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DEPARTMENT OF AFRICAN LANGUAGES AND LINGUISTICS

TONE IN ORTHOGRAPHY:

THE CASE OF BAFUT AND RELATED LANGUAGES

by

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TO THE GLORY OF GOD

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PREFACE

Our main aim in this study has been to determine the best way of representing tone in the orthography of Bafut and the rest of the languages included in this study. Before ever reaching this goal, we, however, have had to answer a number of questions for each language studied. How many tone levels are there in the language? What are the tone processes found in each language? What role does tone play in the grammar of the language in question? The first phase of the work has, therefore, been an analysis of the tonal system of each language.

The work done on the Bafut language has been our starting point and has therefore given us a basis for a better understanding of the tone systems of the other languages.

We have had to answer a number of questions. (a) How does tone function in Bafut? Here, we have had to look into the tonal behaviour of the Bafut language. This, in the main, concerns a study of the changes that underlying or lexical tones undergo in grammatical constructions. We have had to go through the grammar of Bafut in order to fully see the function of tone in the language. (b) Why do lexical tones change when used in grammatical constructions? In order to answer this question adequately, we have had to make a study of the underlying tones of words. After the study of the underlying tones of words and morphemes, we have, therefore, been able, in most cases, to account for tonal changes. In the course of explaining these tonal changes, we have come up with the rules underlying them. In the second half of chapter four we have proposed the tone rules (hereafter, T-rules) which account for the tonal changes in Bafut. The T-rules show that there are a lot of tone processes in Bafut.

A major part of the study is devoted to answering the above questions. These questions are important because the way we decide to represent tone in orthography depends on the answers we find to them. In order to be able to present a valid and efficient system of marking tone in a language, an accurate and detailed analysis of the tonal system is imperative. It is in view of this fact that we have pursued our analysis and explanations of tonal behaviour in some detail.

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Chapter twenty of the study is devoted to determining the best way of marking tone in Bafut. In order to decide on the best tone orthography we had to conduct an experiment in which people were taught not only to read but also to write tone using four different systems. The best tone orthography is one which enables people to read and write the language well. Such a system is one that makes the necessary meaning distinctions and is easy to read and write. The system should be easy to teach and consequently to learn. In order to meet these conditions, it should also be systematic.

Part III of the study is devoted to a study of the tone systems of Bambili, Mankon, Bambui and Nkwen in order to determine how tone could best be represented in the orthography of each language. These languages are closely related to Bafut. In the light of the analysis of the tone system of each of these languages and in view of the tone orthography proposed for each language, it has been possible to draw conclusions regarding a tone orthography that might work for these languages and possibly for the other languages within the same linguistic group.

In order to extend the results of the studies of the Ngemba languages to other languages outside the group, we undertook the study on Limbum. The results of the Limbum experiment confirmed our findings from the study of Bafut and the other Ngemba languages.

After the Limbum study we proceeded to study the tone systems of Yemba, Basaa and Bagyeli. These languages were selected to reflect a wide spectrum of the Bantu languages of Cameroon. Limbum and Yemba fall within the larger group of Eastern Grassfields languages while Basaa and Bagyeli are Northern Equatorial Bantu languages. We have proposed a tone orthography not only for each of these languages but also for the whole group.

In the light of the results of the Bafut and Limbum experiments and in view of the conclusive results relating to our study of the tone systems of the various language groups, we have proposed a tone orthography for Bantu languages in chapter thirty-two.

ACKNOWLEDGEMENTS

ABBREVIATIONS AND SYMBOLS

Adj.	Adjective
AM	Associative marker
AP	Adjective prefix
C	Consonant
CC	Concord consonant
cf.	See
Cl.	Class
CNS	Consecutive
Dem.	Demonstrative
desyllab.	Desyllabification
ds	Downstep
DS	Different Subject marker.
FO	Immediate future
FSH	Far from speaker and hearer demostrative.
F1	Today future
F2	Tomorrow future
F3	Remote future
G.	Group
HAB	habitual
H	High tone
Ḩ	Floating High tone
Ibid.	Ibidem
IMP	Imperative
IMPF	Imperfective
INF	Infinitive
Ipn.	Interrogative pronoun
L	Low tone
Ḻ	Floating Low tone
Logo	Logophoric
M	Mid tone
n.	Noun
-N	Nasal(morph)
Narr. P.	Narrative Past

NEG	Negation(/Negative)
N.S	Near Hearer demonstrative
NP	Noun Phrase
NPfx.	Noun prefix
P0	Immediate Past
P1	Today Past
P2	Yesterday Past
P3	Remote Past
P.C.	Personal Communication
PERF	Perfect
Per.	Person
Pfx.	Prefix
Pl.	Plural
Pn.	Pronoun
Poss.	Possessive Pronoun
Prep.	Preposition
Prog.	Progressive
P-rule	Phonological rule
Q	Question
Rel.	Relative
suff.	Suffix
sg.	Singular
SM.	Subject marker
SS	Same subject marker
Syll.	Syllabic
TO	Present Tense
V	Vowel
Vd	Voiced
Vl	Voiceless
ø	Zero
#	Morpheme/ word boundary
+	Morpheme boundary
//	Phrase boundary/pause
[ ]	Phonetic representation
/ /	Phonemic representation

PART I

INTRODUCTION

Chapter One

METHODOLOGY

1.1 Theoretical Framework

We have found it useful to adopt an eclectic approach in our work because of the nature of the research. This is explained by the fact that our work has both theoretical and practical implications. We recognize the need to stay within the frame of a particular theory but we are also interested in the application of theoretical insights to solve problems of practical tone orthographies. We have therefore turned to those theoretical frames deemed useful for our purpose.

As regards the representation of tone, we have adopted some principles of the suprasegmental theory as presented by Leben (1973, 1980) and Fromkin (1974).

There is in the behaviour of tones in Bafut more which suggests that the representation of tone is best handled within the theory of suprasegmental phonology than that which suggests doing so within a segmental theoretical frame. In addition to the arguments given in 4.6 showing that tone in Bafut may be viewed either as a property of the syllable or word, there are some other points that have motivated our treatment of tone as a suprasegmental feature, i.e., a feature that is realizable on phonological units greater than the segment. So far in our study we have not noticed any case where tone is affected by surrounding segments per se. Our T-rules are stated without reference to segmental phonemes and these rules operate irrespective of the features of the segments, consonants or vowels.

Although we have not specifically followed the autosegmental approach in our treatment of tone in Bafut, the autosegmental theory proposed by Goldsmith (1976) is at the background. The existence of floating tones (cf. chapter eight), tonal morphemes without segments (such as those that mark tense) and toneless morphemes (cf. 15.2.3.4 and 16.3.1) does not only argue for a

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suprasegmental but also for an autosegmental treatment of tone in Bafut.

The approach that is central in our tonal analysis is, in general, the framework of generative phonology along the lines of Hyman and Schuh (1974), Hyman (1976, 1979a), Hyman and Tadadjeu (1976) and Schuh (1978). Within the framework of generative phonology, we have worked at both systematic phonemic and systematic phonetic levels. At the systematic phonemic level, we have worked with two underlying tones, H, and L. Using the system of tone rules (T-rules) in the language we arrive at the systematic phonetic level. Thus the representation of the tones of an utterance or construction is at two levels: the systematic phonemic level, i.e., the underlying tones, and the systematic phonetic level, i.e., the surface tones. There is an input string (to the left of the arrow), and an output string (to the right of the arrow). The link between the input string, (the underlying tones) and the output string (the surface tones) consists of the system of rules. T-rules therefore work on the underlying forms at the systematic phonemic level to produce the surface tones at the systematic phonetic level.

Given the practical side of our work, we have had to adopt some aspects of the traditional phonemic approach which generative phonologists have termed taxonomic or autonomous phonemic level (cf. Schane, 1973:6-7). From this theoretical frame, we have adopted the principle of establishing the phonemic tones of the language on the basis of phonemic contrasts.

In our analysis we have recognized a phonemic M tone in some of the languages that we have studied. However, in our analysis M tone is not treated as an underlying tone. Mid tone, historically and synchronically, is derived from underlying H and L or from a sequence of H and L. Thus, in our analysis, all the tones are reduceable to the two underlying tones, H and L.

Although M is not treated as an underlying tone, we have treated it as having a full phonemic status in the Ngemba languages and in Limbum. This is why we consider Limbum, Bambili, Bambui, Nkwen, Mankon and Bafut as languages each with a three-tone system.

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The fact that loan words are assigned the M tone, for example, /cōr/ "church" (in Limbum), and /trēn/ "train" (in Bafut), shows that M tone has a strong psychological reality for the speakers of these languages. The Mid tone level derived from a series of downsteps in Bambili (cf. 21.3.5) lends support to the fact that M tone is a basic level of contrast, i.e., in the sense of Pike's "basic tone heights" (Pike, 1970:92). These facts are indications that M tone could be treated synchronically as underlying in the Ngemba languages that we have studied and also in Limbum. However, we have not treated M tone as underlying synchronically. This is motivated by the fact that most cases of M tone are traced back to an underlying L, H or synchronic contour tones. The other reason is the fact that even in Bambili where M tone is realized as a phonemic tone, it is the effect of the underlying L tone that is felt on a following H tone when the surface M is no longer realized as such. For example, [yá] + [ñján], is realized tonally as [H 'H], which gives support to the underlying representation, /yá ñján/ "see xylophone!" as given in the derivation in 21.3.4.2 (20).

In view of our concern with orthographical questions we have had to consider another level of tone representation, which we have termed the systematic orthographic level. The systematic orthographic level is fed immediately by the systematic phonetic level and remotely by the systematic phonemic level. The relationship between the systematic phonemic level and the systematic orthographic level is (established indirectly by) the systematic phonetic level. This is so because, as we have already said, the systematic phonemic level feeds the systematic phonetic level, which in turn feeds the systematic orthographic level.

We thus see that the systematic orthographic level is related both to the systematic phonemic and systematic phonetic levels and thus involves both underlying and surface tones in a more or less remote relationship.

The traditional phonemic (or taxonomic) approach is more directly related to the orthographic level and therefore more crucial for orthography. This is because the traditional phonemic

approach establishes the phonemic contrasts that the systematic orthographic level uses.

We thus see that the orthographic level requires both the generative phonology approach and the classical phonemics approach. This is why we found it necessary to adopt both theories and adapt them wherever necessary for our purposes.

The systematic orthographic approach is one which seeks to represent tone in a systematic way at the orthographic level. The systematic orthographic level in turn consists of three levels, the zero representation level, the minimal representation level, and the full representation level.

The zero representation level is one where tone is not marked at all. Until of recent, tone was not marked in most African languages. Tone was either ignored or thought too complicated a matter to be considered in the orthography of a language. Even now some people still resist marking tone in their language even though the functional load of tone is reasonably important. A near zero representation level is a situation where people choose not to mark tone except in selected areas of potential ambiguity. As we will see in chapter twenty, this is not a convenient choice in general.

The full representation level aims at representing orthographically all the tones that contrast at the systematic phonetic level. The full representation level would involve the representation of the following tones in Bafut:

1) Tones	H	'H	M	↑L	L	H'H	HL	'HL	ML	LM	LML
Orth.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11

In the above diagram, S1–S11 represent the orthographical symbols chosen to represent the tones identified at the systematic phonetic level. S1–S11 will then constitute a full representation at the systematic orthographic level.

The orthographic minimal representation level consists of the representation of the minimum number of tones from the taxonomic phonemic representation level that are required to make the

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necessary meaning distinctions in the language. The systematic orthographic minimal representation strikes a balance between too many tone marks and too few tone marks. The minimal representation level enables us to represent just the right number of tones orthographically in the writing system of a given language. The concept of minimal representation is a construct which lies somewhere between full representation and zero representation. This is the optimal representation for the native speaker or those with competence in the language. It is the best tone orthography in the language in this regard.

Even though the minimal representation level is a theoretical construct, it is a point in a continuum to which we should move and eventually attain. The need for the minimal represetation level arises from the desire for a system that enables efficient decoding of the full meaning encoded and which also ensures an effective tone pedagogy in both a teaching and learning situation. Thus semantic and pedagogical factors determine the minimal representation level. We thus see that the minimal representation level is not determined arbitrarily. It is a point along a continuum and is language specific.

In view of the above motivating factors the orthographic minimal representation should be determined in a systematic and scientific way.

The minimal representation level is selected from the taxonomic phonemic level on the basis of field tests or through an experiment like the one that we conducted for Bafut or Limbum (cf. chapters twenty and twenty-seven). However on the basis of a good analysis and a sound knowledge of the tone system and of the rules that produce the systematic phonetic level, one could arrive at a tentative minimal orthographic representation level. This however has to be tried out in the field before it is established and accepted as the orthographic minimal representation.

As it will be seen in the approach we adopted in both the Bafut and Limbum situation, we may have to investigate various alternatives before eventually establishing the minimal representation level. In the Bafut case, we proposed various representations ranging from a more or less full representation to

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a near zero representation. From a range of four proposals the minimal representation was chosen.

The orthographic minimal representation level in Bafut, for example, would represent the following tones:

(2) Tones	H	'H	M	!L	L	H'H	HL	'HL	ML	LM	LML
Orth.			M1	M1		M2	M2	M2	M3	M3	

In the above diagram we notice that the minimal representation level reduces the whole tone system to three symbols, M1, M2 and M3. M1-M3 represent the orthographic symbols chosen to represent the tones in the language. Thus M1-3 has to be interpreted in terms of the specific symbols used in the orthography. For Bafut M1 is symbolized /~/, M2 is symbolized /^/ and M3 is symbolized /~/.

As we have said earlier, and as can be seen in (3) below, the systematic orthographic approach is a continuum wherein one level of representation shades into the other. There are thus three theoretical levels within the orthographic level: full representation, minimal representation and zero representation. The full range of the systematic orthographic level can be captured by the following diagram:

(3) _____

    Zero ⟶   Minimal ⟶   Full
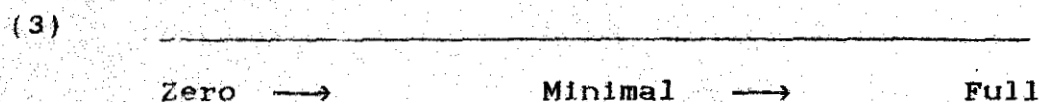
In the Bafut experiment, tone marking system 3 was near zero representation. It marked tone only in selected areas. In our study we have not concerned ourselves much with the zero representation level because it is an extreme case that would not serve our purpose. This point will be elaborated in 20.6 and 32.8.

In the search for the minimal representation, the two extremes, full representation and zero representation, should be avoided. This point will be discussed in detail in the study,

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especially in chapter thirty-two. In the Bafut experiment (cf. 20.6), tone marking system 4 was near full representation. It did not represent all the tones in (2) above, i.e., in a way such that each tone would have a different orthographic symbol. Raised L tone (ꜜL) and downstepped H tone ('H), for example, were not represented orthographically.

It is crucial to note that in the systematic orthographic representation, the optimal representation is relative. This means that the optimal representation is always related to the users. For foreigners learning the language, e.g., linguists, the full representation is the optimal while the minimal representation is the optimal representation for native speakers and all others who function competently in the language. Although in our study we have found that, in all the cases, the zero representation level is not really an option, it might be that for some languages where the function of tone is not that important, the optimal representation could even be zero.

In our study, as we shall see, we are much more concerned with the native speaker and his needs. As a result, we have concentrated on finding the minimal representation level for the native speaker since this is the optimal to be sought after. In chapters twenty and thirty-two we have discussed the various options and shown why the minimal representation level is the ideal tone orthographic representation for the native speaker or the competent user of the language.

The model that we have adopted in the study can be summarized in the following diagram:

(4)

```
                                        ┌─────────────────────────┐
                                        │  Systematic Phonemic    │
                                        │     Representation       │
                                        └────────────┬────────────┘
   Gene-                                              │
   rative                                             ▼
                                        ┌─────────────────────────┐
   Phono-                               │    System of Rules       │
   logy                                 └────────────┬────────────┘
                                                     │
                                                     ▼
                                        ┌─────────────────────────┐
         ┌─────────────────────────┐◄───│  Systematic Phonetic    │
         │   Taxonomic Phonemic    │    │     Representation       │
         │     Representation       │    └────────────┬────────────┘
         └────────────┬────────────┘                  │
   Taxo-              │                                │
   nomic              │                                │
                      ▼                                ▼
   Phone-    ┌───────────────────────────────────────────────────┐
   mics      │          Systematic Orthographic                  │
             │             Representation                         │
             │   ┌──────────┐  ┌──────────┐  ┌──────────┐        │
             │   ▼          │  ▼          │  ▼          │        │
             │ ┌──────────┐ │┌──────────┐ │┌──────────┐ │        │
             │ │   Zero   │ ││ Minimal  │ ││   Full   │ │        │
             │ │Represen- │ ││Represen- │ ││Represen- │ │        │
             │ │ tation   │ ││ tation   │ ││ tation   │ │        │
             │ └──────────┘ │└──────────┘ │└──────────┘ │        │
             └───────────────────────────────────────────────────┘
```
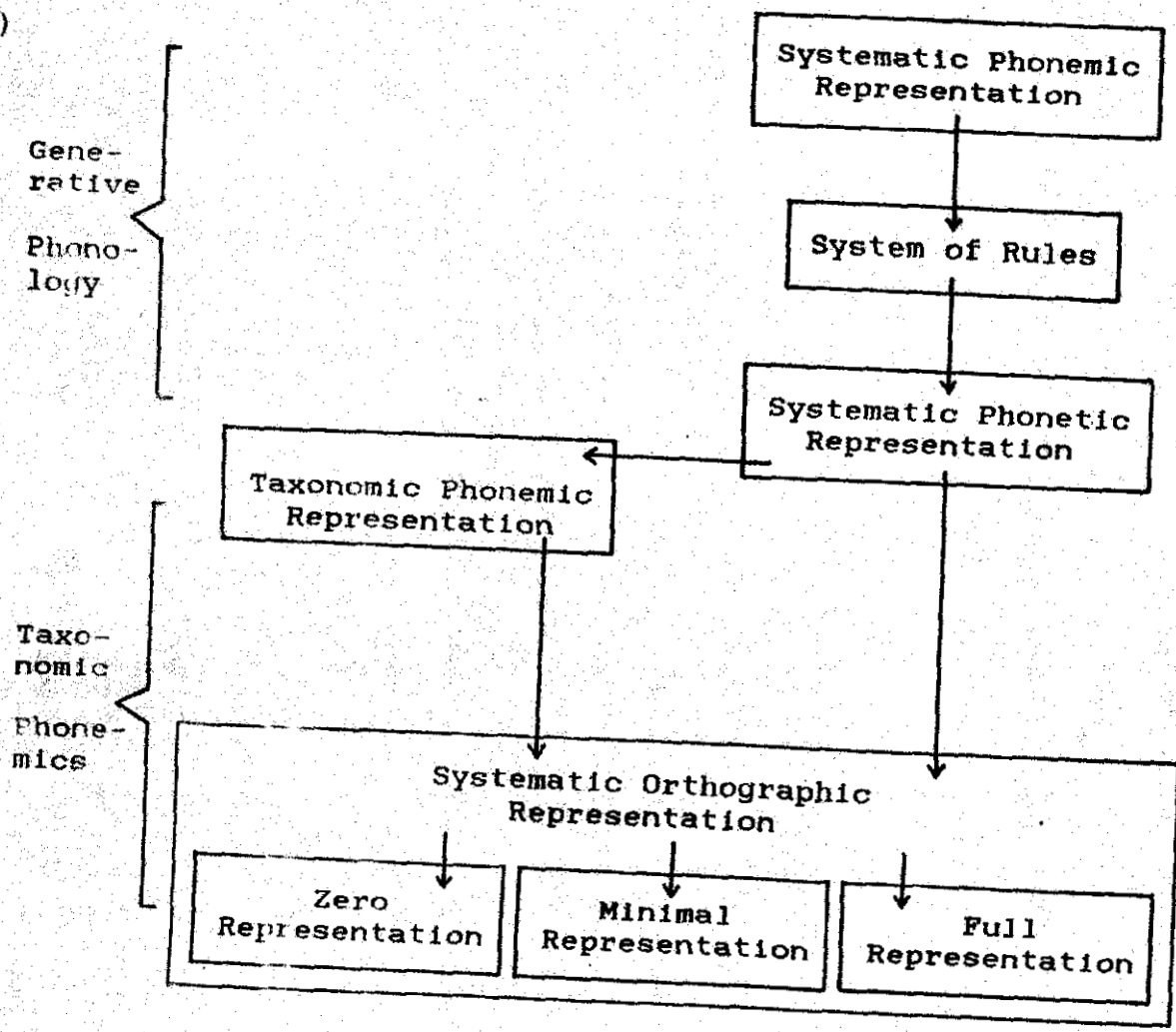
The relationships that exist between levels are indicated by
the arrows. The orthographic representation level is fed by both
the systematic phonetic and taxonomic phonemic levels of
representation.

It should be said here that the systematic phonetic
representation and the traditional phonemic representation are two
different ways of looking at the same linguistic reality. These
are the surface realizations of the same underlying realities.
The taxonomic phonemic representation is a different way of
looking at the contrasts produced by the system of rules that
result in the systematic phonetic level. The taxonomic phonemic
representation is more abstract than the systematic phonetic
representation. The systematic phonetic representation includes
such details as allophones or allotones whereas the taxonomic
phonemic representation represents phonemes or tonemes.

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The essential difference between the generative phonology approach and the traditional phonology approach is that generative phonology looks at tone processes in a syntagmatic relationship whereas the phonemic theory looks at the contrasts produced by tone process in a paradigmatic relation. In traditional phonemic theory such relations as H and M are representations of the different ways in which native speakers react to these realities as distinctive units.

Another way of looking at the model in (4) above is as follows:

(5)

Generative Phonology / Phonemics:

- Underlying forms: | H L
- System of rules : ↓
- Surface forms: ↓ H 'H M ↑L L H'H HL 'HL ML ↑M LML
- Orthography : ↓
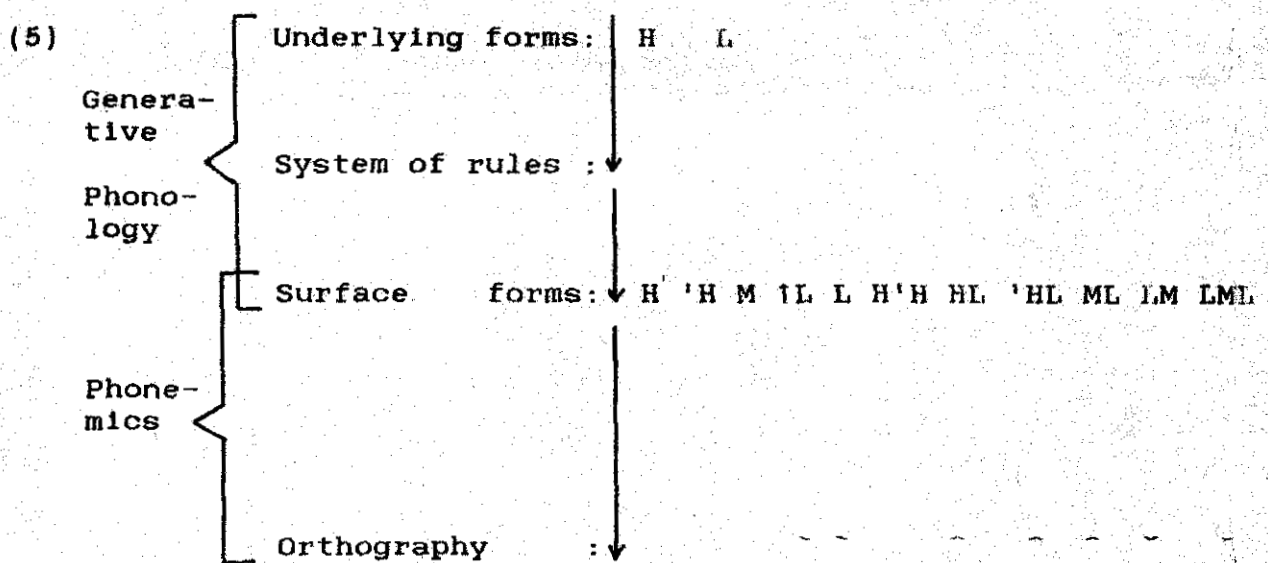
The above diagram shows in a general way a progressive or derivational relationship between the various theories used in the model. From underlying forms we use the system of rules to derive the surface forms. From the surface forms we go to the orthographic level. The generative phonology approach and the traditional or taxonomic phonemic approach meet at the level of the surface forms which directly feed the orthographic systematic level.

One of the issues that we deal with in this work concerns the question of surface representation of tones versus underlying representation of tones in orthography. Generative phonology has argued for a more abstract representation, which in essence actually favours underlying representation. In this light it

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recognizes only H and L as phonemic tones but not M. Traditional phonemics on the other hand favours a surface representation, which is less abstract in view of the many more contrasts that are represented at this level.

At the level of orthographic representation, our approach in the study favours a surface representation of tones rather than a more abstract representation of underlying tones. In this light, we are more on the side of traditional phonemics. In the study, and especially in the sections that deal with orthography, we argue against the writing of M or 'H, for example. This, it might be argued, seems to favour and thus prove the point of generative phonology, which, in general, favours a more abstract representation. However this is actually not the case. Our minimal representation approach does not mean that such contrasts as, M and 'H are not represented. In our approach H and 'H are both marked by the absence of a tone mark, i.e., the absence of an orthographic symbol. Also in our system, one orthographic symbol might represent more than one tone, for example, in Yɛmba the orthographic symbol /¯/ represents the following three tones: L° (level L), L (L falling) and 'L (downstepped L).

We thus see that out of a desire to find solutions to pratical problems we have had to resort to an eclectic approach. We have used the generative phonology model for the basic analysis. What we have taken from the suprasegmental and autosegmental view points is the fact that tone is autosegmental, i.e., tone can be represented at a different tier in relation to segments per se. However, we have not adopted the Well-formedness Condition. We have used the system of rules typical of generative phonology. The taxonomic phonemic approach was crucial for our orthographic representation.

Another question that could be asked concerns the contribution of generative phonology to the systematic orthography level. Since the taxonomic phonemic level seems to be more crucial to the orthographic level than the other levels of representation, could we not move from there directly into the sytematic orthographic level without having to start with the systematic phonemic level and passing through the system of rules

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and the systematic phonetic level? Indeed it is possible to ignore the generative component. This is what the traditional phonemic phonologists have done eversince. Our approach has been motivated, among other things, by the fact that neither the taxonomic phonemic approach nor the generative phonology approach, taken separately, could deal adequately with orthographic problems. Our approach benefits from both the taxonomic phonemic approach and the generative phonology approach.

As can be seen from the diagram in (4) above, one of the arrows from the sytematic phonetic level goes directly to the sytematic orthographic level. This means that there is a direct link between generative phonology and the orthographic level. The full representation level is fed crucially by the sytematic phonetic level, just as the minimal representation level is fed mainly by the taxonomic phonemic level.

A major contribution of generative phonology to the systematic orthographic level is the system of rules that enable us to go from underlying tones to the surface tones. This enables us to explain the surface realizations. The generative phonology approach helps us to account for the representation options at the systematic orthographic level. We should be able to explain why we have chosen a given orthographic representation. The generative component of our model helps, to a great extent, to explain our choices. The tone lowering rule (T-rule 2), for example, gives one of the major reasons for the choice of marking L tone in Bafut instead of H or M tone. As it will be seen in 20.6 (11) and 24.4.1.3 (20), we need to know the underlying tones of the strings given there and the rules applying to yield the surface tones, in order to decide on the tones to mark. It is on the basis of the underlying tones and the rules involved in the derivation of the surface tones in [nìbyɛ̀ zɛ̄] that we have chosen to represent the complex contour tone LML orthographically as /ˇ/ rather than as /ˆ/. This illustrates not only the need to study the underlying tones but also the importance of a sound analysis of the tone system in the design of a good tone orthography.

Since the question of orthography is a key issue in language, a good tone orthography has to be founded on good principles. A

good tone orthography should therefore have as its foundation a sound and adequate analysis of the tone system. This is why we have been motivated throughout our analysis by the principles of descriptive adequacy and explanatory adequacy (cf. Chomsky, 1957). We have tried as much as possible to explain the processes of the tone systems that we have studied. The purpose of the derivations in the study has been to explain the processes involved in the tone systems of the languages studied. Understanding the tone system of a language helps us to establish a good orthographic system for it. Where it has not been possible to give an adequate explanation of any processes, our aim has been to give an adequate description of the processes in question. So in our study we have aimed at both descriptive adequacy and explanatory adequacy.

1.2 Autosegmental Analysis

Autosegmental phonology is one of the most important models advanced recently for tone analysis. It might be asked why we have not adopted this model in our approach.

As many other valid theories that have been advanced, the autosegmental model has some good points and this is why it has attracted a good audience. However, as Pulleyblank (1983) says, it is too strong to handle the data and tone processes that we have described in our work. We thus found that the model could not adequately serve our purposes.

As said above, what we have adopted from the autosegmental phonology model is the principle that tone is an autonomous or independent tier in relation to the segments of language. We however found that both the tone mapping rules proposed by Williams (1971) and the Well-formedness Condition of Goldsmith (1976) are not valid in the description of tone in the languages that we have described in this study. Goldsmith's Well-formedness Condition says that:

a. All vowels are associated with at least one tone.
b. All tones are associated with at least one vowel.

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Concerning (a) above, we see that it is contradicted in Bafut where we have morphemes or vowels that are underlyingly toneless (cf. 4.8.10). When it comes to (b) we also find that it is not true in all cases since in our treatment of verb forms we have processes like replacive tone patterns that, according to our judgment, cannot be associated with any underlying segments (cf. chapters fourteen and seventeen). This last point includes, in general, floating tones that, basically, are not associated with any segments.

Concerning the mapping rules of Williams (1971), the principle of left to right assignment of tones to tone bearing units does not work in all situations in Bafut since in some cases in the verb forms the direction of tone assignment must be from right to left (cf. 4.6 (22b) and (23b)).

We thus see that in general the autosegmental approach is not practical for our case since most of the assumptions of the model work, at best, to a limited extent.

The lexical phonology model adopted by Pulleyblank (1983) points to some of the weaknesses of the autosegmental approach. In this light, lexical phonology seems to offer itself as a better alternative in tonal anlysis. Pulleyblank puts it this way:

> "This thesis shows that the lexical framework forces us to choose certain types of analyses that turn out to be preferred for empirical reasons... By restricting the types of analysis available to a tonal grammar, we take a step towards a more explanatory theory of tone. And it is in this respect that the lexical framework offers a particularly interesting approach to tonal phonology." (1983:54)

The above claim has to be evaluated in terms of the motivations of our own model. As far as we are concerned, the true value of lexical phonology will be established on the basis of how well it handles the practical problems of orthography that our model proposes to solve.

The advantage that our model has over the other models is that while being equally explanatory it, most importantly, goes beyond this and aims at solving the practical problems of tone

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orthograpy. At this point, our model still stands on the basic claim that orthographical questions are best handled at the surface level where we establish our contrasts, i.e., at the traditional phonemic level, whereas generative phonology, whether along the lines proposed by suprasegmental phonology, autosegmental phonology or lexical phonology, seems to look at tone representation basically from the more abstract underlying level and thus more at the lexical level.

1.3 Data Source

Concerning the work on Bafut, I (being a native speaker) was my own principal informant such that most of the data came from me. However, several other people contributed to the data used in the study. When in doubt as to the validity of any data I turned to other native speakers for more data or for confirmation. Most of the data used was verified during the experimental course held in Bafut.

A corpus of about 2,000 words was used. Out of these were some 800 nouns and 400 verbs.

The data of the other languages that we have studied came from native speakers. These are identified where the different languages are treated.

1.4 Procedure

The initial step in the study consisted in putting onto file cards simple (non-compound) nouns and verbs. It was important to work first with simple words since compound words often showed tone changes. Complex nouns were studied later on in the analysis.

The nouns were sorted and grouped together according to the number of syllables they had, 1 syllable, 2 syllables, 3 syllables, and so forth. The nouns were then sorted into different groups according to their tone patterns or tunes. It was found that noun classes also influenced the tones of words and constructions. The tone of the possessive changed with the class

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of the noun that it determined, for example, the tone of the possessive for nouns classes 1 and 9 is L for most of the Grassfields Bantu languages that we have studied and H for the rest of the noun classes. The tone of noun prefixes changes most of the time in constructions. It was therefore important to determine the class of each noun (especially in the Grassfields Bantu languages).

The verbs were also sorted into different groups according to the number of syllables and tone classes. The imperative form of the verb was very useful in determining the tone classes of verbs. In most of the languages, the imperative is the most simple form of the verb. We however found that in Basaa, the infinitive form could also be used in the initial stages of the analysis since its form in this language is not complex. We found that the infinitive form was even more useful in determining the two verb classes, i.e., L and H tone verbs, in Basaa.

We thus, first of all, figured out the lexical tones of words, i.e., of both nouns and verbs. It was important to know the tones of the different words in isolation or citation forms. This enabled us to know when these changed in constructions. A knowledge of the lexical tones helped us to understand grammatical tone changes or even phonetic tone changes.

Our next step was to find out tone processes and grammatical tones. To be able to determine all the possible tones and tone patterns and the perturbations they underwent, we had to study the contexts in which the lexical tones (underlying or citation tones) of words were likely to change. It was quickly recognized that whenever words came together in a grammatical construction, their tones were affected. Some of the contexts we had to study included: prepause positions, the associative construction, i.e., the procedure and description of N + N constructions, demonstratives + nouns, possessives + nouns, etc. These concerned the noun and nominal constructions. We then turned to the verb phrase and examined the verb and verbal constructions. These included verb forms, i.e., tense, aspect, mood, negation, the consecutive construction, etc. This study showed that tone does not only carry an important lexical load but also that it plays a

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very important role in the grammar of Bafut and the other languages which we have studied. Thus in order to discover all the tones and their behaviour or function we had to go through the grammar of the language.

We realized that the underlying tones of words had to be determined because these helped, in most cases, to explain the tone processes. We found that the citation tones of words often differed from their underlying tones. The underlying tones were established on the basis of the changes that the tones of words underwent in contexts, for example, the object position (for nouns).

The visi-pitch was used to check the behaviour of the L tone in Bafut before pause (cf. 5.3.3).

For more information on the methods and analysis of tone in African languages, reference should be made to Wiesemann (forthcoming) and Schaub (1985). It should be said here that Wiesemann developed the procedure that enabled us to discover tone changes in the Bafut tone system.

After the analysis of the tone system, pedagogical materials were constructed in order to conduct experimental tone classes. The Bafut and Limbum tone experiments and the methods used will be fully described in chapters twenty and twenty-seven of the thesis.

The same methods of research used in the Bafut study was used for the research work in the other languages. As we have said above, the data came from the native speakers of each language in question. The experience and knowledge gained from the study of related languages and related problems was used in the study of subsequent languages.

In the study of the Ngemba languages, sometimes a comparative method was adopted. In the study of underlying tones, internal reconstruction was used to establish the common tone patterns from which the different phonemic representations (or phonemic tones) in the different languages of the group developed.

PART II

BAFUT

PART II A

INTRODUCTION
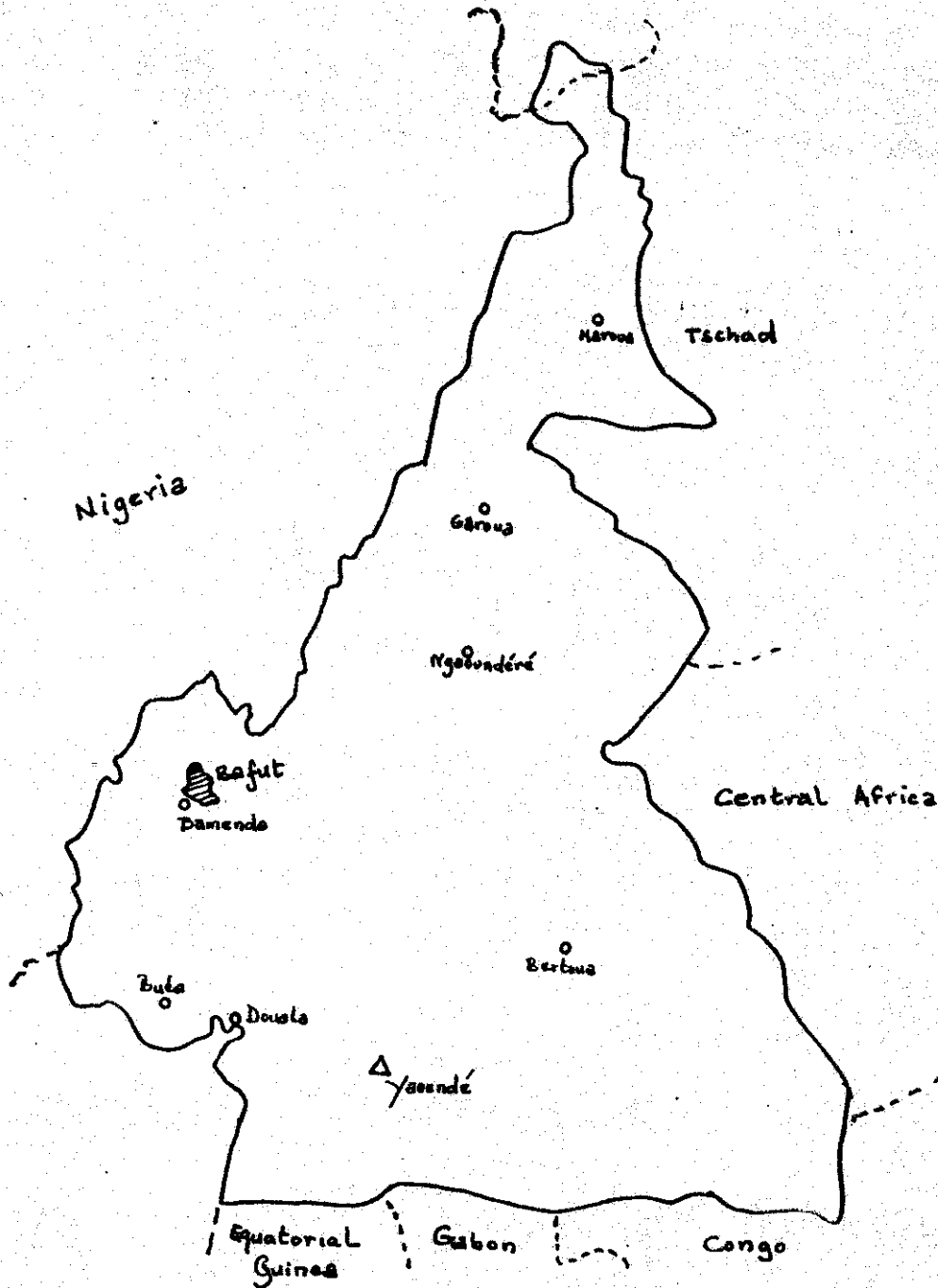
Fig. 1

Situation of BAFUT in Cameroon

FIG 2 : THE BAFUT CHIEFDOM:
VILLAGES AND QUARTERS.
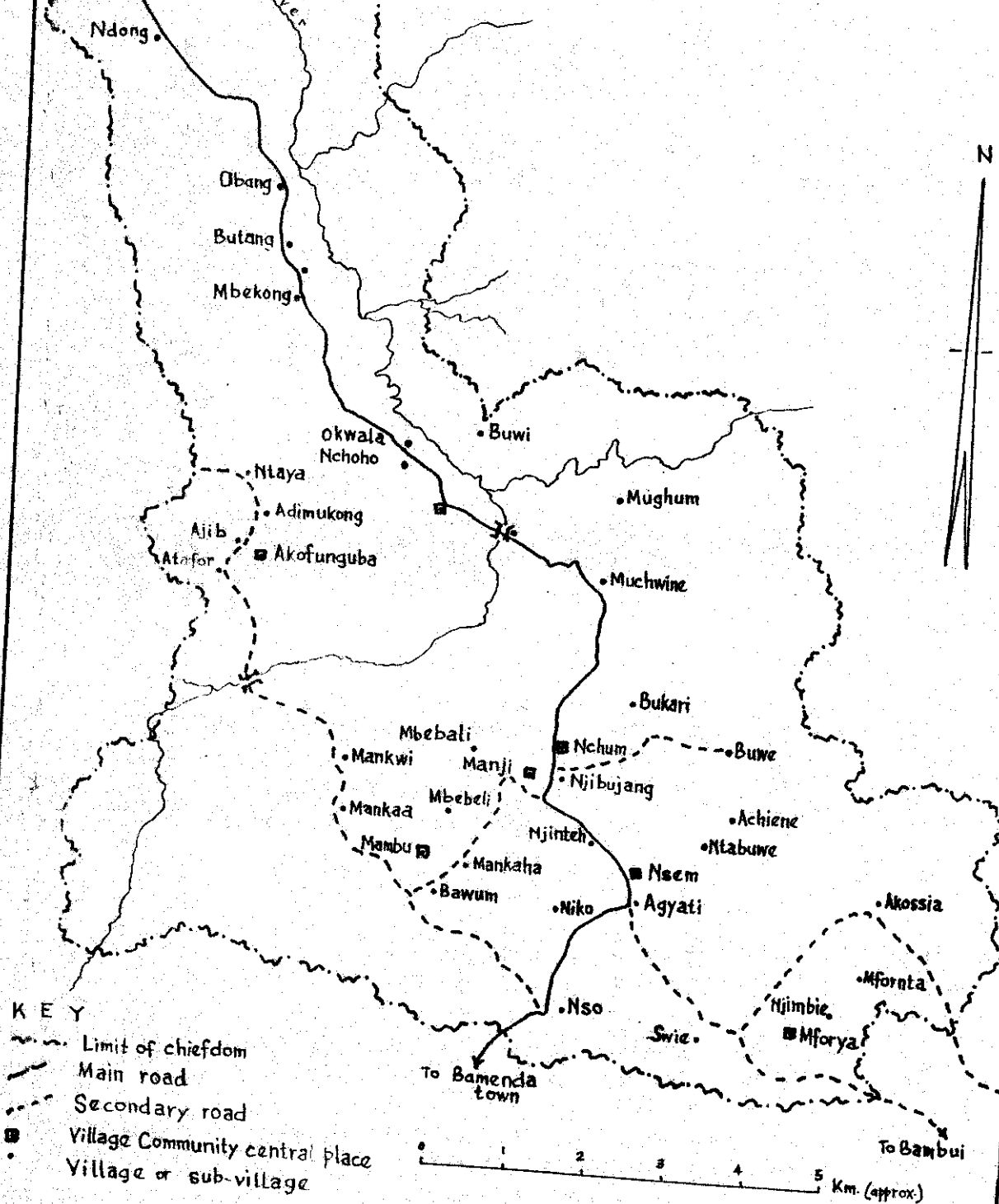
KEY

- Limit of chiefdom
- Main road
- Secondary road
- Village Community central place
- Village or sub-village

Km. (approx.)

adapted from Ngwa E N (1981)
by Ghan E N

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Chapter Two

SITUATION OF BAFUT

2.1 Geographical Situation of Bafut

The Bafut people live in Mezam Division in the N.W. Province of the United Republic of Cameroon. Bafut is situated between latitudes 6°05' and 6°10' north of the equator and longitudes 10°00' and 10°13' east of the Greenwich meridian. Figs 1 and 2 indicate the situation of Bafut in Cameroon and the villages of the Bafut chiefdom. A recent publication by Ngwa (1981) gives comprehensive information about the people of Bafut, their economic life and prospects. According to this document, Bafut covers an area of 425 square kilometres and has a population of approximately 35.000 inhabitants, giving it a density of 82.3 people per square kilometre. As a result of rural exodus, many more Bafut people live outside of the chiefdom than the figure of 35.000 given above. It is estimated that the total number of Bafut people in and outside the chiefdom is about 80.000.

The Bafut people are historically of Tikar origin. Their movements can be traced back to the 18th century wave of migration when the Tikar people started moving southwards from the areas of Tibati or Banyo. The group that now forms Bafut, stopped first at Ndop and then moved again and finally settled in the present area that makes up the Bafut chiefdom.

