to this is added the final vowel, giving the inflectional (or micro-stem); finally the pronominal object marker may be added on the left of the string, giving the macro- or super-stem.

subjunctive (mood): one of the three conventional moods. Verbs in the subjunctive form express speaker attitudes such as uncertainty, tentativeness, vagueness, suggestions, preferences, hopes, fears, wishes, and some commands, by contrast with indicative, which represents situations as factual. The subjunctive encodes functions such as hortative, polite imperatives, jussive, optative, and certain types of subordinate clause. In Proto-Bantu and many Bantu languages the subjunctive form is marked by *-é and a high tone on the subject marker. In some Bantu languages, especially in the northwest, the final vowel is -a, as in the indicative, but a distinctive tonal pattern distinguishes subjunctive from indicative.

Some authors (e.g. Welmers (1973: 356–9) do not want to use subjunctive for various reasons and use instead terms such as conjunctive, hypothetical, hortative, injunctive, etc.

The notes for the matrices (Appendix 1) often say: ‘the Subjunctive has (or seems to have) the usual functional range’. This means that as far as can be seen in the source data, the subjunctive expresses the functions or attitudes above.

subsecutive (relative tense): see consecutive and narrative.

taxis: the chronological relationship (preceding, simultaneous, following) between the situation represented by one verb form/predicate and that represented by other adjacent or related verbs, or the opposition of secondary/backgrounded action to the principal/foregrounded action. In Comrie’s terms taxis has to do with relative tense (and aspect). See Güldemann (1996).

tense: grammaticalized representation of, verbal inflection for, location in time. Absolute tenses have the present as their reference point for location in time, whereas relative tenses have some other point, given or implied in the context. Single-word verbs do not usually encode more than one tense (by contrast with aspect). See aspect, relative, taxis, also Comrie (1985).

valency = valence: refers to the number or function of arguments required by the verb. Arguments refer to the noun phrases relevant to the verb (so *laugh* requires one argument, *hit* requires two, *give* three, etc.).

variety: neutral term for language and dialect.

vast present: a term coined by J. Hewson, it refers not just to the immediate present, as might be represented by the progressive, but to a vast period stretching from the far past, through the immediate present, to the far future, an unbroken period uninterrupted by tense distinctions. Herders answering 'We herd cattle' to the question: 'What do you do for a living?', traders answering 'We buy things' to the same question, or the general statement 'Cows eat grass' are all cases of the vast present.

ventive (directional): involves movement of an agent toward the here-and-now. Often but not always equated with or derived from 'come'.

vowels: with some exceptions, mostly in Zones A and D30, Bantu languages have either five or seven vowels. To represent five-vowel systems, the symbols i, e, a, o, u are commonly used. For seven vowel systems, different conventions apply. One involves use of 'degree (of aperture)': degree 1 vowels are [i, u], degree 2 vowels are [e, o], degree 3 [ɛ, ɔ], and degree 4 [a]. For Proto-Bantu (PB), Guthrie (1967/71) used [i, u] for the degree 1 vowels, [i, u] for the degree 2, [e, o] for degree 3, and [a] for degree four. Others use [i, ɪ, e, a, o, ʊ, u], the system followed here for Proto-Bantu. For an overview, see Schadeberg (1995*b*) and Katamba (2003).

vowel copy: a process in which final vowels, in the near past/anterior, assimilate to those of the stem. Vowel copy applies to a single suffix (the VC suffix), and involves a (more or less) complete copy of the stem vowel into the suffix, whereas vowel harmony is more general, generally operating across a string of vowels in various affixes.

vowel harmony: a process which takes various forms but its commonest form in Bantu involves degree 2 vowels harmonizing in height with a preceding mid (degree 3) vowel. The general domain of this vowel harmony is the extended base, that is, from root vowel into various extensions to its right, and, in a few languages, to its left.

zone: refers to Guthrie's (1971) fifteen zones: A-H, K-N, P, R-S. Tervuren scholars later added J, comprising Guthrie's D40-50-60 and E10-20-30-40, not used here because use of the zones in this book is mostly taxonomic/referential (J is intended to have genetic and historical value).

Bibliography

Abbreviations

AA = Annales Aequatoria. Tervuren.

AAP = Afrikanistische Arbeitespapiere. Cologne. (Replaced by APAL).

ACAL = Annual Conference on African Linguistics, held annually in N. America.

ACCT = Agence de Coopération Culturelle et Technique.

AHK = Abhandlungen des Hamburgischen Kolonialinstituts. Hamburg.

AL = Africana Linguistica. Tervuren.

AL/LA = African Languages/Langues africaines. London.

ALS = African Language Studies.

Ann. Ling. = Annales du Musée Royal de l'Afrique Centrale, série linguistique (Tervuren).

APAL = Annual Publications in African Linguistics. Cologne.

AQ = Aequatoria.

AS = African Studies.

ASDK = Archiv für das Studium Deutscher Kolonialsprachen.

AU = Afrika und Übersee. Hamburg-Berlin.

BCILL = Bibliothèque des Cahiers de l'Institut de Linguistique de Louvain.

BLS = Berkeley Linguistics Society. Berkeley.

BMS = Baptist Missionary Society.

BS = Bantu Studies.

BTL = Bible Translation and Literacy. Nairobi.

(B)SOAS = (Bulletin of the) School of Oriental and African Studies. London.

BTL = Bible Translation and Literacy. Nairobi.

CALL = Conference on African Language and Linguistics, held annually at Leiden University.

CEEBA = Centre d'Etudes Ethnologiques de Bandundu.

CELTA = Centre de Linguistique Théorique et Appliquée (Lubumbashi).

CERDOTOLA = Centre Régional de Recherche et de Documentation sur les Traditions Orales
et pour le Développement des Langues Africaines.

CLS = Chicago Linguistic Society. Chicago.

CSLI = Center for the Study of Language and Information. Stanford.

CUP = Cambridge University Press.

DRC = Democratic Republic of the Congo (formerly Zaire, Belgian Congo).

EA = Estudios Africanos (Revista de la Asociación Española de Africanistas, Madrid).

EAISSR = East African Institute of Social Research. Kampala.

EALB = East African Literature Bureau. Nairobi.

EASC = East African Swahili Committee.

EC = Etudes Créoles.

EOI = Etudes Océan Indien.

FAB = Frankfurter afrikanische Blätter. Frankfurt.

- FSI = Foreign Service Institute. Washington.
- IAI = International Africa Institute. London.
- ILA = Institut de Linguistique Appliquée (Université d'Abidjan).
- ILCAA = Institute for the Languages and Cultures of Asia and Africa. Tokyo.
- INALCO = Institut National des Langues et Cultures Orientales. Paris.
- IULC = Indiana University Linguistic Club.
- JAAS = Journal of Asian and African Studies.
- JAL = Journal of African Languages.
- JALL = Journal of African Languages and Linguistics. Leiden.
- JL = Journal of Linguistics.
- JWAL = Journal of West African Languages.
- KO = Kongo-Oversee.
- LA = Linguistique Africaine.
- LI = Linguistic Inquiry.
- LMS = (The) London Missionary Society.
- LOT = Languages of Tanzania (Project).
- MIO = Mitteilungen des Instituts fuer Orientforschung.
- MRAC = Musée Royal de l'Afrique Centrale. Tervuren.
- MSL = Mémoires de la Société Linguistique de Paris.
- MSOS = Mitteilungen des Seminars für Orientalische Sprachen.
- ORSTOM = Office de la Recherche Scientifique et Technique Outre-Mer.
- OSU = Ohio State University.
- OUP = Oxford University Press.
- RKV = Rüdiger Köppe Verlag.
- RQL = Revue québécoise de linguistique.
- SAJAL = South African Journal of African Languages.
- SAL = Studies in African Linguistics.
- SCOPIL = Southern California Occasional Papers in Linguistics. Los Angeles.
- SELAF = Société d'Etudes Linguistiques et Anthropologiques de Paris.
- SIL = Summer Institute of Linguistics International, formerly Summer Institute of Linguistics.
- SL = Studies in Language.
- SLS = Studies in the Linguistic Sciences.
- SPCK = Society for the Promotion of Christian Knowledge. London.
- SUGIA = Sprache und Geschichte in Afrika. Cologne-Bayreuth-Frankfurt.
- TNR = Tanzania Notes and Records. Dar es Salaam.
- UCP = University of Chicago Press.
- UCB = University of California at Berkeley.
- UCLA = University of California at Los Angeles.
- UDSM = Dar es Salaam University.
- ULB = Université Libre de Bruxelles.
- UMI = University Microfilms International (Ph.D. thesis photocopies).
- USC = University of Southern California.
- WOCAL = World Conference on African Linguistics.
- WPK = Working Papers in Kiswahili.

WPL = Working Papers in Linguistics.

WPLU = Working Papers on Language Universals.

ZAS = Zentrum für Allgemeine Sprachwissenschaft, Typologie + Universalienforschung.
Berlin.

ZA(O)S = Zeitschrift für Afrikanische (und Oceanische) Sprachen.

ZES = Zeitschrift für Eingeborene Sprachen.

ZKS = Zeitschrift für Kolonialsprachen.

ZVS = Zeitschrift für Völkerpsychologie und Sprachwissenschaft.

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Source language reference index

This index provides two things: a pairing of Guthrie's numbers with language names, and sources for and analyses of Bantu verbal information, arranged by language. Language numbers (Maho 2003) are followed by name and authors. A single publication author is cited by name alone (e.g. Smith) but for multi-publication authors, or authors with the same surname, name and date are given (e.g. Smith 1978). Authors, on the right, who are the main or one source for matrix data in the Appendices are underlined (e.g. Smith 1978). The 100 languages underlined on the left are the matrix languages. For the better described languages, the number of descriptions is given (e.g. 'total 15'), and the convention '15 + 1' means fifteen specific descriptions plus one for the group.