Fig 5 SKETCH MAP OF GRASSFIELDS BANTU LANGUAGES

(West and Northwest Provinces of Cameroon)
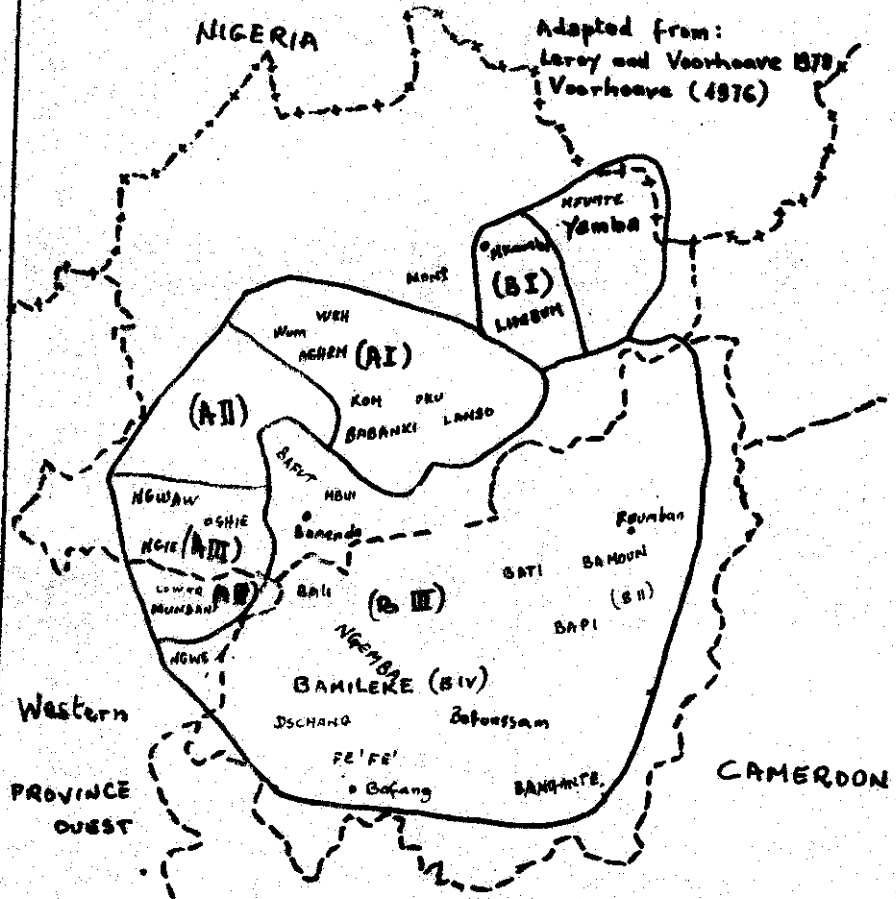
Adapted from:
Leroy and Voorhoeve 1978;
Voorhoeve (1976)

KEY

+ — +1 — + — National boundary
— — — — — Provincial boundary
— — — — . Language group boundary

Sub - groups

A - Western grassfields
  I   Ring
  II   Menchum
  III   Widikum
  IV   Lower Mundani

B - Mbam - Nkam
  I   Nkambe
  II   Nun
  III   Ngemba
  IV   Bamileke.

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2.2 Linguistic Situation

In the following paragraphs we are going to look at the linguistic situation of Bafut. This will, in the main, consist of the identity or language group of Bafut and the work so far done on the Bafut language.

2.2.1 Classification of Bafut

Bafut historically is of Tikar origin. Stallcup (1977:51) classifies Bafut, under Tikar thus:-

```
TIKAR
Tumu
Babanki       (A  i)
Limbum        (B  i)
Bamoun        (B  ii)
Bafut         (B  iii)
```

Westermann and Bryan (1970:127) report: "According to Talbot the Bafut (FUT, BUFU, FU) speak a mogimba dialect, They are, however, not known as WIDEKUM, but as TIKAR."

Fivaz and Scott (1977:93) classify it thus "Bafut 326D243 Benue, Bantoid, Bane Grasslands group... Ngemba subgroup." Tessman (1932) reported by Renaud (1978) classified it as semi-Bantu.

Bafut belongs to the Ngemba group of languages that in turn fall under the Grassfields Bantu languages. Many attempts have been made at classifying Bafut. Welmers (1971) includes it under the more general groups: "Niger Congo, Benue." Jacquot, and Richardson (1956) classify it under the ŋKƆM group. Voorhoeve (1971) in his classification of Mbam-Nkam languages classifies Bafut under the Ngemba group and says that Bafut includes 87 percent of Mbam-Nkam stems in its vocabulary. In his classification of the Bantu languages of the Grassfields, Stallcup (1977:54) divides them in two subgroups (A) Western Grassfields and (B) Mbam-Nkam. Bafut is included this time in the Mbam-Nkam group thus:

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(B) Mbam-Nkam

 I. NKAMBE: Limbum, Mfumte, Nwa.

 II. NUN: Mungaka (Bali), Bamun, Baba 1, Bapi.

 III. NGEMBA: Mbui, Mankon, Mundum 1, Pinyin, Awing,
       Nkwen, Ba'angu, Akum, Bafut.

 IV. BAMILEKE: Ngwe, Bangang, Dschang,
        Fe'fe', Bandjun, Bangante.

A generally accepted classification of the Benue-Congo languages, is that of Williamson (1971) which Greenberg (1974) uses as basis for his discussion of "Bantu and its Closest Relatives". Williamson in her Subclassification of the Benue-Congo languages, classifies Bafut as D.2.C. 5b. D stands for Bantoid while the subclassification D.2.c includes the "Grasslands Bantu" languages which in turn subsume the Ngemba group. According to the classification of Williamson the Ngemba Group includes the following languages:

5. Ngemba Group

a. 1. PINYIN

 ii. MANKON

 iii. AWING (Bambulewe)

b. BAFUT (Bufe)
c. i. NKWEN (Bafreng)
 ii. MANDANKWE
 iii. MBILI (Mbele, Bambili)
 iv. MBUI (Bambui)

d. BAMUNKUM

e. KPATI

Leroy (1977b:15) suggests that the following list of languages could be added to the list of Williamson:

- Shomba (Chomba, Bamechom, Alamatson)
- Songwa (Bangwa, Ngwa, Nsongwa)
- Mbutu (Bambutu, Alamatu)
- Njong (Banjong)
- Akum (Bangangu)

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- Mundum i (Mberewi, Bamundum i)
- Mundum ii (Anyang, Bamundum ii)
- Alatining
- Babaji (Beba, Mubadji)

2.2.2 Linguistic Studies Already Done on Bafut

Crozier (1980b) reports that the first reference to the Bafut language is found in Koelle (1854). As a result of the difference in vocabulary, Crozier speculates that Koelle must have worked on the court language.

Ladefoged (1964) makes a study of Bafut vowels and consonants. In a discussion of phonological contrasts which he presents in page 63, Appendix B he adds:

> "There are also several clusters with W as the second element."

As it will be seen in the section on phonology, Bafut has no consonant clusters. We shall interpret what Ladefoged calls "clusters" as consonant modification.

Another study carried out by Chilver and Kaberry (1974) includes, in particular, a considerable wordlist of Bafut. In some three pages of additional notes they give a list of verbs in the imperative form, personal pronouns, phrases with demonstrative pronouns which he terms "selectors", and ends up with some examples of kinship terms. In their study, they make an effort at marking tone, and acknowledge that their marking of tone is incomplete (p. 65).

In her study of tone patterns in Ngemba nouns Leroy (1979) devotes the last paragraph to Bafut. She proposes two tone patterns, L-LL and L-HL for Bafut nouns in citation form. From tonal realizations in context she proposes the following underlying tone patterns for Bafut: L-LL, L-LH, L-HH and L-HL. She says that the difference between L-LL and L-HL have been neutralized. As we shall see in 4.7 and in the other sections where we describe the Bafut tone system, they are more underlying and citation tone patterns than Leroy indicates in her study.

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Several linguists have considered Bafut in their study of the noun classes in Grassfields Bantu. These will be considered in the chapter on Bafut noun classes (cf. 7.1).

So far the most extensive linguistic study of Bafut has been made by Crozier. He has made a study of Bafut Phonology (1980b); produced a Reading and writing book (1980a); compiled an extensive word-list (Bafut - English; English - Bafut) (1980c). Crozier and Annett (1978) edited stories written in the Bafut language.

Although Crozier did not do much studies on Bafut tonology, what he did so far has served as a basis for the detailed analysis we have carried out.

2.2.3 Dialects of Bafut

There are two main dialects of the Bafut language. One dialect is spoken in the hilly villages to the West i.e. Bawum, Mambu, Mankaa, Mbebeli and Mankwi. The other dialect, which is considered to be the central dialect, is spoken in the quarters surrounding the Fon's palace with more or less perceivable variation in the rest of the chiefdom.

There are few lexical differences between the two dialects but the greater difference are phonological ones as revealed by differences in pronounciation.

There is also a court language which is a social dialect. The court language differs considerably in vocabulary and structure from the common dialect.

Our study is based on the central dialect. This is also the dialect that Crozier studied.

It is also worth noting that there is a Bafut Language Committee, which is the centrally constituted body responsible for the co-ordination of any work geared towards the standardization of the Bafut Language. The Central dialect has been accepted as the standard dialect of Bafut. The Bafut Language Committee publishes a diary in the Bafut language on a regular basis.

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PART II B

PHONOLOGY

Chapter Three

SOUND SYSTEM

3.1 Introduction

Our treatment of the sound system of Bafut (i.e. consonant and vowels) is based on the work of Crozier (1980b). The material we present will be limited mostly to what is relevant to our tonal analysis and the pedagogical material used in the experiment.

3.2 Consonants

The consonants found in syllable initial position are presented in the following chart:

(1)

	Labial	Alveo.	Post-alv.	Pal.	Vel.	glottal
Stops						
Vl		t			k	
Vd	b	d			g	
Fricatives						
Vl	f	s	ts			
Vd		z	dz			ɣ
Nasals	m	n			ŋ	
Vibrant		(r)				
Liquids and Glides	w	l		j		

The following consonants are found in syllable final position:

(2)

	Labial	Alveolar	Velar	Glottal
Stop				'
Nasal	m	n	ŋ	

As can be seen on the above charts, there are 18 consonant phonemes. Some of these have allophones or variants. The glottal

stop is very frequent in Bafut. It occurs intervocally as in ābù'ù "slave" ñtā'ā "hill", It only occurs between reduplicated vowels. It never occurs syllable initially. /k/, on the other hand, occurs only syllable initially. From this distributional evidence it is possible to treat /k/ and /'/ as variants or allophones of the same phoneme as Crozier (1980b) does. We, however, treat them as separate phonemes given that they both occur intervocalically as in the following example:

(3) ākāŋ "plate, pan"
bì'ā "treat (a wound)!"

The vibrant [r] has a very restricted distribution. It occurs intervocalically and only before the central vowel /ə/. It is in free variation in this context with the lateral /l/. Some speakers would say either /akorə/ or /akolə/ "foot". In this respect we can say that [r] is a free variant of the phoneme /l/.

The fricative /z/ and the glide /j/ (written /y/ are in free variation with some speakers in a few words e.g.

(4) either /zi/
or /yi/ "know/come!"

These two sounds are otherwise separate phonemes.

There is morphophonemic variation between /d/ and /l/ in the singular/plural opposition as seen in the following examples:

(5) ñ-dōō/bì-lōō "husband / husbands"
ñ-dìì/bì-lìì "witch / witches"

i.e /d/ occurs after the syllabic nasal prefix, and /l/ after a CV-prefix.

3.3 Vowels

The following Chart shows the vowel system of Bafut:

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(6)

	Front	Central	Back
High	i	ɨ	u
Mid	e	ə	o
Low	ɛ	a	ɔ

As can be seen from the chart in (6) Bafut has a system of 9 vowels: 3 front, 3 central, and 3 back vowels.

Length is distinctive in Bafut. All the 9 vowels in Bafut can be lengthened i.e. each vowel has a long counterpart e.g.

(7) u   àbū "wood ash"   àbà "blemish"
    u: àbū: "rib"   àbà: "bag"

3.4 Evidence for Phonemic Contrasts

In the following charts we present evidence for phonemic contrasts.

3.4.1 Consonant Contrastive Chart

(8) Labials

/b/	/f/	/m/	/w/
bá'á "two"	fáà "here"	máà "grandmother"	wáà "that"
bɛ́ɛ́ "nail!"	fɛ́ɛ́ "slap!"	mɛ́'ɛ́ "bleat!"	wɛ́'ɛ́ "wear!"
bó "they"	fō "your"	mō "your"	wō "fall!"

(9) Alveolars

/t/	/d/	/n/	/l/
tāà "father"	dāà "wine calabash"	nàà "animal"	làà "tree sap"
àtɨ̄ɨ̄ "half"	ñdɨ̄ɨ̄ "witch"	mɨnɨ̄ɨ̄ "floor"	bɨlɨ̄ɨ̄ "elderly people"
tū "pay"	dǔ "uproot"	nū "honey"	lū "tree rat"

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(10) **Alveolars and Palatals**

/ts/	/dz/	/s/	/z/	/y/
tsʸä̀ "pass!"	dzʸä "that" (cl.10,8)	sʸä̀ "over-ripen"	zʸä "roof-rafter"	yä "that" (cl.7)
ñtsĪ "father-in law"	ñdzĪ "hunger"	ñsĪ "face"	ñzĪ̀ "to come"	yĪ'I "our"
ñtsǟǟ "to chew"	ñdzǟǟ "axe"	ñsǟǟ "to split"	–	ñyǟǟ "to throw"

(11) **Velars**

/k/	/g/	/ɣ/	/ŋ/
káá "crab"	gáá "coerce!"	ɣǟǟ "speak!"	ŋáá "acquire by chance!"
kέέ "sift'"	ŋgέέ "grass"	ɣέέ "go'"	ŋέέ "carry'"
äkɔ̄'ɔ̄ "latrine"	ŋgɔ̄'ɔ̄ "stone"	äɣɔ̄'ɔ̄ "nice soup"	äŋɔ̄ŋnǟ "worm"

(12) **Nasals**

/m/	/n/	/ŋ/
mǟ'ǟ "throw!"	nǟ'ǟ "refuse to answer!"	ŋǟ'ǟ "open!"
mĪ'I "eyes"	nĪ'I "ours"	ŋĪ̀ "defecate!"
mū "child"	nū "body"	ŋū "person"

3.4.2 Vowel Contrastive Charts

(13)   a.   Front Vowels

/i/		/e/		/ɛ/	
mbɪ̃	"goat"	nɪbē	"cola nut"	nɪbɛ̄	"fountain"
lɪɪ	"look for"	---		lɛ̄	"stay the night"
mɪ̃	"swallow!"	---		mɛ̄	"end"
nɪ̃	"his"	---		nɛ̃'ɛ̃	"cry!"
ātɪɪ	"waist"	---		tɛ̄'ɛ̄	"stand!"
ñdɪdɪ	"kind of moss"	ñdē	"mother"	dɛ̃'ɛ̃	"beat!"
fɪɪ	"there"	fēē	"sell!"	fɛ̃ɛ̃	"slap!"
yɪɪ	"that one"	---		yɛ̃'ɛ̃	"sweep!"

b.   Central vowels

/ɨ/		/ə/		/a/	
m̃bɨɨ	"breasts"	bə̃	"people"	nɪbã	"wing"	.
ɨlɨ	"ant"	ləə	"keep!"	lãã	"cook!"
mɨ̃	"tell!"	mə̃	"I"	mã	"my"
nɨ	"you pl."	nəə	"ground squirrel"	nãã	"animal"
ātɨɨ	"half"	ātəə	"calabash"	ātãã	"pit"
ñdɨɨ	"witch"	ñdə̃	"thing"	ñdã	"house"
fɨɨ	"lock!"	fə̃	"where?"	fãã	"here"
yɨgə̃	"cover!"	yə̃ə̃	"wake!"	yãã	"throw!"

c.   Back vowels

/u/		/o/		/ɔ/	
m̃bũ	"dog"	bōō	"hunt!"	bɔ̃ɔ̃	"build!"
lũũ	"be full!"	lōō	"bite!"	lɔ̃ɔ̃	"beg for!"
mũ	"child"	mō	"your"	mɔ̃'ɔ̃	"fire"
nũ	"body"	nō	"snake"	nɔ̃'ɔ̃	"squeeze!"
ātũ	"head"	tō	"fight!"	tɔ̃'ɔ̃	"support!"
ñdũũ	"price"	ñdōō	"husband"	ñdɔ̃ɔ̃	"curse!"
fũũ	"hit!"	fō	"your"	fɔ̃ɔ̃	"shiny"
yũũ	"buy!"	yōō	"peel!"	yɔ̃ɔ̃	"big basket"

3.5   Interpretation

3.5.1 Vowels

Although vowel length is phonemic in Bafut we have not interpreted long vowels as different unit phonemes from their

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short counterparts, but rather as representing two syllable nuclei.

Thus the examples in (7) are represented as follows:

(14) ābū "wood ash"   ābā   "blemish"
      àbūū "rib"   àbàà   "bag"

3.5.2 Consonants

The alveolar affricates /ts/ and /dz/ are interpreted as single-unit consonants not as a sequence of two consonants because the syllable structure of Bafut does not permit a CC sequence.

Labialisation and palatalization are respectively interpreted as consonant modifications e.g.

(15) a. [nwɪ] is interpreted as /nʷɪ/   "cutlass"
     b. [fɨbwɛ̀]   as /fɨbʷɛ̀/   "fish"
     c. [fyâ]   as /fʸâ   "demonstrative"
     d. [tsyǎ]   as /tsʸǎ/   "pass!"

The example in (15a), for example, could be interpreted in two other ways: /nwi/ or /nui/. The first alternative gives a CCV syllable structure, which is not acceptable in Bafut (cf. 3.6). The other alternative yields a vowel sequence that is not natural in the language. There are no vowel glides in Bafut. What is common in the language is a sequence of like vowels as we find in long vowels. We would also notice that the glottal stop always occurs between two vowels of the same quality. The same arguments are true for (15c-d). That is why we have interpreted the above examples as consonant modifications, i.e., labialization and palatalization respectively.

Labialization and palatalization have been observed to cooccur, e.g.

(16) [gwyɛ̀]   /gʷʸɛ̀/   "jester"
      [kwyɛ̀]   /kʷʸɛ̀/   "cut!"

When not preceded by a consonant the glides [w] and [y] are

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interpreted as consonants and then they function as syllable onset.

When nasals occur before homorganic consonants, they are interpreted as syllabic nasals, and as such they function as vowels or syllable nuclei. Syllabic nasals always carry L tone e.g.

(17) ńdā   "house"   m̄bɔ̄   "hands"
      m̄fɔ́   "chief"   ŋ̄gɔ́'ɔ́   "stone"
      ńnāā   "to speak   ŋ̄ŋāā   "to acquire
                  in proverbs"   by chance"

As can be noticed in the last examples in (17) above long nasals are interpreted as a sequence of two units. The first nasal carries a L tone and is treated as a syllabic homorgnic nasal and the second is a nasal consonant functioning as syllable onset. Most words with long nasals are derived verb forms, e.g. when the infinitive or gerundial marker /N̄-/ is added to a verb that begins with a nasal the result is a long nasal.

3.6 Syllable and Morpheme Structure

Word stems and affixes do not have the same syllable structure and so they have to be treated separately.

3.6.1 Stem Structure

The general syllabic structure of Bafut stems (noun or verb) may be summarized as follows:

(18)   (C) V (C)

The stem syllable structure consists of an obligatory syllable peak or nucleus V (vowel) and an optional marginal consonant element C which serves as either onset or coda.

Taking the stems of morphemes into consideration, the word stem is generally monosyllabic or disyllabic. The syllable and word structure can be illustrated as seen in (19) below:

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(19) a. CV
      b. CVC
      c. CV.V
      d. CV.CV
      e. CV.VC
      f. CVC.V

These are attested in both noun and verb stems as follows:

(20) a. CV   ŋũ   sɔ̀
                        "person"   "pierce!"
      b. CVC   fũm   tũm
                        "carpenterbee"   "shoot!"
      c. CV.V   káá   lóõ
                        "crab"   "bite!"
      d. CV.CV   bãtə̀   lɔ̃gə̀
                        "wine calabash"   "fetch!"

In (20b) the second C, which forms the coda of the syllable, is always a nasal, m, n, or ŋ. Basic verb roots hardly ever end in a consonant nasal. They end in a nasal as indicated above when they are followed by an object which begins with another nasal or by a suffix. e.g.

(21) a. tũm náǎ   "shoot an animal!"
      b. tũm nĩbɔ̃'ɔ̃   "shoot a pumpkin!"
      c. tũm-tə̂   "shoot several times!"

As will be indicated below, this verb has a CVC syllable structure because the second V element has been lost or deleted. Even nouns with CVC syllable structure show evidence of a second V that was lost. e.g. although we have the word: /fũm/ in isolation a second V element is introduced in a construction such as /ã nĩ fũmə̃/ "it is a carpenter bee." The CV.V pattern in (19c) and (20c) becomes CV.VC when followed by a verb suffix e.g.

(22) CV.V   CV.VC-

      lóõ "bite!"   lóõn-tə̂   "bite several times!"
      yə́ə̃ "sing!"   yə́ə̃n-tə̂   "sing a little!"

Words with the glottal stop /'/ have a syllable structure that is slightly different, as indicated in the example we have seen above in (19f). The structure is of this nature: CVC.V

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(23) bá'â "calabash dish"   bá'â "weave!"
      bū'ū "chimpanzee"   bū'ū "club!"

In these examples, the syllables cannot be divided as in (19d) or
(20d) i.e.: CV.CV because the glottal stop never initiates a
syllable.

     As we saw in (15) and (16) above, the first C of the
(C) V (C) structure can be labialized, palatalized or both
labialized and palatalized. In this case the structure of the
nuclear syllable is still (C) V (C) since we have interpreted both
labialization and palatalization as C modifications. The
structure of the syllables in the words in (15a) and (16a), i.e.,
/nwì/ and /gwyɛ̌/, is as follows: C^W V and C^{WY} V respectively.
Taking the optional elements into consideration, the structure of
the nuclear syllable in Bafut can be: $((C)(^W))$ V (C) or
$((C)(^Y))$ V (C) or $((C)(^{WY}))$ V (C).

     We have not treated vowel length as an element of the
syllable since long vowels have been analysed as sequences of two
vowels of the same quality. Long vowels consist of two syllable
nuclei since the syllable in Bafut is defined as a tone bearing
unit. Thus (19c) is the structure of a disyllabic word and not of
a monosyllabic word. This is why the formula of the canonical
syllable does not include vowel length as one of its constituents.
Vowel length is however included in the morpheme or word sturcture
as given in (19c,d,e) and (22) above.

3.6.2 Syllables of Affixes

     We shall consider the structure of the marginal syllable
here, i.e., syllables if affixes. We shall look at the structure
of prefixes, suffixes or non-affixed grammatical markers or
morphemes such as pronouns or tense markers. The following formula
can capture the various types of syllables found in grammatical
morphemes:

(24) $- \begin{Bmatrix} (C) \ V \ (C) \\ N \end{Bmatrix} -$

Unlike the stem syllables, most non-stem syllables do not begin with a consonant. The formula in (24) above can be expanded to include the following syllables:

(25) a. V   ā-   N.cl. 7 prefix,   as in ā-bāā "bag"

        Ɨ-   N.cl. 3,8 prefix, as in Ɨ-bāā "bags"

        ā • 3rd. pers. sg. pronoun

b. N   Ñ-   m̄- as in m̄-bɔ̃   "hands"

        ñ- as in ñ-dõõ "husband"

        ñ- as in ñ-nõ   "to drink"

The syllabic nasal is the n. cl. marker or prefix for classes 1a, 3b, 6, 9 and 10, and the nominalisation nasal that is used to derive verbal nouns. These nasals carry L tone.

c. CV   nɨ- as in nɨbā "wing"
      bɔ́   "they"
      -tə   verb suffix as in
              nɔ'ɔ-tə "squeeze a little"

d. CVC   as in NɨN P1 tense marker:

nɨn   /ā nɨn lɔ̃/   "he left"

nɨm   /ā nɨm fā/   "he gave"

nɨŋ   /ā nɨŋ kɔ́/   "he caught"

e. CV.VC   as in lɛ́ɛ̃N perf. of experience marker:

lɛ́ɛ̃n /ā lɛ́ɛ̃n jwI/   "she gave birth"

lɛ́ɛ̃m /ā lɛ́ɛ̃m fā/   "he gave"

lɛ́ɛ̃ŋ /ā lɛ́ɛ̃ŋ kɔ̄ nsāā/ "he once caught an elephant"

3.5.3 Realizations of Nasals before other Consonants

The realization of the nasal /N/ is governed by a homorganic assimilation rule similar to that given by Hyman (1975:126):

(26)   P-Rule 1:   [N] ⟶ [α Place]   / ___ [α Place]
                                            [C   ]

The notation [α place] stands for the place of articalation.
The rule then means that the homorganic nasal assimilates to the
place of articalation of the consonant before it. The rule then
converts /N/ to /m/ before labials, to /n/ before
alveolars/palatals; and to /ŋ/ before velars. The rule is
illustrated in the following examples:

(27) ñdā   m̄bɔ̄   ŋ̄kyā
        "house"   "hands"   "fence"
      ñtɔ̄   m̄bā   ŋ̄kwɛ̄rɛ̄
        "to fight"   "meat"   "to take"
      ñtsɔ̄   m̄fā   ŋ̄gɔ̄'ɔ̄
        "war"   "to give"   "stone"
      ñjāā   m̄mā'ā   ŋ̄ghāā
        "axe"   "to throw"   "to speak"
      ñlɔ̄   ŋ̄wɔ̄
        "to leave"   "to fall down"
      ñsɔ̄
        "to pierce"

The nasal in the tense and aspect markers e.g. /nĭN/ or
/lɛ̌ɛ̌N/ obeys P-rule 1 as follows:

(28) ā nĭn sɔ̄   "he pierced"
      ā nĭm fá   "he gave"
      ā nĭŋ kwɛ́rā   "he took"

      ā lɛ̌ɛ̌n sɔ̄   "he once took"
      ā lɛ̌ɛ̌m fā   "he once gave"
      ā lɛ̌ɛ̌ŋ kwɛ̄rā   "he once took"

3.7 Vowel Deletion

The vowel deletion rule is common in Bantu languages. Lovins
(1971 a,b) quoted by Goldsmith (1975:138) defines V- deletion for
Bantu languages in the following terms:

    "If two vowels are juxtaposed, within a word or across
    a word boundary, it is usual for the first vowel to be
    elided."

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A general rule that captures this phonological process can be written thus:

(29) P-Rule 2:   V → ø / ___ V

Spa (1973:78) treats this rule for Enya. Warnier (Leroy) and Voorhoeve (1975:145) consider this rule in their study of "Vowel Contraction and Vowel Reduction in Mankon."

In Bafut, when two vowels come together across morpheme or word boundary, the second vowel is generally deleted. We thus see that the deletion process is different for Bafut and so the V-deletion rule for Bafut is different from the common Bantu rule given in (29) above. The V. deletion rule in Bafut is given in (30) below:

(30) P-Rule 3:   V → ø / V___$\left\{ \begin{array}{c} + \\ \# \end{array} \right\}$ ─

This rule is illustrated in the following examples:

(31) a. ātū ābāā   → [ātū'⁻bāā]
                              "head of bag/big full bag"

     b. kŏ ābāā yā   → [kŏ bāā yā]
                              "take the bag"

     c. ā ghɛ̄ɛ̄ ā mītāā   → [ā ghɛ̄ɛ̄ mītāā]
                              "he is going to market"

     d. ā zǐ ā ŋkwɛ́rə nīŋɔ̄ɔ̄ → [ā zǐ'⁻ŋ'kwɛ́rə nīŋɔ̄ɔ̄]
                              "he has come to take
                               a plantain"

     e. ñdā ībə̄rə̄   → [ñdā'⁻bə̄rə̄]
                              "houses of imbeciles"

In some cases V- deletion may be blocked in order to avoid ambiguity; or when it does take place, the ambiguity is taken care of by tonal rules. (cf. (32d) below; 16.3.1.1(6) and 19.3.3)

In a few cases, especially when the second V is a personal pronoun, the first vowel is deleted instead of the second. This is

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sometimes done to avoid ambiguity as can be seen in the following examples:

(32) a. kāā ā nɨ wá'à yə'ə → [kāā nɨ wá'à yə'ə]
                "he did not cry (today)"

     b. kāā ō nɨ wá'à yə'ə → [kāò nɨ wá'à yə'ə]
                "you did not cry (today)"

     c. kāā á nɨ wā'à yə'ə → [kāā nɨ wā'à yə'ə]
                "he was not crying (today)"

     d. kāā ó nɨ wā:à yə'ə → [kāā ó nɨ wā'à yə'ə]
                " you were not crying (today)"

It should be noticed that if the second vowel were deleted in (32b) and (32d) these sentences would be ambiguous in relation to (32a) and (32c).

In (20) it was pointed out that stems may end in a consonant when they are followed by an object beginning with another nasal e.g.

(33)   /twōŋ m'bū yâ/   "call the dog!"
        /sə́ŋ ŋ'gú jâ/   "count the fowls!"

Basically these verb stems have two syllables thus /twōŋə́/ and /sə́ŋə́/. The vowels of the second syllables are deleted in the context given above.

The tones of the deleted vowel are treated in 8.2.1.2 and 8.4.3.

3.8 Nasal Desyllabification

In Bafut, when two nasals or a vowel and a nasal are used across morpheme or word boundary, the second or following nasal is desyllabified. The second nasal is normally the syllabic homorganic nasal which is usually a norminal prefix or grammatical affix such as the gerund marker on the coreference pronoun. This process is represented by the following N- dessylabification rule.

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(34)

$$
\begin{bmatrix} N \\ +\text{syll.} \end{bmatrix} \rightarrow \begin{bmatrix} N \\ -\text{syll.} \end{bmatrix} \Big/ \begin{bmatrix} [V] \\ \begin{bmatrix} N \\ -\text{syll.} \end{bmatrix} \end{bmatrix} \quad \# \_\_ C
$$

P-Rule 4:

The following examples serve to illustrate the rule.

(35) a. /ātɪ̄ɪ̄ ñdə̄ŋnə̂/ $\longrightarrow$ [ātɪ'ɪ ndə̄ŋnə̂]
"half of bamboo"

    b. /fá ñdə̄ŋnə̂/ $\longrightarrow$ [fá ndə̄ŋnə̂]
"give a bamboo!"

    c. /sǎŋ m̃bā yā/ $\longrightarrow$ /sǎŋ mbā yā/
"dry the meat!"

    d. /tūm ñsə̄ə̂ yā/ $\longrightarrow$ /tūm n'sə̄ə̂ yā/
"shoot the elephant!"

    e. /ā nɪ̄n tsó ñtū'ū ŋkɪ/ $\longrightarrow$ [ā nɪ̄n tsó ntū'ū ŋkɪ]
"he went and carried water"

    f. /ā nɪ̄n yɪ á ñtū'ū ŋkɪ/ $\longrightarrow$ [ā nɪ̄n yɪ̌ ntū'ū ŋkɪ]
"he came to carry water"

A lot of rules (both segmental and tonal) are working in each of the above examples to produce the phonetic output. However, what should be noted here is the desyllabification of the nasal. The rest of the rules involved in each end string will be discussed in the appropriate sections of this study.

3.9 Nasal Deletion

When two nasals are juxtaposed across word boundary, the second nasal is deleted if it is immediately followed by a consonant. This rule can be represented as follows:

(36) P-Rule 5:   N $\longrightarrow$ ø / N # __ C

Following this rule we can notice that in (35c) and (35d) desyllabification of the second nasal was just an intermediary process and not the final output. By application of P-Rule 5 in

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(36) the end strings of (35c) and (35d) are as presented in (37) here below:

(37) a. /sãŋ mbà/   → [sãŋ bà]   "dry meat!"
    b. /túm n'sɔ̃ɔ̃ yã/ → [túm 'sɔ̃ɔ̃ yã] "shoot the elephant!"

Comparing (35a) and (35b) with (37a) and (37b) we find that the nasals in the former only desyllabify while the latter are deleted. When the nasal desyllabifies as in (35a) and (35b) it then serves as a marginal unit of a syllable (the role that consonants play in Bafut). The syllable structure of /ñdãŋnə̃/ is N.CVC.CV. So when the nasal /N-/ desyllabifies it becomes a non-syllabic nasal, a consonant, thus altering the initial syllable structure of the word to CCVC.CV, which is not permitted in Bafut. Since the preceding word ends in an open syllable, to solve the problem, the desyllabified nasal is transferred to the preceding open syllable where it functions as coda; so that phonetically and phonemically, thy actually appear as presented below:

(38) a. [ãtĩ'ín dãŋnə̃] V.CV.VC CVC.CV
    b. [fán   dãŋnə̃] CVC   CVC.CV

Here we notice a difference between the phonological and grammatical word boundaries.

In the case of (37a) and (37b) when the second nasals desyllabifies as shown in the input strings to the left of the arrows, they also acquire the feature [consonant] and alter the syllable structure of the words from,

(39)   /m̃bà/   N.CV   to /mbà/   CCV.
        /ñsɔ̃ə̃/ N.CV.V   to /nsɔ̃ə̃/ CCV.V

The solution adopted in (38) cannot work for these examples because the preceding words /sãŋ/ and /túm/ end in closed syllables. The only logical solution is for the second nasals to drop out and thus the application of the N-deletion rule as in (37a) and (37b) in order to respect the natural syllable structure

in Bafut. Thus the end strings of (37a) and (37b) present the following syllable structure:

(40) a. [sàŋ bā]   CVC # CV
      b. [tūm 'sə́ə́ yā]   CVC # CV.V # CV

Looking at (40a) and (40b) we find that P-Rule 1 (cf. (26)) is violated. However, looking at (35c) and (35d) we see that P-Rule 1 had already applied in the basic forms of which are presented here below.

(41) a. /sàŋə́ m̃bà/   "dry meat!"
      b. /tūmə́ ñsə́ə̀/   "shoot an elephant!"

So we see that the ouput strings in (40a) and (40b) are derivations that involve quite a number of phonological and tone rules which we shall examine as we progress in our study. As regards P-Rule 1 we should note as we compare (40) to (41) that it only applies to initial strings or basic forms and applies only once.

3.10 Orthography

The alphabet used in this study conforms with the **Alphabet Général des Langues Camerounaises**. We have simply adopted the alphabet worked out by Crozier (1980a).

The velar fricative /ɣ/ is represented orthographically by the diagraph /gh/. The alveolar affricate /dz/ is represented as /j/. The rest of the consonants are written as they are presented in the chart in (1). The vibrant [r] although analysed as an allophone of the phoneme /l/ is included in the alphabet because it is found in English, which most native speakers of Bafut also speak.

The vowel phonemes given in chart (6) are represented in the Bafut alphabet as such.

Thus the Bafut alphabet consists of the following 28 letters: a, b, d, e, ə, ɛ, f, g, gh, i, ɨ, j, k, ', l, m̃, n, o, ɔ, p, r, s, ʃ, ts, u, w, y, and z. For the pronounciation or sounds of these

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letters, reference should be made to the words given to illustrate
them in Lesson 1 of Practical Guide (cf. Appendix I).

Generally we write full forms of words even in cases of
elision. We would write the basic morphological forms of words
even though their phonetic realizations may be different. Thus we
would write:

(42) /kŏ abāā/   instead of [kŏ bāā] "take a bag!"
      /sāŋā mbā/ instead of [sāŋ bā] "dry meat!"
      /fā ndēŋnā/ instead of [fān dēŋnā] "take bamboo!"

Given these conventions, we would hardly have any CVC
syllable structure in the verb stems.

There are, however, certain types of deletable forms that are
sometimes maintained. Free morphemes such as the personal pronous
/ā/ and /ŏ/ or the preposition /ā/, may or may not be written
since their deletion is optional with speakers. So that one can
either say and write:

(43) /kāā ā nɪ wá'ā zɪ/ or /kāā nɪ wá'ā zɪ/
         "he did not come"

      /ā nɪ ŋghēē ā mɪ'tāā/ or /ā nɪ ŋghēē mɪtāā/
         "he went to market"

      /ā nɪ nzɪ ā ŋ'kwɛ́rē̄ mbā/ or /ā nɪn zɪ ŋkwɛ́rē̄ mbā/
         "he came to take meat"

We notice in the above examples that the morphemes /ā/ "he
(pr.n.)"; "to" (preposition); "to" (infinitive marker) may be
deleted or maintained.

All the allomorphs of the nasal, N:[n, m, and ŋ] are written
as they are realized contextually.

It would be noted that we have only considered orthography in
relation to the segmental sounds or letters, i.e. consonants and
vowels. Tone orthogramphy will be treated in the appropriate
sections of the work (cf. 20.6).

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Chapter Four

TONE SYSTEM

4.0 Introduction

The functional load of tone in Bafut is very significant. Tone plays an important role both at the lexical and grammatical levels in the language. Tone is so intricately tied to the grammar of Bafut that an adequate analysis of the tone system would, of necessity, demand a study of the grammar of the language. This chapter presents the main issues of the Bafut tone system. In the subsequent chapters (i.e., 7 - 19) we shall see how tone functions in the grammar of the language.

4.1 Level Tones

There are three level (register) phonemic tones in Bafut, H (high), M (mid) and L (low). The three phonemic tones in Bafut have developed from an underlying two tone system. In addition to the three phonemic tones in Bafut, there is a downstepped high tone ('H) which is different from the phonemic mid tone. This will be treated in more detail in 4.4 and 4.5. The three phonemic tones are marked as indicated below:

(1) H   M   L

kāá   kāā   ākāā
  "crab"   "negative marker"   "agreement or oath"

bū'ū   ābū'ū   ābū'ū
  "chimpanzee"   "baton"   "slave"

bāá   ābāā   ābāā
  "additional   "corn fufu"   "bag"
   measure of
   palm oil"

4.2 Contour Tones

The problem generally faced with regard to contour tones is whether to analyse them as units or as sequences of level tones. Some linguists, for example Wang (1967), argue that contour tones should be treated as units while others, as represented by Pike (1948), Woo (1969) and Leben (1973b), think that they should be analysed underlyingly as sequences of level tones. However, how contour tones should be treated depends upon the language that is being considered and the way tone rules function in the language.

In Bafut, it is best to interpret contour tones as a sequence of level tones. This is motivated mostly by the fact that contour tones in Bafut result from the coming together of two unlike tones. The most common processes that create contour tones are tone spreading or tone grounding. This is illustrated by the following examples:

(2) a. fá ākíkūng ⟶ [fā kíkūŋ] "give an owl!"
     b. fá nìŋgɔ̀ɔ̀ ⟶ [fā nìŋgɔ̀ɔ̀] "give a plantain!"

When the tone copying rule applies to a contour tone in Bafut, it copies only one element of the contour tone and not both. For example, where it has to copy from a ML contour tone, it copies only the end point of the contour, i.e., the L tone (cf. 16.3.1.2 (8)). This is proof that this tone is made of a sequence of two separate tone elements.

Although we have in general analysed contour tones as a sequence of the level tones, L and H, we shall see that in the verb phrase contour tones are represented as units. This is motivated by the fact that replacive tones such as L HL are mapped on verb stems with the HL tone behaving in general as a unit (cf. 14.2). However, the crucial point here is whether we treat replacive tones as underlying tones or not. As we shall see 4.6, there are indications that the domaine of tone in the verb phrase is different from that of the noun phrase. Consequently in the verb phrase contour tones shall be represented as units even in the underlying strings when the mapping rules require that. This

principle will also be adopted for practical reasons, especially with regard to monosyllabic grammatical morphemes (e.g., the demonstratives, tense markers and clause markers) where the tone sequence L and H are assigned as contour tones.

There are six tone glides or contour tones, HL, ML, LM, H'H, 'HL and LML. The contour tones in Bafut are illustrated below:

(2) c. HL   lâm   "lamp"
     d. ML   ā-bɔ̀   "hand"

The other contour tones, LM and H'H and LML, are commonly realized in grammatical contexts as follows:

(3) a. H'H   ātú' mfɔ̄   "head of chief"
     b. LM   zǐ nyā   "come and see!"
     c. LML   sɔ̌   "pierce!"
     d. 'HL   ātú' 'mānjǐ   "head of road"

Theoretically in a system where there are four surface tone contrasts: H, 'H, M and L, we would have the following possibilities:

(3) e.

	H	'H	M	L
H	HH	(H'H)	HM	(HL)
'H	'HH	'H'H	'HM	('HL)
M	MH	M'H	MM	(ML)
L	LH	L'H	(LM)	LL

We find that theoretically there would be 16 possible contour tones in Bafut. However, sequences like HH, 'H'H, MM and LL are not possible in practice since these would merge and be realized as single level unit tones rather than contours. LH is realized on the surface as LM by T-rule 1. So in practice LH is not realized in Bafut. The other contour tones that are not attested in Bafut are: HM, 'HM, MH, and M'H. The contour tones attested in Bafut are incircled in table (3e) above.

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4.3 Tone Contrasts

The three phonemic tones contrast in the following lexical set:

(4)   H H   M M   L L

             báá   bāā   bàà
        "additional   "focus   "a kind of
        measure of oil"   marker"   tree"

The above lexical set and their tones also contrast in the following constructions:

(5) a. báá tāā wā à nɪ̀n lò āā fɔ́?   "where did father's measure
                                       of oil come from?"
    b. bāā tāā wā à nɪ̀n lò āā fɔ́?   "where did the father come
                                       from?"
    c. bàà tāā wā à nɪ̀n lò āā fɔ́?   "where did father's (kind of)
                                       tree come from?"

The constructions in example (5) above are distinguished soley by tone. This example does not only show the contrasts between the phonemic tones, but also points out the importance of tone in the language.

These tones are further contrasted in the following frame:

(5) d. à nɪ̀ máà ghà   "it is my grandmother"
    e. à nɪ̀ tāā ghà   "it is my father"
    f. à nɪ̀ bàà ghà   "it is my baa tree"

The following contruction also shows how the three phonemic tones contrast:

(6) à   mɪ̀   má'˜   mɪ̄   mɪ́   ntō'ō   sɪ̀ɪ̀
     he swallow PERF   his   nu.con. six   today

"he has swallowed six of his (own) today"

In the above example we see how the three morphemes: /mɪ/, "swallowed", /mɪ/ "his" and /mɪ/ "number concord", are distinguished by the tones: L, M and H.

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The contour tones that we have seen above contrast with the level tones. This will be demonstrated in the examples below.

H and H'H contrast in the following context.

(7) a. bó zɪ ŋ'kwɛ́rə́ títá
    "they have come and taken pepper"

 b. bó zɪ'˜ ŋ'kwɛ́rə́ títá
    "they have come to take pepper"

M and H'H contrast in the following context:

(8) a. kāā bó sɪ mbã̀ kwɛ̄rə̄
    "they have not taken meat"

 b. kāā bó sɪ'˜ mbã̀ kwɛ̄rə̄
    "they are not taking meat"

The following examples contrast M, ML, HL, LM, and LML:

(9) a. ātū yā "the head"
  b. ātū̀ yā "my head"
  c. fɪ́bwɛ̀ fã̀ˡ "my fish"
  d. sŏ   mbã̀ "pierce meat!"

There is a phonetic raised low tone (↑L) in Bafut which contrasts phonetically with the rest of the tones that we have seen above. The following examples show the phonetic difference between L and ↑L:

(10) a. L nɪ̀bɔ̀'ɔ̀ "pumpkin" ābāā "bag"
  b. ↑L nↀɪ̀bɔ̀'ɔ̀ "fear" ↑ābāā "corn fufu"
    ↑L M L   ↑L ML

In the above example we notice that the ↑L tone is followed by a non-low tone. The raising of the tone is caused by the non-low tone. L tone raising is not a generalized process. It varies with individuals such that it might be realized in the speech of some speakers but not in that of others.

In the examples that we have seen so far, (cf. (3e)) we must have noticed that the downstepped high tone ('H) contrasts with

the rest of the tones. We shall say more about downstep in Bafut later on in the study (cf. 4.4.2.1 and 4.5).