Grassfields

Aghem	<u>Anderson, Hyman, both 1979, Watters 1979b</u>
Kom	<u>Chia</u>
Zone A	Schadeberg 1980b
A11 Londo	Bruens 1938, 1948, Bufe, <u>Kuperus 1982, 1985</u>
A112 Bima	Boursier <i>et al.</i> (?)
A12 Lue	Richardson 1887 (?), Roberts
A121 Mbonge	Friesen
<u>A15 Mbo</u>	Dorsch (?), <u>Hedinger 1984, 1985, forthcoming</u>
<u>A22 Bakwiri</u>	<u>Gensler 1980, Hawkinson 1986, Kagaya 1992b, Lorch, Marlo and Odden</u>
A23 Isubu	Meinhof 1889–90a
A24 Duala	Epale, Epée 1975, 1976, <u>Ittmann 1939</u> , Meinhof 1888–9, Schuler, Seidel 1904
A31 Bobe	Abad, Baumann 1887, Juanola, Justo, Meeussen n.d., Pereda, Rurangwa
A32a No(h)o	<u>Adams, Siroma</u>
A33a Yasa	<u>Bot</u>
<u>A34 Benga</u>	<u>Meinhof 1888–9, 1889–90b, Nassau, Perez & Sorinas Salvado y Cos</u>
A40 Basa	Mous 2005
A42 Bankon	Atindogbé, Spellenberg
<u>A43 Basaa</u>	<u>Bitjaa Kody, Boum, Dimmendaal 1976, 1988, Gehr, Hyman 2003b</u> Ndombo <i>et al.</i> , Rosenhuber, Schurle, Skolaster 1914 (total 10 + 1)
<u>A44 Nen</u>	<u>Dugast, Grégoire 1993, Koki Ndombo et al., Mous 2003a</u>
A46 Nomaande	Scruggs, Taylor 1986, <u>Wilkendorf 1986, 1988, 1991</u>
<u>A53 Kpa, Bafia</u>	Anderson 1935, Aroga Bessong, <u>Aroga Bessong and Melcuk</u> (= Bessong and Melcuk), <u>Guarisma 1982, 1990, 2000, 2003</u> , Motingea Mangulu 1990a (?)
A60 Sanaga	Mous 2005
A601 Tuki	Biloa, Musada

- A62 Yambasa Gerhardt, Orwig, Rekanga 1989, Yukawa 1992a
A70 Yaunde Piper 1989
A72a Ewondo Abega 1969, 1976, Angenot, Essono 1972, 1993, Heepe 1919, Nokes 1911, 1913, Redden 1979
A74a Bulu Alexandre 1966, Bates, Yukawa 1992c
A75 Fang Bolados Carter, Largeau, Ndongo Essono, Ondo-Mebiame 1991–2
A81 Bujeba Echegaray (?), Skolaster 1910
A83 Makaa Heath, Heaths
A84 Koozime Beavon 1984, 1986, 1991
A86c Mpyemo Biandji
A93 Kako Ernst, Yukawa 1992b
- Zone B
B11 Myene Gauthier, Jacquot 1976, Oguoamba, Philippson p.c., Teisseres and Dubois
B25 Kota Piron
B30 Tsogo Blanchon and Mouguiama, Marchal-Nasse, Mickala-Manfoumbi 1994, Raponda-Walker, Rekanga 2000–1, Van der Veen 1986, 1988, 1991, 1999, 2003, Walker 1950 (total 11)
B41 Shira Blanchon 1997, Dodo-Bounguendza
B42 Sangu Idiata, Khabirov, Ondo-Mebiame 1988, 2000, Samarin 1967 (?), Samarin and Walker (?)
B43 Punu Blanchon 1980, Bonneau, Fontenay 1980, Mabik-ma-Kombil, Manfoumbi, Nsuka Nkutsi 1980
B51 Duma Adam, Mickala-Manfoumbi 1988, Reeb
B52 Nzebi Guthrie 1968, Marchal-Nasse 1989
B61 Mbete Adam
B63 Nduumo Adam, Biton
B64? Ngwii Bwantsa-Kafungu 1966
B73c Yaa Mouandza
B75 Teke Fontenay 1984, Laman 1927, Meeussen 1966*a*, Paulian, Vielhauer
B77b Fumu Calloc'h
B80 Tende-Yanzi Meeussen 1964, 1966*b*
B81 Tiene Motingea Mangulu 2004
B82 Boma Stappers 1986*b*
B83 Mfinu Guthrie 1956
B85 Yanzi Mayanga, Rottland
B86 Dzing Mertens
B87 Mbuun Bwantsa-Kafungu and Meeussen, Nkwor
- Zone C
C101 Babole Leitch 1994, 2003
C102 Ngando Hulstaert 1987
C104 Aka Cloarec-Heiss and Thomas, Thomas 1974, 1991
C14 Leke Vanhoudt

- C16 Lobala Morgan, Motingea Mangulu 1996a
- C22 Akwa Cloarec-Heiss and Thomas
- C24 Koyo Gazania, Kokora
- C25 Mboshi Amboulou, Fontenay 1988, 1989
- C30 Cambier, Motingean Mangulu 1996a
- C301 Doko Hulstaert 1961a, Rood, Twilingiyimana
- C31b Ngiri Kamanda Kola 1991, Motingea Mangulu, Van Leynseele
- C32 Bobangi Whitehead
- C34 Sakata de Witte, Ikamba, Witte
- C35a Ntomba Gilliard 1928a, 1928b, Hulstaert 1939–40, Mamet 1955, 1960, Ostrom
- C36d Lingala Bwantsa-Kafungu 1970, De Boeck 1942, Dzokanga, Guthrie 1951, 1966, Guthrie and Carrington, Ingouacka and Shimamungu, Meeuwis 1995, 1997, 2001, Motingea Mangulu 1996b, Mufwene 1978, 1989, Mufwene and Bokamba, Nurse 2000c, Odhner, Redden *et al.*, Stapleton 1911, Sulzmann, Toporova, Van Everbroeck (total 21)
- C37 Budza Motingea Mangulu 2003a, 2003b, Nkiko and Kemp (?), Stappers 1955, Toulmond
- C40 Bale (?) Motingea Mangulu 1995b, 1996c, 1997 (?), 2001
- C401 Pakabete Motingea Mangulu 1995a, Reeder
- C41 Ngombe Molembo Masimo, Price 1944, 1947, Yukawa 1992d
- C43 Baati Koloma Matongi, Motingea Mangulu 2005
- C44 Boa/Bwa Nkabuwakabili, Tekabileba
- C441 Bango Motingea Mangulu 1995d
- C45 Beo Gérard
- C53 Gesogo Harries 1955
- C54 Lombo Carrington 1947, Chelo
- C55 Kele Anonymous ca 1900, Carrington 1972, 1977, Missionaries of Yakusu, Preston and Best
- C60 Lomongo De Rop 1956, 1958, Hulstaert 1938, 1965, 1966
- C71 Tetela Jacobs 1962, 1964, Kamomba, Omatete
- C73 Nkucu Bongo, Handekyn
- C74 Yela Hulstaert 1941–2
- C75 Kela Forges
- C76 Ombo Meeussen 1962c
- C81 Ndengese Gomaere and Hulstaert
- C83 Bushoong Edmiston, Vansina 1959
- D10-20-30 SIL Eastern Zaire Group
- D11 Mbole Jacobs 1961
- D12 Lengola Stappers 1971
- D13 Mituku Stappers 1973
- D14 Enya Spa
- D21 Baali Bolingola
- D23 Kumu Harries 1958
- D24 Binja Meeussen and Sebassoni

<u>D25</u>	<u>Lega</u>	Botne 1997, <u>2003a</u> , Burke, Delhaise, Kinyalolo, Lungumbu, <u>Meeussen 1971a</u> , Waseka
D27	Bangubangu	<u>Meeussen 1954</u> , SIL Eastern Zaire Group
<u>D28</u>	<u>Holoholo</u>	<u>Coupez 1955</u> , Meeussen 1954
D30	Bira-Huku	Dz'ba, Meinhof 1938/9, Wung'a (?)
D311	Forest Bira	<u>Vorbichler</u>
D32	Bila	Kutsch Lojenga
<u>D33</u>	<u>Nyali</u>	<u>Harries 1959</u>
D332	Budu	Asangama, Bokula
D41	Konzo	Tucker
<u>D42</u>	<u>Nande</u>	Baudet, Bbemo Musubaho, <u>Hyman fieldnotes</u> , <u>Mutaka 1994, p.c.</u> , Mutaka and Hyman, <u>Mutaka, J. p.c.</u> , Valinande
D43	Nyanga	<u>Kadima</u> , Vermeiren
D50		Muzale 1998
D51	Hunde	Mateene
D52	Haavu	Aramazani
<u>D53</u>	<u>Shi</u>	Cleire, <u>Polak-Bynon</u>
D531	Tembo	Kaji 1984, 1985
D55	Buyi	Meeussen 1951
D60		Botne 1990, Muzale 1998, Nurse and Muzale, Zorc and Nibagwire
D61	Rwanda	Arnold 1977, 1980, Botne 1983a, 1983b, 1987a, 1987b, 1989b, Cadiou, Coupez 1980, Dryer, Dubnova, Gahagi, Hurel 1911, 1920, Inguouacka and Shimamungu, Jouannet 1983, Kimenyi 1973, 1979, 1980, 2002, forthcoming, Mugesera, Ndahayo, Overdulve, van Overschelde (total 25 + 4)
D62	Rundi	Bagein, Bigangara, Goldsmith and Firmard Sabimana, Meeussen 1959, Menard, Rodogem, Sabimana, Stevick 1965c, van der Burgt (total 9 + 4)
D63	Fuliuro	van Otterloos 2007
D65	Hangaza	<u>Nurse, field notes</u>
<u>D66</u>	<u>Ha</u>	<u>Harjula 2004</u> , Nurse 1979a, van Sambeek
E10	Nyoro-Ganda	Muzale 1998, Nurse and Muzale
E101	Gungu	Moe and Mbalazi
E102	Talinga	<u>Mbula Paluku, Paluku</u>
E11	Nyoro	<u>Maddox, Rubongoya</u>
E12	Tooro	Rubongoya
E13/14	Nyankore	Kaji 1984, Morris and Kirwan 1957, Poletto, <u>Taylor 1985</u>
<u>E15</u>	<u>Ganda</u>	<u>Ashton et al.</u> , Cheswass, Cole, Hyman and Katamba 1990, 1993, Jakovleva, Kamoga and Stevick, <u>Katamba p.c.</u> , Walusimbi
E16	Soga	<u>Nurse, field notes</u>
E20		Hennin, Muzale 1998, Nurse and Muzale, Rehse, Seidel 1898d
E21	Nyambo	<u>Rugemalira 2005</u>