4.4 The status of Mid Tone in Bafut

4.4.1 General Considerations

Alexandre (1962) argues that N.W. Bantu languages have no phonemic mid tone. It has also been attested that a number of languages in Africa do not have a phonemic mid tone in their tonal system because they are "terraced level" languages (Welmers,1973). It is therefore generally attested that languages with both downdrift and downstep have no true or phonemic mid tone. Some of these languages are: Twi (Schachter and Fromkin, 1968) which has been frequently referred to by Hyman (1975, 1979) and by Hyman and Schuh (1974); Tiv, Efik, Igbo, Akan (Welmers, 1973) and Luo (Tucker, Creider, 1975) and Akɔɔse (Hedinger and Hedinger, 1980:28; 1985:3). However, evidence has been presented for the fact that there are languages with both downdrift and downstep that include a phonemic mid tone in their tonal systems, for example, Yoruba (La Velle, 1974), Yala (Ikom) (Armstrong 1968, 1972), Ebolowa-Bulu (Wilkinson,1975), and Supyire (Carlson, 1982).

It has also been argued that all downstep and phonemic M tone come from underlying high tone. Mid tone has also been said to derive from contour tones i.e. either LH or HL (cf. Alexandre 1962).

Despite all these arguments showing the derived nature of M tone, there are also facts that give evidence in favour of the existence or reality of a basic or non-derived Mid tone in the tonal systems of some languages. For example, Wilkinson (1975) argues for and gives evidence to show that in Ebolowa Bulu the derivation of surface M tone from underlying sequences of L and H by what he calls "tone retraction" is not correct. He says that a toneme M must be recognized with the same status as L and H. Armstrong (1968) says that Yala (Ikom) "is a terraced level language with a mid tone which is independent of any downstep or latent tone".

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However, no matter the arguments regarding underlying M tone, it is obvious that, historically, M tone is a derived tone. Nevertheless, synchronically there is a choice between taking as a starting point H and L or H, M and L.

Bafut portrays a kind of uniqueness in its tonal system in that it can be classified neither as a terraced level nor as a discrete level language. It falls in a subgroup with Dschang (cf. Tadadjeu, 1974; Hyman 1979; Hombert, 1974) and Ngyemboɔn (Anderson, 1982) that has downstep without downdrift. Despite this common characteristic, Bafut again differs from Dschang and Ngyemboɔn in that, in addition to downstep, it has a phonemic M tone some͜ᴬ realizations of which can be shown to be derived from H tone, while others have other origins.

4.4.2 Mid Tone in Relation to other Tones

It has already been shown in the preceding paragraphs that M tone is phonemically constrastive with respect not only to H and L but to the rest of the tones (cf. 4.1-3).

4.4.2.1 M, 'H and H

Bafut has a phonemic mid tone which contrasts with downstepped High and H tone. This is illustrated in the following examples:

(11) a. ä nĩŋ kwέrə̄ títá   "he took pepper (today)".
          L M   H H H H
          he P1 take pepper

     b. bő nĩŋ 'kwέrə̄ títä   "they took pepper"
          H   H   'H H H H
          they P1 take pepper

     c. á   nĩŋ   kwērə̄ títä   "he was taking pepper
          H   L   M M H H   (today)"
          he IMPF P1 take pepper

In the above examples we see that the tones on the verb stem are different in each sentence (11a-c). /kwέrə̄/ is basically a H

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tone verb. In (11a) it maintains its H tone. In (11b) it is downstepped and becomes 'HH, while in (11c) it is lowered to the level of M. So from these examples we find that there are two types of H tone lowering a) 'H, which is just slightly lower than H i.e. about 1/2 step lower than H) and b) another downstep that is one step lower than H and which is equal to M tone in pitch level and is phonemic. This tone, which is actually equal to the phonemic M tone comes from a lexical H tone that has been lowered by a preceding L tone as can be verified from (11c). We have decided to regard the first case of 'H in (11a) as the real case of downstep in Bafut while the instance in (11c) has been termed lowered high.

The three occurrences of H in (11a-c) can be represented as in (12) in order to show the differences in their respective pitch levels:

(12) a. High   [⁻ ⁻]
      b. Downstep   [⁻ ⁻]
      c. Mid   [⁻ ⁻]

The difference between the Downstep in (11b) (hereafter represented as ds) and lowered high tone (hereafter represented as lh or M) corresponds to the difference in the processes involved in their derivation. The ds in Bafut is a H tone which is lowered due to the loss of a L tone after a preceding H (H (L) H ⟶ H 'H). Any following high tones are at the same level as the 'H. The lh or M is a H tone lowered to mid after a L tone. A H tone following it is higher than the resulting mid tone. A sample derivation of (11b) is as follows:

(13) a. bó nîŋ kwɛ́rə́   underlying
      b. bó nîŋ 'kwɛ́rə́   simplification and ds

In (13a) the underlying tones of the string are given. An underlying HL contour tone has been posited for the P1 tense marker /nîŋ/. In (13b) this contour tone is simplified. The simplification of the falling contour tone causes the following H

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tones to downstep. This tonal process will be illustrated and amplified later in this chapter and in the subsequent sections.

The derivation of (11c) is given here below:

```
(14)   a.   ā ˆ nɨŋ˜ kwɛ́rə̄        underlying
       b.    â   nɨŋ˜ kwɛ́rə̄        imperfective replacive tone
       c.   ä   nɨŋ´ kwɛ́rə̄        simplification
       d.   á   nɨŋ  kwɛ́rə̄        tone grounding to the right
       e.   ā   nɨŋ  kwɛ̄rə̄        lowering
```

In (14a) the underlying tones of the string are given (cf. 15.4.2). In (14b) the imperfective (HL) tone replaces the low tone of the pronoun. In (14c) the contour tone on the pronoun simplifies to H. In (14d) the floating H tone of the IMPF P1 tense marker grounds to the right where it is absorbed into the H tone of the verb stem. In (14e) the preceding Low tone on the tense marker /nɨŋ/ lowers the following H tones of the verb to M.

From the above derivation we see that one of the origins of phonemic M tone in Bafut is H tone. In actual fact a lot of the cases of surface · lexical M tones come from the process of tone lowering which will be formally stated below (cf. 4.8.1).

In (13a) we posited an underlying HL for the P1 tense marker. In (11a) we see that it surfaces as M tone. A derivation of (11a) is as follows:

```
(15)   a.   ā nɨŋ kwɛ́rə̄        underlying
       b.   ā nɨŋ kwɛ́rə̄        lowering
       c.   ā nɨŋ kwɛ́rə̄        simplification
```

In (15a) the underlying tones are given. In (15b) the preceding low tone of the pronoun /ā/ lowers the HL tone to ML, and in (15c) the ML simplifies to M. We notice from this example that one of the sources of derived M in Bafut is HL. This also happens in neighbouring languages like Ngyembɔɔn (Anderson 1982).

We have seen how M contrasts with the other tones both phonetically and phonemically. The following examples show the phonemic contrast between M tone and H tone.

(16) a. āā   tā   mū wâ   "he is the father of the child"
      he's fath. ch. the

    b. āā   tā   mū wâ   "he will kick the child"
      he'll kick ch. the

    c. kāā tāā wā ā sî   ŋkī tswê "the father is not
      NEG. fath. the he NEG. str. be   in the stream"

    d. kāā tāā wā ā sî   ŋkī tswê "is the father's
      crab fath. the he NEG. str. be   crab not in the
                                      stream?"

The examples in (16) above show pairs of sentences that differ minimally by pairs of mid and high tone words. In (16a) and (16b) the words /tā/ "father" and /tā/ "kick" are contrasted. In (16c) and (16d) the minimal pairs /kāā/ "negative marker" and /kāā/ "crab" are contrasted. These examples again serve to show the phonemic distinction between H and M tones.

4.4.2.2 M Tone Distribution

The distribution of mid tone in relation to the other tones in Bafut is not restricted. It can occur indiscriminately before or after the other phonemic tones. It also occurs before or after a pause. The following examples in (17a-e) show the occurrence of M tone:

(17)   a. M L   tāā   "father"
            b. L M H   ākīkūŋ   "owl"
            c. H M L   tākūmbəŋ "a type of juju"
            d. L M M   bīfōrə   "mice"
            e. 'H M   ātí'í ndəŋnə "half of a bamboo"
                     L H'H M HL

We notice in the above examples that the mid tone in Bafut occurs after and before pause, as in (17a) and (17d). It is possible to go successively from L to M and then from M to H, as can be seen in (17b). It is also possible to go from H to M and then from M to L as in (17c). In (17e) we notice that M occurs after 'H. This example again goes to illustrate the distinction between M and 'H, as we saw in 4.4.2.1 above. Mid tone does not

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occur before H because T-rule 13, the H tone level resetting rule (cf. 4.5 (20) and 4.8.13).

4.4.2.3 Other criteria for determining M

Hyman (1979) in his discussion of downstep in relation to tonal systems, brings out the properties of languages with a three-tone system (H, M, L). A language with a three-way contrast would have each of the level tones freely appearing in any toral context as indicated below:

(18) a. after   pause: H, M, or L
      b. -"-   L   H, M, L
      c. -"-   M   H, M, L
      d. -"-   H   H, M, L

The 3 level tones in Bafut H, M, L, appear in all the above contexts except for the one in (18b) where no lexical H tone appears after L because of the lowering rule (cf. T-rule a). However, there are cases of grammatical H tones that appear after L. So we can say that H,M,L comes after L. The various contexts in (18a-d) will be illustrated in sections 6.2.2 and 14.2-12.

In a language with a 3-tone system the following 9 tone patterns would normally be found on disyllabic noun stems:

(19)   a. H H   d. M H   g. L H

          b. H M   e. M M   h. L M

          c. H L   f. M L   i. L L

Out of the above nine patterns, eight of them occur on disyllabic noun stems (cf. 6.2.2 below). The only pattern which does not occur on noun stems in isolation is the L H of (19g). This does not occur because, as we have said above, of the lowering effect of the preceding low tone.

One of the universal defining characteristics of a language with both ds (and downdrift) as given by Hyman (1979:11) is:

> "...if this tone is a 'H, the language should
> theoretically permit an infinite number of non-low
> tone levels (i.e. H 'H 'H 'H ....)"

This characteristic implicitly defines languages with downdrift since it is presumed or generally accepted that downstep comes from downdrift and that languages with downstep are expected to have downdrift. However, as we have already seen, Dschang and Bafut have downstep without downdrift.

We have already seen (cf. 4.4.2.1) that in Bafut ds is different from M tone. After ds, the following H tones are also lowered to the level of the ds, as in (11b) above while after a M tone it is still possible to go up to H as in (11a) above. Thus by Hyman's definition of M, the Phonemic status of M in Bafut is also confirmed.

In our study of the status of M tone in Bafut we have placed the tonal system of Bafut within the wider context of downstep in Bantu tonology. Bafut has a phonemic M tone which contrasts with H, and L. We have also seen that phonetically M also contrasts with 'H, and ↑L. Bafut, as a result of its tonal system, does not fittingly fall into any of the two generally recognized systems of languages of Africa, i.e. terraced level (with downstep) and discrete level languages (without downstep). While it has downstep, it does not have downdrift, so it is not terraced. While it can be regarded as a discrete level language, it does have downstep.

4.5 Downstep and Tone Pitches

We have seen that there is downstep in Bafut. Although there is no downdrift in Bafut, there can be a series of downstepped H tones in an utterance which may result in a number of phonetic pitches of differing integers. The following examples illustrate the effect of downstep in Bafut:

(20)   a. [mū 'fórə̄ tā mū wâ]   "the small mice of father
of child"

H 'H H M H HL

```
┌ ─           ─   ─ ┐  1
│      ─  ─         │  2
│           ─       │  3
│                ─  │  4
└                   ┘
```

b. [ābá'á 'mū tāā Bīlībá]   "corn fufu of father,
Biliba"

↑L H'H 'H ML M M H

```
┌    ─            ─ ┐  1
│       ─           │  2
│          ─        │  3
│             ─  ─ ─│  4
│ ─                 │  5
└          ─        ┘  6
```

c. [nìbō'ɔ́ nì kā 'tswá yí tsō káá tāā wâ] "fear will hold
him as pincers
of father"

↑L M M H H   'H H M HH ML ML

```
┌     ─  ─          ─ ─       ┐  1
│              ─  ─            │  2
│   ─  ─              ─   ─   ─│  3
│  ─                          │  4
│                       ─   ─ │  5
└                             ┘
```

d. [nìbó'ɔ́ ká 'tswá yí tsō káá tāā wâ]   "fear will hold
him as pincers
of father"

↑L H'H H   'H H M HH ML ML

```
┌    ─                ─ ─      ┐  1
│       ─  ─                   │  2
│             ─   ─            │  3
│                   ─     ─   ─│  4
│ ─                            │  5
└                       ─    ─ ┘  6
```
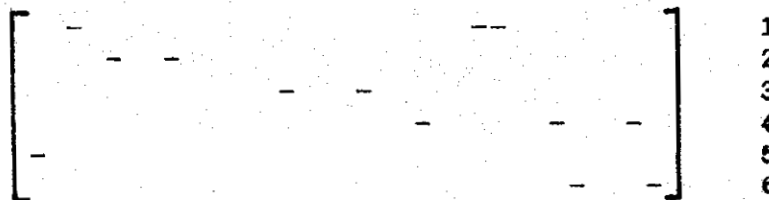
The numbers to the right in the diagrams immediately below
each utterance help us see the relative pitch or height of each
tone. The numbering starts with the highest pitch and goes down
to the lowest. The numbers indicate relative pitches within the
utterance and not absolute heights. It is not practical to give
absolute values to any of the tones because the integers of tones
vary depending on the number of intervening downsteps.

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Downstepped high tones are associated with intervening low tones and eventual contour tone simplification. We notice that we may have as many as five or six pitch levels in an utterance in Bafut.

The above examples further show the difference between H and 'H and M. We also notice that in the examples above we have the tone sequence: H 'H M H. In this case the different tones are clearly distinctive. A H tone is higher than a 'H and a M. The level of a high tone at the biginning of an utterance is the same even at the end of the utterance. Thus in (20a) above, the H tone on the first instance of /mū/ "child" is same as on the second irrespective of the fact that there are downstepped high tones on the word /fɔ̄rə̄/ "mouse".

The fact that it is still possible to have H tone later on in an utterance after a 'H tone is contrary to what happens normally in languages where downstep is known to exist. What has normally been reported is that after a 'H tone, it is not possible to go up to the original H tone pitch, i.e. the pitch level that would have continued to be realized had there not been a downstepping of H. Where there is automatic downstep or downdrift, both H tones and L tones systematically drift down. In Bafut after a 'H, immediately following H tones are at the same level as the 'H but once a L tone or a M tone intervenes, a following H tone will go back to the level of the H tone that was realized before the 'H. However, since in Bafut a L tone generally lowers a following H to M, we would say that the more determining factor in this case is a M. Examining the examples given in (20), we notice that when downstep has taken place, an original H tone is realized again only after an intervening M tone. We thus see that in Bafut there is a rule that resets the level of H after 'H. This rule states that:

(20) e. An intervening M tone resets the level of H after 'H.

The above rule is evidence in support of the fact that there is no downdrift in Bafut and therefore establishes the fact that Bafut is not a terraced-level language. The above rule also operates in the other Ngemba languages that we have studied (cf. 21.3.5).

4.6 ·The domain of Tone in Bafut

The domain of tone in relation to the other phonological
units has been viewed differently by various linguists. Pike
(1948) regards tone as a property of the syllable; Welmers (1962)
considers it as a property of the morpheme, and Edmondson and
Bendor-Samuel (1966), regard it as functioning within the
phonological word. Leben (1971, 1978) looks at the tone patterns
in Mende from a suprasegmental view point and notes that a given
tone pattern can be assigned to a word regardless of the number of
syllables such that the domain of tone is rightly regarded as the
word in this language.

In Bafut, tone is both a property of the syllable and of the
word. In the noun and noun phrase tone tends more to be a
property of the syllable since the syllable is here best defined
in terms of tone bearing units. Looking at the verb phrase,
however, we would say that the domaine of tone is more linked to
the word or morpheme. As we will see in section 13.2, two tone
patterns H and LH are assigned to verb words irrespective of the
number of their syllables. The H tone verbs have the pattern H and
the Low tone verbs have the pattern LH. Two tone placement rules
will describe the tone patterns on verbs irrespective of the
number of syllables. The first rule which maps tones on the H tone
verbs would be as follows:

(21)   Associate H tone with each syllable.

The second rule which will deal with the L tone verbs could
be stated as follows:

(22)   a) Associate the whole pattern with monosyllabic
          verbs.

       b) Associate the last tone with the last syllable and
          the rest of the syllables to the left with the
          first tone.

These tone mapping rules can be illustrated as follows:

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(23) a. High tone   b.   Low tone

          H   i.   LH

      fa   "give!"   so   "pierce!"
      | /\
      H   L H

                                 ii.   LH

      kwɛrə   "take!"   lɔgə   "fetch!"
      \|/ | |
       H   L H
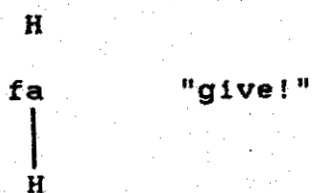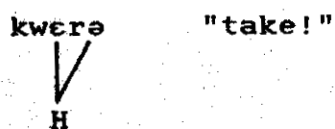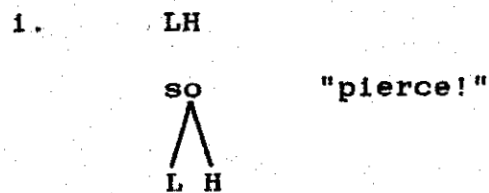
      bəgətə   "break!"   lɔgənə   "start!"
      \|/   \| |
       H   L H
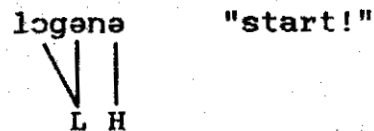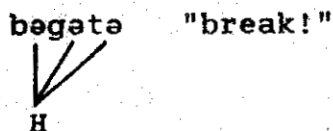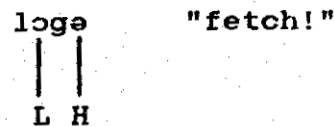
     Example (23a) is an application of rule (21) while (23b(i))
is an application of rule (22a). The examples in (23b(ii)) are
representative of the application of rule (22b).   It should be
noted that in the low tone verb the H tone is lowered to M by
T-rule 1 (cf. 4.8) so that the LH pattern becomes LM.

4.7 Underlying Tones

     The question of underlying tones in Bafut is very crucial
since there are a lot of tone processes in the language. In order
to be able to explain some of the tone changes that we notice in
Bafut, we have to posit underlying tones.   The problem of
determing underlying tones of words in Bafut is a very difficult
one.   One needs to do a lot of study so as to know what is
happening to the tones of the words in different contexts as they
come together in grammatical constructions. What we present in
this section of the study only goes to lay a foundation for
further investigation. Also, given the ultimate aim of our study,
i.e., determining a good tone orthography, we do not want to

concentrate on underlying tones since these, as will be seen later, are not very pertinent in a pratical writing system of the language.

We present below the underlying tone patterns we have posited for nouns:

(24)	-CV	-CVV	-CVCV	-CVCCV
Ļ-HH	ˉ-nwí˘ "cutlass"		ˉ-mɔ́'ɔ́ "gun"	
Ḥ-HH		ˊ-káá "crab"	ˊ-fɔ́rə̄ "mouse"	
L-HL	ñ-dá˘ "house"	fɨ-tə́ə̀ "w. calab."	à-káŋə̀ "pan"	ñ-dɔ́ŋə̄˘ "bamboo"
Ḥ-HL	ˊ-mú˘ "child"	ˊ-máà "g.mother"	ˊ-sárə̀ "w.bird"	ˊ-lámsɨ̀ "orange"
L-LH	à-tɨ́˘ "tree"	ñ-sòó "farm"	ñ-gɔ̀'ɔ́ "termite"	m̃-bə̀ŋə́ "h. bell"
Ḥ-LH			ˊ-tɨ̀tá "pepper"	ˊ-tùmná "k. of hat"
L-LL	nɨ̀-bà˘ "wing"	à-bàà "bag"	ŋ̀-gɨ̀gɨ̀ "egusi"	mɨ̀-wèntà "goose pimples"
Ḥ-LL	ˊnyà˘ "mosquito"	ˊ-nàà "anim."	ˊ-sɔ̀rə̀ "witch"	ˊ-nɔ̀ŋsə̀ "law"

It can be seen that we have posited both low and high tones for the noun prefix. The nouns with a H tone prefix are mostly in noun class 1. A few of these nouns are in noun classes 9 and 10. This is natural since most of the high tone nouns in Bafut fall in these classes. As we shall see below (cf. 6.2) the -H or -HH pattern (of nouns stems in the citation form) is found mostly in n. class one. A few of them are found in classes 3, 9 and 10.

The above tone patterns can best be seen when they are put in different contexts. We present here below some of the relevant contexts:

(25a)   Singular

	n.cl.	Citation	Demons.	Poss.	Object
Ļ-HH	3	-mɔ́'ɔ́ "gun"	mɔ́'ɔ́ wâ "the gun"	mɔ́'ɔ́ ghâ "my gun"	'mɔ́'ɔ́
Ḥ-HH	1	-fɔ́rɔ́ "mouse"	fɔ́rɔ́ wâ "the mo."	fɔ́rɔ́ ghâ "my mo."	fɔ́rɔ́
L-HL	3	ñ-tā'ā "hill"	ñtā'ā wâ "the hill"	ñtā'ā ghâ "my hill"	nt'ā'ā
Ḥ-HL	1	-sā́rə̄ "w.bird"	sā́rə̄ wâ "the wb."	sā́rə̄ ghâ "my wb."	sā́rə̄
L-LH	9	ñ-gɔ̄'ɔ́ "termite"	ŋgɔ̄'ɔ́ yâ "the ter."	ŋgɔ̄'ɔ́ yâ "my ter"	ŋ'gɔ̄'ɔ́
Ḥ-LH	1	-tɨ̄tá "pepper"	tɨ̄tá wâ "the pep."	tɨ̄tá ghâ "my pep."	tɨ̄tá
L-LL	9	ŋ-gɨ̄gɨ̄ "egusi"	ŋgɨ̄gɨ̄ yâ "the egu."	ŋgɨ̄gɨ̄ yâ "my egu."	ŋgɨ̄gɨ̄
Ḥ-LL	1	-sɔ̄rə̄ "witch"	sɔ̄rə̄ wâ "the witch"	sɔ̄rə̄ ghâ "my witch"	sɔ̄rə̄

(25b)   Plural

	n.cl.	Citation	Demons.	Poss.	Object
L-HH	6	mɨmɔ'ɔ "guns"	mɨmɔ'ɔ myâ "the guns"	mɨmɔ'ɔ mâ "my guns"	mɨmɔ'ɔ
L-HH	2	bɨfōrə̄ "mice"	bɨfōrə̄ byâ "the mice"	bɨfōrə̄ bâ "my mice"	bɨfōrə̄
L-HL	6	mɨntā'ā "hills"	mɨntā'ā myâ "the hills"	mɨntā'ā mâ "my hills"	mɨntā'ā
L-HL	2	bɨsārə̄ "w.birds"	bɨsārə̄ byâ "the wbirds"	bɨsārə̄ bâ "my wbirds"	bɨsārə̄
L-LH	9	ŋgɔ'ɔ "ter."	ŋgɔ'ɔ yâ "the ter."	ŋgɔ'ɔ yâ "my termite"	ŋ'gɔ'ɔ
L-LH	2	bɨtɨtá "pepp."	bɨtɨtá byâ "the pep."	bɨtɨtâ bâ "my pepper"	bɨtɨtá
L-LL	9	ŋgɨgɨ "egusi"	ŋgɨgɨ yā "the egu."	ŋgɨgɨ yā "my egusi"	ŋgɨgɨ
L-LL	2	bɨsɔ̄rə̄ "witches"	bɨsɔ̄rə̄ byā "the witches"	bɨsɔ̄rə̄ bā "my witches"	bɨsɔ̄rə̄

We can see how the different underlying tones are realized on the surface in the above given contexts. In (25a) the singular forms are given while in (25b) the plural forms are given. The first column shows the underlying tone pattern while the second gives the noun class. The last frame (in the last column) is one where the noun is used as object of a H tone verb. This context is useful in bringing out the difference between a number of the above underlying forms and their tones (cf.25a). For example, the difference between the L-HH and H-HH in this frame comes out as seen below in (26):

(26)   a. fá ˋmɔ'ɔ   → [fá 'mɔ'ɔ] "give a gun!"

         H L-H H   → [H 'H H]

     b. fá ˊfōrə̄   → [fá fōrə̄] "give a mouse"

         H H-H H   → [H H H]

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In (26a) the intervening floating low tone of the prefix causes the H tones of the noun to downstep, while in (26b), there is no downstep because the floating tone of the prefix is H. In this same context we see the difference between underlying L-LL and H-LL; H-LL comes out as -HL.

Another frame which makes some of the important distinctions among the given underlying tones is the associative noun phrase. We present here below a frame where nouns of the various tone patterns are used in N1 position.

(27)		Citation	Associative	Tone Pattern
L-HH		-mɔ'ɔ "gun"	mɔ'ɔ	-HH
H-HH		-fɔ́rɔ̃ "mouse"	fɔ́rɔ̃	-HH
L-HL		ñ-tā'ā "hill"	ñtā'ʼá	L-H'H
H-HL		-sárə̄ "w.bird"	sárə̄	-HL
L-LH		ñ-gɔ'ɔ "termite"	ŋgɔ'ɔ²	L-MM
H-LH		-tɨtá "pepper"	tɨtá	-HH
L-LL		ñ-gɨgɨ "egusi"	ŋgɨgɨ	L-LL
H-LL		-sɔ̄rə̄ "witch"	sɔ̄rə̄	-LL

The above frame gives the tones of the words used as N1 in the associative construction followed by a H tone N2.

With all the frames that we have seen so far, the necessary tone patterns have been seen. We present here below a summary table with all the patterns we have seen:

(28)

under.	Citat.	Pl.	Demon.	Poss.	Object	Assoc.
Ḷ-H H	-H H	L-M M	-H H	-H HL	-'H H	-H H
Ḥ-H H	-H H	L-M M	-H H	-H H	-H H	-H H
L-H L	L-M L	L-M L	L-M M	L-M L	-'H L	L-H 'H
Ḥ-H L	-H L	L-M L	-H L	-H L	-H L	-H L
L-L H	L-L L	L-L L	L-L L	L-M M	-'H H	L-M M
Ḥ-L H	-H H	L-M H	-H H	-H H	-H H	-H H
L-L L	L-L L	L-L L	L-L L	L-L L	-L L	L-L L
Ḥ-L L	-L L	-L L	-L L	-L L	-H L	-L L

The underlying tones of the word /tāā/ "father" and a few nouns like /mānjīī/ "name of a place", /rēdyō/ "radio" and /trēn/ "train" do not seem to fall in any of the eight underlying tone patterns that we have posited for Bafut nouns. The table in (29) below enables us to compare the patterns of /tāā/ and /rēdyō/ with the rest of the patterns that we have seen in the different frames.

(29)

under.	Citat.	Pl.	Demon.	Poss.	Object	Assoc.
Ḷ-H H	-H H	L-M M	-H H	-H HL	-'H H	-H H
Ḥ-H H	-H H	L-M M	-H H	-H H	-H H	-H H
L-H L	L-M L	L-M L	L-M M	L-M L	-'H L	L-H 'H
Ḥ-H L	-H L	L-M L	-H L	-H L	-H L	-H L
L-L H	L-L L	L-L L	L-L L	L-L M	-'H H	L-M M
Ḥ-L H	-H H	L-M H	-H H	-H H	-H H	-H H
L-L L	L-L L	L-L L	L-L L	L-L L	-L L	L-L L
Ḥ-L L	-L L	-L L	-L L	-L L	-H L	-L L
tāā	-M L	L-M L	-M L	-M L	-H L	-M
rēdyō	-M L	L-M L	-M L	-M L	-H L	-M L

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Looking at the above frames we can see how different the nouns /tāā/ and /rēdyɔ̄/ are from all the rest. On the basis of this evidence it is likely that Bafut is developing into an underlying three tone system. It might be possible at a certain point in time for the mid tone to fully develop and thus giving more evidence for an underlying M tone in the language.

However since the above nouns are rather few they do not give strong evidence to convincingly say that there is an underlying M in Bafut, we would treat this group rather as an exception. It is possible to classify these nouns in the same group as the L-HL nouns, for example, /ñ-tá·ā/ "hill". The difference in their various surface realizations, could possibly be explained by the floating L (L̩) prefix as opposed to the L tone prefix on the surface segment of the other nouns: /˜-tāā/ (L̩-HL) and /ñ-tá·ā/ (L-HL). However, this does not completely solve the problem since the differences still exist when it comes to the plural forms of these words: /mɨ̄ntá·ā/ "hills" and /bɨ̄táā/ "fathers".[3]

We have limited ourselves in this section to the study of the underlying tones of nouns. The underlying tones of verbs and other grammatical words will be given in subsequent sections of the work. Now that we have studied the underlying tones of the nouns, it will then be possible to present the tone rules that are behind the tone processes of Bafut.

4.8 Tone Rules

There are quite a number of rules governing the behaviour of tones in Bafut. Some of these rules are so general in their application that it seems best to define them right at the beginning of the study so that reference can be made to them when necessary.

4.8.1 Tone Lowering

A surface L tone causes following lexical H to lower to the level of M. This rule can be presented thus:

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(30)   T-Rule 1:   (H)H   →   (M)M / L __

This rule is illustrated by the following examples:

(31) a.   sín   "bird"   bìsín   →   bìsîŋ   "birds"
          fõrə̄   "mouse"   bìfõrə̄ →   bìfōrā   "mice"
          káá   "crab"   bìkáá   →   bìkāā   "crabs"

     b.   kūmtájɪ'ɪ → kùmtājɪ'ɪ̄ "a kind of
                                                      banana"
                           kɔ́fɪ   →   kɔ̄fɪ   "coffee"
                           tõrə́sá   →   tōrāsā   "trousers"
                           zɪ́   →   zɪ̄   "come!"
                           lɔ́gə́ ŋgwā → lɔ̄gə̄ ŋgwā "take Ngwa
                                                      along!"

     c.   kɔ́'ɔ́sə́   bì-kɔ́'ɔ́sə́ → [bì-kɔ̄'ɔ̄sə̄]
          "kind of yam"   "kind of yams" (pl.)

          nɪ́ghə́nɪ́ghóó   bì-nɪ́ghə́nɪ́ghóó → [bì-nɪ̄ghə̄nɪ̄ghóó]
          "praying mantis"   "praying mantis"

     d.   yɪ́'ɪbṍ   →   [yɪ̄'ɪ̄bṍ]   ours (and theirs)

We notice from the examples in (31c) above that the lowering
effect of the L tone goes as far as the two following syllables.
From the above examples and other occurrences it can be concluded
that the effect of T-rule 1 on lexical L tone does not go beyond
two immediately following H tones. From the example in (31d) we
also see that this rule applies within morpheme boundaries and
between two morpheme boundaries but would not go beyond one
morpheme boundary. The example in (31d) underlyingly is made of
of three morphemes:

(31) e.   yɪ́'ɪ + nɪ́ + bṍ → yɪ́'ɪ ɪ́ bṍ → [yɪ̄'ɪ̄bṍ] "ours"
          ours   and   they

     In (31e) the plus sign (+) indicates the morpheme boundaries.
We see that the L tone in the first morpheme acts accross the
first boundary and lowers the first H tone, which is in the second
morpheme, but does not affect the second H tone because it belongs
to the third morpheme.

4.8.2 Downstep

An underlying L tone that is not realized on the surface causes following H to be realized as 'H. This rule can be represented as follows:

(32) T-Rule 2: H Ḷ H $\longrightarrow$ H 'H

This is illustrated by the following examples:

(33) a. fá ˋmɔ́'ɔ́ $\longrightarrow$ [fá 'mɔ́'ɔ́]   "give gun!"

      b. fá ñsɔ̃́ɔ̃́ $\longrightarrow$ [fá n'sɔ̃́ɔ̃́]
                                        "give a farm!"

      c. bɔ́ nĩ̀ŋ kwɛ́rɔ́ $\longrightarrow$ [bɔ́ nĩ̀ŋ 'kwɛ́rɔ́]
                                        "they took (it today)"

The derivation of (33a) is as follows:

(34) a. fá ˋmɔ́'ɔ́   underlying
      b. fá mɔ́'ɔ́   tone grounding to the left
      c. fá 'mɔ́'ɔ́   simplification and ds

In (34a) an underlying L is posited before the noun /mɔ́'ɔ́/[4]. In (34b) the L is grounded to the left; in (34c) it is simplified and the simplification of the contour tone causes the following H to downstep. The derivation of (33b) is given in (35b) below.

(35) a. fá ñsɔ̃́ɔ̃́   underlying
      b. fá ñsɔ̃́ɔ̃́   tone spreading
      c. fá ñsɔ̃́ɔ̃́   simplification (by absorption)
      d. fá nsɔ̃́ɔ̃́   nasal desyllabification and
                       tone grounding to the left
      e. fá n'sɔ̃́ɔ̃́ tone simplification and ds

In (35a) the underlying tones are given. In (35b) the high tone of the noun stem spreads into the preceding L tone where it creates a rising contour tone. In (35c) the contour tone simplifies to H by a process whereby the L tone part of the rising tone is absorbed by the preceding L of the noun prefix. In (35d) the homorganic nasal noun prefix is desyllabified by P-rule 4 (cf. 3.8) and the L tone of this nasal prefix is assigned to the preceding verb syllable where it creates a HL contour tone. In

(35e) this HL contour tone simplifies and causes the following H tones to downstep.

The derivation of (33c) has already been given in (13) above.

A number of things should be noted about the derivations in (34) and (35) above. As an alternative derivational process it is possible to assign the intervening L tone to the following syllable where its effect is felt as follows:

(36) a. fā ⁻mɔ'ɔ ⟶ fā mɔ'ɔ ⟶ [fā 'mɔ'ɔ]
     b. fā ñsőő ⟶ fā nsőő ⟶ [fā n'sőő]

It is, however, preferable to assign it to the left as in (34b) and (35d) above where it occurs within a regular and more general pattern of tonal behaviour in Barul (cf. 4.8.6). The following example illustrates the point.

(37) a. ñdá‘ ˉ ⁻lāŋā ⟶ [ñdā lāŋā] "house of horse"
     b. kō ⁻lāŋā   ⟶ [kō lāŋā]   "take a horse!"

In the above examples in (37) we notice that the L tone of preceding words or morphemes lowers the H tone of following ones.

The derivation of (37a) will serve to give support to our general principle of assigning floating tones and the L tone of desyllabified or deleted noun prefixes to the left on the preceding syllable.

(38) a. ñdā ˉ ⁻lāŋā   underlying
     b. ñdā   ⁻lāŋā   tone grounding to the left
     c. ñdā   lāŋā   tone grounding to the right
     d. ñdā   lāŋā   tone lowering
     e. ñdā   lāŋā   tone lowering

In (38a) there is a floating L tone associative marker (cf. 8.2). In b. this floating tone is grounded to the left where it is absorbed by the L tone of the falling tone. In c. the H of the N2 prefix grounds to the right where it is absorbed by the H tone of the stem. In d. the preceding L tone of the N1 prefix lowers the HL tone to ML. In e. the L tone of the falling ML contour tone lowers the following H tones of the N2 to M.

Hyman (1979:15,16) also prefers the principle adopted in the derivation of the strings in (33) above whereby the L tone is assigned to the left.

Another point at issue is the point at which the conditioning L tone downsteps a following H tone. Considering (33a) above, the traditional way of looking at it has been to presume that there are two diachronic rules involved: downdrift and loss of the L tone. In this case, the derivation of (33a) would be as follows:

(39) a. fá ˋmɔ́'ɔ́   underlying
     b. fá ˋ'mɔ́'ɔ́   ds
     c. fá 'mɔ́'ɔ́   loss of L tone

It is thus generally taken that in (39) the H tones of the noun, /-mɔ́'ɔ́/ are downstepped by the preceding L tone, as in b. i.e., downdrift. After the downdrift, the conditioning L tone is then lost. But this is not what happens in Bafut (and in the other Ngemba languages that we have studied). We cannot treat the data in Bafut as in (39) first, because, as we saw in 4.5, there is no downdrift in Bafut and secondly, because this will conflict with the tone lowering rule (cf. T-rule 1 above). The derivation of (33a) given in (34) is to be preferred to that given in (39). The derivation given in (39) would produce the wrong output, i.e., if the lowering took place before the loss of the L tone, the output would be MM (by T-rule 1) instead of 'HH. This fact is illustrated by the following example.

(40) fá   ˋyI'Ibɔ́ ⟶ [fá yI'Ibɔ́] "give ours and theirs (ours)"
     give ours + they

As we shall see in 11.4, /yI'Ibɔ́/ is the possessive pronoun, ours (1+3 pl.). The possessive in Bafut has an underlying floating L tone which is the tone of the concord prefix. The derivation of (40) is as follows:

(41) a. fá ˋyI'Ibɔ́   underlying
     b. fá ˋyI'Ibɔ́   tone lowering
     c. fá yI'Ibɔ́   loss of L tone

In a. the underlying tones of the string are given. In b. the underlying floating L tone lowers the following H tones of the possessive (by T-rule 1). In c. the Ļ tone is lost or deleted.

We thus see from the above examples that the downstep in a H Ļ H is not effected by the mere presence of the intervening Ļ. As we saw in (34c), it is caused by the simplification of a contour tone. So we would say that in Bafut, downstep is not caused by the presence of the Ļ tone per se but by the disappearing of this Ļ tone. This means that downstep is a complex process that involves two synchronic rules:

a. Tone grounding (or docking)
b. Tone simplification.

So we see that T-rule 2, H Ļ H $\longrightarrow$ H 'H, describes the general environment that favours downstep. This rule can be expanded as follows:

     a.   b.   c.
(42) H Ļ H $\longrightarrow$ HL H $\longrightarrow$ H 'H

Although the general tendency is for the Ļ to move leftwards, as in stage b. above, there are cases where the Ļ moves rightwards onto the following H. This will then give this alternative derivation of the rule:

     a.   b.   c.
(43) H Ļ H $\longrightarrow$ H LH $\longrightarrow$ H 'H

It is important to note in (42) and (43) that the Ļ has to be part of the preceding or following H tone, i.e., it has to form either a falling contour tone, as in (42b), or a rising contour tone, as in (43b). It often happens that the starting point is (42b) or (43b), which means that we would not need a tone grounding (or docking) rule. In this case what is needed is a tone simplication rule that will produce the downstep. We thus

see that in Bafut downstep is caused by the simplification of contour tones.

Hyman (1979:15) says this which might be used in support of the above derivations and our claim:

> "...DS almost always results from the simplification of contour tones ...."

As we have seen above, downstep does not happen before the simplification because this would yield a H M sequence. Downstep does not happen after simplification of the contour because this would mean that the condition favouring the rule will have been removed. It thus follows that in Bafut downstep happens at the moment of the contour tone simplification, i.e., the processes of simplifications and downstep happen simultaneously. The following quote gives support to the point:

> "The point we wish to make here is, however, that in many cases synchronic downstep rules are required that take place in one synchronic step (and are therefore not possible natural diachronic rules)." (Hyman and Schuh, 1974:93)

4.8.3 Tone Raising

Underlying grammatical H tone causes preceding L tone to be realized as phonetically raised L. This can best be perceived by comparing the following constructions.

(44) a. ˉnàá ˉ bɨ̀tàá → [nàá bɨ̀tàá]   "animal of fathers"
      b. ˉnàá ˉ bɨ̀tàá → [ꜛnàá bɨ̀tàá]   "animals of fathers"

The LL of N1 in (44a) is realized as a normal L while the ꜛLL in (44b) is appreciably higher. The raised L results from the H associative marker that follows the L tone N1 in (44b).

The L tone raising rule is not a generalized rule (cf. 4.5). The example that we have given in (44) is rather one of the few cases that might be found in the language. In some speakers the distinction is hardly perceivable. This means that the tone raising rule has not yet been phonologized in the language. As we

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shall see in 21.3.2, the L tone raising rule has been phonologized
in Bambili.

4.8.4 Tone Grounding

There are instances of floating tones in Bafut as we have
already seen in the preceding paragraphs. Floating tones are
underlying tones which are not associated with any syllable. They
generally originate from diachronic deleted syllabic segments.
They are symbolized as Ļ (ˋ) and Ḩ (ˊ).

Tone grounding is the process of assigning a floating tone to
an adjacent syllable. Tone grounding, also includes the process of
assigning the tone of a desyllabified homorganic nasal to the
adjacent syllable on the left as exemplified in (35d) above.

Floating tones in Bafut are generally assigned to the left
but there are instances where they are also assigned to the
right. The floating tones of noun prefixes are generally grounded
to the right when not deleted or when not preceded by another
floating tone of like pitch.

The derivation of (44b) given below is an example of a
situation where floating tone is assigned to the right:

```
(45)   a.  ˊnàà ˋ bìtáà        underlying tones
       b.  nàà ˋ bìtáà         tone deletion
       c.  nàà   bìtáà         tone grounding to the right
       d.  ínàà  bìtáà         tone raising
       e.  ínàà  bìtāà         tone lowering
```

In the above example the ˄first floating tone in a. is the
underlying tone of the noun prefix. This tone is deleted in b.
The other floating tone is the associative marker. This Ḩ is
grounded to the right. At the same time it causes the preceding Ḽ
tones to be raised. In e. the L tone part of the falling tone
lowers the H tone on the N2 stem to M. It is worth noting that a
raised L tone does not lower a following H to M.

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4.8.5 Tone Deletion

Tone deletion is the disappearance of a tone from a syllabic segment or morpheme when this segment disappears or when it is desyllabified (cf. 3.7 and 8.3.3). The examples below illustrate tone deletion.

(46) a. kŏ ābăă   →   [kŏ băă]   "take a bag!"
      b. fá ńdə̄ŋnə̂ →   [fá ndə̄ŋnə̂] "give a bamboo!"

The derivation of (46a) is as follows:

(47) a. kŏ ābăă   underlying tones
      b. kŏ ābăă   H tone lowering
      c. kŏ ⁻băă   V-deletion
      d. kŏ băă   deletion of L tone
                             (or grounding to the right)

In (47a) the underlying tones are given. In (47b) the vowel of the following noun is deleted. The L tone of this vowel floats and is eventually deleted in (47d).

A derivation of (39b) is given here below:

(48) a. fá ńdə̄ŋnə̂   underlying
      b. fá ńdə̄ŋnə̂   H tone lowering
      c. fá ńdə̄ŋnə̂   nasal desyllabification
      d. fá ndə̄ŋnə̂   tone deletion

In (48a) the underlying tones are given. In (48b) the low tone of the noun prefix lowers the following H tone of the noun stem to M. In (48c) the syllabic homorganic nasal noun prefix desyllabifies. In (48d) the tone of the nasal prefix disappears or is deleted.

4.8.6 Tone Spreading

It often happens that the H of a preceding morpheme moves or spreads onto the L tone of a following morpheme.[5] This process is illustrated by the following examples:

(49) a. fá bɨlū'ū   →   [fá bɨlū'ū]
                                "give spoons!"

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b. kó bɨfōrə́   →   [kó bɨfōrə̄]
                                "catch mice!"

c. sô nɨŋɔ́ɔ́   →   [sô nɨŋɔ́ɔ̂]
                                "pierce plantain!"

d. lɔ̄gə́ bɨlú'ū →   [lɔ̄gə̀ bɨlū'ū]
                                "fetch spoons!"

A sample derivation of (49a) is given below:

(50)   a.   fâ bɨlū'ū   underlying
       b.   fâ bɨlū'ū   tone lowering
       c.   fâ bɨlū'ū   tone spreading

In (50a) the underlying tones are given. In (50b) the L tone of the prefix lowers the following H of the noun stem to M. In (50) the H of the verb spreads onto the L of the noun prefix creating a HL falling tone on the prefix.