- E22 Haya Byarushengo *et al.*, Dalgish 1977, Duranti 1977, Duranti and Byarushengo, Hawkinson 1976, Herrmann 1920, Hewson *et al.* 2000, Hyman and Byarushengo, Muzale 1998, p.c., forthcoming, Nurse 1979a, Rascher, Saloné 1979 (total 13 + 5)
- E23 Zinza Seidel 1898c
- E24 Kerebe Botne 1987a, Downing 1997, Hurel 1909, Odden 1996b, 2000, Thornell
- E25 Jita Downing 1996
- E251 Kwaya Sillery 1932
- E253 Ruri Botne 1990–1, Hawkinson 1976, Massamba 1982, 1984, 2000
- E30 Luyia Angogo, Dalgish 1976, Hinnebusch *et al.*, Mould 1981, Nurse and Muzale
- E31 Bukusu etc De Blois 1975, Huntingford, Khisa/Hyman (ms), Kisembe p.c., Mutonyi 1996, 2000, p.c., Purvis
- E32F Nyala Oluoch 2004
- E33 Nyole Morris
- E34 Saamia Appleby, Botne *et al.* 2006, Marlo 2002, 2004, 2006
- E40 E. Nyanza Davy and Nurse, Hinnebusch *et al.*, Muzale 1998, Nurse and Muzale
- E403 Suba Kihore, Rottland and Okoth Okombo
- E404 Shashi Johnstone 1920
- E41 Logooli Leung, Lwane
- E42 Gusii Cammenga 2002, Dempwolff 1914, Kingston, Whiteley 1956a, 1960, 1965a (?)
- E43 Kuria Cammenga 1994, 2004, Odden 1987b, Rose, Sillery 1936, Whiteley 1955
- E46 Sonjo/Temi Nurse and Rottland
- E50 Thaagicu Bennett 1969, Davy and Nurse
- E51 Gikuyu Armstrong, Barlow 1927, 1960, Bennett 1969, Bennett et al., Gecaga and Kirkaldy-Willis, Harries n.d., Hewson and Nurse 2005, Johnson 1977, 1980, Leakey, Macgregor, Mugane 1996 (total 13 + 2)
- E54 Tharaka Kibiubi and Margetts, Lindblom 1914, Mberia, Muriungi, Muriungi and Abels
- E55 Kamba Brutzer, Farnsworth, Last 1885, Lindblom 1926, Ndumbu and Whiteley, Odden field notes, Roberts-Kohno, Whiteley and Muli
- E56 Daisu Baumann 1891, Dammann 1936/7, Nurse 2000a
- E60 Chaga Emanation 1988, 1992, Hinnebusch *et al.*, Nurse 1979b, 2003b, Philippson 1982, Philippson and Montlahuc, Seidel 1895
- E61 Meru Shinagwa
- E62a W. Kilimanjaro Augustiny 1964, Fokken, Müller, Yukawa 1989e
- E62b C. Kilimanjaro Dalgish 1979, McHugh, Moshi 1988, 1994, 1995, 1998, 2000, Nurse and Philippson 1977, Raum, Saloné, Walker 1915 (total 11 + 8)
- E65 Gweno Philippson and Nurse
- E70 Hinnebusch *et al.*, Nurse 1983, 1989, Nurse and Hinnebusch, van Otterloos 1980