The derivation of (49d) is as follows:

(51)   a.   lɔ̄gə́ bɨlú'ū   underlying
       b.   lɔ̄gə́ bɨlū'ū   tone spreading
       c.   lɔ̄gə́ bɨlú'ū   tone dissimilation
       d.   lɔ̄gə̀ bɨlú'ū   tone lowering
       e.   lɔ̄gə̀ bɨlū'ū   tone lowering

In (51a) the underlying tones are given; in (51b) the H tone of the preceding verb spreads onto the noun prefix where it creates a HL falling tone. In c. the H tone of the verb becomes L by dissimilation (cf. 4.8.9). In d. the HL tone of the noun prefix becomes ML by T-rule 1. In e. the L of the ML contour tone lowers the following H tones of the noun stem to M.

4.8.7 Tone Simplification

While tone spreading and Tone grounding create contour tones, rules of tone simplification convert them to level tones. Tone simplification involves two processes: (a) absorption and (b) levelling. Absorption takes place when the beginning or end-point of a contour tone shifts into a like tone of a neighbouring syllable or is lost because it is adjacent to a syllable bearing like tone (cf. 53). Levelling occurs when a contour tone becomes a level tone by another process other than absorption. (cf. 52

below) Examples of contour tone simplification have already been seen in the derivations above. Here are more examples:

(51bis) a. fá mɨlũ'ũ   → [fá mɨlũ'ũ]   "give wine!"
         b. lɔ̃gé nɨbɔ̃'ɔ̃ → [lɔ̃gə̀ nɨbɔ̃'ɔ̃] "fetch pumpkin!"
         c. fá nɨké   → [fá nɨ'ké]   "give soap!"

The derivation of (51a) is as follows:

(52)   a. fá mɨlũ'ũ   underlying
       b. fá mɨlũ'ũ   tone spreading
       c. fá mɨlũ'ũ   simplification (absorption)

In (52a) the underlying tones are given; in (52b) the H of the preceding verb spreads onto the following noun prefix thereby creating a falling contour tone. In (52c) the HL is simplified by an absorption process whereby the end-point of the contour tone is absorbed into the following L tone.

The derivation of (51b) is similar to (52) above. The derivation of (51c) is given here below:

(53)   a. fá nɨkē   underlying
       b. fá nɨkē   tone simplification (by absorption)
       c. fá nɨkē   tone spreading
       d. fá nɨ'kē   simplification and ds

In (53a) the underlying tones are given; in (53b) the contour tone of the noun stem simplifies to H by absorption. In (53c) the H of the verb spreads onto the the following L of the noun prefix creating a HL contour tone; in (53d) the contour tone is simplified by a process of tone levelling to H, and at the same time the H tone of the noun stem is downstepped (as a result of the simplification of the falling contour tone).

4.8.8 Tone Coalescence

Tone coalescence is related to tone absorption. In tone coalescence two like floating tones come together and merge into one. The following example and its derivation will serve to illustrate the processes involved.

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(54) ˉtá̄ā ˘ ā̀tsə̂ ⟶ [tā̄ tsə̄] "lineage head"

The derivation of this string is given here below:

(55) a. ˉtáā ˘ ā̀tsə̂   underlying tones
      b. ˉtāā ˘ ā̀tsə̂   tone lowering
      c. tāā ˘ ā̀tsə̂   tone deletion
      d. t̄āā ˘ ˘tsə̂   V-deletion
      e. tāā ˘ tsə̄   tone coalescence
      f. tāā tsə̄   tone grounding
      g. tā˘ tsə̄   v-deletion
      h. tā tsə̄   tone grounding
      i. tā tsə̄   tone lowering

In (55a) the basic tones are given. The H is the tone of the
N1 prefix (cf. 4.7) while the L tone is the associative marker of
N.cl. 1. In (55b) the floating L tone of the N1 prefix lowers the
H tone of the noun stem to M. In (55c) the L of the N1 prefix
drops out. In (55d) the V-prefix of N2 deletes; in (55e) the L
tone of the deleted V-prefix and the L of the associative marker
coalesce; in (55f) the floating L tone grounds to the left where
it is absorbed into the L tone of the preceding noun; in (55g) the
second V. of N1 deletes and in (55h) its tone gets grounded to the
left on the preceding syllable creating a ML contour tone. In
(55i) the HL tone on of N2 stem is lowered to ML by T-rule 1.

4.8.9 Dissimilation

     Tone dissimilation occurs mostly on the last syllable of the
L tone verbs when the H tone of this syllable changes as it comes
in proximity with a syllable of similar or identical tone. Tone
dissimilation also applies to the tones of some verb form
morphemes, for example, /kə́N/, the imperfect marker (cf. 17.6.4).
This process is illustrated by the following examples:

(56) a. sə̌ŋə́ ˉtɨtá   ⟶ [sə̌ŋə̄ tɨtá]   "dry pepper!"
      b. lɔ́gə̄ nɨbɔ́'ɔ̄ ⟶ [lɔ́gə̄ nɨbɔ̄'ɔ̄] "fetch pumpkin!"
      c. sɔ̌ lə́ŋə́   ⟶ [sɔ̌ lə̄ŋə̄]   "pierce a horse!"

The derivation of (56a) is given here below:

(57) a. sə̃ŋə́ títa̋ underlying
     b. sã̄ŋə́ tî̋tá tone grounding
     c. sã̄ŋə̀ tî̋tá dissimilation
     d. sã̄ŋə̀ tí̋tá simplication
     e. sã̄ŋə̄ tí̋tá lowering

In (57a) the underlying tones are given. In (57b) the H̦ tone
of the noun prefix grounds to the right where it creates a contour
tone on the noun stem. In d. the contour tone is simplified. In
c. the H tone of the verb dissimilates to L in proximity with the
HL tone on the following noun stem. In e. the L tone on the verb
lowers the adjacent syllable of the noun.

The derivation of (56b) is as follows:

(58) a. lɔ̄gə́ nɨ̄bɔ̀'ɔ̄ underlying
     b. lɔ̄gə́ nɨ̄bɔ̀'ɔ̄ tone spreading
     c. lɔ̄gə́ nɨ̄bɔ̀'ɔ̄ tone simplification
     d. lɔ̄gə̀ nɨ̄bɔ̀'ɔ̄ dissimilation
     e. lɔ̄gə̄ nɨ̄bɔ̀'ɔ̄ tone lowering

In (58a) the underlying tones are given. In (58b) the H of
the verb spreads onto the L of the n. prefix creating a HL contour
tone on it. In (58c) the contour tone is simplified to H. In
(58d) the H̦ tone of the verb stem dissimilates to L before the H
of the noun prefix. In (58e) the H tone of the noun prefix is
lowered to M by the preceding L tone.

4.8.10 Tone copying

In tone copying a syllable or grammatical morpheme is
considered as having no underlying tone of its own, but receives
its tone from an adjacent syllable. Some verb suffixes and
interrogative pronouns in Bafut exhibit instances of tone copying,
e.g.

(59) a. ɔ̄ ghɛ̃̂ɛ̃ fə̀ "where are you going?"
     b. ɔ̄ ghɛ̃̂ɛ̃ fə́ "where are you going?"
     c. ã̄ nɨ̄ wɔ̄ "who is it?"
     d. ã̄ nɨ̄ yə̄ 'wɔ̄ "whom did he see?"

Looking at the tones of the interrogative pronouns /fə/ "where?" and /wo/ "who?" in the above examples, we can notice that they copy the tone of the preceding syllable. In (59a) /fə/ copies the L part of the ML on the preceding verb; in (59b) /fə/ takes its H tone from the preceding non-low tone (i.e., the underlying H); in (59c) /wo/ takes its tone from the L of the ML of the preceding morpheme while in (59d) it copies the H of the verb /yə́/. The derivations of the above examples are given in the section on interrogatives (cf. 16.3.1). Concerning the example in (59d) reference should be made to 16.3.1.2 (10) where the 'H on the question marker is discussed.

4.8.11 Tone Replacement

In tone replacement the inherent tone pattern of a word or morpheme is replaced by a different tone pattern. This process is a common device in marking tense or aspect in the verb phrase e.g.

(60) a. à kwɛ́rə́ mə̂ → [à kwɛ̀rə̀ mə̂] "he has taken"
      b. bó lɔ́gə́ mə̂ → [bó lɔ̀gə̀ mə̂] "they have taken"

In the above example the inherent tones of the verbs HH and LH are replaced by a LL in the present tense. This tonal process will be treated in detail in the section on tense and aspect.

4.8.12 L Tone-raising

The tone rules in 4.8.12 operate on citation L tones. In Bafut there is a difference between underlying tones and citation tones. Citation tones of words are the tones that a word has when it is said alone. These rules are alternative ways of explaining some of the Bafut tone processes. These rules are simpler ways of explaining tone changes to people learning to read and write tone. The other tone rules that we have seen can also be used to explain these processes. Reference could be made to the derivations in (35) above and (63) below for a comparison of the two ways of explaining these tone changes.

In Bafut L tone nouns fall into three classes: A: B̄, B:
and C: LL. This subclassification of these nouns is based on their
tonal behaviour in context. (cf 6.3.3). These groups of nouns
have different underlying tones (cf. 4.7). B tone – raising rule
deals with the B LL tone nouns while C tone – raising concerns C
LL tone nouns.

4.8.12.1 B Tone-raising

The L tone stems of class B L tone nouns are raised to H in
object position and in N2 position in the associative
construction. This rule can be represented thus:

(61) T-Rule 12: $\begin{bmatrix} L - L\ (L) \\ Cl.\ B \end{bmatrix} \longrightarrow L - H\ (H)\ /\ H\ \#\_\_\#$

The following examples illustrate this rule.

(62) a. /fá ñsɔ̀ɔ̀/   →   [fá n'sɔ́ɔ́]   "give a farm!"
      b. /nɨ̀bà nɨ́ ŋgɔ̀'ɔ̀/ → [nɨ̀bà nɨ́ ŋgɔ́'ɔ́] "wing of termite"

The derivation of (62a) is given in (63) here below:

(63)   a. fá   ñsɔ̀ɔ́   underlying tones
          b. fá   ñsɔ̀ɔ̀   citation tones of noun
          c. fá   ñsɔ́ɔ́   B tone raising
          d. fá   nsɔ́ɔ́   desyllabification and tone grounding
          e. fá   n'sɔ́ɔ́   simplication and ds

In (63a) the underlying tones of the string are given while
in (63b) the citation tones of the noun are given. In c. the low
tones of the noun are raised to H by the B L tone-raising rule.
In d. the nasal prefix of the noun desyllabifies (P-Rule 4) and
its tone shifts and grounds on the preceding H tone of the verb
where it creates a contour tone. In e. the contour tone
simplifies and causes the following H tones to downstep.
    The derivation of (62b) is given in (64).

(64)   a. nɨbã nɨ ŋgɔ̄'ɔ̄   underlying tones
        b. nɨbã nɨ ŋgɔ̄'ɔ̄   citation tones of N2
        c. nɨbã nɨ ŋgɔ́'ɔ̄   B tone raising
        d. nɨbã nɨ ŋgɔ́'ɔ̄   tone lowering (T-rule 1)
        e. nɨbã nɨ ŋgɔ́'ɔ̄   nasal desyllabification (P-rule 4)
                            and tone deletion (T-rule 5)

The rules that operate in the above derivation are given. However in (64c) we should note that the L tone of the noun is raised to H by the B tone-raising rule.

4.8.12.2 C Tone-raising

The L tone stems of class C L tone nouns are raised to HL in object position or in N2 position in the associative construction. This rule is captured by the following formula:

(65)   T-rule 13a: $\begin{bmatrix} \emptyset\text{-L(L)} \\ \text{Cl. C} \end{bmatrix} \longrightarrow \emptyset\text{-HL} \ / \ \text{H \#\_\_\#}$

This rule is illustrated by the following examples:

(66) a. kɔ́ nãã   ⟶ [kɔ́ náã]
                            "catch an animal!"

      b. fá bãtã̄   ⟶ [fá bátã̄]
                            "give wine calabash!"

      c. bɨlã̄ŋá bɨ ŋũ̀ ⟶ [bɨlã̄ŋā bɨ ŋũ̂]
                            "horses of person"

In (66a,b) the rule applies to raise the -LL tones of the nouns to HL. It should be noted that this rule concerns only prefixless L tone nouns. A derivation of (66c) is given below:

(67) a. bɨlã̄ŋá bɨ ˈŋũ̀   underlying
      b. bɨlã̄ŋá bɨ ŋũ̀   citation tones of N2
      c. bɨlã̄ŋá bɨ ŋũ̂   C L tone raising
      d. bɨlã̄ŋā bɨ ŋũ̂   tone lowering

In (67a) the underlying tones of the string are given. In (67b) the citation tones of the noun are given. In (67c) the L

tone of N2 becomes HL by L̥ and raising

of the prefix lowers the H tones of the stem of N1 to M.

4.8.13 Tone Level Resetting

In (20e) we gave the tone resetting rule. This rule states
that: An intervening M tone resets the level of H after 'H. The
rule can be stated formally as follows:

T-rule 13: 'H ⟶ H / M ___

This rule has been discussed in 4.5 above and so we will give more
examples and illustrate its application here.

(68) a. àtɪ̀ɪ̀ ́ ñdə̄ŋnə̄˘ ⟶ [àtɪ̀'ɪ̀ ndə̄nə̂] "half of bamboo"
     b. à nɪ̄ŋ kwέrə́ ⟶ [à nɪ̄ŋ kwέrə́ "he took"

The derivation of (68a) is given here below:

(69) a. àtɪ̀ɪ̀ ́ ñdə̄ŋnə̄˘   underlying
     b. àtɪ̀ɪ̀ ñdə̄ŋnə̄˘   tone grounding
     c. àtɪ̀'ɪ̀ ñdə̄ŋnə̄˘   simplification and ds
     d. àtɪ̀'ɪ̀ ñdə̄ŋnə̄˘   tone lowering and tone level
                          resetting
     e. àtɪ̀'ɪ̀ ndə̄ŋnə̄˘   nasal desyllabification
                          and tone deletion
     f. àtɪ̀'ɪ̀ ndə̄ŋnə̄   tone grounding

In a. the underlying tones are given. In b. the H̥ of the
associative marker grounds to the left where it creates a LH
contour tone. In c. the contour tone simplifies to H and causes
the following H tone to downstep. In d. the L tone of the noun
prefix lowers the following H tone to M and because of this
intervening M tone the level of the following H tone is reset to
that of the H which obtained before the 'H. In e. the nasal
prefix of N2 desyllabifies and its L tone is deleted. In f. the
floating L tone of the N2 grounds to the left.
The derivation of (68b) is given in (70) below:

(70) a. à nɨŋ kwɛ́rə́   underlying tones
      b. à nɨŋ 'kwɛ́rə́   simplification and ds
      c. à nɨŋ kwɛ́rə́   tone lowering and level resetting

In a. the underlying tones are given. In b. the HL contour
tone simplifies to H and causes the following H tone to downstep.
In c. the preceding L tone of the pronoun lowers the following H
tone to M and as a result of this intervening M tone, the level of
the following 'H tones on the verb stem is raised and reset to H.

4.8.14 Tone Superimposition

One of the common tone processes in the verb forms in Bafut
is superimposition. In tone superimposition, a tone pattern is
superimposed on the underlying tones of the verb stem. The
following examples will illustrate the point:

(71) a. ˉkáá à sɨˉ m̄bā kwɛ́rə́ ˊ ˉ   →
         NEG he NEG meat take   T

         [kāā sɨ'ˉ mbā kwɛ̄rə̄]
         "he is not taking meat"

     b. ˉkáá à sɨˉ m̄bā sāŋə́ ˊ ˉ   →
         NEG   he NEG meat dry   T

         [kāā sɨ'ˉ mbā sá'ŋə́]
         "he is not drying meat"

     c. à nɨn zɨ n̄-lɔ́gə́ ˊ ˊ ˊlə̄ŋə́ →
         he P1 come CNS-fetch T   horse

         [à nɨn zî nló'gə́ 'lə̄ŋə́]
         "he came and took a horse"

     d. à lēn zɨ n̄-sāŋə́ ˊ ˉ m̄bā   →
         he P3 come CNS-dry T meat

         [à lēn zî nsá'ŋə́ mbā]
         "he came and dried meat"

The tone pattern of both the H and L tone verbs in the P1 CNS
and P3 CNS construction is HH. As in the NEG IMP TO, this whole
tone pattern is superimposed on the underlying tone of the verb.
The HH tone pattern of the verb /kwɛ́rə́/ is affected by its

phonetic environment such that in (71a) it is lowered to MM by T-rule 1. For the derivation of (71a-b), reference should be made to the NEG IMP TO (cf. 17.6.1). Following is the derivation the second clause of (71d), which will serve to illustrate the process of tone superimposition.

(72) a. ñ-sâŋə́ ˊ ˊ m̀bâ   underlying
     b. ñ-sâŋə́   m̀bâ   tone superimposition
     c. ñ-sá'ŋə̂   m̀bâ   simplification and ds
     d. ñ-sá'ŋə̂   mbâ   nasal disyllabification
                        and tone deletion

In (72a) the underlying tones of the string are given. In (72b) the CNS P3 tone H H pattern is superimposed on the underlying L H tone pattern of the verb stem. The application of the tone superimposition rule results in HL H tone pattern on the verb stem. In (72c) the contour HL tone on the verb stem simplifies and causes the following H tone to downstep by T-rule 2. In (72d) the nasal noun prefix desyllabifies and its tone is deleted.

In the process of tone superimposition, it is important to note the tone assignment order. Looking at the resultant tone pattern after the application of the rule, it is clear that the H H tone pattern is assigned in a given order. The first H tone is assigned to first syllable tone of the verb stem. Since the underlying tone of the first of the verb in the above derivation is a L tone, the result is a HL contour tone. It is worth noting that superimposition does not result in a LH contour tone on the first syllable of the verb. Since the underlying tone of the second syllable of the verb is H, superimposition results in tone absorption, i.e., the superimposed H tone is absorbed by the underlying H tone of the verb stem.

4.9. Summary of Tone Rules

We present below a summary of the tone rules that we have seen so far.

Rule 1. Tone lowering: In tone lowering a preceding surface L causes following lexical H to be realized as M.

Rule 2. Downstep Rule: An underlying L tone that is not realized on the surface between two H tones causes following H to be realized as 'H.

Rule 3. L tone-raising: An underlying grammatical floating H tone (Ḥ) causes preceding L tone to be realized as a phonetically raised L.

Rule 4. Tone grounding: Floating tones are assigned to an adjacent syllable. In Bafut the more general trend is for floating tones to be assigned to the left. However in some cases these are assigned to the right.

Rule 5. Tone deletion: This is the disappearance of a tone from a syllabic segment or morpheme when this segment disappears or when it is desyllabified.

Rule 6. Tone spreading: Tone spreading occurs when the H of a preceding morpheme moves onto the L of a following morpheme, or when the H of a following syllable spreads leftwards into the L of a preceding syllable.

Rule 7. Tone Simplification: Tone simplification converts contour tones to level tones by the processes of levelling or absorption.

Rule 8. Tone coalescence: In tone coalescence, two like floating tones come together and merge into one.

Rule 9. Tone dissimilation: In tone dissimilation, the (H) tone of a syllable changes when it comes in proximity with a syllable of similar or identical tone.

Rule 10. Tone copying: In tone copying, a syllable or grammatical

morpheme, considered as having ... ...
receives its tone from an adjacent syllable tone.

Rule 11. Tone replacement: In tone replacement, the inherent tone pattern of a word or morpheme is replaced by a different tone pattern.

Rule 12. Tone absorption: Tone absorption takes place when the beginning or end-point of a contour tone shifts into a like tone of a neighbouring syllable or is lost because it is adjacent to a syllable bearing like tone.

Rule 13. Tone level resetting: An intervening M tone resets the level of H after 'H. This rule is discussed in 4.5 (cf. (20e)).

Rule 14. B L Tone-raising: The stem L tones of class B L tone nouns are raised to H in object position or in N2 position in the associative construction.

Rule 15. C L Tone-raising: The stem L tone of class C L tone nouns is raised to HL in object position or in N2 position in the associative construction.

T-rule 16. Tone superimposition: In tone superimposition, a tone pattern is superimposed on the underlying tones of the verb stem.

Other tone rules and intonation rules will be presented progressively in the study.

4.10 Rule Ordering

As we must have noticed in the derivations that we have seen so far, some of the rules have to apply in a given order in order to yield the correct output. Rule ordering could be the subject of a more detailed study but given the nature and purpose of our present study we cannot give this subject all the attention it requires. What we propose to do is to point out the main

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characteristics that need to be addressed within the scope of our study.

What is important to say right at the beginning of this discussion is that there is no strict rule ordering in Bafut. The concept of a number of ordered rules, each applying once in a derivation has been strongly challenged (Koutsoudas, Sanders and Noll, 1974; Hyman, 1975). In Bafut, for example, the tone rules have no fixed order of application. It cannot be strictly affirmed, for example, that given T-rule 1 and T-rule 2, the former will always apply before the latter. In general what comes closer to describing the order of rule application in Bafut is the random sequential ordering (Hyman, 1975). This means that each rule can apply any time that its structural description is met, and randomly until there are no longer any forms to which the rule may apply. This implies that the same rule can apply several times in one derivation.

Despite the fact that in general the rules in Bafut cannot be said to have a strict order of application, these rules can be ordered in specific derivations. This means that rule ordering in Bafut and the other Ngemba languages that we have studied is a matter of individual derivations. This fact can be related to idea of extrinsic rule ordering which Hyman (1975:129) describes in the following terms:

> "Extrinsic ordering is imposed by the language in question; given the form of ...two rules, one must consult the particular data to see if a given rule precedes or follows another rule."

The above quotation describes in a way what is happening in Bafut. In a number of situations different data reveal different rule ordering.

Another important distinction that we need to make with regard to rule ordering in Bafut is that often made between feeding and bleeding rule ordering. A rule (a) feeds another rule (b), if it creates a new environment for (b) to apply to. In the following derivation, tone grounding (T-rule 5) feeds tone simplication (T-rule 7).

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(73) a. fá ˉmɔ'ɔ   underlying
      b. fâ mɔ'ɔ   tone grounding (T-rule 4)
      c. fá 'mɔ'ɔ   simplification (T-rule 7)
                        and downstep (T-rule 2)

We thus see that in the above derivation, the rules are in a feeding relationship.

Still in the derivation in (73) above we see that T-rule 7 and T-rule 2 are ordered together or put together, this means that in some situations some rules must apply simultaneously, such as simplification and downstep (4.8.2).

The other relationship that we will illustrate now is the bleeding relationship. Rule (a) is said to bleed rule (b) if (a) removes the environment that would have favoured the application of (b) In the following derivation tone lowering (T-rule 1) bleeds the downstep rule (T-rule 2):

(74) a. fá bɨlū'ū   underlying
      b. fá bɨlū'ū   tone spreading (T-rule 6)
      c. fá bɨlū'ū   tone lowering (T-rule 1)

The above situation is better understood in the light of the following derivation given in (75)

(75) a. fá fɨtɔ̄ɔ̄   fyâ   underlying
      b. fá fɨtɔ̄ɔ̄   fyâ   tone spreading (T-rule 6)
      c. fá fɨ'tɔ̄ɔ̄ fyâ   simplification and ds (T-rule 2)
      d. fá fɨ'tɔ̄ɔ̄ fyâ   tone spreading (T-rule 6)
      e. fá fɨ'tɔ̄ɔ̄ 'fyâ   simplification and ds (T-rule 2)

In both (74b) and (75b) tone spreading creates an environment for the downstep rule (T-rule 2) to apply. In (75c) T-rule 2 applies whereas in (74c) T-rule 1 (tone lowering applies and thus bleeds the application of T-rule 2.

Although in some derivations it is important to respect a given order in order to have the right output, in many cases the order of rule application does not matter. In the derivation given in (74) it does not matter whether T-rule 6 applies before or after T-rule 2. This can be verified in the following derivation:

(76) a. fá bìlû'û   underlying
      b. fá bìlû'û   tone lowering (T-rule 2)
      c. fá bîlû'û   tone spreading (T-rule 6)

In the derivation in (76) T-rule 1 applies before T-rule 6 but the output is still the same as the one in (74). This indicates that the different rule ordering in this case does not matter since in both cases the right output is still realized.

Pulleyblank (1983) argues that in lexical phonology tonal rules apply cyclically in a number of languages. The model of lexical phonology which Pulleyblank proposes assumes that phonological rules can apply in the lexicon. These rules apply on appropriate morpheme classes referred to as "levels" or "strata". The other notion that is useful and related to that of strata is that of brackets. Each stratum is enclosed within brackets and it is assumed that phonological rules apply at the appropriate strata within the brackets. The brackets are subsequently erased for rules to apply post-lexically. The following quotation gives some of the principles:

> "... I will assume in this thesis that bracket erasure applies at the end of every stratum...
> Note that an important result of brackets erasure is that any rule that refers to word-internal bracketing -- such as a rule referring to a notion like 'stem', 'affix', or 'compound' -- must be a rule of the lexical phonology...
> Also with respect to bracketing, note that any rules that applies across word-boundaries must be a post-lexical rule...
> It also follows from such a model that in any given derivation, all lexical applications of rules must precede all post-lexical applications of rules.
> It should be stressed that the theory being summarized here does not prohibit a rule from applying both lexically and post-lexically.
> (Pulleyblank 1983:21-23)

Of all that the lexical phonology says about rule application what is interesting in relation to the application of rules in Bafut is the fact that rules apply systematically across a set of continuous strata. This means that in an utterance, rules will

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apply systematica~~~, ~~~ ~~~ ~~~, ~~~ ~~~ ~~~ ~~~ ~~~ ~~~ first
constituent to the next and finally to the last in the utterance.
The notion of bracketing enables us to group the constituents into
units while bracket erasing enables us to move from smaller
constituents into larger units. This is the principle followed in
our derivations, as can be verified in the derivations of longer
units composing of at least one clause.6 We shall use the
derivations given in 18.7 (9), 19.3.3 (12) and 26.3.3 (17) to
illustrate this principle.

The underlying strings given in 18.7 (9), 19.3.3 (12) and
26.3.3 (17) can be bracketed as follows:

(77) a. [bō] [[[kā] [lā̄]] [zI]]] [[ñ][lōgā̄]] [m̄bā]

    "they will come and fetch meat"

  b. [ā̃] [[zI] [ˇ ˇ] [mā̂]] [á] [[ŋ][kō] [ˇ]] [ˉ fórá]

    "they have come to catch a mouse"

  c. [Ɛ̃] [[ˇ bá] [ˇ cē̃] [fā̃]] [fūū̃]

    "he was giving corn fufu"

The above brackets are illustrative of the fact that the
constituent morphemes, words, phrases or clauses of each utterance
are scanned by rules and are thus treated systematically when ever
possible. The derivation of (77a) is given below:

(78) a. bó kā̃ lā̄ zI ñ-lōgā̄ m̄bā   underlying
     b. bó kā̃ lā̄ zI ñ-lōgā̄ m̄bā   simplification
     c. bó kā̃ lā̄ zI ñ-lōgā̄ m̄bā   simplification
     d. bō kā̃ lā̄ zǐ ñ-lōgā̄ m̄bā   tone lowering
     e. bō kā̃ lā̄ zǐ ñ-lōgā̄ m̄bā   nasal desyllabification
     f. bó kā̃ lā̄ zǐ   lōgā̄ m̄bā   nasal and tone deletion
     g. bō kā̃ lā̄ zǐ   lōgā̄ m̄bā   tone lowering
     h. bō kā̃ lā̄ zǐ   lōgā̄ mbā   nasal desyllabification
                                         and tone deletion

We notice that in the above derivation the rules apply
systematically from left to right as the the brackets are opened
or erased. The derivation of (77b) will further illustrate this
principle.

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(79) a.  ã zĬ  ˋ  ˋ  mã  á  ŋkõ  ˋ  ˊ  fõrã    underlying
     b.  ã zĬ     mã  á  ŋkõ  ˋ  ˊ  fõrã    PO replacive tone
     c.  ã zĬ     mã  á  ñkõ     ˊ  fõrã    subord. clause verb tone
     d.  ã zĬ     mã  ã  ŋkõ        fõrã    tone grounding to the right
     e.  ã zĬ     mã  ˊ  ŋkõ        fõrã    V-deletion
     f.  ã zĬ     mã˥    ñkõ        fõrã    tone grounding to the left
     g.  ã zĬ     mã'˥   ŋkõ        fõrã    simplification and ds
     h.  ã zĬ     mã'˥   ŋkõ        fõrã    nasal desyllabification and
                                           tone grounding to the left
     i.  ã zĬ     mã'˥   ŋ'kõ       fõrã    simplification and ds
     j.  ã zĬ     mã'˥   ŋ'kõ      'fõrã    simplification and ds
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For the explanation of the rules and processes involved in the above two derivations reference should be made to 18.7 (9) and 19.3.3 (12) respectively. The point we want to illustrate is the nature of rule application and rule ordering in the language.

Although the principle of systematic application of rules from left to right is maintained in general in the derivation in (79) above, it might be necessary to start opening the brackets within the verb phrase and replacing the underlying tones of the verbs with the characteristic tone pattern of the verb form in question, as can be seen in (79b). What this all means is that in general the floating tones that mark verb forms or sentence types, as in (79c), are assigned to verb stems or wherever these have to be before the rest of the rules may start to apply.

The derivation of (77c) will illustrate the fact that a rule application may be limited to a given level:

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(80) a.  Ĕ  ˥  bã  ˥  cĕ  fã  fũu    underlying tones
     b.  Ê     bã  ˥  cĕ  fã  fũu    tone grounding
     c.  Ê  'bã  ˥  cĕ  fã  fũu    simplification and ds
     d.  Ê  'bã     cĕ  fã  fũu    L tone deletion
     e.  Ê     bã     cĕ  fã  fũu    M level (rule (16e) and T-rule 13)
```

We notice in the above derivation that (in Limbum) the downstep rule is limited to the verb phrase level. This explains why the H tones of the object /fũu/ are not affected. The explanation of the processes and rules involved in the above derivation is given in 26.3.3 (17).

The derivation in (80) above leads us to another thing that could be said about rule ordering. We should recognize the fact that the same set of rules may apply differently and also be

ordered differently in different languages. This is illustrated
by the following examples taken from Bafut and Nkwen. The
derivation in (81) is a Bafut example while (82) is a Nkwen
example (cf. 24.4.1.3 (17)).

(81) a. à kwɛ́tə̄ ˉ ˆ ˋmū˘ wâ   underlying
     b. à kwɛ̄tə̄   ˋmū˘ wâ   TO replacive tone
     c. à kwɛ̄tə̄   mū˘   wâ   tone grounding to the left
                                   and absorption
     d. à kwɛ̄tə̄ˋ   mū˘   wâ   tone spreading to the left
     e. à kwɛ̄tə́'ˋ   'mū˘ wâ   simplification and ds
     f. à kwɛ̄tə́'ˋ   'mū   wâ   tone grounding
     g. à kwɛ̄tə́'ˋ   'mū   'wâ   simplification and ds

     In the above derivation we notice that the rules apply
cylcically from left to right. The different rules that are
involved in the derivation are given in each step. The rules and
their order of application, as noticed in (80) and (81) above,
should be compared with those in the derivation in (82) below.

(82) a. à kwɛ́sə̄ ˉ ˆ ˉ mɔ̄ wɛ̂   underlying tones
      b. à kwɛ̄sə̄   ˉ mɔ̄ wɛ̂   TO replacive tones
      c. à kwɛ̄sə̄   mɔ̄ wɛ̂   tone grounding to the left
                                  and absorption
      d. à kwɛ̄sə̄   mɔ̄ wɛ̂   simplification
      e. à kwɛ̄sə̄   mɔ̄ wɛ̂   simplification
      f. à kwɛ̄sə̄   mɔ̄ wɛ̂   simplification

     We notice that in (81) and (82) the same underlying tones are
realized differently on the surface. This is so because, in these
derivations, the rules and the rule application are different in
the two languages, Bafut and Nkwen. Comparing the derivation in
(80) with (81), we notice that the application of the downstep
rule is different in both languages. What is immediately obvious
in (80) is the fact that downstep in Limbum is equal to M, which
is not the case in Bafut.

Notes to Chapter Four

1 /fɨbwɛ̀ fā/ actually comes out phonetically as [fɨbwɛ̀ fā], thus yielding a contour tone of the form LML. The LM tones on monosyllabic verbs like /sô/ "pierce!" /wyɛ̀/ "laugh!" actually come out in isolation as LML. For practical reasons we represent this tone simply as LM. In the orthography it is written as: /˜/ (LH).

2 The L-MM varies with L-LM. Some speakers say /ŋgɔ'ɔ tāā/ and others say /ŋgɔ'ɔ tāa̋/ "termite of father."

3 The difference between /mɨntá'ā/ and /bɨtāā/ comes out when both words are used in the associative construction:

```
mɨntā'ā mɨ bɔ̂ɔ   ⟶   [mɨntá'ʼá mɨ bɔɔ̋]   "hills of children"
bɨtāā bɨ bɔ̂ɔ     ⟶   [bɨtā bɨ bɔɔ̋]       "fathers of children"
```

4 /mɔ'ɔ/ is from noun class 3, and every noun in this class carries a prefix (with a L tone as is the case with the rest of the noun class prefixes). It is therefore likely that it lost its segmental prefix and its L tone remained as an underlying floating low tone. We therefore posit a synchronic floating L tone to account for the derivation in (34) above.

5 There might be cases of regressive tone spreading where a following H spreads into the L tone of a preceding syllable. An example of this process occurs in 8.3.2(30b).

6 However, no attempt has been made to determine specific strata for Bafut with a view to assigning rules to specific strata as would be required by an analysis within the model of lexical phonology for this is not crucial to the present work.

Chapter Five

INTONATION

5.1 Definition

Intonation has been described as a linguistic universal by Bolinger (1964). Lehiste (1970:95) defines intonation in the following terms:

> "The use of tonal features to carry linguistic information at the sentence level is one of the meanings of the term intonation. Intonation also carries non-linguistic meanings; in this respect it is analogous to tempo, i.e., the use of features of duration at the sentence level to reflect the attitudes of the speaker and the relative urgency of the message."

5.2. Intonation and Tone

Intonation affects tone in that it influences the phonetic realization of tone. Schuh (1978:244) defines the nature of intonational effect as follows:

> "By intonational effects on tone I mean modifications in pitch which cannot be attributed directly to immediate tonal or segmental environments or to some special morphological marking."

The natural effect of intonation on tone is a general downward drift of pitches. Pike (1948), Schacter (1965), Hombert (1974), Tucker and Creider (1975), for example, think that downdrift is an integrated part of intonation. It has also been shown that downdrift can be suspended in order to avoid perceptual confusion of phonemic tones (cf. La Velle, 1974 and Hombert, ibid.).

Another effect of intonation on tone is to produce a rising contour; for example, the effect of question intonation on the tonal system of Hausa is to raise the last high tone of the phrase

to an extra high pitch accompanied by a sharp fall (Schuh, 1978). A similar phenomenon has been reported to happen in Kɔnzime (Beavon, 1981).

Thus the effect of intonation on tone may take different forms. In Otomi (Lehiste, 1970), for example, only the last syllable of the word carries intonational pitches while preceding syllables bear tones.

In Bafut, since tone carries an important functional load, the role of intonation is greatly reduced. As we have already seen (cf. 4.5), downdrift is absent in Bafut. However there are intonational pitch features marked at the level of syllable, word, phrase or sentence. Generally the effect of intonation is felt on the last syllable of the last word whether at the word, phrase or sentence level. As we shall see in the various examples given in the subsequent paragraphs, the intonational feature in Bafut is an absolute final one.

5.3. Intonation at Word Level

Words in their citation form generally carry a falling intonation contour.

5.3.1 H tone words

Some high tone words end in a downglide. Most of these are monosyllabic words. The following examples will illustrate the point.

(1) nû   "honey"
     mû   "child"
     āmbɛ́nû   "bee"
     ńdə́ŋnə̂   "bamboo"
     m̄bɔ́ɔ́nə̂   "blessing"

When these words are followed by other words, the falling intonational pattern ceases to be in effect, as can be seen in the following examples.

(2) nū yâ   "the honey"
     mū wâ   "the child"
     āmbēnū yâ   "the bee"
     ñdāŋnā́ wâ   "the bamboo"
     m̄bɔ̄ɔ̄nā́ yâ   "the blessing"

5.3.2 Surface M Tone Words

Noun words whose underlying tones are L-HL are realised normally as L-MM (or L-M) on the surface (cf. 4.7). These surface M tone words in their citation forms are lowered in the final syllable. Monosyllabic M words end in a ML glide while the last syllable of disylabic M words is lowered to L. This process can be captured by the following intonation rules:

(3) a. M   ⟶ ML / ___ //
     b. MM ⟶ ML / ___ //

The following nouns illustrate the process:

(4) ābɔ̀   "hand"
     ñdà̄   "house"
     ābā̀à   "corn fufu"
     fɨ̄tɔ̄ɔ̀   "wine calabash"

Just as for the H tone nouns, when the above M tone nouns are followed by other words, e.g., the demonstrative, the intonation contour is transferred to the last element of the following morpheme. This is illustrated in the examples below:

(5) ābō yâ   "the hand"
     fɨ̄tɔ̄ɔ̄ fyâ   "the wine calabash"

5.3.3 L Tone Words

The effect of intonation on L tone nouns is hardly perceptible, however, with the help of a visi-pitch it was seen that although L tones normally do not downdrift, they end in a downglide when they occur finally.

5.4   Phrase Intonation

At the phrase level the domain of intonational contour is still the last syllable of the final word or morpheme:

(6)   a.   ātū'¯ ndâ   "head of house(roof)"
      b.   ātū'¯ n'dā yâ   "the head of house(roof"
      c.   ātū'¯ n'dā 'yā 'mā... "the roof that..."

The extent of downstep in the example in (6c) has already been pointed out (cf. 4.5). The downstep here is caused by intervening underlying low tones.

The falling intonational contour is suspended in enumeration or counting since enumeration indicates that the string has not yet come to an end. The examples below illustrate this point.

(7)   a.   m̄bī jī báā   "two goats"
      b.   m̄bī jī tārə   "three goats"
      c.   mɔ'ɔ, bā'ā, tā'rā, ... "one, two, three..."
      d.   ābō, ñtāā, bó nīlī·ī "hand, leg, and eye"

In (7a,b) the words/bā'ā/"two" and/tā'rə/"three" come at the end of the phrase, so the effect of intonation can be seen in the last syllable. The 'H of the last syllable is lowered to L while in (7c) they are not affected by intonation. In (7d) the M tones on the words/ābō/and/ñtāā/stay unaffected by intonation because of the enumeration. However, we see that at the end of the phrase, the effect of intonation is felt. The M on the second syllable of /nīlī·ī/"eye" is lowered to L since it occurs phrase finally.

5.5   Sentence Intonation

As already mentioned above the effect of intonation at the sentence level is felt on the last syllable of the last word.

5.5.1   Imperatives

The effect of intonation is felt on the imperative forms of verbs when these constitute the only element of the sentence.

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(8) a. kwέrə̄   "take!"
     b. fâ   "give!"
     c. lɔ̄gə̄   "fetch!"
     d. sɔ̀   "pierce!"

The falling intonation contour is suspended or transferred when an object is placed after the above verbs. This is indicated in the examples below.

(9) a. kwέrə̄ mbà yā   "take the meat!"
     b. fá mbà yā   "give the meat!"
     c. lɔgə̄ mbā yā   "fetch the meat!"
     d. sɔ̌ mbā yā   "pierce the meat!"

5.5.2 Statement

In statements the effect of intonation is sentence finally.

(10) a. mə̀ kɨ kūrə̄ nô   "I ate a snake"
      b. mə̀ kɨ yūū ābāā   "I bought corn fufu"
      c. à nɨ fɨtə̄ə̄   "it is a wine calabash"
      d. à nɨ mū   "it is a child"
      e. à māŋsə̄   "he has finished"
      f. à nɨŋ kūrə̄ mbà yā   "he ate the meat!"

The effect of intonation in the above sentences is to lower the last syllable of the sentence.

5.5.3 Yes-No Questions

The unmarked falling intonation contour is suspended in question sentences. The sentences in (10) would be marked for question by a rise to level pitch of all the tones on the last syllables as follows:

(11) a. mə̀ kɨ kūrə̄ nô   "did I eat a snake?"
      b. mə̀ kɨ yūū ābāā   "did I buy corn fufu?"
      c. à nɨ fɨtə̄ə̄   "is it a wine calabash?"
      d. à nɨ mū   "is it a child?"
      e. à māŋsə̄   "has he finished?"
      f. à nɨŋ kūrə̄ mbà yā   "did he eat the meat?"

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However, as will be illustrated in the section on mood (cf. 16.3.2) there are some cases where it is difficult to distinguish a statement from a question solely on the basis of intonational pitch. This is specially true for sentences ending in L or H tone as can be seen in the examples in (12).

(12) a. à ghɛ̃ɛ̃ mə̀   (the statement has raised L tones)
                  "he has gone/has he gone?"
      b. á jɨ́
                  "he is eating/is he eating?"
      c. à kɨ kúrə́ nɨ̀ŋɔ̃ɔ̃
                  "he ate plantains/did he eat plantains?"
                  "he ate plantains/did he eat plantains?"

5.5.4 Tenses

In some verb forms or tenses the LM tone pattern of verbs is lowered to a LL pattern as a result of intonation when these occur sentence finally.

(13) a. à nɨ̀n lɔ̃ŋə̀ mbà
                  "he fetched meat"
      b. à nɨ̀n lɔ̃gɔ̃
                  "he fetched (it)"
      c. à kā lŏ fēē mbà
                  "he will sell meat (tomorrow)"
      d. à kā lŏ fēē
                  "he will sell (it)"
      e. bɔ́ ká yɨ sàŋə̀ mbà
                  "they will dry meat (in the distant part)
      f. bɔ́ ká yɨ sàŋə̀
                  "they will dry (it)"

We notice that in the above examples, the second in each pair is affected by intonation. The M of the verb goes to L since it occurs utterance final.

5.6 Emotion or Attitude

The intonational key may change depending upon the emotions or attitude of the speaker. When a speaker is excited the normal pitch key of his voice is raised and every thing is said at a relatively higher key.

A person will adopt a different intonational contour depending upon his attitude towards the addressee, for example, in the following pair of sentences the difference in intonational pitch corresponds to the different relationships existing between speaker and hearer.

(14) a. õ lõ fə̄   "where are you from?"
       b. õ lõ̃ã fə̀   "where are you from?"

The intonational pattern of (14a) is one of familiarity and laxity while the form in (14b) would be used with elderly people or strangers, or when speaker is angry with hearer.

Emphatic utterances are characterised by a relatively higher pitch.

The emphatic demonstratives are formally different according to the degree of emphasis but emphasis is underscored by a rise in pitch. The following examples illustrate the point:

(15) a. nua   1st
       b. nula   2nd   degree of emphasis
       c. nuanu   3rd

Considering the above demonstratives, the pitch of the speaker will be lower or higher depending upon the degree of emphasis.

Although there is no appreciable pitch difference between statement and question when both end in L tone nouns, an emphatic statement can be distinguished from a question. The emphatic statement is characterised by a raised low tone, while the question stays L.

(16) a. ã nɨ̄ nɨ̄bɔ̀'ɔ̀   "it is a pumpkin"
       b. ã nɨ̄ nɨ̄bɔ̀'ɔ̀   "is it a pumpkin?"
       c. ã nɨ̄ ɨ́nɨ̄bɔ̀'ɔ̀   "it is a pumpkin!"

The emphatic statement in (16c) is differentiated from the ordinary statement (16a) and question (16b) by the raised L tone on the noun, "pumpkin". The meaning of the emphasis is that, he ate "pumpkin" not "plantain" or "cocoyams".

PART II C
NOUN AND NOMINAL CONSTRUCTIONS

Chapter Six

NOUN STRUCTURE AND LEXICAL TONE PATTERNS

6.1 Prefix and Stem

The citation form of the noun in Bafut is composed of a prefix followed by a stem. The prefix forms are discussed below (cf.7.3) In the examples which follow, the prefix is separated from the stem by a hyphen(-). The nominal prefix normally carries a low tone in citation form. The noun stem can be monosyllabic, bisyllabic or trisyllabic. A few of the nouns contain four, five or six syllables. In this group a good number of them are compound nouns. However, most Bafut noun stems are either monosyllabic or bisyllabic.

6.2. Syllables and Tone Patterns

The tone pattern of each noun stem in citation form depends upon the number of syllables it has.

6.2.1 Monosyllabic Noun Stems

The three phonemic tones, i.e., L, M and H, appear on monosyllabic noun stems, for example,

(1) a. L-L : nì-bā   "wing"
     b. L-M : à-tū   "head"
     c. Ø-H : Ø-nwí   "cutlass"

The H tone pattern in (1c) is found only in noun classes 1, 9 and 10.

6.2.2 Bisyllabic Noun Stems

The following patterns occur on bisyllable stems:

(2) a. L-LL nì-bɔ́ɔ̀   põũ̯...ìî
    b. L-LM à-kwɛ̀'ɛ̄   "cough"
    c. L-ML nɨ̀-ghə̄ghə̀ "praying mantis"
    d. L-MM bɨ̀-kāā   "crabs"
    e. L-MH à-kɨ̄kûŋ   "owl"
    f. Ø-ML Ø-tāà   "father"
    g. Ø-HL Ø-máà   "grandmother"
    h. Ø-HH Ø-fórə́   "mouse"

The pattern Ø-HH is found only in noun classes 1 and 3. It should also be noted that only prefixless nouns have the patterns -H or -HH. This is explained by the fact that the L tone of the prefix would automatically lower the following H to M by T-rule 1. As a result of this also, the lexical tone pattern -LH is not possible since it is automatically realised as -LM.

It should also be remembered that intonation rules apply to lower all M tone words like /à-tū/ "head" or /fɨ̀-tə̄ə̄/ "calabash" which occur finally (cf. 5.3.2(3a,b).

Very few nouns were found with the pattern (L)-LM such as /à-kwɛ̀'ɛ̄/, /-ànsāŋ/, etc.

5.2.3 TriSyllabic Noun Stems

The following patterns are found on three-syllable noun stems:

(3) a. Ø-LLL   : Ø-nɨndɛ̀nə̀   "boundary"
    b. Ø-LML   : Ø-tòrə̄sà   "trousers"
    c. L-MLL   : ǹ-jɨ̄ɨ̀rə̀   "cutting grass"
    d. L-MHL   : ǹ-də̄máà   "aunt"
    e. L-MHH   : ā-lə̄ləə̄   "bat"
    f. L-H'HH : m̀-bɨ́''ɨkə̄   "thanks"
    g. Ø-HLL   : Ø-fɨ́lòò   "a type of spice"
    h. Ø-HML   : Ø-tákūmbə̀ŋ   "type of juju"
    i. Ø-HHH   : kɔ́'ɔ́sə́   "type of yam"

6.2.4 Quadrisyllabic Noun Stems.

The following are examples of the patterns found on four-syllable noun stems:

(4) a. Ø-LLLL : Ø-āntābā'ā   "tobacco"
     b. L-LLMM : ŋyāākūkū   "house spider"
     c. Ø-LMLL : Ø-āŋkyābàŋà   "baboon"
     d. Ø-LMLM : Ø-kūmtājī'Ī   "a species of bananas"
     e. Ø-HLLL : Ø-múmītāà   "a day of the week"
     f. Ø-HHLL : Ø-kúūkòlò   "jigger"

6.2.5 Five Syllabic Noun Stems

Very few nouns were found with five syllables e.g.

(5) a. L-LLMML : ñ-də̄rə̄tākūmbə̄ŋ
                     "house of juju"
     b. Ø-LMLLL : Ø-mītānībā'ā
                     "5th day of the week"
     c. L-LMLLL : ŋ-kɔ̄'ɔ̄fīkūū
                     "6th day of the Bafut week"
     d. L-MLLLL : ñ-tōōbā'ālə̄
                     "7th day of the Bafut week"
     e. L-MMLMM : ñ-tā'ābīwēē
                     "Ntabuweh"
     f. Ø-HHLLL : Ø-kwímāŋkɔ'ɔ
                     "tortoise"
     g. Ø-HHHLL : Ø-tséétākɔ̄rə̄
                     "kind of cricket"
     i. Ø-HHHHH : Ø-níghə́níghóö
                     "chameleon"

The tone patterns presented for the noun stems with three, four, and five syllables are those attested in the more common nouns in a corpus of about 800 nouns. More patterns are likely to be found in a larger corpus. However, there are relatively very few simple nouns with 4 or 5 stem syllables. Most of the nouns with 4 or more stem syllables are compound nouns which are derived by means of the associative construction. If we had taken more of such nouns into consideration we would have come up with many more nouns with many more stem syllables and consequently with many more noun stem lexical tone patterns.

6.3. Tone Classes

The three tone levels found in Bafut nouns are again divided into subgroups.

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6.3.1 H tone Class

The H tone nouns fall into 3 main classes depending upon their behaviour in context:

6.3.1.1 Class A H Tone

This class of H tone nouns is not affected by intonation (i.e. not lowered by intonation) and the lowering effect of L tone by applicaion of T-rule 1 is felt as far as two immediately following syllables. These nouns have the underlying tone pattern H-H H. Following are examples of A H tone nouns:

(6) a. síŋə̄   "bird"
     b. fórə̄   "mouse"
     c. kó'ɔ̄sɔ̄   "type of"
     d. nɨghə̄nɨghóō "chameleon"

The basic H tones of the nouns in the above examples stay level H. These nouns are affected by T-rule 1 (cf. 4.8.1) as follows:

(7) a. bɨ-sɨ́ŋə̄   ⟶ [bɨ-sɨ́ŋə̄]
                          "birds"
     b. bɨ-fórə̄   ⟶ [bɨ-fōrə̄]
                          "mice"
     c. bɨ-kó'ɔ̄sə̄ ⟶ [bɨ-kó'ɔ̄sə̄]
                          "type of yams"(pl.)
     d. bɨ-nɨghə̄nɨghóō ⟶ [bɨ-nɨghə̄nɨghóō]
                          "praying mantis"

From the above examples we notice that the lowering effect of the L tone goes as far as the two following syllables (cf. 4.8.1).

6.3.1.2 Class B H Tone

Class B high tone nouns are not affected by intonation and the lowering effect of L tone does not go beyond the immediately following H tone. These nouns have the underlying tone pattern H-LH. Examples of B H tones are given here below.

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(8) a. tɨ́tá   "pepper"
    b. ŋɪ́nɪ́ŋ   "night mosquito"
    c. tūmnā́   "hat"
    d. ŋɪ́nsā́   "pain in the tooth"

We notice that the H tones of the nouns in the above examples are not affected by intonation. A preceding L tone lowers only the first following H tone as seen in the following examples:

(9) a. bɨ̀-tɨ́tá   ⟶   [bɨ̀-tɨ̏tá]   "peppers"
    b. bɨ̀-ŋɪ́nɪ́ŋ ⟶   [bɨ̀-ŋɪ̏nɪ́ŋ]   "night mosquitoes"
    c. bɨ̀-tūmnā́ ⟶   [bɨ̀-tūmnā́]   "hats"
    d. wùrā̀ ŋɪ́nsá̄ ⟶ [wùrā̀ ŋɪ̏nsā́] "treat pains in
                                      the tooth"

6.3.1.3   Class C H Tone

    Class C high tone nouns are affected by intonation, have a downstepping effect on following H tone, and a lowering effect on the HL tone of the adjectival or numeral prefix. These nouns have the underlying tone pattern H-HL. Examples of nouns in this group are given here below.

(10) a. lū́ [lû]   ⟶   [lū́ wâ]
           "tree rat"   "the tree rat"
     b. mū́ [mû]   ⟶   [mū́ wâ]
           "child"   "the child"
     c. nó [nô]   ⟶   [nó yâ]
           "snake"   "the snake"

    The H tones of the nouns in the above examples are affected by intonation when they are realized in isolation. They all end in a HL tone glide. They, however, stay level high when not in utterance final position, as shown on the right hand column above.
    They lower the HL tone pattern of the adjective or numeral prefix as follows:

(11) a. lū́ yɪ̄m fɪ̄ɪ   ⟶   [lū́ yɪ̄m fɪ̄ɪ]
                                "black tree rat"
     b. mū́ yɪ̄n sɨ̄gə̄nə̄ ⟶   [mū́ yɪ̄n sɨ̄gə̄nə̄]
                                "nice child"

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c.　nõ yĩm ilɨ　　　　　　　　　　　　ɛ ili ɟ ɟtŋ ɟ
　　　　　　　　　　　　　　"black snake"

The above nouns cause following H tones to downstep as in the following examples:

(12)　a.　nõ mū jyâ　→　[nõ 'mū jyâ]
　　　　　　　　　　　　　　"the snakes of the child"
　　b.　nū mū wâ　→　[nū 'mū wâ]
　　　　　　　　　　　　　　"honey of child"

6.3.2　M Tone Classes

There are two main classes of M tones. One class, class A mid-tone words, comes from an underlying L-HL tone pattern while most of the rest of mid tone words, which fall in class B, come from the application of T-rule 1.

6.3.2.1　Class A M Tone

Words in this class are affected by intonation contour (cf. 5.3.2).

Class A M tone noun stems are raised to H in object position or in N2 position of the associative construction. The following examples illustrate this tonal behaviour:

(13)　a.　fá fɨtāā fyâ　→　[fá fɨ'tāā fyâ]
　　　　　　　　　　　　"give the wine calabash!"
　　b.　ŋkɨrə fɨtāā wâ　→　[ŋkɨrə fɨtāā wâ]
　　　　　　　　　　　　"rope of the wine calabash"

In the above examples we note that the M tone of the noun, /fɨtāā/ is raised to H.

The M tone of nouns in this class lowers the HL tone of the adjective and numeral prefix to L as illustrated in the following examples:

(14)　a.　fɨtāā fɨ fɨɨ　→　[fɨtāā fɨ fɨɨ]
　　　　　　　　　　　　"black wine calabash"
　　b.　ñdā yĩm fɨɨ　→　[ñdā yĩm fɨɨ]
　　　　　　　　　　　　"new house"

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c. ābō yī fūūrə̄ → [ābō yī fūūrə̄]
        "one hand"

6.3.2.2 Class B M tone

As seen above, most cases of M tone in Bafut are derived from
H tone by application of T-rule 1. Examples of this M tone have
already been given in (7) above.

The M tone in this class does not lower the HL tone of the
adjective or numeral prefix. This is illustrated in the following
examples.

(15) a. kō lə̄ŋə̄ yīm fīī   "take a black horse!"
      b. lōgə̄ lə̄ŋə̄ yīm fūūrə̄ "take one horse!"
      c. bīfōrə̄ bī fīī   "black mice"

The mid tone of words in this class are not affected by
intonation when they occur utterance finally.

6.3.3 L Tone Classes

The L tone nouns in Bafut fall into three subclasses: A, B
and C. These groups have different underlying tones. Class
A: L-LL; class B: L-LH; class C: H-LL.

6.3.3.1 Class A L Tone

The stems of Low tone nouns in class A, relative to classes B
and C nouns, are not raised in object position or in N2 position
in the associative construction. e.g.

(16) a. kō̆ ŋgīgī̆   → [kō̆ ŋgīgī̆]   "take egusi!"
      b. bwéɛ́ ŋgɔ́'ɔ̄ → [bwéɛ́ ŋgɔ́'ɔ̄]   "pick up stones"
      c. ātū ˉ ābə̄ə̄ → [ātū'ˉ bə̄ə̄]   "head of bag/big bag"

The tone changes in the associative construction of (16c) are
described in chapter eight (cf. 8.4). What we should notice,
however, is the fact that the L tone of the stems of class A nouns
are not changed in the above defined contexts.

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6.3.3.2   Class B L Tone

Nouns in class B L tone undergo tonal changes in their stems.
The L tone of the noun stem is raised to H by B tone-raising rule
(cf. 4.8.12.1). The following examples illustrate the point:

(17)   a.   kɔ́ ñsɔ̀ɔ̀   ⟶   [kɔ́ n'sɔ́ɔ́]
                                  "start a new farm!"
       b.   nɪ̀tɔ́ɔ̀ nɪ́ ŋgɔ̀'ɔ̀ ⟶   [nɪ̀tɔ́'ɔ́ 'nɪ́ ŋ'gɔ́'ɔ́]
                                  "termite hill"

A sample derivation of the above strings has been given in 4.8.13.

6.3.3.3.   Class C L Tone

The stems of nouns in class C L tone are raised to HL when
they occur in object position or in N2 position of the associative
noun construction by application of C tone-raising rule
(cf. 4.8.12.2). The examples below illustrate the point:

(18)   a.   tsɛ́tɛ́ fɛ̀rɛ̀ wã̀ ⟶   [tsɛ́tɛ́ fɛ̀rɛ̀ wã̀]
                                  "shut the window!"
       b.   mɪ̀ŋkɪ̀rɛ̀ mɪ́ dã̀ã̀ ⟶   [mɪ̀ŋkɪ̀rɛ̀ mɪ́ dã́ã̀]
                                  "ropes of wine calabash"

A sample derivation of (18.a,b) is given in 4.8.12.2.

Chapter Seven

NOUN CLASSES

7.1 Previous Studies

Some studies have been carried out on Bafut noun classes by Eastlack (1968), Dunstan (1971) and Leroy (1977a). The work that has been done so far is of a preliminary nature meant to serve for comparative purposes either within the larger framework of the Mbam-Nkam or the smaller group of Ngemba languages. However, this work has served as a base for our description of the Bafut noun class system. Moreover, studies done on related languages, particularly, studies on Mankon by Leroy (1977b), have proved very useful in our study because the N.cl. system in Mankon is very similar to that of Bafut. We have also drawn upon other works, e.g. Guthrie (1970), Hyman (ed. 1980) and, especially, Kadima (1969), whose criteria were adopted for the definition of N. classes in Mankon (Leroy, 1977b).

7.2 Definition of Noun Classes

In Bafut the noun can generally be described as having a prefix and stem. The structure of the stem has already been described in terms of syllables (cf. 6.2). Some information about the nominal structure has also been given above in relation to its tone. The nominal prefix can either be of a CV, N, or V structure, as will be seen below.

On the basis of nominal prefixes and prefixes of noun related morphemes which occur in a concordial relation to head nouns, 10 classes have been established for Bafut nouns. These are 1, 2, 3, 5, 6, 7 , 8, 9, 10, and 19. The numbering system is adopted from the one used commonly for Bantu languages and used for the Ngemba group. To the Class 19 Dunstan (1971) gives the number 11.

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7.3. Noun Prefixes

All noun prefixes in Bafut bear L tone in citation form.

7.3.1 Noun Class 1

A majority of the nouns in class 1 do not have a prefix; so we say that they have zero prefix, represented: ø- . We call this subgroup n.cl. 1a e.g.

(1) ø-fǒrə̄ "mouse"
    ø-kǎá "crab"
    ø-ǎnsāŋ "corn"
    lâmsɪ̀ "orange"
    kǎâ "car"

However, a number of nouns in this class have a nasal prefix and we label this subgroup n.cl. 1.b

(2) m-ú "child"   m̄-fɔ̄ "chief"
    m-ăngyɛ̀ "woman"   ŋ-ù "person"
    ñ-dōō "husband"
    ñ-dɪ̄mə̄ "kinsman/brother"

The prefixes of the nouns: mū, māngyɛ̀ and ŋù, have lost their tone and have become fused with the stem.

7.3.2 Noun Class 2

The prefix of n.cl. 2 is /bɪ̀-/ which is realized simply as /b-/ before a vowel.

(3) bɪ̀-fǒrə̄ "mice"   b-ɔ́ɔ́ "children"
    bɪ̀-kāā "crabs"   b-ə̀ "people"
    b-ǎnsāŋ "corn"   bɪ̀-lōō "husbands"

The /b-/ prefix of "children" and people has lost its tone and become fused with the stem.

7.3.3   Noun Class 3.

N.cl. 3 is subdivided into n.cl. 3a and n.cl. 3b depending on the prefix each noun takes. N.cl. 3a takes the prefix /ɪ-/:

(4) a.   ɪ-sā'ā   "case"
          ɪ-lɪ   "ant"
          ɪ-bɔ'ɔ   "mushroom"

N.cl. 3b takes a nasal prefix /Ñ-/:

(4) b.   m̃-bãŋ   "kernel"
          ñ-tɪɪ   "heart"
          ñ̃-gãŋ   "root"

7.3.4   Noun Class 5

N.cl. 5 is marked by the prefix /nɪ-/:

(5) nɪ-ŋgɔɔ   "plantain"   nɪ-bã   "wing"
     nɪ-bɪɪ   "breast"   nɪ-tāā   "walk"
     nɪ-kwɛɛ   "arm"   nɪ-lɪ'ɪ   "eye"

7.3.5   Noun Class 6

N.cl. 6 is characterised by the prefix /mɪ-/. /mɪ-/ is realised as /m-/ before the bilabial /b/ or as /ŋ-/ before a velar obstruent:

(6) mɪ-ŋgɔɔ   "plantains"   m̃-bɪɪ   "breasts"
     mɪ-ŋgãŋ   "roots"   m-ɪ'ɪ   "eyes"
     mɪ-njɔŋ   "thorns"   ñ̃-kwɛɛ   "arms"

7.3.6   Noun Class 7

The prefix of n.cl. 7 is /ã-/.

(7) ã-bãã   "bag"

     ã-kãŋ   "pan"   ã-bõ   "hand"

     ã-tɔ̄ɔ̄   "calabash"   ã-sõ   "hoe"

7.3.7 Noun Class 8

The prefix for N.cl. 8 is /ɨ-/:

(8) ɨ-bãã   "bags"   ɨ-tɔ̄ɔ̄   "calabashes"

     ɨ-jū'ū   "yams"   ɨ-sõ   "hoes"

     ɨ-kãŋ   "pans"   ɨ-lõõ   "years"

7.3.8 Noun Class 9

The prefix for N.cl. 9 is a nasal /Ñ-/:

(9) ñ-dã   "house"   m̃-bã   "meat"

     ŋ̃-gū   "fowl"   n-ãã   "animal"

     ñ-jɔ̃ŋ   "thorn"   n-ó   "snake"

7.3.9 Noun Class 10

The prefix for N.cl. 10 is also a nasal /Ñ-/, i.e. the same as that of n.cl. 9. Although we represent the nasal prefixes of n.cl. 9 and 10 (and some of n.cl. 3b) with a hyphen between them and the n. stem, these prefixes are actually inseparable from the n. stem.

(10) ñ-dã   "houses"   ñ-dɛ̄nɛ̄   "bamboos"

      ŋ̃-gū   "fowls"   n-ãã   "animals"

      m̃-bū   "dogs"   n-ó   "snakes"

The prefix of nãã "animal(s)" nó "snake(s)" have lost their tone and have become fused with the stem.

Noun classes 9 and 10 have been set up as separate classes because the concordial morphemes of both classes are different. This is why we have not considered them as one class that is invariable with respect to singular/plural distinction.

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7.3.10 Noun Class 19

N.cl. 19 is marked by the prefix /fî-/

(11) fî-ŋgwāŋ "salt" fî-njɔ̄ŋ "star"
      fî-nsāŋ   "broom" fî-tə̄ə̄ "wine calabash"

7.4. Concord Morphemes

In this section we are going to present some of the concordial morphemes or concord prefixes of some noun dependent or related words. The form of a noun related word or its prefix agrees with the class of the head noun such that each noun class will command the same concord prefixes or morphemes. To each noun class corresponds a different form of this morpheme (except for classes 8 and 10). An adjective also carries a class or concord prefix which corresponds to the class of the head noun it qualifies. In the following table, which illustrates concord between the head noun and the qualifier, note should be taken of the form of the possessive "my" and the adjective prefix corresponding to each noun class.

(12)

N. Cl.	Head Noun	Poss.	Conc.	Adj.	
1.	sîŋ	ghā̀	yîm	fîî	"my black bird"
2.	bîsîŋ	bā̀	bî	fîî	"my black birds"
3.	îlî	ghā̀	yî	fîî	"my black ant"
5.	nîŋgɔ̄ɔ̄	nā̀	nî	fîî	"my black plantain"
6.	mîŋgɔ̄'ɔ̄	mā̀	mî	fîî	"my black plantains"
7.	ǎbā̀ā̀	yā̀	yî	fîî	"my black bag"
8.	îbā̀ā̀	jā̀	jî	fîî	"my black bags"
9.	m̄bî	yā̀	yîm	fîî	"my black goat"
10.	m̄bî	jā̀	jî	fîî	"my black goats"
19.	fîtə̄ə̄	fā̀	fî	fîî	"my black wine calabash"

We thus see from the above table that the form of the possessive and the adjective prefix differ according to the class of the noun they qualify.

In the table below we present the concord morphemes or prefixes that are relevant and thus determinant in the classification of nouns in Bafut. Only the basic tones of these

will be given for each case when we come to study the various noun related words. The concord consonants are the consonants of the possessive morpheme "my" and the interrogative pronoun given according to each n.cl.

(13)   Table of Concords

N. Cl.	Member Noun	NPfx	SM	CC	AP	IP	Poss (my)	Dem	AM
1	sɪŋ (bird)	a) Ø- b) Ǹ-	à	gh˗-	yɪ	ghʊʊ	ghã	wã	ˉ
2	bɪsɪŋ (birds)	bɪ-	bɪ	b˗-	bɪ	bʊʊ	bã	byã	bɪ
3	ɪlɪ (ant)	ɪ-	ɪ	gh˗-	yɪ	ghʊʊ	ghã	wã	ˉ
	mɔ'ɔ (gun)	Ǹ-							
5	nɪŋgɔɔ (plantain)	nɪ-	nɪ	n˗-	nɪ	nʊʊ	ná	nyã	nɪ
6	mɪŋgɔɔ (plantains)	mɪ-	mɪ	m˗-	mɪ	mʊʊ	má	myã	mɪ
7	àbàà (bag)	à-	á	y˗-	yɪ	yʊʊ	yá	yã	ˉ
8	ɪbàà (bags)	ɪ-	ɪ	j˗-	jɪ	jʊʊ	jã	jã	ˉ
9	ńdã (house)	Ǹ-	yɪ	y˗-	yɪ	yʊʊ	yã	yã	ˉ
10	ńdã (houses)	Ǹ-	jɪ	j˗-	jɪ	jʊʊ	jã	jã	ˉ
19	fɪngwãŋ (salt)	fɪ-	fɪ	f˗-	fɪ	fʊʊ	fá	fyã	fɪ

The abbreviations used in the above table are as follows: Npfx. noun prefix; SM. subject marker; CC. concord consonant; IP. interrogative prefix; Poss. possessive; Dem. demonstrative; AM associative marker.

7.5. Genders

7.5.1 Definition

As can be noticed, the noun classes in Bafut can be paired with respect to the opposition of singular and plural. A pair of singular and plural classes is called a noun class gender. The 10

noun classes in Bafut consist of 6 singular and 4 ·plural classes
which in turn are paired in 6 major genders, 5 minor genders and a
couple of single-class genders.

The following table illustrates the pairing of the n.classes
into genders.

(15)   Singular   Plural

    N.Cl.   NPx   CC   N.Cl.   NPx   CC

            a) Ø-
       1   gh`- ←───────────────────→ 2   bỉ   b̄-
            b) Ñ-

            a) ỉ-
       3   gh̄- ←
            b) Ñ-   6   mỉ   m̄-

       5   nỉ-   n̄- ←

       7   ã-   ȳ- ←   8   ỉ ┐
                                                        ├ j̄-
       9   Ñ-   ȳ- ←   10   Ñ ┘

      19   fỉ-   f̄- ←

In the above table, the N.classes, N. prefixes, concord
consonants, and the genders are indicated. Full lines indicate
major genders while broken lines indicate minor genders. We
therefore have the following paired genders in Bafut:

    major genders: 1/2, 3/6, 7/8, 9/10, 19/6.
    minor genders: 3b/10, 7/6, 7/10, 9/6, 19/10.

In addition to paired genders we have a couple of single class
genders in Bafut. These will be treated below.

7.5.2   Contents of Genders

7.5.2.1   General Remarks

The   semantic contents of each gender seem to be very varied,
and thus it is hard to give a general semantic characterisation of

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any particular gender.

the various languages treated in Hyman (ed. 1981) and other Mbam-Nkam languages (cf. Hyman and Tadadjeu, 1976, Dunstan, 1971), the following general remarks can be made about the contents of genders in Bafut: Gender 1/2 contains human nouns while 9/10 contains mostly animals. All borrowed words fall in gender 1a/2. Body parts fall mostly in 5/6 and 7/8. Most mass nouns and liquids fall in gender 6 (cf. Heny 1972, Welmers 1973, Denny and Creider 1976, Asongwed 1976, Watters 1981, Hedinger 1981). Gerunds fall in gender 9 and gerundials fall in gender 5. These last two will be illustrated below. Gender 19/6 contains mainly small (size) things or dimunitives.

7.5.2.2 Major Genders

In the following paragraphs we are going to give examples of nouns in the major genders.

7.5.2.2.1 Gender 1/2 (humans, borrowed words)

-nəə̀/bì-   -rɛ́dyŏ/bì-
  "groundsquirrel"   "radio"
ñ-dě/bì-lě   -káà/bì-
  "mother"   "car"
-tsáà/bì-   -káǔ/bì-
  "reception house"   "cow"
-bǒǒ/bì-   -wíndǒ/bì-
  "boring ant"   "window"
-m̀fwěě/bì-   -sɪ́ŋ/bì-
  "roofer"   "bird"
ñ-dɪ̀ɪ̀/bì-lɪ̀ɪ̀   -lǔ/bì-
  "witch"   "tree rat"
-yěkǎ/bì   -búʼǔ/bì-
  "the day before market day" "chimpanzee"
-yějǒŋ/bì   -fórə̀/bì-
  "Bafut market day"   "mouse"
ñ-dǒǒ/bì-lǒǒ   -káá/bì-
  "husband"   "crab"
-trɛ́n/bì-   -tsɔ́ʼɔ́/bì-
  "train"   "partridge"

7.5.2.2.2 Gender 3/6 (assorted nouns)

ñtǒ/mì-   ŋgə̀ə̀/mì-
  "new leaf,bud"   "gutter"

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ñdə̃ŋ/mɨ-
"metal ring"
ñsõõ/mɨ-
"farm"
ŋkũũ/mɨ-
"tail"
ŋkɨ/mɨ-
"river"
ɨ-kõõ/mɨ-
"song"
ɨ-kũũ/mɨ-
"bed"
ɨ-lɨ/mɨ-
"ant"
ɨ-lə̃ŋ/mɨ-
"tapping shoot of palm"

ŋkɨrə/mɨ-
"rope"
ñdɨgɨ/mɨ-
"climber stem"
ɨ-bɔ̃'ɔ̃/mɨ-
"mushroom"
ɨ-kɨ/mɨ-
"cane"
ɨ-kũm/mɨ-
"name"
ɨ-kɔ̃'ɔ̃/mɨ-
"ladder"
ɨ-tũgə̃/mɨ-
"night"
ɨ-sã̄'ã̄/mɨ-
"case"

7.5.2.2.3 Gender 5/6 (assorted nouns)

nɨ-bã/mɨ-
"wing"
nɨ-kẽ/mɨ
"soap"
nɨ-ŋgɔ̃ɔ̃/mɨ-
"plantain"
nɨ-lwɨ/mɨ-
"nose"
nɨ-bẽ/mɨ-
"kolanut"
nɨ-kõõ/mɨ-
"headbasket"
nɨ-kũũ/mɨ-
"bean"
nɨ-sɔ̃ŋ/mɨ-
"tooth"
nɨ-bɔ̃'ɔ̃/mɨ-
"pumpkin"
nɨ-ghãã/mɨ-
"language"

nɨ-bõõ/m-
"egg"
nɨ-kwɛ̃ɛ̃/ŋ-
"arm"
nɨ-bɨɨ/m-
"breasts"
nɨ-wɛ̃ɛ̃/mɨ-
"pepple"
nɨ-kɔ̃ŋ/mɨ-
"spear"
nɨ-kə̃ŋ/mɨ-
"pipe"
nɨ-būũ/mɨ-
"corner"
nɨ-fũrə̃/mɨ-
"feather"
nɨ-gõ/mɨ-
"chest"
nɨ-ghã̄'ã̄/mɨ-
"jaw"

7.5.2.2.4 Gender 7/8 (assorted nouns)

ã-bɛ̃'ɛ̃/ɨ-
"shoulder"
ã-dɨgɨ/ɨ-
"place"
ã-fũ/ɨ-
"leaf"
ã-kã̄ŋ/ɨ-
"pan"
ã-kɨkũŋ/ɨ-
"owl"
ã-kɨŋ/ɨ-
"mortar"

ã-tɨɨ/ɨ
"half"
ã-tɨɨ/ɨ-
"waist"
ã-tə̃ə̃/ɨ-
"calabash"
ã-tũ/ɨ-
"head"
ã-yũ'ũ/ɨ
"yam"
ã-bãã/ɨ-
"bag"

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ã-kwɛ̃ɛ̃/ɨ-
  "bone"

ã-sɔ̃/ɨ-
  "hoe"

ã-tɪ̃/ɨ̃
  "tree"

ã-tɪ̃ɨ̃
  "iron"

"cloth"

ã-kõŋ/ɨ-
  "umbrella"

ã-lã'ã/ɨ-
  "country"

ã-la'a/ɨ-
  "wound"

7.5.2.2.5 Gender 9/10 (animals)

nɔ̃/ñ
  "snake"

nɯ̃/ñ
  "honey"

ñ-jãã/ñ-
  "axe"

ñ-jyã/ñ-
  "soup"

ñ-jɨm/ñ-
  "back"

m̃-fwɛ̃ɛ̃/m̃-
  "bangle"

m̃-bã/m̃-
  "meat"

ñ-dɔ̃ŋ/ñ-
  "cup"

ñ-tɔ̃'ɔ̃/ñ-
  "palace"

ñ-tã'ã/ñ-
  "mountain/hill"

m̃-bɪ̃/m̃-
  "goat"

m̃-bū/m̃-
  "dog"

ŋ̃-gū/ŋ̃-
  "fowl"

ñ-dã/ñ-
  "house"

ñ-tãm/ñ-
  "shoe"

ŋ̃-gyã/ŋ̃-
  "week"

ŋ̃-gyã/ŋ̃-
  "antelope"

ŋ̃-kãã/ŋ̃-
  "monkey"

ŋ̃-kõm/ŋ̃-
  "box"

ŋ̃-kwã'ã/ŋ̃-
  "scaby"

7.5.2.2.6 Gender 19/6 (diminutives)

fɨ-kũũ/mɨ-
  "small bed"

fɨ-njɔ̃ŋ/mɨ-
  "star"

fɨ-ntã/mɨ-
  "fruit"

fɨ-nsãŋ/mɨ-
  "broom"

fɨ-lɨnjwõrə̃/mɨ-
  "kind of mushroom"

fɨ-njɔ̃ɔ̃/mɨ-
  "toad"

fɨ-tɔ̃ə̃/mɨ-
  "small wine fish"

fɨ-ntsũm/mɨ-
  "small drum"

fɨ-ŋgɛ̃ɛ̃/mɨ-
  "small cane"

fɨ-ŋgwãŋ/mɨ-
  "salt"

fɨ-ŋkõbə̃/mɨ-
  "statue"

fɨ-lɨnjɪ̃/mɨ-
  "fly"

fɨ-lɨnjõõ/mɨ-
  "small biting fly"

fɨ-bwɛ̃/m̃-
  "fish"

7.5.2.3 Minor Genders

Minor genders consist of much fewer words than the major genders above. They are probably of closed classes.

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7.5.2.3.1 Gender 3b/10 (assorted nouns)

```
m̀-bǎŋ/m̀-    "kernel"
ñ-də̄ŋnə̄/ñ-   "bamboo"
```

7.5.2.3.2 Gender 7/6 (body parts)

```
à-fã'ã/mɨ-    "job,work"
à-kŏrə̄/mɨ-    "foot"
à-kū'ūtə̄/mɨ-  "knee"
```

7.5.2.3.3 Gender 7/10 (assorted nouns)

```
à-yōō/ñ-jōō    "thing"
```

7.5.2.3.4 Gender 9/6 (assorted nouns)

```
ñ-jɔ̄ŋ/mɨ-    "thorn"
```

7.5.2.3.5 Gender 19/10 (assorted nouns)

```
fɨ-kwēē/ŋ̀-    "firewood"
```

7.5.2.4 Single Class Genders

Single class genders may be found in most of the n.classes in Bafut. However, we are going to discuss only those that have a considerable number of nouns in them.

7.5.2.4.1 Gender 6 (Liquid or uncountable nouns)

```
mɨ-wǎŋ       "porridge"
mɨ-kǎà       "gun powder"
mɨ-kŏŏ       "juju"
mɨ-lū'ū      "wine"
mɨ-tō        "intestines"
mɨ-wĕntə̄     "goose pimples"
mɨ-wūrə̄      "oil"
mɨ-tsyɛ̄      "intelligence, wisdom"
mɨ-tɨɨ       "power, strength"
```

7.5.2.4.2 Gender 9 (Gerunds)

All gerunds are in this gender.

ñ-tə̄ə̄	"standing"
ñ-yI	"knowing"
ŋ̃-fǎ'ɛ̄	"coming out"
m̃-fǎ	"giving"
m̃-fɛ̄ɛ̄	"slapping"
ŋ̃-kwɛ̃rə̄	"taking"

7.5.2.4.3 <u>Gender 5 (Gerundials)</u>

nɨ-tə̄ə̄	"walk"
nɨ-wyɛ̃	"laugh"
nɨ-ghãə̄	"manner of talking"
nɨ-tsə̄'ə̄	"wildness"

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Chapter Eight

THE ASSOCIATIVE CONSTRUCTION

8.1. Associative Marker

The associative construction is used to express a number of relations, especially possession, content and origin. The possessed or head noun will be N1 while the possessor or specifier will be N2.

The associative marker in Bafut depends upon the n.class of the head noun (N1). The marker for each class is presented below in table 1.

(1)   N.Cl.   AM and Tone

N.Cl.	AM and Tone
1	Ļ
2	bɨ́
3	Ḥ
5	nɨ́
6	mɨ́
7	Ḥ
8	Ḥ
9	Ļ
10	Ḥ
19	fɨ́

As can be seen from table (1) the associative marker is either a CV or merely a floating tone symbolized by o below the tone mark. Just as in most Mbam-Nkam languages (cf. Hyman and Tadadjeu 1976:75) the segmentals of the associative marker have been dropped for a majority of the classes retaining only the tone which Welmers (1959) calls a "tonal morpheme." As in most of the Mbam-Nkam languages, the associative marker of n.cl. 1 and 9 is characterized by a L tone while the rest of the classes have a H tone. However, in Bafut the characteristic low floating tone found in n.cl. 1 seems to be phasing out because its influence on neighbouring tones is not as strongly felt as that of a normal surface L tone or that exercised by the H tone marker in the other n. classes. In order to derive the correct surface tones, the

following rules and
noted.

(2) The floating tone is assigned to a syllabic unit.
This is called tone grounding (cf. T-rule 4).

It is difficult to set any fixed rules regarding the
direction of floating tone grounding since tones can be grounded
in either direction, i.e. to the left or to the right. Moreso, in
some cases the effect of the floating tone is felt in both
directions. However, there are three generally observed
tendencies.

(3) a. The floating tone of the marker in n.cl. 1 is
grounded generally to the left (if it is not
deleted).
b. The floating tone of the marker in n.cl.9 may
be grounded in either direction.
c. The floating tone of the marker in the rest
of the n.classes (3, 7, 8, 10) is grounded
generally to the left.

The effect of the n.class of the head noun (N1) is so
determinant in the tonal alternations observed in the associative
construction that it is important to pay attention to each noun
class. We will group the noun classes together in our discussion,
according to the nature of the associative marker. They will be
treated in the following groups: (1) Noun classes 1 and 9 :
with Ļ (2) Noun classes 2, 5, 6, 19: with CV̀ (3) Noun
classes 3, 7, 8, 10: with Ḥ

8.2   Noun Classes 1 and 9

The associative marker for noun classes 1 and 9 is a floating
L tone. Although the associative marker for both classes is the
same, i.e. Ļ, its influence on like tone patterns is not always
the same in each context in both classes. Moreover, there are
some differences in the tone patterns found in these classes. We
shall treat these classes in turn pointing out, where necessary,

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the differences or similarities in their tonal patterns and alternations.

8.2.1 Noun class 1

8.2.1.1 Tone of Head Noun (N1)

The following examples show the tone patterns that were found in n.cl. 1 and their tonal behaviour in N1 position.

(4) a. bá'ǎ ˋ ˊfǒrə̄ ⟶ [bá'ǎ 'fǒrə̄]
"calabash dish of mouse"

b. mǎˋghǒ́ǒ́ ˋ ˊfǒrə̄ ⟶ [mǎ'ghǒ́ǒ́ 'fǒrə̄]
"hawk of mouse"

c. ñdǒ́ǒ̀ ˋ ˊfǒrə̄ ⟶ [ñdō̄ō̄ fǒrə̄]
"husband of mouse"

d. ānsáŋ ˋ ˊfǒrə̄ ⟶ [ānsāŋ fǒrə̄]
"maize of mouse"

e. kwǐŋyǎm ˋ ˊfǒrə̄ ⟶ [kwǐŋyǎm fōrə̄]
"pig of mouse"

f. ˋrɛ́dyō̄ ˋ ˊfǒrə̄ ⟶ [rɛ̄dyò fōrə̄]
"radio of mouse"

g. tsǎǎ ˋ ˊfǒrə̄ ⟶ [tsǎǎ fōrə̄]
"reception house of mouse"

(5) a. bá'ǎ ˋ ākɨ́kúŋ ⟶ [bá'ā kɨ́kúŋ]
"calabash dish of owl"

b. ñdǒ́ǒ̀ ˋ ākɨ́kúŋ ⟶ [ñdō̄ō̄ kɨ́kúŋ]
"husband of owl"

c. ˋtáǎ ˋ ātsə̄ ⟶ [tā tsə̄]
"lineage head"

d. māŋgyɛ̀ˊ ˋ ñtɔ́'ɔ́ ⟶ [māŋgyɛ̀ ntɔ̄'ɔ̀]
"chief's wife"

e. mɨtǎá ˋ bɨfɨ̄ɨ̄ ⟶ [mɨtāā bɨfɨ̄ɨ̄]
"Bafut market"

In (4a-g) it can be noticed that the surface tone patterns of N1 are explained with reference to the underlying tones given in

the input strings. We, in all examples except in (4c,d). The tone changes in N2 will be discussed below.

It can be noticed that the tones of N1 in (5a-e) change. A sample derivation of (5a,b) will be given in (14) below. The derivation of (5c) has already been given in 4.8.8. The second syllable of /tāā/ is deleted for semantic reasons. This makes it to fall in tune with other expressions like:

(6) a. ˋtáā ˉ mū → [tā mū]
                "father of child"

    b. ˋtáā ˉ lkōō → [tā kōō]
                "song leader"

    c. ˋtáā ˉ ˊfōrā → [tā fōrā]
                "father of rat"

The deletion of the second syllable of /tāā/ distinguishes the above constructions semantically from the following appositional constructions:

(7) a. ˋtáā ātsā̀ → [tāā tsā̀]
                "Father Atsā̀"

    b. ˋtáā ɨkōō → [tāā kōō]
                "Father Ikōō"

    c. ˋtáā ˊfōrā → [tāā fōrā]
                "Father Fōrā or Papa Fōrā"

In (5d) we notice that the tone of the last syllable of /mãŋgyɛ̀/ (citation tone) is raised. This raising effect is also seen in (5e). The derivation of (5d) is given here below:

(8) a. mãŋgyɛ̀ˋ ˉ ñtɔ'ɔ   underlying
    b. mãŋgyɛ̀ ˉ ñtɔ'ɔ   tone grounding
    c. mãŋgyɛ̀ ˉ ñtɔ'ɔ   tone lowering
    d. mãŋgyɛ̀ ˉ ñtɔ'ɔ   desyllabification
    e. mãŋgyɛ̀ ˉ ntɔ'ɔ   tone coalescence
    f. mãŋgyɛ̀ ntɔ'ɔ   tone grounding
    g. mãŋgyɛ̀ ntɔ'ɔ   tone lowering

In (8a) the underlying tones of /māŋgyɛ̄⁻/ are given. The underlying tones are different from the citation tones, which are all L tones. The floating H tone after the second syllable of this word is posited to explain the change of tones as noticed in the associative construction. In b. the floating H tone of N1 grounds on the last syllable. In c. the LH contour tone is lowered to LM by T-rule 1. In d. the homorganic nasal prefix of N2 desyllabifies by P-rule 4. Its tone is assigned to the left where it coalesces with the L tone associative marker as in (8e). In (8f) the floating L tone is grounded to the left where it creates a LML glide on the adjacent syllable of N1. In (8g) the L tone of the contour tone lowers the H tone of the N2 stem.

In (5e) we notice that the last tone of N1 is raised to M. This is in line with the behaviour of other group B L tone nouns in this context. This leads us to the following tone rule:

(9)   Tone rule 17 (B Tone raising 2). The rule
      states: The last stem tone of class B L tone
      nouns is raised to M in N1 position in the
      associative construction.

The derivation of (5e) is as follows:
(10) a. mɪ̄tāā   Bɪ̀fɪ̀ɪ̀   citation tones
      b. mɪ̄tāā   Bɪ̀fɪ̀ɪ̀   T-rule 1

In (10a) the citation tones are given; In (10b) the last tone of N1 is raised to M by T-rule 17.

8.2.1.2   <u>Tone of Prefix of N2</u>

The tone of prefixes in N2 position behaves as follows:

(11) a.   the tone of the CV prefix is L.
      b.   The tone of the nasal prefix is either
           (a) deleted or (b) assigned to the left where it
           eventually gets grounded on the preceding
           syllable.
      c.   The tone of the V prefix is assigned to the left
           where it eventually gets grounded on the preceding
           syllable.

The following examples illustrate the above rules.

(12) a. ˉbáˀòˉ   ᵑɡᵘᵘ

                           "calabash dish of plantains"

      b. ñdóõˉ   ākɪ́kúŋ   →   [ñdõõ kɪ́kúŋ]
                           "husband of owl"

      c. ˉfórə̄ˉ   ñdā   →   [fórə̄ ndā]
                           "mouse of house (house mouse)"

    In (12a) the floating L tone of the marker is grounded to the
right on the L tone prefix of N2 where it is absorbed. The
floating H tone of the N1 prefix is grounded to the right where it
is absorbed by the stem H tone.
    The derivation of (12b) is as follows:

(13) a. ñdóõˉ   ākɪ́kúŋ   underlying
      b. ñdóõˉ ˉ ˉ kɪ́kúŋ   V-deletion
      c. ñdóõˉ   kɪ́kúŋ   tone coalescence
      d. ñdõõˉ   kɪ́kúŋ   tone lowering
      e. ñdõõ   kɪ́kúŋ   tone grounding and absorption
      f. ñdõõ   kɪ́kúŋ   tone lowering

    In (13a) the underlying tones are given; in (13b) the vowel
prefix of N2 is deleted in (13c) the tone of the deleted V-prefix
coalesces with the floating L tone of the marker; in d. the L
tone of the prefix lowers the H tone N1 stem to M. In (13e) the
floating L tone is grounded to the left on the preceding syllable
of N1 where it it is absorbed into the preceding low tone of N1.
In (13f) the low tone of N1 lowers the first H tone of N2 stem to
M.

    The derivation of (12c) is given here below:

(14) a. ˉfórə̄ˉ   ñdā   underlying
      b. fórə̄ˉ   ñdā   tone grounding to the right
      c. fórə̄ˉ   ñdā   desyllabification
      d. fórə̄ˉ   ndā   tone coalescence
      e. fórə̄   ndā   tone grounding
      f. fórə̄   ndā   tone lowering

    In (14a) the underlying tones are given; in b. the H of the
N1 prefix grounds to the left on the noun stem where it is
absorbed by the H tone of the stem. In (14c) the nasal prefix of
N2 is desyllabified by P-rule 4 and its tone is assigned to the

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left where it coalesces with the L marker as in (14d); in (14e)
the floating L tone is grounded to the left on the adjacent
syllable of N1 where it creates a HL contour tone. In (14f) the
HL tone of N2 is lowered to ML by T-rule 1.

The general tendencies observed in (3) and (11) above confirm
the observations regarding floating tone grounding given under
T-rule 4 in 4.8.4. We notice that the floating tones of the
associative markers of noun classes 1 and 9, the tone of the
desyllabified nasal prefix, and the floating tone of deleted
V-prefixes of N2 are generally grounded to the left. The floating
H tones of noun prefixes are grounded to the right on the noun
stem (when not deleted).

8.2.1.3 Tone of N2 Stem

The examples in tables (15-18) below show the tone patterns
of N2 stems after the most common tone patterns found on N1.

(15) a. ˉbāʹā ˎ ˉfōrə   ⟶ [bāʹā ʹfōrə]
          "calabash dish of mouse"

      b. ˉmāˋghōō ˎ ˉfōrə ⟶ [māʹghōō ʹfōrə]
          "hawk of mouse"

      c. ñdōō ˎ ˉfōrə   ⟶ [ñdōō fōrə]
          "husband of mouse"

      d. āsāŋ ˎ ˉfōrə   ⟶ [ānsāŋ fōrə]
          "maize of mouse"

(16) a. ˉlūʹū ˎ ˉmāˋghōō ⟶ [lūʹū ʹmāʹghōō]
          "spoon of hawk"

      b. ˉlūʹū ˎ ˉmāā   ⟶ [lūʹū ʹmāā]
          "spoon of grandmother"

      c. ˉlūʹū ˎ ākɨkūŋ   ⟶ [lūʹū kɨkūŋ]
          "spoon of owl"

      d. ˉlūʹū ˎ ɨjūʹū   ⟶ [lūʹū jūʹū]
          "spoon of yams"

      e. ˉlūʹū ˎ ˋtāā   ⟶ [lūʹū tāā]
          "spoon of father"

f. ´lū'ū ˉ kɔ́ſſ → [lū'u kɔ́ſſ]
"spoon of coffee"

g. ´lū'ū ˉ ´sɔ̄rə̄ → [lū'ū sɔ̄rə̄]
"spoon of witch"

(17) a. ñdōō ˉ ´má⁻ghōó → [ñdōō má'ghōó]
"husband of hawk"

b. ñdōō ˉ ´māā̄ → [ñdōō máā̄]
"husband of grandmother"

c. ñdōō ˉ ākɪ̄kū́ŋ → [ñdōō kɪ̄kū́ŋ]
"husband of owl"

d. ñdōō ˉ āyū'ū → [ñdōō jū'ū]
"husband of yam"

e. ñdōō ˉ ˋtáā → [ñdōō tāā̀]
"husband of father"

f. ñdōō ˉ ˉkɔ̄fɪ́ → [ñdōō kɔ̄fɪ́]
"husband of coffee"

g. ñdōō ˉ ´sɔ̄rə̄ → [ñdōō sɔ̄rə̄]
"husband of witch"

(18) a. ´tsāā̄ ˉ ´fōrə̄ → [tsāā̄ fōrə̄]
"reception house of mouse"

b. ´tsāā̄ ˉ má⁻ghōó → [tsāā̄ má'ghōó]
"reception house of hawk"

c. ´tsāā̄ ˉ ´māā̄ → [tsāā̄ māā̄]
"reception house of grandmother"

d. ´tsāā̄ ˉ ākɪ̄kū́ŋ → [tsāā̄ kɪ̄kū́ŋ]
"reception house of "owl""

e. ´tsāā̄ ˉ ɪ̄jū'ū → [tsāā̄ jū'ū]
"reception house of yams"

f. ´tsāā̄ ˉ ˋtáā → [tsāā̄ tāā̀]
"reception house of father"

g. ´tsāā̄ ˉ ˉkɔ̄fɪ́ → [tsāā̄ kɔ̄fɪ́]
"reception house of coffee"

h. ´tsāā̄ ˉ ´sɔ̄rə̄ → [tsāā̄ sɔ̄rə̄]
"reception house of witch"

As can be seen in (12a-c) the (citation) tones of N2 stems

are hardly affected. The effect of the tone of the marker appears to be relatively limited.

Most of the N2 in (15-18) are prefixless nouns. (These however have an underlying floating prefix H tone.) These include most of the tone patterns attested on two syllabic nouns. The tone affected in N2 stem is mostly H tone. The H tone of N2 in (15a,b) and (16a) is downstepped after the L of the marker. The derivation of (15a) is as follows:

(19) a. ˉbá'á ˘ ˉfórә   underlying tones
      b. bá'á ˘ ˉfórә   tone grounding to the right
      c. bá'á ˘ fórә   tone grounding to the right
      d. bá'á   fórә   tone grounding to the left
      e. bá'á   'fórә   tone simplification and ds

In (19a) the underlyilng tones are given. In (19b-c) the floating H tones of the noun prefixes are grounded to the right where these are absorbed by the H tones of the noun stems In (19d) the L tone of the marker is grounded to the left. In (19e) the contour tone simplies causing the following H tone of N2 stem to dowstep.

The derivation of (15b) is as follows:

(20) a. ˉmáˉ ghóõ ˘ ˉfórә   underlying
      b. máˉghóõ ˘ fórә   tone grounding to the right
      c. mághóõ ˘ fórә   tone grounding
      d. má'ghóõ ˘ fórә   tone simplification and ds
      e. má'ghóõ   fórә   tone grounding
      f. má'ghóõ   'fórә   tone simplification and ds

In (20a) the underlying tones are given. In b. the floating H tones of the noun prefixes both ground to the right on their respective noun stems. It is quite possible that /má'ghóõ/ is a compound noun resulting from the associative construction. In (20c) the L tone between /má-/ and /-ghóõ/ is grounded to the left on /má-/ forming a HL contour tone which simplifies in (20d) causing the following H tone of /-ghóõ/ to downstep. In (20e) the floating L tone associative marker between N1 and N2 grounds to the left forming a HL contour tone on N1. In (20f) the contour tone simplifies and causes the following H tones to downstep.

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In (18d) the H
marker is deleted.

In (18a-h) the Ļ marker is grounded to the left where it is
absorbed into the preceding L tone of N1. The H tone of N2 stem is
lowered by the preceding L of N1 (cf. T-rule 1). The rest of the
tone patterns of N2 stem in (18a-h) do not change.

8.2.2 Noun Class 9

8.2.2.1 Tone of N1

The tones of N1 are presented in (21) below.

(21) a.   ˉnwĬ ˮ   m̄fɔ̄   →   [nwĬ mfɔ̄]
                                "cutlass of chief"
      b.   ñdə̄ŋnə̄ˮ ˮ m̄fɔ̄ →   [ñdə̄ŋnə̄ mfɔ̄]
                                "bamboo of chief"
      c.   ñtɔ̄'ɔ̄ ˮ ˉfŏrə̄   →   [ñtɔ̄'ɔ̄ fŏrə̄]
                                "palace of mouse"
      d.   m̄bə̄'ə̄ ˮ m̄fɔ̄   →   [m̄bə̄'ə̄ mfɔ̄]
                                "Bambui of chief"
      e.   ñjə̄ə̄ ˮ m̄fɔ̄   →   [ñjə̄ə̄ mfɔ̄]
                                "axe of chief"
      f.   ŋgɔ̄'ɔ̄ ˮ m̄fɔ̄   →   [ŋgɔ̄'ɔ̄ mfɔ̄]
                                "termite of chief"

The patterns L-MH in (21b) was not found in n.cl. 1. As can
be seen by comparing (4) and (21), there are tone patterns in
n.cl. 1 that are not found in n.cl. 9.

In the above examples, except in (21b) and (21f), the Ļ tone
associative marker is assigned to the left.

The derivation of (21a) is similar to that of (12c) given in
(14).

In (21b) the floating L tone of the last syllable of N1, the
floating L tone of the marker, and the L tone of the nasal prefix
of N2 are deleted.

The derivation of (21c) is given here below:

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(22) a.  ñtɔ'ɔ ˜ ˊfɔ́rā    underlying
     b.  ñtɔ́'ɔ ˜ fɔ́rā    tone grounding to the right
     c.  ñtɔ́'ɔ   fɔ́rā    tone grounding and absorption
     d.  ñtɔ́'ɔ   fɔ́rā    tone lowering
     e.  ñtɔ́'ɔ   fɔ̄rā    tone lower‿ing
```