- E701 Ilwana Nurse 2000a, Rosbach 1991, 1992
- E71 Pokomo Geider 1980, 1990, Meinhof 1905c, Wurtz 1888–9, 1896
- E72 N. Mijikenda Giryama TLP 1993a, 1993b, Lax, Meinhof 1905b, Newmans 1988, Taylor 1891
- E73 Digo De Groot, Kisseberth 1984, Meinhof 1905a, Mwafusi p.c., Nicolle 2002
- E74a Dawida Maynard, Nurse notes, Odden 2001, 2006, Philipsson p.c., Philipsson and Montlahuc, Woodward 1914, Wray
- E74b Saghala Philipsson p.c., Wray.
- F12 Bende Abe 2006, p.c.
- F21 Sukuma Augustiny 1929, Batibo 1985, 1991, p.c., Goldsmith 1985, Herrmann 1898, Masele p.c., Matondo, Meinhof 1904c, Nurse 1979a, Richardson 1959, Yukawa 1989a (total 10)
- F22 Nyamwezi Maganga and Schadeberg, Meinhof 1904b, Nurse 1979a, Schadeberg 1989, Seidel 1898e, Stern, Velten 1901
- F23 Sumbwa Capus 1898, Kahigi 1977, 1988
- F25 Bungu Labroussi
- F31 Ilamba Anderson 1942, Dempwolff 1915, Ittameier, Johnson 1925, Nurse 1979a, Yukawa 1989b
- F32 Rimi Dempwolff 1915, Hualde, Nurse 1979b, 2000b, Olson, Schadeberg 1978, 1980a, Schregel
- F33 Langi Akhavan, Dempwolff 1916, Dunham 2001, 2004, 2005, Hawkinson 1976, Seidel 1898a, Stegen p.c.
- F34 Mbugwe Dempwolff 1916, Mous 2000, 2004, Struck
- G Hinnebusch *et al.*
- G11 Gogo Cordell, Nurse 1979a, Rossel,
- G12 Kaguru Last 1886, Petzell 2007
- G20A Mbugu/Ma'a Mous 2003b
- G22 Athu, Pare Baumann 1891, Hohenberger, Kaehler-Meyer, Kagaya 1989a, 1987b, 1989, Kotz, Mreta 1997, 1998, Odden 1985a (total 10)
- G23 Shambala Besha 1989a, 1989b, 2000, Meeussen 1955, Meinhof 1904a, Nurse 1979a, Odden 1982, Roehl, Rosler, Seidel 1895, Wald 1997 (total 11)
- G24 Bondei Dale 1894, Meinhof 1906b, Woodward 1882
- G31 Zigua anonymous n.d., Kisbey, Meinhof 1906b, Woodward 1902
- G33 Zalamo Meinhof 1907, Nurse 1979a, Worms
- G35 Lugulu Nurse 1979a, Seidel 1898b
- G36 Kami Seidel 1896, Velten 1899a, 1900
- G40 Sabaki Nurse 1989, Nurse and Hinnebusch
- G403 Mwani Floor, Petzell 2002
- G412 M(w)iini Abasheikh 1976, Goodman, Kisseberth 1976a, 1976b, 1976c, 1977, 2004, Kisseberth and Abasheikh, Whiteley 1965b
- G41 Gunya, Bajuni Nurse 1982, Sacleux 1909

- G42 Swahili Ashton, Barrett-Keach 1985, Bertoncini, Brain 1970, Brauner and Herms, Contini-Morava 1983, 1987, 1989, Driver, Drolc 1992, 2000, 2001, Goebelsmann, Hassan, Hawkinson 1976, Hewson and Nurse 2001, Keach 1986, Krapf, Lambert 1953, 1957, 1958, Leonard, Loogman, Marten, Maw, Mazrui, McWhorter, Mukama, Mufwene 1989, Ngonyani 2001*b*, Novotna 2000, Nurse 1982, 1983, 1988, 1989, 1997, Nurse and Hewson, Polome 1967, 1968, Sacleux 1909, Schadeberg 1973/84, 1990*b*, Stevick 1968, Wald 1973, 1976, 1981, 1997, Whiteley 1956*b* (all Swahili total 70 + 2, where Swahili = G403, 41, 42, 43)
- G42-43 Knappert, Maganga
- G43 Pemba etc. Khamis, Kipacha, Krieglner, Racine-Issa, Riedel, Whiteley 1958, 1959
- G44 Comorian Angot, Chamanga and Guenier, Fischer, Full, Heepe 1920, Philippson 1988, Rombi 1982, 1983, Rombi and Chamanga
- G51 Pogolo Hendle, Kizee ms, Nurse notes, Reimer
- G52 Ndamba Novotna 2005
- G61 Sangu Biledeau, Heese
- G62 Hehe Dempwolff 1911–12, Makombe ms, Nurse 1979*a*, Priebusch, Velten 1899*b*, von Sowa
- G63 Bena Nurse 1979*a*, Priebusch, Schumann 1918, von Sowa
- G64 Pangwa Klamroth, Kusters, Stirnimann
- G65 Kinga Schadeberg 1971, Wolff
- Zone H Hadermann 1996
- H10A Kituba Fehderrau 1962, 1964, Hohegger, Mufwene 1989, 1990, 1997, 2001 2003, Swift and Zola
- H10 Kongo Bentley 1887, Butaye, Carrie, Carter 1973, De Clercq 1912, Dereau, Geoffray, Guinness, Jacquot 1971, Laman n.d., 1912, Mbudi Mb'osongo (?), Motingea Mangulu 1991, Ndembe-Nsasi 1982, Ndonga, Nsonde, Odden 1991, Seidel and Struyf, Söderberg and Widmar, Tavares, Welmers 1973 (total 21 + 1)
- H21 Kimbundu Chatelain 1888–9*a* & *b*, Maia 1957
- H31 Yaka Kyota, van den Eynde
- H32 Suku Piper 1977
- H33 Hungu Atkins 1954
- H41 Mbala Ndolo
- H42 Hung'an Takizala
- K11 Cokwe Atkins 1955, Delille and Burssens, Diarra 1990*a*, McJannet, Martins, van den Eynde, White 1947
- K12b Ngangela Baiao, Lecomte (?), Lilunga, Maniacky
- K13 Lucazi Fleisch 2000
- K14 Luvale Horton, Nsuka Nkutsi 1969, Sommer 2003, White 1949, Yukawa 1987*a*
- K15 Mbunda Diarra 1990, Instituto

<u>K21</u>	Lozi	Gorman 1950, <u>Gowlett 1967</u> , 2003, Jalla, <u>Yukawa 1987d</u>
K30		Sommer 2003
<u>K31</u>	Luyana	<u>Givón 1970</u> , Jacottet 1896b, Lisimba
K33	Kwangali	Dammann 1957, Fisch, Westphal 1958b
K332	Dciriku	<u>Móhlig 1967</u> , <u>2005</u>
K352	Mwenyi	<u>Yukawa 1987c</u>
<u>K42</u>	Subia	<u>Endresen, Jacottet 1896a</u> , Ohly, Sommer 2003
L11	Pende	Bunduki, Griffin, Niyonkuru
L12	Holu	Daeleman
<u>L13</u>	Kwezo	<u>Forges 1978</u>
<u>L21</u>	Kete	Declercq 1898, <u>Kamba Muzenga 1980</u> , Mbuyi-Kabandanyi, Sevrancx, Stappers 1951
L221	Lwalwa	Ndembe-Nsasi 1972, van Coillie
L23	Songye	Lumeka, <u>Stappers 1964</u>
L30	Luba	Beckett 1951, Bondo, <u>Coupez 1954</u> , Gillis, Grégoire 1979, Kabuta, Mukendi, Munyarugero, Mutonkole Lunda, Nkiko, <u>Yukawa 1992e</u> (all Luba = L30 total 26)
L31a	Luba-Kasai	Burssens, Declercq 1897, Meeussen 1962b, Mutombo, Willems
L31b	Lulua	Morrison
<u>L32</u>	Kanyoka	Declercq 1900, Kalenda, Kongolo, <u>Mukash-Kalel</u> , Mwadi, <u>Stappers 1986a</u> , <u>Weier</u>
L34	Luba-Hemba	van der Meiren
L35	Sanga	Coupez 1981, Roland
<u>L41</u>	Kaonde	Broughall Woods, Foster, Mann <i>et al.</i> , <u>Stappers 1968</u> , <u>Wright 1977</u>
<u>L52</u>	Lunda	Carvalho, Fisher 1944, 1963, Givón and Kawasha, <u>Kawasha 2000</u> , 2002, 2003, 2006, <i>p.c.</i> , <u>White 1947</u>
<u>L53</u>	Uruund	Lerbak, <u>Nash 1992</u> , <u>1992–4</u> , <u>N'landu and Vincke</u> , Stappers 1954, Philippson <i>p.c.</i> , Vincke
<u>L62</u>	Nkoya	<u>Yukawa 1987e</u>
M10	Corridor	Labroussi
<u>M11</u>	Pimbwe	<u>Chomba ms</u>
M13	Fipa	Struck 1911, Whiteley 1964
<u>M14</u>	Lungu	<u>Bickmore 2007, p.c.</u> , Kagaya 1987a
M15	Mambwe	Jones, LMS
M20	Corridor	Labroussi
M202	Sukwa	Kershner 2001, 2002
M22	Namwanga	Busse 1940–1
M23	Nyiha	Bachmann, Busse 1960, Yukawa 1989d
<u>M25</u>	Safwa	Labroussi 1988, van Sambeek 1933, <u>Voorhoeve 1973, n.d.</u>
M30	Konde	Labroussi
M31	Nyakyusa	Endemann 1900, 1914, Hawkinson 1976, Nurse 1979a, Schumann 1899, Voorhoeve and Mwangoka
<u>M301</u>	Ndali	<u>Botne 2001</u> , <u>2003b</u> , 2005, 2007, <u>Swilla</u>
M41	Taabwa	De Beerst