We notice that in (22c) the L tone of the marker is grounded to the left where it is absorbed into the L tone of the adjacent syllable of N1; in (22d) the L tone of the N1 prefix lowers the H tone of the stem. In (22e) the preceding L tone lowers the following H tones of N2 to MM.

The derivation of (21f) is as follows:

```
(23) a.  ŋgɔ'ɔ ˜  m̄fɔ    underlying
     b.  ŋgɔ'ɔ ˜  m̄fɔ    desyllabification
     c.  ŋgɔ'ɔ ˜  mfɔ    tone coalescence
     d.  ŋgɔ'ɔ    mfɔ    tone deletion
     e.  ŋgɔ'ɔ    mfɔ    tone lowering
```

In (23a) the underlying tones are given; in (23b) the homorganic nasal prefix of N2 desyllabifies by P-rule 4, and its tone is assigned to the left where it coalesces with the floating L tone of the marker. In (24d) the floating L tone is deleted. In (23e) the H tone of N1 is lowered by the preceding L tone.

8.2.2.2 Tone of Prefix of N2

The tone of the prefix of N2 in N.cl. 9 behaves in the same way as described for n.cl. 1. The rules given in (11) above hold true for the tonal behaviour of N2 Prefix following N1 in n.cl. 9. The following examples illustrate the behaviour of N2 prefix.

```
(24) a.  ˋnwɪ ˜  bɪtāā  ⟶  [nwɪ bɪtāā]
                             "cutlass of fathers"
     b.  ˋnwɪ ˜  nɪŋgɔɔ ⟶  [nwɪ nɪŋgɔɔ]
                             "cutlass of plantain"
     c.  ˋnwɪ ˜  mɪlū'ū ⟶  [nwɪ mɪlū'ū]
                             "cutlass of wine"
     d.  ˋnwɪ ˜  ākɪkūŋ ⟶  [nwɪ kɪkūŋ]
                             "cutlass of owl"
     e.  ˋnwɪ ˜  m̄fɔ   ⟶  [nwɪ mfɔ]
                             "cutlass of chief"
```

In the above example ⟨...⟩
underlying tone of the noun prefix. This floating L tone is simply deleted in this construction. In (24a-c) the floating tone L tone of the associative marker is grounded to the right where it is absorbed into the L tone of the prefix while in (24d,e) both the tone of the marker and N2 prefix are assigned to the left. The derivations of the above examples are similar to those given for (13) above.

8.2.2.3 Tone of stem of N2

The tones of N2 stems are presented below.

(25) a. ˉnwI ˉ ˉfōrə̄ ⟶ [nwI 'fōrə̄]
                          "cutlass of mouse"
     b. ˉnwI ˉ ˉmāā ⟶ [nwI 'māā]
                          "cutlass of grandmother"
     c. ˉnwI ˉ ñtɔ̄'ɔ̄ ⟶ [nwI ñtɔ̄'ɔ̄]
                          "cutlass of Palace"
     d. ˉnwI ˉ ˉtāā ⟶ [nwI tāā]
                          "cutlass of father"
     e. ˉnwI ˉ ˉkɔ̄fI ⟶ [nwI kɔ̄fI]
                          "cutlass of coffee"
     f. ˉnwI ˉ m̄fwèè ⟶ [nwI mfwèè]
                          "cutlass of roofer"

(26) a. ñjāā ˉ ˉfōrə̄ ⟶ [ñjāā fōrə̄]
                          "axe of mouse"
     b. ñjāā ˉ ˉmāā ⟶ [ñjāā māā]
                          "axe of grandmother"
     c. ñjāā ˉ ntɔ̄'ɔ̄ ⟶ [ñjāā ntɔ̄'ɔ̄]
                          "axe of palace"
     d. ñjāā ˉ tāā ⟶ [ñjāā tāā]
                          "axe of father"
     e. ñjāā ˉ ˉkɔ̄fI ⟶ [ñjāā kɔ̄fI]
                          "axe of coffee"
     f. ñjāā ˉ m̄fwèè ⟶ [ñjāā mfwèè]
                          "axe of roofer"

As can be seen from the above examples, i.e., in (25) and (26), only the H tone of N2 stem is affected by the floating L tone of the associative marker. This was also noted for the N2 stem tone in n.cl. 1. The derivation of (25a) would be same as that of (15a) given in (19) above.

From the above study the following conclusions can be made about the floating L tone associative marker for noun classes 1 and 9. The effect of this marker is not as prominent as will be seen for the other noun classes. In both n.cl. 1 and 9 very few tone patterns are affected by the marker per se. The tone that is affected in N2 position is an immediate stem H tone. The tone of the prefix is not changed per se since it is simply assigned to a preceding tone or syllable. Morever this very behaviour is noticed in other grammatical constructions, as will be seen in the section on verbs. Most tone changes that occur in N1 stems are caused by the tone of either the vowel or nasal prefix (cf. 5a-d). The L tone has a tendency to be deleted in all other tonal contexts. Judging from this behaviour we can, therefore, conclude that the L tone of the associative marker for n.cl. 1 and 9 is on its way to being lost completely.

8.3   Noun Class 2, 5, 6 and 19

In the associative construction noun classes 2, 5, 6, and 19 behave in a similar way with respect to the tonal alternations involved. Our discussion in this section will be based on common and pertinent tone patterns represented in this group of noun classes.

8.3.1   The Associative Marker

The associative marker in each of the above classes is of the form Cǔ :

(27)   N.Cl.   AM and Tone

2	bɨ
5	nɨ
6	mɨ
19	fɨ

As can be noticed in the above examples, the tone of the marker in all classes is H. The underlying H tone of the marker

can be affected by
prefix.

(28) a. nɪ̄bāsə̄ˋ nɪ̄ m̄fɔ̄   →   [nɪ̄bāsə̄'ˋ 'nɪ̄ mfɔ̄]
                                "kind of insect of chief."
     b. mɪ̄ŋɔ̄ɔ̄ mɪ̄ m̄fɔ̄   →   [mɪ̄ŋɔ̄ɔ̄ mɪ̄ mfɔ̄]
                                "plantains of chief."
     c. bɪ̄bā'ā bɪ̄ àkɪ̀kūŋ →   [bɪ̄bā'ā bɪ̄ kɪ̀kūŋ]
                                "calabash dishes of owl"
     d. bɪ̄kɔ̄bə̄ bɪ̄ mɪ̄lū'ū →   [bɪ̄kɔ̄bə̄ bɪ̄ mɪ̄lū'ū]
                                "cups of wine"

In (28a) the H tone of the marker is downstepped as a result
of tone processes involving the intervention of the HL contour
tone of the preceding N1. The derivation of (28a) is similar to
that of (30) below. In (28b) the preceding L tone of N1 lowers the
tone of the marker to M. In (28c) the tone of the prefix of N2 is
assigned to the marker where it creates a HL contour tone. The
derivation of this phrase will be given in (35) below. In (28d) we
notice that the tone of the marker is not affected. The
derivation of this string will be given in (34) below.

8.3.2 Tone of N1

The following examples have been chosen to illustrate the
behaviour of the commonly attested tone patterns of N1 in the noun
classes under consideration.

(29) a. bɪ̄fórə̄ bɪ̄ m̄fɔ̄   →   [bɪ̄fōrə̄ bɪ̄ mfɔ̄]
                                "mice of chief"
     b. nɪ̄bāsə̄ˋ nɪ̄ m̄fɔ̄   →   [nɪ̄bāsə̄'ˋ 'nɪ̄ mfɔ̄]
                                "type of insect of chief"
     c. fɪ̄tə̄ə̄ fɪ̄ m̄fɔ̄   →   [fɪ̄tə̄'ə̄ 'fɪ̄ mfɔ̄]
                                "wine calabash of chief"
     d. bɪ̄kɔ̄fɪ bɪ̄ m̄fɔ̄   →   [bɪ̄kɔ̄fɪ bɪ̄ mfɔ̄]
                                "coffee of chief"
     e. mɪ̄ghāghə̄ mɪ̄ m̄fɔ̄ →   [mɪ̄ghāghə̄ mɪ̄ mfɔ̄]
                                "praying mantises of chief"
     f. mɪ̄ŋɔ̄ɔ̄ mɪ̄ m̄fɔ̄   →   [mɪ̄ŋɔ̄ɔ̄ mɪ̄ mfɔ̄]
                                "plantains of chief"

In (29a) the H tone of the stem of N1 is lowered by the L

(..)	a.	bə...'ā bə m			
	b.	bǐlə...'ā bǐ m			
	c.	bǐbə...'ā bǐ m			
	d.	bǐbā'ā bǐ mǐkūū	mya		tone spreading
	e.	bǐbā'ā bǐ mǐ'kūū	myā⁻		tone simplification and ds
	f.	bǐbā'ā bǐ mǐkūū	'myā⁻		tone simplification and ds
	g.	bǐbā'ā bǐ mǐkūū	'myā		tone grounding

In (37a) the underlying tones are given. In (37b) the L tone of the prefix lowers the H tones of the stem of N1 to M. In (37c) the H tone of the marker spreads onto the prefix of N2 creating a HL contour tone on it. In (37d) the H tone of the N2 stem spreads onto the L tone of the second syllable where it creates a HL contour tone. In (37e) the contour tone on the N2 prefix simplifies causing the following H tones on the stem of N2 to downstep. In (37f) the HL contour tone on the second syllable of N2 simplifies as indicated thus causing the following H tone to downstep. In (37g) the floating L tone of the demonstrative grounds and creates a HL contour on its stem.

The derivation of (36f) is as follows:

(38)	a.	bǐlə̄ŋə̄ bǐ ⁻tāā	underlying tones
	b.	bǐlə̄ŋə̄ bǐ tāā	tone deletion
	c.	bǐlə̄ŋā bǐ tāā	tone lowering

In (38a) the underlying tones are given. In (38b) the H tones of the stem of N1 are lowered by the L tone of its prefix to M. In (38c) the L tone of N2 prefix is deleted.

The derivation of (36g) is given below:

(39)	a.	fǐntā fǐ ⁻kɔfI	underlying
	b.	fǐntā fǐ kɔfI	tone grounding
	c.	fǐntā fǐ kɔfI	tone lowering
	d.	fǐntā fǐ kɔfI	tone lowering

In (39a) the underlying tones are given. We have posited an underlying H as the prefix tone of the noun /⁻kɔfI/ to explain the HL contour tone on the first syllable of this noun when used in the object position or in N2 position as in (36g). In (39b) the floating tone of the N2 is grounded to the right where it creates a HL contour tone on the N2 stem. In (39c) the H tone of the

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In (35a) the underlying tones are given. In (35b) the L tone
of N1 prefix lowers the following H tones of the stem to M. In
(35c) the V-prefix of N2 is deleted and its tone is assigned to
the left on the marker where it forms a HL contour tone as in
(35d). In (35d) the low tone on the marker lowers the first H tone
of N2 to M.

8.3.4 Tone of Stem of N2

In our discussion of the tones of N1 and prefix of N2 we have
noticed that the tones of some of the N2 stems do not change. We
will present some of the common N2 tone patterns, most of which
undergo tonal changes.

(36)   a.   mɪ̀kɔ̃rə̀ mɪ̀ ˉfɔ́rə́   ⟶   [mɪ̀kɔ̃rə̀ mɪ̀ fɔ́rə́]
                                          "legs of mouse"
       b.   nɪ̀bũrə̀ nɪ̀ ˉfɔ́rə́   ⟶   [nɪ̀bũr'ə́ 'nɪ̀ fɔ̃rə́]
                                          "faeces of mouse"
       c.   mɪ̀nɔ̃ŋ mɪ̀ bɪ̀fɔ́rə̀   ⟶   [mɪ̀nɔ̃ŋ mɪ̀ bɪ̀fɔ̃rə̀]
                                          "hairs of mice"
       d.   nɪ̀ŋgɔ̃ɔ̃ nɪ̀ ˉmáã   ⟶   [nɪ̀ŋgɔ̃ɔ̃ nɪ̀ máã]
                                          "plantain of grandmother"
       e.   bɪ̀bá'ã bɪ̀ mɪ̀kũũ myá˘ ⟶   [bɪ̀bã'ã bɪ̀ mɪ̀'kũũ 'myã]
                                          "calabash dishes of the beans"
       f.   bɪ̀lə̃ŋə̀ bɪ̀ ˉtãã   ⟶   [bɪ̀lə̃ŋə̀ bɪ̀ tãã]
                                          "horses of father"
       g.   fɪ̀ntã fɪ̀ ˉkɔ̃fɪ   ⟶   [fɪ̀ntã fɪ̀ kɔ̃fɪ]
                                          "fruit of coffee"
       h.   mɪ̀ŋgɔ̃ɔ̃ mɪ̀ ñsɔ́ɔ́   ⟶   [mɪ̀ŋgɔ̃ɔ̃ mɪ̀ nsɔ́ɔ́]
                                          "plantains of farm"
       i.   fɪ̀tãã fɪ̀ ˉsɔ̃rə̀   ⟶   [fɪ̀tãã fɪ̀ sɔ̃rə̀]
                                          "huckleberry seed of witch"

In (36a) the H tone of N2 does not change. In (36b) the H
tone of the marker is downstepped by the tone processes involved
in the derivation of the tones of N1 (cf. 8.3.2 (30)). As a result
of the preceding 'H, the H tone of N2 is also downstepped. In
(36c) the L tone of the HL contour tone on the N2 prefix lowers
the H tone of the stem to M. The H L tone pattern of N2 stem in
(36d) is not changed. The derivation of the tones of N2 in (36e)
is given here below.

b. mɨ̀ʔɔ̄ mɨ́ nɔ̀

c. bɨ̀kɔ̄bɔ̄ bɨ̀ mɨ̀ʔ

d. fɨ̀tə̄ə̄ fɨ́ m̄fɔ̄   ⟶   [fɨ̀tə́ə̄ 'fɨ́ mfɔ̄]
                                    "wine calabash of chief"

e. bɨ̀bá'ā bɨ́ ākɨ̄kūŋ ⟶ [bɨ̀bā'ā bɨ́ kɨ̄kūŋ]
                                    "calabash dishes of owl"

The derivation of (32a) is as follows:

(33) a. nɨ̀ŋɔ̄ɔ̄ nɨ́ bɨ̀tāā   underlying tones
       b. nɨ̀ŋɔ̄ɔ̄ nɨ́ bɨ̀tāā   tone spreading
       c. nɨ̀ŋɔ̄ɔ̄ nɨ́ bɨ̀tāā   tone lowering
       d. nɨ̀ŋɔ̄ɔ̄ nɨ́ bɨ̀tāā   tone lowering

In (33b) the H tone of the marker spreads onto the following L tone of the prefix of N2 thereby creating a HL contour tone. In (33c) the preceding L tone of N1 lowers the tone of the marker to M. In d. the L tone part of the HL contour lowers the following H of the N2 stem to M.

The derivation of (32b) is very similar to that of (32a) given above.

The derivation of (32c) is given here below:

(34) a. bɨ̀kɔ̄bə́ bɨ́ mɨ̀lū'ū   underlying
       b. bɨ̀kɔ̄bə̄ bɨ́ mɨ̀lū'ū   tone lowering
       c. bɨ̀kɔ̄bə̄ bɨ́ mɨ̀lū'ū   tone spreading
       d. bɨ̀kɔ̄bə̄ bɨ́ mɨ̀lū'ū   tone simplification
                                    (by absorption)

In (34a) the underlying tones are given. In (34b) the L tone of the prefix lowers the following H tones of N1 stem to M. In (34c) the H tone of the marker spreads onto the prefix of N2 where it creates a HL contour tone which is eventually simplified in (34d) in a process of tone absorption.

The derivation of (32d) has already been given in (30) above. The derivation of (32e) is as follows:

(35) a. bɨ̀bá'ā bɨ́ ākɨ̄kūŋ   underlying
       b. bɨ̀bā'ā bɨ́ ākɨ̄kūŋ   tone lowering
       c. bɨ̀bā'ā bɨ́ ⁻kɨ̄kūŋ   V - deletion
       d. bɨ̀bā'ā bɨ́ kɨ̄kūŋ   tone grounding
       e. bɨ̀bā'ā bɨ́ kɨ̄kūŋ   tone lowering

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tone of the prefix to M (cf. T-rule 1). The change in the tone of
N2 will be treated below. The derivation of (29c) is as follows:

(30) a.   fītə̀ə̀ fí m̄fɔ̀   underlying
       b.   fītə̀ə̌ fí m̄fɔ̀   tone spreading to the left
       c.   fītə̌'ə̌ 'fí m̄fɔ̀   simplification and ds
       d.   fītə̌'ə̌ 'fí m̄fɔ̀   desyllabification
       e.   fītə̌'ə̌ 'fí mfɔ̀   tone deletion

In (30a) the underlying tones are given. In (30b) the H tone
of the marker spreads leftwards onto the L tone of the adjacent
syllable of N1 where it creates a LH contour tone. In (30c) the
contour tone simplifies and causes a double downstep. It is not
evident why the H tone of the associative marker should be down
stepped again. However, we shall see that this process
characterizes a group of nouns with the underlying tone pattern,
L-HL when they function as N1 in the associative construction
(cf.22.3.1.2 (19) and (20)). In (30d) the homorganic nasal prefix
of N2 desyllabifies by P-rule 4. and in (30e) the L tone of the
nasal prefix is deleted (cf. (31b) below).

The surface tone patterns of N1 as found in (29d,e,f)
respectively are fairly straightforward. In (29e,f) the H tone of
the marker is lowered to M by the preceding L tone of N1.

8.3.3 Tone of Prefix of N2

The behaviour of the tone of N2 prefix varies according to
its n.cl., structure, or phonetic environment. The following rules
describe the tones of the N2 prefixes.

(31) a.   The tone of the CV prefix of N2 is a HL
          glide for N.cl. 2 and for nouns whose CV
          prefix is immediately followed by a nasal, and
          H elsewhere.
       b.   The tone of the nasal prefix is deleted.
       c.   The tone of the V prefix is assigned to the
          left on the immediately preceding syllable.

The above rules are illustrated in the following examples:

(32) a. nīŋgɔ̌ɔ̌ nī bītáā → [nīŋgɔ̌ɔ̌ nī bītáā]
                                  "plantain of fathers"

marker is lowered by the preceding L tone of N1 and in (39d) the H tone on the last syllable of N2 is lowered to M by the L part of the HL contour tone.

The derivation of (36h) is as follows:

(40) a. mìngɔ̀ɔ̀ mǐ ñsŏŏ   citation tone of N2
      b. mìngɔ̀ɔ̀ mǐ ñsóó   B tone raising by T-rule 14
      c. mìngɔ̀ɔ̀ mǐ ñsóó   tone lowering
      d. mìngɔ̀ɔ̀ mǐ ñsóó   desyllabification
      e. mìngɔ̀ɔ̀ mǐ nsóó   tone deletion

In (40a) the citation tones of N2 are given. In (40b) the L tone of N2 stem is raised to H by T-rule 14; in (40c) the H tone of the marker is lowered to M by the preceding L. In (40d) the nasal prefix of N2 is desyllabified by P-rule 4 and in (40e) its tone is deleted (cf. 31b).

The derivation of (36a) is as follows:

(41) a. fìtàà fǐ sɔ̀rə̀   citation tones of N2
      b. fìtàà fǐ sɔ̀rə̀   tone lowering
      c. fìtàà fǐ sɔ́rə̀   C tone raising

In (41a) the citation tones of N2 are given. In (41b) the H tone of the marker is lowered to M by the preceding L tone. In (41c) the -LL tone of N2 is raised to HL by T-rule 15.

8.4. Noun Classes 3, 7, 8, 10

8.4.1 The Associative Marker

The associative marker for noun classes 3, 7, 8 and 10 is a floating H tone. It has the general tendency to be grounded to the left. It, however, may be grounded either to the left or right. There are also cases where the effect of the marker is felt on both N1 and N2. This last fact is illustrated by the following examples:

(42) a.   ⁻nāā ⁻ bɨtɑ̄ɑ̄
"animals of fathers"

      b.   ɨbāā ⁻ ⁻bə̄   → [ɨ↑bāā bə̄]
"bags of people"

A sample derivation of (42a) is as follows:

(43) a.   ⁻nāā ⁻ bɨtáā   underlying tones
      b.   nāā ⁻ bɨtáā   tone deletion
      c.   ↑nāā ⁻ bɨtáā   tone raising
      d.   ↑nāā   bɨtáā   tone grounding to the right
      e.   ↑nāā   bɨtāā   tone lowering

In (43a) the underlying tones of the nouns are given. In b. the floating H tone of N1 prefix is deleted. In (43c) the floating H tone of the marker, by a process of vertical assimilation, raises the preceding L of N1. In (43d) the H tone of the marker is grounded to the right on the prefix of N2 where it creates a HL contour tone. In e. the L tone part of the HL contour tone on the prefix lowers the H tone of N2 to M.

The derivation of (42b) is similar to the above derivation.

8.4.2 Tone of N1

The following examples have been selected to illustrate the tonal behaviour of N1 in the classes under consideration:

(44) a.   ⁻mɔ́'ɔ́ ⁻ m̄fɔ̄ → [mɔ́'ɔ́ m̄fɔ̄]
"gun of chief"
      b.   m̄bɛ́ɛ̄ ⁻ m̄fɔ̄ → [m̄bɛ́'ɛ̄ m̄fɔ̄]
"nails of chief"
      c.   ɨbɛ̄tə̄ ⁻ m̄fɔ̄ → [ɨbɛ̄tə̄ m̄fɔ̄]
"questions of chief"
      d.   ābāā ⁻ m̄fɔ̄ → [ābāā m̄fɔ̄]
"bag of chief"
      e.   ŋ̄kūū ⁻ ⁻fɔ́rə̄ → [ŋ̄kūū fɔ́rə̄]
"tail of mouse"

It can be noticed that the H tone of N1 in (44a) does not change. The floating L tone of the N1 prefix is simply deleted. The underlying L-HL tone of N1 in (44b) changes to L-H'H. Its derivation is given here below:

```
(45)  a.  m̄bɛ́ɛ̄  ˋ  m̄fɔ́    underlying
      b.  m̄bɛ̄ɛ̄    m̄fɔ́    tone grounding by T-rule 4
      c.  m̄bɛ́'ɛ̄   m̄fɔ́    tone simplification and ds T-rules 7 and 2
      d.  m̄bɛ́'ɛ̄   m̄fɔ́    desyllabification by P-rule 4
      e.  m̄bɛ́'ɛ̄   mfɔ́    tone deletion by T-rule 5
```

The different rules involved in the derivation of the surface tones of the above construction are given in each step. The derivation of (44c) is as follows:

```
(46)  a.  ɪ̄bɛ́tə̄  ˋ  m̄fɔ́    underlying
      b.  ɪ̄bɛ̄tɔ̄    m̄fɔ́    tone grounding
      c.  ɪ̄bɛ̄tɔ̄    m̄fɔ́    tone lowering
      d.  ɪ̄bɛ̄tɔ̄    m̄fɔ́    tone lowering
      e.  ɪ̄bɛ̄tɔ̄    mfɔ́    nasal desyllabification
                           and tone deletion
```

In the above derivation in (46) the H tone of the marker is grounded to the left thus causing the preceding L tone of the last syllable of N1 to rise to LH. The rest of the processes involved in the derivation are indicated in each step above. The derivation of (44d) is similar to that given above except for the fact that the ML tone involved in (46e) further simplifies to M.

The derivation of (44e) is given here below:

```
(47)  a.  ŋ̄kūū  ˋ  ˊfɔ̄rə̄    underlying
      b.  ŋ̄kūū  ˊ  fɔ̄rə̄    tone coalescence
      c.  ŋ̄kūū     fɔ̄rə̄    tone grounding to the right
      d.  ŋ̄kūū     fɔ̄rə̄    tone lowering
```

In the above derivation, the H̥ tone of the marker and the H̥ tone of the N1 prefix coalesce in b. In c. the H̥ tone is grounded to the right where it is absorbed into the H tone of N2 stem. In (47d) the preceding L tone lowers the following H tones of N2 to M by T-rule 1.

8.4.3 Tone of Prefix of N2

The rules given in (31a,b) are also true for the description of N2 prefixes in the present context. Rule (31c), however, does not apply for n.cl. 3, 7, 8 and 10. In these classes, the tone of the V-prefix of N2 is deleted just like that of the nasal prefix.

The beha   our of

already been illustrated in (40a-e). We noticed there that the
tone of the nasal prefix of N2 is deleted. The following examples
illustrate the rest of the tonal changes.

(48) a. ˋmɔ́ˑɔ́ ˊ bɨtāā → [mɔ́ˑɔ́ bɨtāā]
                                 "gun of fathers"
      b. ñdɔ́ŋˋ ˊ mɨlū'ū → [ñdɔ́'ˉŋ 'mɨlū'ū]
                                 "calabashes of wine"
      c. ābáā ˊ ākɨkūŋ → [ābá'á kɨkūŋ]
                                 "corn fufu of owl"

     In (48a) the floating H tone of the marker is grounded to the
right on the N2 prefix where it creates a HL tone. In (48b) the H
tone of the marker is also grounded to the right. Its derivation
is as follows:

(49) a. ñdɔ́ŋˋ ˊ mɨlū'ū   underlying
      b. ñdɔ́ŋ ˊ mɨlū'ū   tone grounding to the left
      c. ñdɔ́ŋ ˉ mɨlū'ū   tone grounding to the right
      d. ñdɔ́ŋ   mɨlū'ū   tone absorption
      e. ñdɔ́ŋ   mɨlū'ū   tone spreading to the left
      f. ñdɔ́'ˉŋ 'mɨlū'ū   simplification and double ds

     In (49a) the underlying tones are given. In (49b) the
floating L tone of N1 grounds to the left where it creates a HL
contour tone. In (49c) the H tone of the marker is grounded to
the right where it creates a HL contour tone on the N2 prefix; in
(49d) the contour tone is simplified by a process of tone
absorption whereby its end-point is absorbed by the following L
tone of the N2 stem. In (49e) the H tone on the N2 prefix spreads
leftwards onto the preceding syllable of N1 where it creates a HLH
contour tone. In f. there is a process simplification whereby the
HLH becomes H'H followed by a double ds on the H tone on the N2
prefix. For a discussion of this phenomenon, see the derivation
in (30) above (cf. also 22.3.1.2 (19)).

     In (48c) the V-prefix of N2 and its tone are both deleted.

8.4.4 Tone of Stem of N2

The examples we have seen so far have also served to illustrate some of the tone patterns of N2 stem. The following examples serve to illustrate further the tone processes of N2 stems.

(50) a. ˋmɔ'ɔ ˉ ˋbūʼū   →   [mɔ'ɔ būʼū]
                                     "gun of chimpanzee"
      b. ābáā ˉ ˋbūʼū   →   [ābá'á 'būʼū]
                                     "corn fufu of chimpanzee"
      c. ābāā ˉ ˋbūʼū   →   [ābāā būʼū]
                                     "bag of chimpanzee"
      d. ˋnāā ˉ ˋmáā   →   [nāā máā]
                                     "animals of grandmother"
      e. ɨlɨlɔ̄ɔ̄ ˉ ˋtáā   →   [ɨlɔ̄lɔ̄ɔ̄ táā]
                                     "bats of father"
      f. ākɨká'á ˉ ˋkɔfɨ   →   [ākɨká'á kɔfɨ]
                                     "basket of coffee"
      g. ñdɔ̄ŋˋ ˉ ŋgɨgɨ   →   [ndɔ'ˋŋ ŋgɨgɨ]
                                     "cups of egussi"
      h. ātūˋ ˉ ñsɔ̄ɔ̄   →   [ātú'ˋ n'sɔ̄ɔ̄]
                                     "head of farm"
      i. ˋnwɨ ˉ ˋsɔ̄rə̄   →   [sɔ̄rə̄]
                                     "cutlasses of witch

In (50a) the floating L tone of the N1 prefix drops out so the H tone of N2 does not change; while in (50b) it is downstepped by the tone processes involved in the derivation of the N1 tones (cf. (30)). In (50c) the H tone of N2 is lowered to M by the preceding L tone. Its derivation is the same as that given in (47) above. The HL pattern of N2 in (50d) does not change. The derivation of (50e) is similar to that of (36f) given in (38) above. The derivation of (50f) is similar to that of (39) above. The Ḥ tone marker and that of the N2 prefix coalesce and the resultant Ḥ is grounded to the right on the first syllable of N2 where it forms a HL tone. The L-LL tone of N2 in (50g) does not change. The derivation of the tones in (50h) is given in (51) below.

(51) a. ātū¯ ¯ n̄sòò
     b. ātū ¯ n̄sòò   tone grounding to the left
     c. ātũ   n̄sòò   tone grounding to the left
     d. ātū'¯ n̄sòò   tone simplification and ds
     e. ātū'¯ n̄sóó   B tone raising by T-rule 14
     f. ātū'˜ nsóó   nasal desyllbification and
                          tone grounding to the left
     g. ātū'˜ n'sóó   simplification and ds

     In a. the citation tones of N2 are given. In b. the Ḷ tone
of N1 grounds to the left and in c. the H̩ tone of the marker also
grounds to the left thus creating a HLH complex contour tone on
the N1 stem. In d. this tone simplifies to H'H. In e. the stem L
tones of N2 are raised to H by T-rule 14 (cf. 4.8.12.1). In e.
the nasal prefix of N2 desyllabifies by P-rule 4 and its L tone is
assigned to the left where it creates contour tone. In g. this
contour tone simplifies and causes the following H tones on N2
stem to downstep.

     The -LL tone of N2 stem in (501) is raised to HL by T-rule
15. Its derivation is similar to the one given in (41) above.

Chapter Nine

PERSONAL PRONOUNS

9.1.   Subject Pronouns

Bafut has two sets of personal pronouns, subject and object pronouns. These pronouns are again subdivided into human and non-human pronouns; and, furthermore, these consist of simple and compound pronouns.

9.1.1   Simple Human Pronouns

The following are the simple human pronouns used as subjects in Bafut.

(1) Person   Singular   Plural

1	mà	bI'I
2	ò	nÌ
3	à	bó

The underlying tones of the pronouns are indicated. As will be seen later in the study (cf. 14.4 and 15.4.1.) the underlying tones of the pronouns may change in context to mark tense or aspect.

9.1.2   Simple Non-human Subject Pronouns

The form of the non-human subject pronouns depends upon their noun classes.

(2)   N.Cl.   Pronou~

1	ã
2	bɨ̃
3	ɨ̃
5	nɨ̃
6	mɨ̃
7	ã̄
8	jĩ
9	yɨ̃
10	jĩ
19	fɨ̃

The tone of the pronouns is L for noun classes 1 and 9, while those in the rest of the classes have H tone

    The tone of the subject pronouns affects the tones of adjacent words or morphemes. e.g.

(3)   a.   ã kwɛ̌rã̄ m̃bã   →   [ã kwɛ̌rə̃ mbã]
                                  "he has taken meat"
      b.   bó sã̄ŋə̃̄ m̃bã   →   [bó sáŋə̃ mbã]
                                  "they have dried meat"
      c.   ã nɨ̃n wŏ   →   [ã nɨ̃n wŏ]
                                  "it fell (today)"
      d.   bɨ̃ nɨ̃n wŏ   →   [bɨ̃ nɨ̃n wŏ]
                                  "they fell (today)"

    We notice in the above examples that the L tone of the pronoun has a lowering effect on the following morpheme. The H tone pronoun on the other hand, has a raising effect, for example, on the following L tone as seen in (3b). The rules working to produce the surface tones on the strings to the right of the arrow will be discussed later in this study (cf. chapter fourteen).

9.1.3 Compound Pronouns

    The human subject pronouns have the following compound forms:

(4) Persons	Singular	Plural
1+2	sɨ̃	bɨ̃'ɨ̃nə̃
1+3	bɨ̃'ɨ̃yū	bɨ̃'ɨ̃bó
2+3	bū̃ˉyū	bū̃ˉbó

The underlying tones of the pronouns are as indicated. T-rule 1

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lowers the H tones to M after L. The following examples
illustrate the use of these pronouns:

(5) a. sɨ̀ kā kwɛ́rɘ́ mbā   "you and I shall take meat"
     b. būyū́ kā́ 'kwɛ́rɘ́ mbā "you and he will take meat"
     c. bɨ̀'Ibó kā́ 'kwɛ́rɘ́ mbā "they and I shall take meat"

The tonal changes in the above sentences will be discussed in
their appropriate sections (cf. 14.7).

9.2 Object Pronouns

The non-human pronouns are never used as object, or in other
words, they do not have object counterparts. There are two groups
of object pronouns: (a) object of verbs and (b) objects of
prepositions.

9.2.1 Objects of Verbs

The pronouns that function as verb objects consist of both
simple and coumpound forms.

9.2.1.1 Simple Object Pronouns of Verbs

The following table shows the simple pronouns that are used
as verb objects.

(6) Person   Singular   Plural

      1   ghá˘   yɪ́'I
      2   ghő˘   ghűű
      3   yI   wā̄

The underlying tones of the above pronouns can be affected as
follows:

(7) a. ā yɘ̄ mɘ́˘ ghā ⟶ [ā yɘ̀ mɘ̀ ghā]
                           "they have seen me"
    b. bó yɘ̄ mɘ́˘ yɪ́'I ⟶ [bó yɘ̀ mɘ̀ yɪ́'I]
                           "they have seen us"

We notice in the above examples that the preceding L of the ML falling tone lowers the tones of the object pronouns by T-rule 1.

9.2.1.2 Compound Object Pronouns of Verbs

The following are the compound pronouns used as verb objects.

(8) Persons   Singular   Plural

     1+2   yI'ǒ   yI'I˜nə̀
     1+3   yI'I˜yū   yI'I˜bő
     2+3   ghūū˜yū   ghūū˜bő
     3+3   wáá˜yū   wáá˜bő

The tones marked on the above pronouns are their underlying tones. These tones are affected in context as follows:

(9) a. ã yá̄ má̄˜ yI'I˜yū   → [ã yə̀ mə̀ yI'Iyū]
                                 "he has seen him and mə"
    b. ã yá̄ má̄˜ yI'I˜nə̀   → [ã yə̀ mə̀ yI'Inə̀]
                                 "he has seen you and me"

We notice that the H tones of the pronouns is lowered by the preceding low of the ML falling tone.

The morphemes /yI'I/, /ghūū/ and /wáá/ have a downstepping effect on the following H so we have posited an underlying Ļ after them. Their underlying forms would be /yI'I˜ /, /ghūū˜ /, /wáá˜ / so that:

(10) a. ã nín˜ yá̄ ghūū ˜ yū → [ã nín yá̄ ghūū 'yū]
                                "he saw you and him (today)"
     b. ã nín˜ yá̄ wáá ˜ bő → [ã nín yá̄ wáá 'bő]
                                "he saw them and them"

The downstepping of the H tone of the second object morpheme is therefore explained by the eventual simplification of the contour tone resulting from the intervening floating L tone (cf. T-rule 2).

9.2.2 Object of Preposition

The pronouns that function as propositional objects consist of simple and compound forms.

9.2.2.1 Simple Object Pronouns of Preposition

The following are the simple pronouns that are used as prepositional objects:

(11) Person   Singular   Plural

1	mə̀	bɪ̀'ɪ
2	wò	bù
3	yú	bó

The tone of the 1st and second person pronouns is low for both singular and plural forms while the 3rd person (singular and plural) has H tone.

The following examples illustrate the use of these pronouns.

(12) a. fá   á m̀bó˘ mə̀   →   [fá m'bó mə̀]   "give it to me"
          give to   me
      b. fá   á m̀bó˘ bó   →   [fá m'bó 'bó]   "give it to them"
          give to   them

For a description of the tone changes involved in the prepositional phrase see 12.2.1(17).

9.2.2.2 Compound Object Pronouns of Preposition

The following table shows the compound pronouns that are used as objects of prepositions.

(13) Person   Singular   Plural

1+2	bɪ̀'ó˘	bɪ̀'ɪ̀nə̀
1+3	bɪ̀'ɪ̀yú	bɪ̀'ɪ̀bó
2+3	bū˘yú	bū˘bó

The following examples illustrate the use of the above pronouns:

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(14) a. ləə á m̂bó bɪ o   (ləə m̂bó ɛɪ o)
                              "keep it for you and me"

     b. fá á m̂bó bɪ'íbó   → [fá m'bó bɪ'íbó]
                              "give it to them and me"

The tonal derivations of the elements to the right of the arrow
will be given in their appropriate sections (cf.12.2.1.1(18)).

9.3 Logophoric Pronouns and Switch Reference

With respect to logophoric pronouns Hyman (1979:50) says:

> "The logophoric pronoun is used when a third person
> singular referent in reported speech is
> coreferential with the third person doing the
> reporting."

Wiesemann (1982a,b) makes a survey of switch reference and types
of coreferential markings in Bantu languages. These linguistic
indexing devices are reported to be common among a number of Bantu
languages. Switch reference has to do with devices that indicate
that in conjoined clauses the subject of the following clause is
same as or different from the subject of the preceding clause.
Switch reference, which indicates different subject marking is
represented as (DS) while coreference, i.e. same subject marking
is represented as (SS). Bafut has switch reference, coreference
and the logophoric pronoun reference.

9.3.1 Coreference

The device of coreference is used in reported speech,
consecutive clauses, and temporal subordinative sentences. The
following examples illustrate the use of coreference.

(15) a. [ă nɪn swóŋ 'mə̄ yū yūù mbā]
        he P1 say that he buy meat
        "he said that he (himself) had bought meat"

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b. [Ŋgwā nɨn wā'ātə́ 'mə̄ yū kā 'lɛ̄   afɔ̄]
   Ngwa P1 think that he FO sleep farm
   "Ngwa thought that he (Ngwa) would stay the
   night in the farm."

c. [ā kɨ tūm   nāāŋgwɛ̀ ŋkhə́'⁻]
   he P2 shoot leopard run
   "he shot a leopard and (he) ran away"

d. [ā nɨn yə́ ŋgwā ŋkwɛ̄tə́ yɪ]
   he P1 see Ngwa help him
   "he saw Ngwa (today) and helped him (Ngwa)"

e. [ā kā lŏ ghɛ̀ɛ̄ kɔ́ɔ́   atū yɪ]
   he F 2 go   shave head his
   "he will go tomorrow and (himself) have his
   head shaved"

f. [ā nɨm fá   mbɔ́'⁻ ŋ fɛ̄'ɛ̀]
   he P1 give before go out
   "he gave (it) before going out"

g. [Sūū nɨn yū'ū ā ntsū Fū   mə̄
   Shu P1 hear from   Fu   that
   "Shu heard from Fu that

   yū wŏ   ākwā'ānə̀]
   he fail examination
   he had failed the examination"

The logophoric pronoun in (15a,b) is /yū/. /yū/ is
coreferential with the 3rd person singular pronoun /ā/ which is
doing the action in the main clause. The tonal behaviour in these
sentences will be described in the appropriate sections (cf.
chapter 19).

     In (15g) the reference is ambiguous. The Logophoric pronoun
in this example can refer either to the speaker or hearer. Thus it
is either Fu or Shu who failed the exam. This example shows that
if the hearer is the subject of the main clause, the reference may
be ambiguous. This fact has also been reported to exist in Tupuri
(Wiesemann,1982b).

     In (15c,d) coreference (same subject) is marked by the nasal
/ŋ/. In consecutive clauses, coreference of two subjects is
marked by the use of a nasal, (for all persons) /N/ which is
prefixed to the verb stem (cf. chapter 18).

In (15e,f) the absence of subject marker at the second clause indicates same subject marking. This marking device is used in future tense consecutive clauses and in the temporal subordinative sentences.

9.3.2 Switch Reference

The above sentences in (15a-f) are going to be rewritten to illustrate switch reference of two subjects.

(16)   a.   [ã nɪn swõŋ 'mə́ ã yũũ m̃bã]
           "he said that he (DS.) had bought meat"

       b.   [ŋgwã nɪn wã'átə́ 'mə́ ã kã lɛ afɔ̀]
           "Ngwa thought that he (DS.) would
            stay the night in the farm"

       c.   [ã kɪ tũm nããŋgwɛ̃ yɪ kghə̃]
           "he shot a leopard and it ran away"

       d.   [ã nɪn yə́ ŋgwã ã́ kwɛ́tə̀ yɪ]
           "he saw Ngwa (today) and he (Ngwa, DS)
            helped him"

       e.   [ã kã lõ ghɛ̀ɛ tã k55 atũ yɪ]
           "he will go so that he (DS) should shave
            his head"

       f.   [ã nɪm fã́ mbɔ́'⁻ ŋ tã fɛ̀''ɛ̃]
           "he gave it before, he (DS) went out"

In the examples above, (16a-f), switch reference marking is indicated by the presence of a subject pronoun in the second clause signalling the switch or different subject (DS).

In (15a-d) same subject marking is indicated by the logophoric pronoun /yũ/ and the SS marker /Ñ/ respectively while in (16a,b,d) switch of subject (DS) is indicated by the 3rd person pronoun /ã/. In (16c) the switch reference of two subjects is indicated by the use of the n.cl. 9 subject pronoun agreeing with the class of the noun /nããŋgwɛ̃/ to which it refers.

In (16e,f) the change of subject (DS) is signalled by the morpheme /tã/.[1] The tonal behaviour of (16a,b,e,f) is discussed

in the chapter treating complex sentences. (cf. 19.3). The
sentences in (16c,d) are discussed in 18.10.

The following tables present the personal pronouns in Bafut
(both human and non-human pronouns).

(17)   Human Pronouns

Person		Subject	Object (verb)	Object (prep.)	Logo.	Coreference SS marker
1	sg	mə̀	ghā̃ˇ	mə̀		꬞
	pl	bĭ'Í	yĭ'Í	bĭ'Í		꬞
2	sg	ò	ghố˜	wò		꬞
	pl	nĭ	ghū́ū́˜	bū̀		꬞
3	sg	à	yÍ	yū́	yū́	꬞
	pl	bő	wāā̃ˇ	bő		꬞
1+2	sg	sĭ	yĭ'ò	bĭ'ő˜		꬞
	pl	bĭ'Ínə̀	yĭ'Í˜nə̀	bĭ'Ínə̀		꬞
1+3	sg	bĭ'Íyū́	yĭ'Í˜yū́	bĭ'Íyū́		꬞
	pl	bĭ'Íbő	yĭ'Í˜bő	bĭ'Íbő		꬞
2+3	sg	bū̀˜yū́	ghū́ū́˜yū́	bū̀˜yū́		꬞
	pl	bū̀˜bő	ghū́ū́˜bő	bū̀˜bő		꬞
3+3	sg		wāā̃˜yū́			
	pl		wāā̃˜bő			

(18)   <u>Non-human Pronouns</u>

N.Cl.	Singular	N.Cl.	Plural
1	à	2	bɨ
3	ɨ		
5	nɨ	6	mɨ
7	á	8	jɪ
9	yɪ	10	jɪ
19	fɨ		

Notes to Chapter Nine

[1] The third person subject pronoun /ã/ in (16e,f) basically would come immediately after the morpheme /tâ/ but in this context it is deleted by P-rule 3.

Chapter Ten

DEMONSTRATIVES

10.1 Forms of Demonstratives

There are three demonstrative pronouns in Bafut. These demonstratives also have emphatic forms which go up to three degrees of emphasis. These are presented in tables (1-3) below:

(1)   N.S.   N.H.   F.S.H.

       -ū   -ā   -í

We see in the above table the stems of the three demonstratives: the near speaker (N.S.) /-ū/ "this/these"; near hearer (N.H.), /-ā/ "that/those;" and far from both speaker and hearer (F.S.H.), /-í/ "that/those". These, as will be seen in (3) below, are made up of a root vowel with their respective tones.

The tone on the demonstrative is actually a H tone followed by a floating L tone, i.e., HL, but, for practical purposes, we have chosen to write this underlying sequence directly as a HL contour tone by application of the tone grounding rule (cf. T-rule 4). This is however how this tone is realized in its citation form.

The concord consonants of the demomstratives will be given in (4) below.

The following are the emphatic demonstratives:

(2)   N.S.   N.H.   F.S.H.   Degree of emphasis

       -ā   -ā   -í   1
       -lā   -lā   -lí   2
       -Cū   -Cā   -Cí   3

The emphatic demonstrative forms given in table two above represent the elements that are common in all the n.classes. They are the last syllable of the emphatic demonstratives in each

degree. The tones of these elements are marked as shown above. In the 3rd degree emphatic demonstrative, -C represents the concord consonant. The use of the emphatic demonstratives will be described in 10.3 below.

The full forms of the demonstratives (together with illustrating nouns) are given in (3) below.

(3)

N.Cl.	Nouns	N.S.	N.H	Far from S.H.	Emphatic degree
1	fōrə̄ "mouse"	ghū	wâ	wɪ̂	0
		ghúà	wá'á	wɪ̂ɪ̂	1
	sɔ̂rə̄ "witch"	ghúlà	wá'lá	wɪ̂lɪ̂	2
		ghúàghū	wá'áwá	wɪ̂ɪ̂wɪ̂	3
2	bɪ̀fōrə̄ "mice"	bū	byâ	bɪ̂	0
		búà	byá'á	bɪ̂ɪ̂	1
	bɪ̀dàá "wine calabashes"	búlà	byá'lá	bɪ̂lɪ̂	2
		búàbū	byá'ábyâ	bɪ̂ɪ̂bɪ̂	3
3	mɔ́'ɔ́ "gun"	ghū	wâ	wɪ̂	0
	ɪ̀lɪ̂ "ant"	ghúà	wá'á	wɪ̂ɪ̂	1
	ɪ̀bɔ̂'ɔ́ "mush-room"	ghúlà	wá'lá	wɪ̂lɪ̂	2
		ghúàghū	wá'áwá	wɪ̂ɪ̂wɪ̂	3
5	nɪ̀kwɛ̄ɛ̄ "arm"	nū	nyâ	nɪ̂	0
		núà	nyá'á	nɪ̂ɪ̂	1
	nɪ̀bɔ̂'ɔ̄ "pump-kin"	núlà	nyá'lá	nɪ̂lɪ̂	2
		núànū	nyá'ányâ	nɪ̂ɪ̂nɪ̂	3
6	mɪ̀kūū "beans"	mū	myâ	mɪ̂	0
		múà	myá'á	mɪ̂ɪ̂	1
	mɪ̀ŋɔ̄ɔ̄ "plan-tains"	múlà	myá'lá	mɪ̂lɪ̂	2
		múàmū	myá'ámyâ	mɪ̂ɪ̂mɪ̂	3
7	ātə̄ə̄ "calabash"	yū	yâ	yɪ̂	0
	ākɪ̀kúŋ "owl"	yúà	yá'á	yɪ̂ɪ̂	1
	ābàá "bag"	yúlà	yá'lá	yɪ̂lɪ̂	2
		yúàyū	yá'áyâ	yɪ̂ɪ̂yɪ̂	3
8	ɪ̀tə̄ə̄ "cala-bashes"	jū	jyâ	jɪ̂	0
	ɪ̀kɪ̀kuŋ "owls"	júà	jyá'á	jɪ̂ɪ̂	1
	ɪ̀bàá "bags"	júlà	jyá'lá	jɪ̂lɪ̂	2
		júàjū	jyá'ájyâ	jɪ̂ɪ̂jɪ̂	3

9	ŋgū "fowl"	yū	yâ	yɪ	0
		yúã	yá'á	yɪ̃ɪ	1
	ŋgɔ̀'ɔ̀ "stone	yúlã	yá'lã	yɪ̃lɪ	2
		yúãyū	yá'áyâ	yɪ̃ɪyɪ̃	3
10	m̀bɪ "goats"	jū	jyâ	jɪ	0
		júã	jyá'á	jɪ̃ɪ	1
	ŋgɔ̀'ɔ̀ "stones"	júlã	jyál'á	jɪ̃lɪ	2
		júãjū	jyá'ájyâ	jɪ̃ɪjɪ	3
19	fɪtɔ̄ɔ̄ "wine calabash"	fū	fyâ	fɪ	0
		fúã	fyá'á	fɪ̃ɪ	1
	fɪkūū "small bed"	fúlã	fyá'lã	fɪ̃lɪ	2
		fúãfū	fyá'áfyâ	fɪ̃ɪfɪ	3

We present here below the concord consonants of the demonstratives according to noun classes.

(4)   N.Cl.   Concord Consonant

1	gh-
2	b-
3	gh-
5	n-
6	m-
7	y-
8	j-
9	y-
10	j-
19	f-

The concord consonants are the consonants of the N.S. demonstrative and interrogative pronouns. These are also the general n.cl. concord consonants. It will be noticed that gh- varies with w-. w- occurs before -a and -i. The consonants n-, m-, j- and f- are palatalized before -a.

10.2.   Tone of Demonstratives

The underlying tones of the demostratives are given in tables (1) and (2). The tone of the simple demonstratives is HḶ. The tone of the emphatic demonstratives is L for both the N.S. and F.S.H. and H for the N.H. (cf. (2)).

The underlying tones of the different degrees of the emphatic demonstratives are given in the table below:

(5)

N.Cl.	N.S.	N.H.	Far from S.H.	Emphatic degree
1	ghū	wâ	wɪ̂	0
	ghūä	wââ	wɪ̂ɪ	1
	ghūlä	wâlá	wɪ̂lɪ̂	2
	ghūäghū	wââwâ	wɪ̂ɪwɪ̂	3
2	bū	byâ	bɪ̂	0
	būä	byââ	bɪ̂ɪ	1
	būlä	byâlá	bɪ̂lɪ̂	2
	būäbū	byââbyâ	bɪ̂ɪbɪ̂	3

The derivation of the surface tones of each degree (1-3) of the emphatic demonstratives is got through the simplification of the first HL contour tone. This is illustrated in the following table:

(6)

N.Cl.	Emphatic degree	N.S.		
1				
	1	ghūä	HL L	⟶ [H L]
	2	ghūlä	HL L	⟶ [H L]
	3	ghūäghū	HL L HL	⟶ [H L HL]
		N.H.		
	1	wââ	HL H	⟶ [H 'H]
	2	wâlá	HL H	⟶ [H 'H]
	3	wââwâ	HL H HL	⟶ [H 'H HL]

We notice that with the N.S. (and also the F.S.H.), the simplification of the contour tone is by the process of absorption where the L tone, which is the end point of the contour is absorbed into the following L tone of the emphatic stem. With the N.H., the simplification causes the following H tone of the emphatic stem to downstep.

The general principles or rules for tone association on the demonstratives are as follows:

(7) a. If one syllable, associate the whole tone pattern with it;
    b. If two syllables, associate the first tone with the first syllable and the second tone with the second syllable;
    c. If three syllables, associate the first tone with the first syllable the second tone with the second syllable, and associate the whole tone pattern with the third syllable.

These rules are exemplified as follows:

(8) No. of syllables   HL

         1   ghū
         2   ghūā
         3   ghūāghū

Since there is no tonal distinction between noun classes, the distinction between classes 1 and 3, 7 and 9, which is normally made by tone, ceases to exist. As in the possessive, the forms in classes 8 and 10 are identical.

The tone lowering rule (cf. T-rule 1) affects the demonstrative forms such that in the 3rd. degree emphatic demonstrative, HLHL ⟶ HLML e.g.

(9) ghūāghū ⟶ [ghūāghū]
     būābū   ⟶ [būābū]

The tone of the demonstrative is affected in context as follows:

(10) a. nīngɔɔ nū   ⟶ [nīngɔɔ nū]   "this plantain"
     b. nīngɔɔ nūānū ⟶ [nīngɔɔ nūānū] "this plantain"
     c. nīngɔɔ nyā   ⟶ [nīngɔɔ nyā]   "that plantain"

In (10a-c) T-rule 1 applies and the L tone lowers the following H as in (9) above.

Surface M tone (with the underlying tone pattern L-HL) has a lowering effect on the N.S. and F.S.H. simple demonstratives as follows:

(11)　ātə́ə̀ yṹ　　→　[ātə̄ə̄ yṹ]　"this calabash"
　　　ātə́ə̀ yĬ　　→　[ātə̄ə̄ yǏ]　"that calabash"
　　　fĭŋwâŋ fṹ　→　[fĭŋwāŋ fṹ]　"this salt"
　　　fĭŋwâŋ fĬ　→　[fĭŋwāŋ fǏ]　"that salt"

The surface H tone nouns that are affected by intonation (cf.
5.3.1.3) also affect the tone of the N.S. and F.S.H. in the same
way as in (11) above. e.g.

(12)　mṹ ghṹ　　→　[mṹ ghṹ]　"this child"
　　　nṹ yṹ　　→　[nṹ yṹ]　"this body"

　　　nô yĬ　　→　[nô yǏ]　"that snake"
　　　ñdə̄ŋə̄˜ wĬ　→　[ñdə̄ŋə̄ wǏ]　"that bamboo"

10.3　Emphasis

As already mentioned and as indicated in table (3) Bafut has
emphatic demonstrative pronouns in addition to the simple
demonstratives. In (3) above the demonstrative pronouns in each
n.cl. are arranged in ascending degree of emphasis; e.g.

(13)　Emphatic　N.cl.　Noun　F.S.H.
　　　degree

　　　　0　　　　5　　nĭŋɔ̄ɔ̄　nĬ　　"that plantain"
　　　　1　　　　5　　nĭŋɔ̄ɔ̄　nĬI　　"that plantain!"
　　　　2　　　　5　　nĭŋɔ̄ɔ̄　nĬlǏ　"that plantain!!"
　　　　3　　　　5　　nĭŋɔ̄ɔ̄　nĬInǏ "that plantain!!!"

The notion of emphasis in the demonstrative is relative,
since it is a scale that ranges between 0 and 3 in ascending order
of degree. Emphasis, therefore, consists of variables such as (a)
the form of the demonstrative (b) repetition, and (c) voice
intensity.

As can be seen above, the emphatic degree is signalled
morphologically by the different forms of the demonstratives. The
general principle here is a reduplication of elements of the
demonstrative. The difference between 0 and 1 emphatic degrees is
signalled by reduplication of the vowel /i/; the difference
between 2 and 3 is indicated by a reduplication of morphemes.
Thus, 3 consists of a combination of 0 and 1 degree forms. For

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some speakers the form in 3, /nĪInĪ/ varies with /nĪlĪnĪlĪ/ which is simply a reduplication of the form in 2.

The idea of repetition is already included in that of reduplication. The forms are reduplicated or repeated in this sense for emphasis. In actual usage the degree of emphasis is also indicative of the number of times that the demonstrative is being used or uttered such that when it is being used for the first time it is generally the 0 degree emphasis or the simple demonstrative. If the demonstrative has to be used for the second time running or repeated (particularly by the speaker) it would be in the first degree of emphasis. If for any reason the speaker has to repeat it again it would be in the 2nd degree, and eventually in the 3rd degree, if there is still a cause for repetition.

The variable of voice is also linked with the idea of repetition. It often happens that a speaker gets irritated or emotional when he is caused to repeat or say one thing many times over. Each repetition makes him impatient and irritated. In this non-linguistic context, the degree of his emotions which corresponds here to emphasis is signalled by the loudness and pitch of the voice. In this sense, we see that the voice variable consists mainly of intonational contour (cf. 5.6).

It should be noted that with respect to the actual use of the emphatic demonstrative forms, any of the last two variables or factors (i.e. repetition or voice), could be overriding. This might explain why in actual usage speakers might violate the logical rules of emphasis such that a first degree emphatic demonstrative would be given more emphatic meaning than a second degree one by virtue of the voice variable or intonational contour used in each case.

For detailed description of the use of the emphatic demonstratives in Bafut, reference should be made to Mfonyam, 1984.

10.4   Independent Use of Demonstratives

The emphatic demonstratives can all be used to mean this

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one/these ones, that one/those ones (N.H.) and that one/ those ones (F.S.H.) e.g.

(14) N.Cl. N.S.   N.H.   F.S.H.

   5   nūā   "this one"   nyá'â   nĭĭ "that one"
   5   mūā   "these ones"   myá'â   mĭĭ "those ones"

10.5 Definite Article

The N.H. demonstrative is used as the definite article in Bafut. There is thus no definite or indefinite article per se in Bafut.

(15) a. ākĭkûη yâ "that/the owl"
      b. ākĭkûη   "an owl"

In (15a) /ākĭkûη yâ/ may mean either "that owl" (N.S.) or "the owl". The absence of the demonstrative gives the meaning or implies the presence of the indefinite article such that in (15b) /ākĭkûη/ would mean "an owl."

10.6 Interrogative Pronoun

The interrogative pronoun in Bafut is /-ūū/ "which". It has underlying H tones. The interrogative pronoun is derived from the N.H. demonstrative. The following are the interrogative pronouns in Bafut:

(16)   N.Cl.   Interrogative

       1   ghūū
       2   būū
       3   ghūū
       5   nūū
       6   mūū
       7   yūū
       8   jūū
       9   yūū
       10   jūū
       19   fūū

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As we have already seen with the demonstratives, there is no
tonal distinctions between noun classes. The tone of the
interrogative pronoun is affected as in the following examples.

(17) a. nǐŋgɔ̀ɔ̀ núú → [nǐŋgɔ̀ɔ̀ núū]   "which plantain?"
      b. ˉmúˉ ghúú → [mú 'ghúú]   "which child?"

    In (17a) the H tones of the interrogative pronoun are lowered
to M by application of T-rule 1 while in (17b) the H tone are
downstepped by T-rule 2. The derivation of (17b) is as follows:

(18) a. ˉmúˉ ghúú   underlying
      b. múˉ   ghúú   tone grounding to the right
      c. mú   ghúú   tone grounding to the left
      d. mú   'ghúú   tone simplification and ds

10.7 Relative Demonstrative

    The relative demonstrative pronoun in Bafut is /-ǐǐˉ/
"which", that". It has a LHLH tone pattern. Table (19) shows the
relative demonstratives in Bafut.

(19)   N.Cl.   Rel. Dem.

          1   yǐǐˉ
          2   bǐǐˉ
          3   yǐǐˉ
          5   nǐǐˉ
          6   mǐǐˉ
          7   yǐǐˉ
          8   jǐǐˉ
          9   yǐǐˉ
         10   jǐǐˉ
         19   fǐǐˉ

    As can be seen in table (3) the relative demonstrative is
derived from the F.S.H. demonstrative. In n.cl. 1 and 3 we notice
that the concord consonant gh- becomes y-. The relative
demonstrative can be used together with the relative clause marker
/ˉmə́/ (cf.19.3.2).

    The N.H. demonstrative, /-â/ "that" and a H tone marker is
also used with /ˉmə́/ as a relative marker (cf. 19.3.2).

Chumbow (1977) says that the term "relative pronoun" is a misnomer. He says that the relative demonstrative should be viewed as a "relative determiner." We would not regard our use of the term "relative pronoun" a misnomer since the demonstrative in this form together with the relative marker /ˉmə́/ function as a pronoun in the relative clause.

The forms of the relative demonstrative are given in (20) below.

(20)   N.Cl.   Rel. Dem.

         1   wâˉ
         2   byâˉ
         3   wâˉ
         5   nyâˉ
         6   myâˉ
         7   yâˉ
         8   jâˉ
         9   yâˉ
        10   jâˉ
        19   fyâˉ

The following examples illustrate the use of these relative forms of the demonstrative.

(21) a. ˊmûˉ yɪ́ɪ̄ˉ ő lɔ̄ɔ̄ ā   →   [mû yɪ́ɪ'ˉ ő lɔ̄ā]
                                        "the child that you want"

      b. ˊmûˉ yɪ́ɪ̄ˉ ˉmə́ ő lɔ̄ɔ̄ ā   →   [mû yɪ́ɪ'ˉ 'mə́ ő lɔ̄ā]
                                        "the child that you want"

      c. nɪ̄ŋgɔ̄ɔ̄ nyâˉ ˉ mə́ nɪ́ wŏ ā   →   [nɪ̄ŋgɔ̄ɔ̄ nyá'ˉ 'mə́ nɪ́ wóā]
                                        "the plantain that has fallen"

      d. bə̄ byâˉ ˉ mə́ bɪ́ fá̄ ā   →   [bə̄ byá'ˉ 'mə bɪ́ fá̄ ā]
                                        "the people that they have given"

The tone rules that work to produce the surface tones in the above examples will be discussed and illustrated in the appropriate sections (cf. 19.3.2). What should be noted, however, is that the downstepped H tones are caused by intervening low tones.

Chapter Eleven

POSSESSIVE PRONOUNS

11.1 Stems of Possessive

The stems of the possessive pronouns in Bafut are as follows:

(1)

	Singular	Plural
1st person	-a	-i'i
2nd person	-o	-uu
3rd person	-i	-aa
1+2 persons	-u'o	-i'inə
1+3 persons	-i'iyu	-i'ibo
2+3 persons	-uuyu	-uubo
3+3 persons	-aayu	-aabo

11.2 Concord Prefixes

The concord prefixes are presented below in table (2).

(2)

N.Cl.	concord prefix
1	gh- (y- w-)
2	b- (by-)
3	gh- (y- w-)
5	n- (ny-)
6	m- (my-)
7	y-
8	j- (jy-)
9	y-
10	j- (jy-)
19	f- (fy-)

As will be seen below, the concord prefixes are the consonants of the 1st person singular possessive pronouns given according to n. classes. In n.cl. 1 and 3, gh- varies with y- and w-. gh- occurs before -a, -o, and -uu; y- occurs before -i and -u, while w- occurs before -aa. In n.cl. 5 and 6 n- and m- vary with ny- and my- respectively. n- or m- occurs before -a, -i and -u while ny- or my- occurs before -aa. In n.cl. 8 and 10 j- varies with jy-; jy- occurs before -aa while j- occurs before the rest of

the vowel stems. In n.cl. 19, f- varies with fy-; fy- occurs before -aa while f- occurs before the rest of the vowel stems.

11.3 Possessives

The Possessives and their surface tones are presented fully in the table below.

(3)

Possessives

N.Cl.	1 sg.	1 pl.	2 sg.	2 pl.	3 sg.	3 pl.
1	ghã	yI'I	ghõ	ghũũ	yI	wãã
2	bã	bI'I	bõ	bũũ	bI	byãã
3	ghã	yI'I	ghõ	ghũũ	yI	wãã
5	nã	nI'I	nõ	nũũ	nI	nyãã
6	mã	mI'I	mõ	mũũ	mI	myãã
7	yã	yI'I	yõ	yũũ	yI	yãã
8	jã	jI'I	jõ	jũũ	jI	jyãã
9	yã	yI'I	yõ	yũũ	yI	yãã
10	jã	jI'I	jõ	jũũ	jI	jyãã
19	fã	fI'I	fõ	fũũ	fI	fyãã

N.Cl.	1 + 2 sg.	1 + 2 pl.	1 + 3 sg.	1 + 3 pl.
1	yũ'õ	yI'Inã	yI'Iyũ	yI'Ibõ
2	bũ'õ	bI'Inã	bI'Iyũ	bI'Ibõ
3	yũ'õ	yI'Inã	yI'Iyũ	yI'Ibõ
5	nũ'õ	nI'Inã	nI'Iyũ	nI'Ibõ
6	mũ'õ	mI'Inã	mI'Iyũ	mI'Ibõ
7	yũ'õ	yI'Inã	yI'Iyũ	yI'Ibõ
8	jũ'õ	jI'Inã	jI'Iyũ	jI'Ibõ
9	yũ'õ	yI'Inã	yI'Iyũ	yI'Ibõ
10	jũ'õ	jI'Inã	jI'Iyũ	jI'Ibõ
19	fũ'õ	fI'Inã	fI'Iyũ	fũũyũ

	2 + 3		3 + 3	
	sg.	pl.	sg.	pl.
1	ghūūyú	ghūūbő	wāāyú	wāābő
2	būūyú	būūbő	byāāyú	byāābő
3	ghūūyú	ghūūbő	wāāyú	wāābő
5	nūūyú	nūūbő	nyāāyú	nyāābő
6	mūūyú	mūūbő	myāāyú	myāābő
7	yūūyú	yūūbő	yāāyú	yāābő
8	jūūyú	jūūbő	jyāāyú	jyāābő
9	yūūyú	yūūbő	yāāyú	yāābő
10	jūūyú	jūūbő	jyāāyú	jyāābő
19	fūūyú	fūūbő	fyāāyú	fyāābő

The possessive, just like other modifiers in Bafut, follows the noun it determines. This is demonstrated in table 4 below.

(4) n.cl.	noun	possessive + tone	gloss
1	főrə́	ghā	"my mouse"
2	bɨfőrə́	bā	"my mice"
3	ɨlɨ	ghā	"my ant"
5	nɨŋɔ̀ɔ	nā	"my plantain"
6	mɨŋɔ̀ɔ	mā	"my plantains"
7	ātə̄ə̀	yā	"my calabash"
8	ɨtə̄ə̀	jā	"my calabashes"
9	ŋgɔ̀'ɔ	yā	"my stone"
10	ŋgɔ̀'ɔ	jā	"my stones"
19	fɨbwɛ́	fā	"my fish"

The concord prefixes as given in (2) above are the consonants of the 1st person singular possessive "my". Although the structure of some of the concord prefixes changes, as can be verified from table (3) above, the forms in table (4) are taken as basic.

The possessives in Bafut consist of a 14 - term system which breaks down generally into the 1st, 2nd, and 3rd persons. These categories occur in singular and plural forms. When 1st and 2nd persons are combined, the minimum form is a dual one, /-u'o/, including "mine" (the speaker's) and "yours" (the hearer's). There is also a plural for the combination of 1st and 2nd persons, which can have several meanings: "ours" (several speakers') and "yours" (one hearer's); "mine" (one speaker's) and "yours" (several hearers'; ours (several speakers') and "yours" (several hearers'). The distinction between 1 plural and the combination of 1 + 2

(dual or plural) is often called inclusive-exclusive 1st person. In Bafut, however, it is only one of the possible combinations of person categories. The others are 1+3, where the minimum form also is a dual one: "my" (speaker's) and "his" (belonging to the person spoken about). The plural form, just as for the combination of 1+2 person categories can have several meanings: "ours" (several speakers') and "his" (belonging to the person being spoken about); "ours" (several speakers') and "theirs" (belonging to several people being spoken about); "mine" (one speaker's) and "theirs" belonging to several people being spoken about). There is, in the same manner, a combination of 2nd and 3rd persons and also 3rd and 3rd persons respectively. These also have several meanings as indicated in table (5) below.

(5) N. Persons
    Cl.

5	1 + 2	Singular	nū'ə̀	"mine and yours (ours)" "my and your (our)"
		Plural	nĭ'Inə̀	"mine and yours (ours)" "my and your (our)"
5	1 + 3	Singular	nĭ'Iyū	"mine and his (ours)" "my and his (our)"
		Plural	nĭ'Ibó	"mine and theirs (ours)" "my and their (our)" "our and his"
5	2 + 3	Singular	nūūyū	"yours and his (yours)" "your and his (your)"
		Plural	nūūbó	"yours and theirs (yours)" "your and their (your)" "yours (pl.) and his"
5	3 + 3	Singular	nyāāyū	"his and his (theirs)" "his and his (their)"
		Plural	nyāābó	"his/theirs and theirs (theirs)" "his/their and their (their)"

The possessive forms can be used independently as possessive adjectives or as possessive pronouns, e.g.

(6) n.cl. 6   mā   "mine"
               mĪ'Ī   "ours"

11.4 Tone of Possessive

The underlying tones of the possessive are given in the following table:

(7) N.Cl. and tone   prefix and tone   stem tone

N.Cl.	tone	prefix	tone	stem tone
1	ˋ	gh	–	ˋ
2	ˊ	b	–	ˊ
3	ˊ	gh	–	ˊ
5	ˊ	n	–	ˊ
6	ˊ	m	–	ˊ
7	ˊ	y	–	ˊ
8	ˊ	j	–	ˊ
9	ˋ	y	–	ˋ
10	ˊ	j	–	ˊ
19	ˊ	f	–	ˊ

The underlying tone of the concord Prefixes as given in table (7) above is L. The underlying tone of the stem of the possessive in all but the combination of person categories 1+2, as given above in table (1), is low for n. classes 1 and 9, and H for the rest of the classes. It is (H)HL for the person categories of 1+2 in all noun classes. The derivation of surface tones from the underlying tones given in (7) above is illustrated in the examples below.

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(8) n.cl.

1	fórə̄	˘ ghˉ-ə̄	→	[fɔ́rə̄	ghə̄]	"my mouse"
2	bɨfórə̄	˘ bˉ-ə̄	→	[bɨfɔ́rə̄	bə̄]	"my mice"
3	ɨlɨ̄	˘ ghˉ-ə̄	→	[ɨlɨ̄	ghə̄]	"my ant"
5	nɨ̀ŋɔ́ɔ̄	˘ nˉ-ə̄	→	[nɨ̀ŋɔ́ɔ̄	nə̄]	"my plantain"
6	mɨ̀ŋɔ́ɔ̄	˘ mˉ-ə̄	→	[mɨ̀ŋɔ́ɔ̄	mə̄]	"my plantains"
7	ə̄tə́ə̄	˘ yˉ-ə̄	→	[ə̄tə́ə̄	yə̄]	"my calabash"
8	ɨ̄tə́ə̄	˘ jˉ-ə̄	→	[ɨ̄tə́ə̄	jə̄]	"my calabashes"
9	ŋ̄gɔ́'ɔ̄	˘ yˉ-ə̄	→	[ŋ̄gɔ́'ɔ̄	yə̄]	"my stone"
10	ŋ̄gɔ́'ɔ̄	˘ jˉ-ə̄	→	[ŋgɔ́'ɔ̄	jə̄]	"my stones"
19	fɨ̄bwɛ̀	˘ fˉ-ə̄	→	[fɨ̄bwɛ̀	fə̄]	"my fish"

(9) n.cl.

1	fórə̄	˘ yˉ-ɨ	→	[fɔ́rə̄	yɨ]	"his mouse"
2	bɨfórə̄	˘ bˉ-ɨ	→	[bɨfɔ́rə̄	bɨ]	"his mice"
3	ɨlɨ̄	˘ yˉ-ɨ	→	[ɨlɨ̄	yɨ]	"his ant"
5	nɨ̀ŋɔ́ɔ̄	˘ nˉ-ɨ	→	[nɨ̀ŋɔ́ɔ̄	nɨ]	"his plantain"
6	mɨ̀ŋɔ́ɔ̄	˘ mˉ-ɨ	→	[mɨ̀ŋɔ́ɔ̄	mɨ]	"his plantains"
7	ə̄tə́ə̄	˘ yˉ-ɨ	→	[ə̄tə́ə̄	yɨ]	"his calabash"
8	ɨ̄tə́ə̄	˘ jˉ-ɨ	→	[ɨ̄tə́ə̄	jɨ]	"his calabashes"
9	ŋ̄gɔ́'ɔ̄	˘ yˉ-ɨ	→	[ŋ̄gɔ́'ɔ̄	yɨ]	"his stone"
10	ŋ̄gɔ́'ɔ̄	˘ jˉ-ɨ	→	[ŋgɔ́'ɔ̄	jɨ]	"his stones"
19	fɨ̄bwɛ̀	˘ fˉ-ɨ	→	[fɨ̄bwɛ̀	fɨ]	"his fish"

The tone patterns of the possessive are summarized in the following table:

(10) Concord Prefix: L
Non-combined person categories: L in n.cl. 1 and 9;
                                H in all others.
Combined person categories: HL in 1+2 dual
                             HHL in 1+2 plural
                             HHH in all others.

LL   → L: 1, 2, 3 sg. in n.cl. 1 and 9
LLL   → LL: 1, 2, 3 pl. in n.cl. 1 and 9
LH   → LM   → M: 1, 2, 3 sg. in other classes.[1]
LHH   → LMM   → MM: 1, 2, 3 pl. in other classes.
LHL   → LML   → ML: 1+2 dual
LHHL → LMML → MML: 1+2 plural.
LHHH → LMMH → MMH: 1+3, 2+3, 3+3 dual and plural.

It should be noted that the underlying L tone of the concord prefix sometimes spreads onto the preceding noun before grounding onto the stem of the possessive where it eventually simplifies. The MMH that is found on the trisyllabic possessives 1+2, 2+3, in table (3) above is explained by the fact that the effect of the underlying L tone when it surfaces as such is felt as far as two

following syllables such that the H tone on the 3rd syllable is not affected (cf. 6.3.1.1) so that Ļ-HHH → Ļ-MMH → -MMH².

11.5 Tone of Nouns before the Possessive

The effect of the tones of the possessive on the nouns that it qualifies can be seen in tables (8) and (9) above. In general the possessive and noun class systems work together to affect the tone of the nouns. The following general tendencies have been observed:

In noun classes 1 and 9 the group A and C L tone nouns stay low while in group B the last L tone is raised to ML tone.

(11) a. n.cl. 1 sɔ̄rə̀ sɔ̄rə̀ ghã "my witch"
     b. n.cl. 1 mɨ̀tāā mɨ̀tāā ghã "my market"
     c. n.cl. 9 ŋ̀gɔ̄'ɔ̀ ŋ̀gɔ̄'ɔ̀ yã "my stone"
     d. n.cl. 9 ŋ̀gɔ̄'ɔ̀ ŋ̀gɔ̄ɔ̄ yã "my termite"

In (11a,c) the LL tone stays LL before the possessive because /sɔ̄rə̀/ and /ŋ̀gɔ̄'ɔ̀/ belong respectively to groups A and C L tone nouns. It will be remembered that the underlying tones of groups A and B L tone nouns are L-LL and H-LL respectively (cf. 6.3.3.1 and 6.3.3.3). Since both the n. cl. tone marker and the possessive prefix tone are low in these cases, (cf. (7)-(9) above) the stem tone is therefore not affected. In (11b,d), however, the last L tone of /mɨ̀tāā/ "market" and /ŋ̀gɔ̄'ɔ̀/ "termite" is raised to ML tone because they belong to the group B L tone nouns, and thus have the underlying tones: L-LH. A sample derivation of (11b,d) is as follows:

(12) a. ŋ̀gɔ̄'ɔ̄ ˇ yã underlying tones
     b. ŋ̀gɔ̄'ɔ̄ yã tone grounding
     c. ŋ̀gɔ̄'ɔ̀ yã tone lowering
     d. ŋ̀gɔ̄'ɔ̀ yã tone coalescence

In (12a) the underlying tones of the construction are given. In b. the L tone marker of n. cl. 9 is grounded to the left where it creates a HL contour tone on the noun. In c the HL tone is lowered to ML by ⁴T-rule 1. In d. the L tone of the possessive

prefix and the L tone of the possessive stem coalesce (cf. T-rule 8).

The last tone of the L tone nouns in all other classes become LML tone. This is because the class marker for these classes is a H tone (cf. (8) and (9) above.

(13) a. n.cl. 2   bɪsɔrə   bɪsɔrə   bɪ   "his witches"
     b. n.cl. 3   ŋkūū   ŋkūū⁻   yɪ   "his tail"
     c. n.cl. 5   nɪŋgɔɔ   nɪŋgɔɔ   nɪ   "his plantain"
     d. n.cl. 6   mɪlū'ū   mɪlū'ū   mɪ   "his wine"
     e. n.cl. 7   ābāâ   ābāâ   yɪ   "his bag"
     f. n.cl. 8   ɪbāâ   ɪbāâ   jɪ   "his bags"
     g. n.cl.10   ŋgɔ'ɔ   ŋgɔ'ɔ   jɪ   "his stones"
     h. n.cl.19   fɪkūū   fɪkūū   fɪ   "his small bed"

(14) a. n.cl. 2   bɪfɔ   bɪfɔ   bā   "my chiefs"
     b. n.cl. 3   ŋkɪ   ŋkɪ   ghā   "my water"
     c. n.cl. 5   nɪbā   nɪbā   nā   "my wing"
     d. n.cl. 6   mɪbā   mɪbā   mā   "my wings"
     e. n.cl. 7   ātɪ   atɪ   yā   "my tree"
     f. n.cl. 8   ɪtɪ   ɪtɪ   jā   "my trees"
     g. n.cl.10   ŋkyā   ŋkyā   jā   "my combs"
     h. n.cl.19   fɪbwɛ fɪbwɛ   fā   "my fish"

In (14) the stem L tone of the L-L tone pattern also becomes a LML contour tone just like the last L tone of the low tone nouns in (13) above. A sample derivation of the above surface tones is given in (15) below:

(15) a. bɪsɔrə ⁻ b⁻ ɪ   underlying tones
     b. bɪsɔrə   b⁻ ɪ   tone grounding
     c. bɪsɔrə   b⁻ ɪ   tone lowering
     d. bɪsɔrə   b⁻ ɪ   tone lowering
     e. bɪsɔrə   bɪ   tone grounding to the left.

The underlying tones of the construction are given in a. The T-rule involved in each process is given. What should be noted is that both the H tone marker and the L tone of the possessive prefix are grounded to the left where they affect the tone of the noun.

In n.cl. 1 the H tone nouns with the tone pattern H-HH are not affected by the possessive. (i.e., the L of the class marker and that of the concord C are absorbed by the L tone of the possesive stem).

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(16) a. n.cl. 1   fɔ́rə́   fɔ́rə́   ghà   "my mouse"
     b. n.cl. 1   káá   káá   ghà   "my crab"
     c. n.cl. 1   tɛ́tá   tɛ́tá   ghà   "my pepper"

The H tones of the stems of nouns in class 2, which have already
been lowered to M by the L tone of the prefix are again lowered by
the L tone of the class marker and that of the concord as shown in
the following examples.

(16) a. n.cl. 2   bɪ̀bū·ū   bɪ̀bū·ū   bà   "my chimpanzees"
     b. n.cl. 2   bɪ̀káā   bɪ̀káā   bà   "my crabs"
     c. n.cl. 2   bɪ̀tɪ̄tá   bɪ̀tɪ̄tā   bà   "my pepper"
     d. n.cl. 2   bɪ̀ŋɪ̄nsə̄   bɪ̀ŋɪ̄nsə̄ bà   "my tooth pains"
     e. n.cl. 2   bɪ̀fōrə̄   bɪ̀fōrə̄   bà   "my mice"

     The lowering effect on the tone of the last syllable of the
noun in (16e) does not go right to the level of L as in the others
in (16a,b) but rather converts it to a ML glide. We have no sure
explanation for this.

     In class 3 the HH tone pattern is affected as shown in (17a)
below where the last H tone becomes HL. In class 6, where the HH
noun tone is lowered to MM because of the L tone prefix, the last
tone of /mɪ̀mɔ́·ɔ́/ "fire arms" is lowered to form a ML tone glide as
in (16e).

(17) a. n.cl. 3   mɔ́·ɔ́   mɔ́·ɔ̄   ghà   "my fire arm"
     b. n.cl. 6   mɪ̀mɔ́·ɔ́ mɪ̀mɔ́·ɔ̄ mà   "my fire arms"

     The L tones in the pattern (L)- ML and in nouns ending in a
HL tone glide are not affected by the possessive. This can be
verified in (18) below.

(18) a. n.cl. 1   tāā   tāā ghà   "my father"
     b. n.cl. 2   bɪ̀tāā   bɪ̀tāā bà   "my fathers"
     c. n.cl. 5   nɪ̀ghə̄ghə̄ nɪ̀ghə̄ghə̄ nà "my praying mantis"
     d. n.cl. 6   mɪ̀ghə̄ghə̄ mɪ̀ghə̄ghə̄ mà "my praying mantis"
     e. n.cl. 7   àbē̄tə̄   àbē̄tə̄ yà   "my question"
     f. n.cl. 8   ɪ̀bē̄tə̄   ɪ̀bē̄tə̄ jà   "my questions"
     g. n.cl. 9   ñdǟnwɪ̄   ñdǟnwɪ̄ yà   "my church"
     h. n.cl.10   ñdǟnwɪ̄   ñdǟnwɪ̄ jà   "my churches"
     i. n.cl.19   fɪ̀lɪ̄njɪ̄   fɪ̀lɪ̄njɪ̄ fà   "my fly"
     j. n.cl. 5   nɪ̀bāsə̄   nɪ̀bāsə̄ nà   "my...insect"

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Following the above study of the possessive, we see that the tones associated with the possessive trigger a lot of tone processes. The possessive construction therefore is important in any tonal study.