- M42 Bemba Givón 1969, Guthrie 1945, Hyman 1995, Kula p.c., Mann *et al.*, Sharman, Sharman and Meeussen, Sims, van Sambeek
- M51 Wisa Madan 1906
- M52 Lala-Lamba Madan 1980, van Dyk
- M54 Lamba Doke 1938
- M61 Lenje Kagaya 1987*b*, Madan 1908
- M62 Soli van Eeden
- M63 Ila Smith 1907, Yukawa 1987*f*
- M64 Tonga Carter 1962, 1971, Collins, Fell, Hopgood, Meeussen 1963, O'Brien
- N101 Ndendeuli Ngonyani 2001*a*, 2001*c*
- N12 Ngoni Ebner, Elmslie, Moser, Ngonyani 2003, Spiss 1904
- N14 Mpotu Nurse, fieldnotes
- N21 Tumbuka Anaklet, Anonymous n.d., Anonymous 1970, Botne 1993, Downing 2006, Hazen, Vail, Young
- N30 Nyanja/Cewa Atkins 1950, Bentley and Kulemeka, Bresnan and Kanerva, Bresnan and Mchombo, Bulley, Henry, Hetherwick 1920, Hullquist, Mapanje, Price 1960, Sanderson and Bithrey, Stevick 1965*a*, Watkins (total 13)
- N41 Nsenga Ranger
- N43 Nyungwe Courtois, Von der Mohl
- N44 Sena Alves, Anderson 1897, Heins ms and p.c., Moreira, Torrend 1900
- Zone P Bleek
- P10 Odden 2003
- P13 Matumbi Krumm, Odden 1996*a*, Nurse fieldnotes
- P20 Odden 2003
- P21 Yao Hetherwick 1902, Mapanje, Meinhof 1908*b*, Meeussen 1971*b*, Ngunga 2000, 2001, Nurse 1979*a*, Sanderson, Whiteley 1966
- P22 Mwera Harries 1950
- P23 Makonde Guerreiro, Johnson 1921–3, 1923–5, Lorenz, Nurse 1979*a*, Odden 1990*a*, 1990*b*, Yukawa 1989*f*
- P25 Mawiha Harries 1940
- P31 Makkuwa Cheng and Kisseberth 1979, 1980, 1981, Do Sacramento 1906, Katupha 1983, 1991, Kisseberth 2003, Maples, Meinhof 1908*a*, Porter 1911, Prata, Schadeberg and Mucanheia, Stucky 1979, 1985, van der Wal, Woodward 1926 (total 16)
- P32 Lomwe Bawman
- P34 Chwabo Torrend 1894
- Zone R Haacke and Elderkin, Maho 1998, Magalhaes, Sommer 2003
- R10 (U)Mbundu Hambly, Keiling, Maia 1955 (?), Nascimento, Schadeberg 1986*a*, 1986*b*, 1990*a*, Seidel n.d. Valente, Wald 1970 (total 10 + 4)
- R20 Wambo Baucom, Seidel n.d., Viljoens
- R21 Kwanyama Brincker 1891, Diarra 1990*b*, Fourie 1993, Halme, Hasheela, Ntondo, Tönjes, Zimmermann and Hasheela

- R22 Ndonga Fivaz, Fourie 1991a, 1991b
- R31 Herero Booyesen, Brincker 1886, Elderkin 2003, Fleisch 1995, Hahn, Köhler 1958, Meinhof 1906a, Möhlig forthcoming, Möhlig et al., Viehe, Volschenk (total 11)
- R41 Yeyi Baumbach 1997, Gowlett 1992b, 1997, Larson, Lukusa, Sommer 1994, 2000
- Zone S Doke 1954, Gowlett 2003, Poulos 1986, Westphal 1950
- S10 Shona Biehler, Borland, Carter and Kahari, Chebanne, Dale 1972, Dembetembe, Fivaz and Ratzlaff, Fortune 1955, 1984/5, Güldemann 1997, 2002, Kahari and Carter, Louw, Marconnes, Myers 1987, 1995, 1998, Odden 1981a, 1981b, Hawkinson and Hyman, Stevick 1959, 1960, 1965, Weber, Wentzel (total 25 + 4)
- S20 Venda Cassimjee, Poulos 1990, Ziervogel et al. 1981
- S30 Zorc and Mokabe
- S31 Tswana Chebanne et al., Cole, Cole and Mobokalieo, Creissels 1994, 1996a, 1998a, 1998b, 1999a, 1999b, 2001, 2002a, 2002b, 2004, Dickens, Krueger and du Plessis, Louwrens 1996, Sandilands (total 17 + 5)
- S32 N. Sotho Lombard, Louwrens 1991, Louwrens et al., Poulos and Louwrens, Ziervogel et al. 1979
- S33 S. Sotho Chapole, Demuth, Doke and Mofokeng, Guma, Jacottet 1965, Köhler 1956, Machobane, Morolong, Morolong and Hyman, van Eeden (total 10 + 5)
- S40 Nguni van der Spuy
- S40A Fanagalo Bold, Erasmus and Baucom
- S41 Xhosa Bennie, Du Plessis and Visser, McLaren, Mhkatshwa
- S42 Zulu Beuchat 1963, 1966, Buell 2005, 2006, Canonici, Doke 1992, Gowlett p.c., Hlongwane, Malcolm, Nkabinde, Nyembezi 1968, 1970, Poulos and Bosch, Poulos and Tsimang, Rycroft and Ngcobo, Taljaard and Bosch, Ziervogel et al. 1976 (total 16 + 5)
- S43 Swati Creissels 1996b, Downing 1994, Ziervogel 1952, Ziervogel and Mabuza
- S44 Ndebele Bower and Lotridge, Downing 2001, Ziervogel 1959
- S51 Tswa Persson
- S53 Tsonga Baumbach 1987, Junod 1932, Ribiero
- S54 Ronga Junod 1896, Quintao, Van Warmelo
- S61 Copi Bailey, Dos Santos 1941
- S62 Tonga Lanham

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