Notes to Chapter Eleven

1 The M of 1 and 2 singular persons are affected by intonation such that:

a. bɨfõrə bā ⟶ bɨfõrə bā   "my mice"
‚b. bɨfõrə bō ⟶ bɨfõrə bō   "your mice"

2 The lowering was probably done before the L tone disappeared from the surface. This assumption stems from the fact that normally an underlying L or floating L tone will lower the following H only when preceded by another H. Even in this case, the lowering is a downstep which does not go right to the level of M.

Chapter Twelve

OTHER NOUN RELATED WORDS

12.0 Introduction

In this chapter we are going to treat the rest of the noun related words. We shall consider adjectives, numerals, prepositions and adverbs. Numerals are considered as adjectives since they function as such. Adverbs are treated together with noun related words for convenience and also because, in Bafut, some of them are related to prepositions in a sense.

12.1 Adjectives

12.1.1 Adjective prefixes

Almost all adjectives in Bafut are derived forms. Most of them are derived from verbs. Adjectives are marked by a prefix which is governed by the n. class of the noun it qualifies. The adjective prefixes are different from the n. class prefixes. The adjective prefixes in Bafut are presented in the following table:

(1) n.cl.   Adj. prefix and tone

n.cl.	Adj. prefix and tone
1	yɪ˞
2	bɪ˞
3	yɪ˞
5	nɪ˞
6	mɪ˞
7	yɪ˞
8	jɪ˞
9	yɪ˞
10	jɪ˞
19	fɪ˞

The tones marked are the underlying tones of the prefixes. The underlying tones of the adjective prefix are HL. The floating tone normally grounds to the left on the prefix stem where it

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creates a HL contour tone. This contour tone may change in context, as will be shown in examples below.

12.1.2 Attributive adjectives

Attributive adjectives take the prefixes given above in (1). Most attributive adjectives are derived from the immediate past tense (PO). They consist of the prefix and the stem of the verb and its PO tone pattern (cf. 14.3). The following are examples of these forms.

(2) nǐŋgɔ̌ɔ̌   nǐ-fě̌ě̌   "plantain for sale
     lě́ŋ̀ə̀   yǐm-fě̌ě̌   "horse for sale"
     m̄bǎŋ   yǐ-twǐ   "cracked kernel"
     m̄bǎŋ   jǐ-twǐ   "cracked kernels"
     ātsə̀'ə̀   yǐ-flǐ   "black dress"
     ǐkǐkűŋ   jǐ-flǐ   "black owls"

In the above examples the noun comes before the adjective. The adjective is separated from its prefix by a hyphen (-).

Some adjectives consist of prefix + stem + suffix. e.g.

(3) mɔ́'ɔ́   yǐ- sà'ə̀-tə̀   "tall gun"
     gun   pfx. big suff.

     ābāä   yǐ- fàŋ – tə̀   "big corn fufu"
     c.fufu   pfx. big suff.

     ānsāŋ   yǐŋ-ghà'ə̀-tə̀   "big quantity of corn"
     corn   pfx. big suff.

     mű   yǐ- sà'ə̀ -tə̀   "tall child"
     child   pfx. tall suff.

The above examples are actually comparative forms used attributively.

The adjective /-sǐgə̀nə̀/ "good, nice " is one of the few forms regarded as true adjectives, i.e. not derived forms. A form like /-bə́gə́tə̂/ "red" is also regarded as purely adjectival because of its tonal pattern. The stems of most derived adjectives have a regular L tone pattern.

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As can be observed in the examples in (2) and (3) above, the tone of the adjective is affected by the tone of the noun. In general a preceding L tone lowers the HL tone of the prefix to ML. The surface M tone of nouns with an underlying L-HL tone pattern and H tone nouns that fall in the group of /⁻mū/ (cf. 6.3.1.3) lower the tone of the prefix from HL to L. This is seen in the following examples.

(4) a. ātə̄ə̄ yĪ-fā̄ntə̄   "big calabash"
     cal.   big

    b. āsō̄ yĪ-fĪĪ   "new hoe"
     hoe   black

    c. fĪtə̄ə̄ fĪ-fĪĪ   "black wine calabash"
     w.cal.   black

    d. m̄bĪ yĪm-fēē̄   "good for sale"
     goat   sell

    e. mū yĪn-sĪgə̄nə̄   "a nice child"
     child   good

    f. ñdə̄ŋnə́ yĪ- ghù'ūtə̄ "short bamboo"
     bambo   short

    g. nṓ yĪm-fà̄ntə̄   "big snake"
     snake big

The reason for the lowering effect of these nouns has to do with the underlying L tone of the last syllable of each of the nouns in question. A sample derivation of the surface tones in the above constructions is given below.

(5) a. fĪtə̄ə̄ fĪ⁻ fā̄ntə̄   underlying
    b. fĪtə̄ə̄ fĪ fā̄ntə̄   tone grounding
    c. fĪtə̄ə̄ fĪ fā̄ntə̄   tone lowering
    d. fĪtə̄ə̄ fĪ fā̄ntə̄   tone spreading to the left
    e. fĪtə̄ə̄ fĪ fā̄ntə̄   tone simplification by absorption
    f. fĪtə̄ə̄ fĪ fā̄ntə̄   tone simplification

In (5a) the underlying tones are given. In b. the floating tone of the adjective prefix grounds to the left on the stem. In c. the H tone of the noun is lowered to M by T-rule 1. In d. the H tone part of the falling tone spreads left onto the L tone of

the noun. In e. the HL contour tone of the adjective prefix simplifies to L by the process of tone absorption. In f. the LH contour tone on the last syllable of the noun simplifies to M tone. The derivation of (4g), for example, is similar to the above derivation.

Some of the attributive adjectives can be reduplicated, e.g.

(6)   lâmsì yîn lèè   "sweet orange"
       lâmsì yîn lèè lé'é "very sweet orange"
       ñgū yìm- fìì   "black fowl"
       ñgū yìm-fìì fìì   "very black fowl"

Adjectives used attributively can stand alone in place of the noun.

(7)   nìŋɔ̀ɔ nì- fāŋtə̀   "big plantain"
       nì fāŋtə̀   "big one"

       m̄bā yìm- bɔ̄nə̀   "tender meat"
       yìm-bɔ̄nə̀   "tender one"

       lāŋə́ yìm fū'ū   "white horse"
       yìm- fū'ū   "white one"

As can be noticed in the above examples, when used alone the HL tone of the prefix becomes L tone.

12.1.3 Predicative Adjectives

Since adjectives are derived from verbs they can be used predicatively as illustrated in the examples below:

(8)   àbāā yá'⁻ 'fìì   "the bag is black"
       àtsə̀'ə yá'⁻ 'fìì   "the dress is black"
       àbāā yā kì sì'⁻ 'fìì   "the bag was black"
       àtsə̀'ə yá'⁻ kì sì'⁻ 'fìì "the dress was black"
       lāŋə̀ wā à kì fāŋtə̀   "the horse was big"

In the above examples, we notice that the adjectives are used as verbs. They behave as verbs so that the tones which they carry are characteristic of tonal changes that mark tense and aspect in Bafut. The derivation of the tones in the above constructions

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will be discussed in chapters 14-15 where tenses and aspect are treated.

12.1.4 Use of Nouns as Adjectives

Some nouns are used as adjectives. The noun used as an adjective is placed before the noun it qualifies. Its position is thus different from that of the normal adjective in Bafut since adjectives come after the nouns they determine.

(9) ñlwèn   māŋgyɛ̀   "old lady"
     old (one) woman

     mūŋkghə̄ māŋgyɛ̀   "young lady"
     child   woman

     ñdɨ̀ɨ   ŋù   "elderly man"
     elderly (one) person

In the above examples the first word is a noun used as an adjective. These all have regular noun prefixes.

12.1.5 Numerals

Numerals are used as adjectives. The numbers 1-10 indicate noun class agreement with the noun they determine. The numeral prefixes are presented in (10) below:

(10) 1   yɪ̃
      2   bɪ
      3   yɪ̃
      5   nɪ̃
      6   mɪ
      7   yɪ̃
      8   jɪ
      9   yɪ̃
      10   jɪ
      19   fɪ̃

The numeral prefixes differ from the adjective prefixes only tonally. The singular prefixes are, however, identical. As can be seen in the above table, the singular numeral prefixes, agreeing with singular n. classes, carry HL tone while the plural prefixes

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have H tone. The numeral 1 takes the singular prefixes depending upon the class of the noun it is determining. Numerals above 1 take the plural prefixes according to the class of the noun they determine. The following examples illustrate their usage.

```
(11    fōrə yĩm-fūūrə        "one mouse"
       bĩfōrə bĩ-báā         "two mice
       mɔ'ɔ yĩ-fūūrə         "one gun"
       mĩmɔ'ɔ mĩ-ntōō        "six guns"
       nĩŋɔɔ nĩ-fūūrə        "one plantain"
       mĩŋɔɔ mĩ-ntáā         "five plantains"
       ābāā yĩ-fūūrə         "one bag"
       ātōō yĩ-fūūrə         "one calabash"
       ñdā yĩ-fūūrə          "one house"
       ñdā jĩ-nĩghūmə        "ten houses"
```

Numerals that are multiples of 10 agree with 10; multiples of 100 agree with the unit 100; while multiples of 1000 agree with this unit, e.g.

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(12)   bĩfōrə   mĩ-'ghūm    mĩm-báā     "20    mice"
       bĩfōrə   mĩ'ghūm     mĩ-ntáā     "50    mice"
       bĩfōrə   ŋkghĩ       yĩ-fūūrə    "100   mice"
       bĩfōrə   ŋkghĩ       jĩ-ntáā     "500   mice"
       bĩfōrə   ntsū'ū      yĩ-fūrə     "1000 mice"
       bĩfōrə   ntsū'ū      jĩ-ntáā     "5000 mice"
```

In the above examples we see that concord is governed by the units 10, 100, 1000. These units are classed as nouns such that 10 falls in the singular class 3 and plural class 10 forming gender 3/10; 100, and 1000 are also classified as 3/10 nouns (cf. Chapter 7).

12.2 Preposition

12.2.1 Preposition /ā/

The preposition /ā/ with an underlying H tone functions as (a) a locative marker, (b) an infinitive marker and (c) an indirect object marker.

12.2.1.1 Locative

The locative phrase in Bafut is marked by the preposition /á/. Perhaps it is more appropriate to say that the morpheme /á/ derives prepositions from body parts. The following examples illustrate its usage:

(13) a. á   àtŭˉ   n̄dâ   ⟶ [á 'tŭ ndâ]
        prep. head house   "on the roof"
     b. á   n̄sĬˉ   mə̀   ⟶ [á n'sĬ mə̀]
        prep. face me   "in front of me"
     c. á   n̄jĬm   àbā'à ⟶ [á njĬm àbā'à]
        prep. back door   "behind the door"
     d. á   n̄jĬ'Ĭ àtĬ   ⟶ [á n'jĬ'Ĭ tĬ]
        prep. bottom tree   "under the tree"
     e. á   m̀bɛ̀ɛ̄ mán̄jĬ ⟶ [á mbɛ̀ɛ̄ mán̄jĬ]
        prep. side road   "by the road side"

The tone rules working to produce the tonal changes in the above examples have already been discussed (cf. 4.8). We will, however, present a sample derivation of these below. The derivation of (13a) is as follows:

(14) a. á àtŭˉ ˉ n̄dâ   underlying
     b. á àtŭ ˉ n̄dâ   tone grounding
     c. á àtŭ 'ˉ n̄dâ   simplification and ds
     d. áˉ tŭ 'ˉ n̄dâ   V-deletion
     e. à tŭ 'ˉ n̄dâ   tone grounding to the left
     f. á 'tŭ 'ˉ n̄dâ   tone simplification and ds
     g. á 'tŭ'ˉ n̄dâ   tone grounding
     h. á 'tŭ'ˉ n̄dâ   nasal desyllabification
     i. á 'tŭ'ˉ ndâ   tone deletion

In (14a) the underlying tones of the string are given. In b. the floating L tone of the first noun grounds to the left. In (14c) the contour tone of the first noun simplifies causing the floating tone of the associative marker to ds. In (14d) the vowel prefix of the 1st noun is deleted by P-rule 3; in (14e) the tone of the deleted V-prefix is grounded to the left on the locative marker creating a HL contour tone which eventually simplifies to H and thus causing the following H tone to downstep (cf. e-f). In g. the floating tone of the associative marker grounds to the left where it forms a contour tone on the N1 stem. In (14h) the

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homorganic nasal prefix of the second noun desyllabifies by P-rule 4 and its tone is deleted in (141).

The morpheme /á/ can occur on its own (i.e. without body parts) as preposition as shown in the following examples.

(15) a. á 'bɛ́ɛ́   "outside"
      b. á ndã   "at home/from the house"
      c. á mɪ́'tãã   "to market/from the market"

The underlying tones of the nouns in (15a) and (15c) are the same, i.e. L-LH.

12.2.1.2 Indirect Object Marker

The preposition /á/ is used to mark indirect verb objects.

(16) a. fá á m̃bó⁻ mə̀   →   [fá m'bó mə̀]
                              "give it to me"

      b. là̃ã á m̃bó⁻ bɪ'ó⁻ → [là̃ã mbó bɪ'ò]
                              "keep it for us"

      c. kwɛ́rə́ á m̃bó⁻ Sũũ → [kwɛ́rə́ m'bó Sũũ]
                              "take it from Shu"

The derivation of (16a) is as follows:

(17) a. fá á m̃bó⁻ mə̀   underlying
      b. fá á m̃bô mə̀   tone grounding
      c. fá   ⁻ m̃bô mə̀   V-deletion
      d. fá   m̃bô mə̀   tone grounding
      e. fá   m̃bó mə̀   tone simplification
      f. fá   m̃bó mə̀   desyllabification
      g. fá   mbó mə̀   tone grounding
      h. fá   m'bó mə̀   simplification and ds

In (17a) the underlying tones of the string are given In (17b) the floating tone of /m̃bó⁻/ grounds and creates a contour tone on this word. In (17c) the vowel of the preposition is deleted by P-rule 3; in (17d) the floating tone of the deleted vowel is grounded to the left where it is absorbed into the preceding H. In (17e) the HL contour tone on /m̃bó/ simplifies. In (17f) the nasal homorganic prefix desyllabifies by P-rule 4 and

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its L tone is assigned to the left in (17g) where it creates a contour tone which is eventually simplified in (17h) causing the following H to downstep.

The derivation of (16b) is given in (18) below:

(18) a. làə́ á   m̀bó⁻ mə̀   underlying
      b. làə́ á   m̀bô   mə̀   tone grounding
      c. làə́ ⁻   m̀bô   mə̀   V- deletion
      d. làə́   m̀bô   mə̀   tone grounding
      e. làə̄   m̀bō   mə̀   tone lowering
      f. làə̄   m̀bó   mə̀   tone simplificatio
      g. làə̄   m̀bó   mə̀   nasal desyllabification
      h. làə̄   mbó   mə̀   tone deletion

In (18a) the underlying tones are given. In (18c) the vowel element of the preposition is deleted by P- rule 3. In (18d) the floating tone of the preposition is grounded to the left where it is absorbed by the H tone of the verb. In (18e) the H tone of the verb is lowered by T-rule 1. In (18f) the contour tone on /mbo/ is simplified. In (18g and 18h) the nasal prefix of /m̀bó/ desyllabifies by P- rule 4 and its tone is deleted by T- rule 5. The derivation of (16c) is similar to that of (16a).

12.2.1.3 Infinitive Marker

The preposition /á/ is used as an infinitive marker in consecutive clauses. The prepositional phrase in this construction is also used in answer to a question.

(19) a. à zĭ á ŋkwɛ́rə́ m̀bà ⟶ [à zĭ'⁻ ŋ'kwɛ́rə́ mbà]
                                    "he has come to take meat"

      b. à tsó á ñtū'ū ŋkĭ ⟶ [à tsó'⁻ n'tū'ū ŋkĭ]
                                    "he has gone to the stream
                                     to carry water"

The tonal derivation of (19a) is as follows:

(20) a. ã zĩˉ ˉˉ ã́ ŋkwɛ́rə̄ m̄bã   underlying
     b. ã zĩˆ   ã́ ŋkwɛ́rə̄ m̄bã   TO replacive tone (cf. 14.2)
     c. ã zĩˆ   ˉ ŋkwɛ́rə̄ m̄bã   V-deletion cf. P-rule 3
     c. ã zĩ ˉ   ŋkwɛ́rə̄ m̄bã   tone absorption
     d. ã zĩ 'ˉ '   ŋkwɛ́rə̄ m̄bã   simplification and ds
     e. ã zĩ'ˉ   ŋkwɛ́rə̄ m̄bã   tone grounding
     f. ã zĩ'ˉ   ŋkwɛ́rə̄ m̄bã   desyllabification by P-rule 4
     g. ã zĩ'ˉ   ŋkwɛ́rə̄ m̄bã   tone deletion by T-rule 5
     h. ã zĩ'ˉ   ŋ'kwɛ́rə̄ m̄bã   simplification and ds

The rules involved in this derivation are indicated in each step. In b. the TO replacive tone pattern replaces the underlying tone of the verb (cf. 14.2). We notice that the preposition is deleted. Its tone is not, however, deleted. The derivation of (19b) is similar to that of (19a) given here above.

12.2.2 Preposition /nĩ/

The underlying tone of the preposition /nĩ/ is HL̩, given its dowstepping effect on following H.

This preposition is used to portray the meaning of instrument or accompaniment in an adverbial phrase.

(21) a. nĩˉ ˉnwĩ   → [nĩ 'nwĩ]   "with a cutlass"
                                (instrument)

     b. nĩˉ mĩlũ·ũ → [nĩ mĩlũ·ũ] "with wine"
                                (accompaniment)

     c. nĩˉ ˊfórə̄   → [nĩ 'fórə̄]   "with a mouse"
                                (accompaniment)

The floating L tone posited after the preposition causes a following H to downstep. The derivation of (21c) justifies the presence of this L̩.

(22) a. nĩˉ ˊfórə̄   underlying tones
     b. nĩ ˊfórə̄   tone grounding to the left
     c. nĩ fórə̄   tone grounding to the right
     d. nĩ 'fórə̄   simplification and ds

In (22a) the underlying tones are given. In b. the floating tone of the preposition grounds to the right and creates a HL contour tone. In c. the floating H tone of the noun prefix

grounds to the right where it is absorbed by the H of the noun stem. In d. the contour tone on the preposition simplifies and causes the following H tones of the noun to downstep.

12.2.3 Derived Prepositions

The prepositions /bĬˑǏ/, /bū̄/, and /bŏ̄/ are derived from personal pronouns (cf.9.1.1.). They are used in adverbial phrases to give the meaning "together with (accompaniment)." Given the tonal behaviour of /bo/ in context, we have posited an underlying floating L tone after it thus: /bŏ̄ /.

(23) a. bŏ̄ lǎŋǎ ⟶ [bŏ 'lǎŋǎ]
                             "he together with a horse"

      b. bĬˑǏ m̄bū̄ ⟶ [bĬǏ mbū]
                             "I together with a dog"

      c. bū̄ m̄bū̄ ⟶ [bū mbū]
                             "you together with a dog"

The the derivation of the surface tones from the underlying tones is straightforward. We give in (24) below the derivation of (23b) as an example.

(24) a. bĬˑǏ   m̄bū̄   underlying
      b. bĬˑǏ   m̄bū   tone grounding
      c. bĬˑǏ   m̄bū   tone lowering
      d. bĬˑǏ   mbū   tone lowering
      e. bĬˑǏ   m̄bū   desyllabification
      f. bĬˑǏ   mbū   tone grounding

In (24a) the underlying tones are given. In b. the floating L tone of the noun is grounded. In (24c) the H tone of the preposition is lowered by T-rule 2. In d. the HL tone of /m̄bū/ is lowered to ML. In e. the homorganic nasal prefix of the noun dessyllabifies by P-rule 4 and its tone is grounded on the preceding morpheme.

The derivation of (23c) is similar to that of (23b) given here above.

12.3 Adverbs

Adverbs tell us when, where or how an action takes place. As we have seen above, (cf 12.2.1.2 and 12.2.3) prepositions are used with nouns to form adverbial phrases. Here are other examples where prepositions and nouns are used in adverb phrases.

(25) a. á 'yɔɔ́   "yesterday"
     b. á yìjōŋə̀   "on market day"
     c. nì mìtìì   "fast, quickly, or with force"
     d. nì bìnōò bìntáā   "at five o'clock"

The derivation of the tones in (25a) is as follows:

(26) a. á ˉ yɔɔ́   underlying
     b. á ˋ yɔ́ɔ́   B tone raising
     c. á yɔ́ɔ́   tone grounding
     d. á 'yɔ́ɔ́   simplification and ds

The word /yɔɔ́/ is a class B L tone noun. In (26a) we have posited a floating L tone before this noun (which represents the tone of a lost prefix). In (26b) the L tone of the noun stem is raised to H by T-rule 14. In (26c) the floating L tone of the prefix is grounded to the left on the preposition where it creates a HL contour tone. In (26d) the contour tone is simplified causing the following H to downstep.

The derivation of (25b) is as follows:

(27) a. á yìjōŋə̀   underlying tones
     b. á yǐjōŋə̀   tone spreading.

We notice that the contour tone on the first syllable of /yìjōŋə̀/ is a result of tone spreading, i.e. the H of the preposition spreads onto the L of the following noun.

Adverbs come immediately after the verb as seen in the following examples:

(28) a. á 'yáŋá sì'ì   "it hurts much"
        it hurts much

b. ā 'bwíí   tsātsɔŋə   "he is sleeping now"
   he sleep   now

c. ā fɛ'ɛ mə tsí'í tsātsɔŋə
   he go out PO just   now
   "he has just gone out now"

The tonal changes involving the subject pronoun and the verb will be discussed in the sections treating tense and aspects (cf. chapters fourteen and fifteen). What we should note is the tones and the position of the adverbs. The basic tones of the adverbs in the above examples are indicated as follows: /sí'í/ "much" /tsātsɔŋə/ "now", /tsí'í/ "just". In (28a) the H tone of the adverb /sí'í/ is downstepped after the preceding downstepped H. In (28b) the preceding H of the verb spreads onto the L tone of the following adverb creating a HL contour tone on the first syllable of the adverb, /tsātsɔŋə/, while in (28c) the L tone on the Po tense marker lowers the following H tone of the adverb /tsí'í/ to /tsí'í/.

Some adjectives are used as adverbs, for example:

(29) ā fà'ā sígənə   "he works well"
     he work good

The tones of the adverb in the above example are indicated. They do not change in this context.

Some verbs are used as adverbs to modify other verbs.

(30) a. ā ní wànsə yí'ˉ   "he came early (today)"
        he P1 be-quick come

     b. ā ghɛsə mə yí'ˉ   "he has just come"
        he just   PO come

     c. ā ní tígsə nzíˉ
        he P1 be-late to come "he came late"

In the above examples, the first verb is used as an adverb to modify the following verb. The first verb can be conjugated in the various tenses and aspects while the second verb occurs in the infinitive form. Its tonal changes are conditioned by their phonetic environments.

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PART II D

VERB AND VERBAL CONSTRUCTIONS

Chapter Thirteen

VERB STRUCTURE AND LEXICAL TONE

13.1 Verb Structure

In Bafut, the most free form of the verb is the imperative. The imperative is thus taken as the citation form of the verb in this study.

The verb in Bafut does not have a prefix in its citation or basic form. Most verbs, however, can take a suffix. The basic structure of the verb is thus: Stem + Suffix.

The verb suffixes in Bafut are: -tə, -nə, -kə, and -sə. The first three of them, i.e. -tə, -nə, and -kə, have aspectual meanings. These will be discussed in the section on aspect (cf.15.2.3). The suffix -sə is a transitiviser, i.e., it converts basically intransitive verbs into transitive verbs. These suffixes are illustrated in the following examples:

(1) fǎ'ə   fà'ā-tə́
       "work!"   "work a bit!"
     kɔ́   kɔ́-tə̄
       "catch!"   "catch one after the other!"
     sǒ   sǒ-tə̄
       "pierce!"   "pierce several times!"
     ghɛ̀ɛ́   ghɛ̀n-tə́
       "go!"   "go a little distance!"
     lóɔ́   lóɔ́-nə́
       "bite!"   "bite a little piece off!"
     kwɔ́   kwɔ́-kə̄
       "die!"   "die one after the other!"
     lə̀'ə́   lə̀'ə̄-sə́
       "to be slippery"   "make slippery!"
     lwɪ̀'ɪ́   lwɪ̀'ɪ-sə́
       "to end"   "end!"
     ghá'á   ghá'ā-sə́
       "to be big, great"   "glorify, praise!"

The verb stem in Bafut is generally monosyllabic or disyllabic. Trisyllabic verbs generally consist of a two-syllable stem and a one-syllable suffix as can be verified from the above table.

13.2 Verb Tone Classes

Verbs in Bafut fall in two tone classes: H and L. The L tone verbs have the pattern LH. The underlying LH pattern of the L tone verb comes out on the surface as LM by application of T-rule 1.

Some of the verbs that show a distinction of tone classes are presented as follows:

(2)   High Tone   Low Tone

   a. bá'á   "weave!"   bà'á   "treat a wound!"
   b. bɔ́ɔ́   "build!"   bɔ̀ɔ́   "cover!"
   c. kwɛ́rɨ́ "take!"   sàŋɨ́ "dry!"
   d. nɔ́   "drink!"   sɔ̀   "pierce!"

In the above examples, the verbs in (a) and (b) are minimal pairs and therefore immediately serve to establish the distinction between the two classes. The verbs will be put in their imperfective P1 forms.[1] This will further show the dististinction between the H and L tone classes.

(3) a. á   nɨ̀ bà'á   "he was weaving"   bá'á
       he-IMPF. P1 weave

    b. á   nɨ̀ bɔ́ɔ́   "he was building"   bɔ́ɔ́
       he-IMPF. P1 build

    c. á   nɨ̀ kwɛ̄rɨ́   "he was taking"   kwɛ́rɨ́
       he-IMPF. P1 take

    d. á   nɨ̀ nɔ́   "he was drinking"   nɔ́
       he-impf. P1 drink

(4) a. á   nɨ̀ bá''á   "he was treating"   bà'á
       he-IMPF. P1 treat

    b. á   nɨ̀ bɔ́'ɔ́   "he was covering"   bɔ̀ɔ́
       he-IMPF. P1 cover

    c. á   nɨ̀ sá'ŋɨ́   "he was drying"   sàŋɨ́
       he-IMPF. P1 dry

    d. á   nɨ̀ sɔ́'�ésʼ   "he was piercing"   sɔ̀
       he-IMPF. P1 pierce

Looking at the above examples we see that the verbs in (3) are distinguished from those in (4) by the tone pattern they carry. The tones of the verbs are given in the third column. The verbs in (3) are H tone class verbs while those in (4) are L tone class. As shown above, the verbs in each class reveal a tone pattern that indentifies it as to the class membership but which at the same time sets it off from the other class. The H tone verbs are lowered to M while the L tone verbs are raised to a H'H tone pattern.

Verbs in their citation form end in a glide:

(5) a. kwɛ́rə̂   "take!"   H HL
    b. sā̄ŋə̂   "dry!"   L ML

It should be noted that the falling tone pattern that is realized on the verb in the citation form is purely an intonational effect. This has already been discussed in 5.5.1 above.

The H H and L H tones as given to the verbs in (3) above are actually the underlying tones as shown in the following examples:

(6) a. kwɛ́rə́   afū̄   HH L   "take medicine!"
         take   medicine

    b. sā̄ŋə́   afù   LM L   "dry medicine!"
         dry   medicine

The prefix of the noun /āfū/ and its tone are deleted in context. As already said above, the LH tone pattern of the L tone verb comes out on the surface as LM by T-rule 1.

In a few cases, the tone of the basic form of the verb is affected by the tone of the deleted V-prefix of the object:

(7) a. fá ālə́lə́ə́   ⟶ [fâ lə́lə́ə́]   "give a bat!"
    b. lɔ́gə̄ ākíkūŋ ⟶ [lɔ́gə̄ kíkūŋ] "fetch an owl!"
    c. kūrə́ āsísáŋ   ⟶ [kūrə̂ sísáŋ]   "eat a sugar cane!"

In the above examples the V-prefix of the object noun is deleted by P-rule 3 and its L tone is assigned to the left on the adjacent syllable of the verb where it creates a contour tone on

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the last syllable of the verb. The rules affecting the tone changes in the nouns have already been discussed in the previous chapters (cf. 4.8).

13.3 Tone Patterns of Verbs

Although the tone pattern of a verb in its citation form depends upon the number of syllables it has, the tone patterns of verbs, however, can generally be described in terms of two patterns: H and LH^2, characterizing thus the High and Low classes repectively. Each tone pattern is mapped onto verbs of one, two, or three syllables by the rules given in 4.6 (21) and (22) above. In view of this, and in the light of our analysis of contour tones (cf. 4.2), the LH pattern on a monosyllabic verb is underlyingly a sequence of L and H level tones and therefore not a unit or contour tone.

These tone patterns are mapped onto one, two and three syllable verbs as follows:

(8)   Monosyllabic verb stems

    a. H : fá   "give!"
    b. LH: sŏ   "pierce!"
    c. L : kō   "take!"[2]

(9)   Disyllabic verb stems

    a. HH: kwárá   "take!"
    b. LH: sāŋá   "dry!"

(10)   Trisyllabic verb stems

    a. HHH: bágátá   "break!"
    b. LLH: bāgātá   "insult!"

The tone patterns described above are those of the imperative form of the verb. As we have already said, the imperative is the citation form of the verb since this form is relatively simpler than the rest of the forms, which are usually more complex.

Notes to Chapter Thirteen

1 The imperfective P1 is the today Past put in its continuous
form.   This will be treated in detail in the next two chapters
(cf. 15.4.2).

2 The pattern L on the verb kò in the citation form is a very
rare one.   Out of a corpus of about 400 verbs it was found on only
the verb, /kò/, which is an irregular verb because it has only one
form, the imperative form. However, the following example shows
that kò derives from the normal LH tone group:

(1) kò˗ m̄bã   ⟶ [kǒ mbã] "pierce meat!"

Chapter Fourteen

TENSE

14.1 Definition

Bafut has tenses, that is, it has grammaticalised time reference.   Comrie (1976) defines tense as "grammaticalized location in time." The function of tense is to locate or situate the action of a verb in time. It relates the time situation to some other time, normally the moment of speaking. Lyons (1968:305) describes it as a deictic category. Strang (1969:143), adapting the defination of the Oxford English Dictionary, defines tense in a language in relation to verb forms. Tense is here regarded as any of the forms of a verb which indicates the different times in which an action "is viewed as happening or existing." Talking about the notion of time in tense, Grimes (1975:230) makes the important point that "time is topological rather than metric," i.e. the notion of situation, event or period coupled with lexicalised time references such as before, during, after, today, yesterday, etc. is more important than real time measurement.

In our treatment of tense in Bafut, we shall aim more at determining the different verb forms and their tones rather than dwelling on the semantics of the various tenses.

The Bafut language, according to its verbal system or verb forms, divides up the time line into nine tenses. Most of these tenses have separate markers.

The tenses are: Remote Past P3
                  Yesterday past P2
                  Today past P1
                  Immediate past P0
                  Present T0
                  Immediate Future F0
                  Today Future F1
                  Tomorrow Future F2
                  Remote Future F3

An aspect worth noting about the tense system of Bafut is that its time spectrum is symmetrical with respect to the present tense (TO) or the moment of speaking. Past and future time is divided up equally either way.

14.2 Present (TO) /ø/

The present tense in Bafut is marked solely by tone. It is translated into English by the present perfect tense. It has a perfective meaning as regards aspect. The imperfective aspect of this tense, which has the meaning of the English progressive, will be treated in the section on aspect.

The following examples illustrate the tonal marking of the TO.

(1) a. à   kwɛ́rə̄ ˋ ˆ m̄bà   → [ā kwɛ̀rə̄ mbà]
         he ø take   T meat   "he has taken meat"

     b. à   sāŋə̄ ˋ ˆ m̄bà   → [ā sāŋə̄ mbà]
         he ø dry   T meat   "he has dried meat"

     c. bő   kwɛ́rə̄ ˋ ˆ m̄bà   → [bő kwɛ̀rə̄ mbà]
         they ø take   T meat   "they have taken meat"

     d. bő   sāŋə̄ ˋ ˆ m̄bà   → [bő sāŋə̄ mbà][1]
         they ø dry   T meat   "they have dried meat"

     e. à   kwɛ́rə̄ ˋ ˆ ˋ főrə̄ → [à kwɛ̀rə̄'ˉ 'főrə̄]
         he ø take   T mouse   "he has taken a mouse"

     f. à   sàŋə́ ˋ ˆ ˋ főrə́ → [à sàŋə́'ˉ 'főrə́]
         he ø dry   T mouse   "he has dried a mouse"

     g. bő   kwɛ́rə́ ˋ ˆ ˋ főrə̄ → [bő kwɛ́rə̄'ˉ 'főrə̄]
         they ø take   T mouse   "they have taken a mouse"

     h. bő   sāŋə́ ˋ ˆ ˋ főrə̄ → [bő sāŋə́'ˉ 'főrə̄]
         they ø dry   T mouse   "they have dried a mouse"

We notice that in the above examples, the contrast between high and low tone verbs is neutralized. We notice that the TO has a replacive tone pattern (T). (Henceforth a replacive or superimposed tone pattern in the underlying string will be symbolized as T.) Replacive tone patterns have also been attested

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to in Ngyemboon (Anderson, 1981). The replacive tone pattern of the TO is L HL. This tone thus replaces both the H H pattern of the high tone verbs and the L H pattern of the low tone verbs. This will be demonstrated in the derivations below.

A sample derivation of (1a) is as follows:

```
(2)   a.   à kwárá ⎺ ⎺ m̄bà      underlying
      b.   à kwɛ̀rá      m̄bà      TO replacive tone
      c.   à kwɛ̀rá      mbà      desyllabification and tone absorption
      d.   à kwɛ̄rá      mbà      tone lowering
```

In (2a) the underlying tones are given. Special note should be taken of the TO replacive tones on the verb as given in (b). In (2c) the nasal prefix desyllabifies by P-rule 4 and its L tone is assigned to the left where it is absorbed into the low tone of the verb. In d. the HL tone is lowered to ML by T-rule 1.

A sample derivation of (1d) is given in (3) below:

```
(3)   a.   bó sàŋá ⎺ ⎺ m̄bà      underlying
      b.   bó sàŋá      m̄bà      TO replacive tones
      c.   bó sáŋá      m̄bà      tone spreading
      d.   bó sáŋá      mbà      nasal desyllabification and
                                  tone absorption
      e.   bó sáŋá      mbà      tone simplification
      f.   bó sáŋá      mbà      tone simplification by absorption
```

In the above derivation the H tone of the pronoun spreads into the L tone of the verb in(3c) and eventually simplies to H in (3e). The syllabic nasal prefix of the object desyllabifies in (3d) and its tone is assigned to the adjacent syllable of the verb. In (3f) the HL tone on the verb simplifies to L by the process of tone absorption.

The derivation of (1e) is as follows.

```
(4)   a.   à kwɛ̀rá ⎺ ⎺ ⎺fórá      underlying
      b.   à kwɛ̀rá      ⎺fórá      TO replacive tone
      c.   à kwɛ̀rá⎺      fórá      tone grounding
      d.   à kwɛ̀rá'⎺      'fórá      simplification and ds
```

In (4a) the underlying tones are given. In b. the TO tones replace the underlying H tones of the verb. In (4c) the H floating tone of the noun prefix is grounded to left on the

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preceding syllable where it creates a HLH contour tone. In (4d) the HLH contour tone simplifies and becomes a H'H contour tone, which in turn causes the following H tones on /fōrá/ to downstep.[2]

The derivation of (1h) is the same as that of (1e) given above. The same TO tone pattern, L HL, is realized on monosyllabic verbs. This tone pattern also has the same effect on the tones of noun object, as we have seen in the derivations of tones on disyllabic verbs. This is illustrated in the following examples:

(5) a. à   kó ⁀ ⁀ m̃bà   → [à kō mbà]
       he TO catch T meat   "he has caught meat"

    b. à   kó ⁀ ⁀ ⁀ fōrá   → [à kó'⁀ 'fōrá]
       he TO catch T   mouse   "he has caught a mouse"

    c. bó   sŏ ⁀ ⁀ m̃bà   → [bō sō mbà]
       they TO pierce T meat   "they have pierced meat"

    d. bó   sŏ ⁀ ⁀ ⁀ fōrá → [bó só'⁀ 'fōrá]
       they TO pierce T mouse   "they have pierced a mouse"

The derivation of (5a) is as follows:

(6) a. à kó ⁀ ⁀   m̃bà   underlying
    b. à kō⁀   m̃bà   TO replacive tone
    c. à kō   m̃bà   tone absorption
    d. à kō   mbà   nasal desyllabification and
                            tone absorption
    e. à kō   mbà   tone lowering

In (6a) the underlying tones are given. It should be noted that the whole L HL tone pattern of the TO is realized on the one-syllable stem as a complex LHL contour tone (6b). In (6c) the L tone of the verb stem is absorbed into the preceding low tone of the pronoun. In (6d) the syllabic nasal prefix of the object desyllabifies by P-rule 4 and its tone is assigned to the left where it is absorbed into the low tone part of the contour tone. In (6e) the contour tone is lowered to ML by T-rule 1.

The derivation of (5b) is as follows:

(7) a. à kó ˘ ˆ ˉfórə̄   underlying
     b. à kǒˆ   ˉfórə̄   TO replacive tones
     c. à kó   ˉfórə̄   tone absorption
     d. à kǒˆ   fórə̄   tone grounding to the left
     e. à kó'ˆ   'fórə̄   simplification and ds

In (7b) the TO tone pattern is realized on the verb stem as a
LHL contour tone; in (7c) the first low tone part of the contour
tone is absorbed into the low tone of the pronoun.   In (7d) the
floating H tone of the following object grounds to the left onto
the contour tone on the verb forming a HLH contour tone there. In
(7e) the contour tone simplifies to H'H and causes the following H
tones of the nouns to downstep.[2]

The derivation of (5c) is as follows:

(8) a. bó só ˘ ˆ m̄bà   underlying
     b. bó sôˆ   m̄bà   TO replacive tones
     c. bó sôˆ   m̄bà   tone spreading
     d. bó só   m̄bà   tone grounding
     e. bó só   mbà   nasal desyllabification
                            and tone absorbtion

In (8a) the underlying tones are given. In (8c) H tone of the
pronoun spreads into the verb stem where it creates a HL contour
tone.   In (8d) the floating HL tone grounds on the verb stem where
it is absorbed by the other HL contour tone.   In (8e) the nasal
prefix of the object desyllabifies and its tone is assigned to the
left where it is absorbed by the low tone on the verb stem.

The derivation of (5d) is the same as that of (5b) given in
(7) above.

The TO tone pattern for trisyllabic verbs is L L HL. This is
illustrated in the following examples.

(9) a. à tsɔ́'ɔsə̄ ˘ ˘ ˆ m̄bà   → [à tsɔ́'ɔsə̄ mbà]
                                        "he has borrowed meat"

     b. bó mā'ātə̄ ˘ ˘ ˘ ˉlə́ŋə̄ → [bó mā''ātə̄ 'lə́ŋə̄]
                                        "they have let go the horse"

The derivation of (9a) is as follows:

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```
(10)   a.   à tsɔ'ɔsə ˜ ˘ ˆ m̀bā        underlying
       b.   à tsɔ'ɔsə            m̀bā    TO replacive tone
       c.   à tsɔ'ɔsə            mbā    nasal desyllabification and
                                        tone grounding to the left
       d.   à tsɔ'ɔsə            mbā    tone lowering
```

In (10b) the TO tones replace the underlying tones of the verb. Note should be taken of how the TO tone pattern is mapped on the three-syllabic verb. In (10c) the nasal prefix of the object desyllabifies and its tone is assigned to the left where it is absorbed into the L tone of the last syllable of the verb. In (10d) the HL tone is lowered by T-rule 1.

The derivation (9b) is as follows:

```
(11)   a.   bō mà'ātə ˜ ˘ ˆ ˉfōrə     underlying
       b.   bō mà'ātə           ˉfōrə    TO replacive tones
       c.   bō mà'ātə           fōrə    tone grounding to the right
       d.   bō mà'ātə           fōrə    tone spreading to the right
       e.   bō mà'ãtə           fōrə    tone spreading to the left
       f.   bō mà'ãtə           fōrə    tone simplification
       g.   bō mã'ˈātə          fōrə    tone simplification and ds
       h.   bō mã'ˈātə          ˈfōrə   tone simplification and ds
```

In (11a) the underlying tones are given. In (11d) the H tone of the pronoun spreads onto the first low tone of the verb. In e. the H tone part of the contour tone on the last syllable of the verb spreads leftwards to the second syllable of the verb where it creates a LH contour tone. In f. the first contour tone simplifies to H. In g. the LH contour tone simplifies to H causing the H tone to downstep. In h. the contour tone on the last syllable of the verb simplifies causing the following H tones of the noun to downstep.

14.3   The Immediate Past (PO) /mə̀/

The immediate past tense (labelled PO) is used to describe events that have just taken place. The immediate past seems to overlap with the present tense (TO) described above in its aspectual meaning which shows the completed nature of the event. However, the point to stress about the immediate past is the immediacy of the completed act, i.e. the focus is on the nearness

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of the completed event to the moment of speaking with the result that the event or action is still "fresh" or felt. This might correspond more in a sense to what McCawley (1971) termed "Hot News Perfect." In Aghem this tense is translated as the Present (Anderson, 1979). The PO is also translated into English by the present perfect.

The PO tense is morphologically marked by /mə̂/ which follows the verb. The tone of the marker is HL. The verb has a replacive L L tone pattern. The following examples illustrates the use of the tense and the tonal behaviour involved.

(12) a. à kwɛ́rə́   `  ` mə̂ ˈlɛ́ŋə̂ → [à kwɛ̀rə̀ mə̂ lə̄ŋ̄ə̂]
          he take   T PO horse   "he has taken a horse"

      b. à lɔ́gə́   `  ` mə̂ ˈlə́ŋə̂ → [à lɔ̀gə̀ mə̂ lə̄ŋ̄ə̂]
          he fetch   T PO horse   "he has fetched a horse"

      c. bó kwɛ́rə́ `  ` mə̂ ˈlə́ŋə̂ → [bó kwɛ̀rə̀ mə̂ lə̄ŋ̄ə̂]
          they take   T PO horse   "they have taken a horse"

      d. bó lɔ́gə́   `  ` mə̂ ˈlə́ŋə̂ → [bó lɔ̀gə̀ mə̂ lə̄ŋ̄ə̂]
          they fetch T PO horse   "they have fetched a
                                          horse"

As can be observed in the above examples, the difference between the two verb classes, L and H, is neutralized. Both classes acquire a LL tone pattern, i.e. HH → LL; LH → LL. To explain this derivation we will, as in the case of the TO above, posit a replacement tone pattern wherein the inherent tone of the verb is replaced by a low tone pattern.

In the above examples it can be noticed that the L of the ML tone of the PO marker lowers the H tone of the following object to M.

A point worth noting about the TO and the PO tenses is that while these two tenses overlap in their aspectual meaning, i.e., the perfective aspect, they are different in the degree of focus. In the TO, the focus is on the perfective nature or the completive aspect of the action or event while the PO focuses on the immediacy of the past action or event while retaining the meaning component of completive aspect.

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14.4.1 Today Past (P1) /nɪ̂N/

The today past tense (P1) is used to describe events that took place earlier in the same day, i.e. the day of speaking. It is morphologically marked by /nɪ̂N/, which precedes the verb. The underlying tone of the marker is HL as will be seen below.

(13) a. ā nɪ̂ŋ kwɛ́rə̄ lə̄ŋə́ → [ā nɪ̂ŋ kwɛ́rə̄ lə̄ŋə́]
        he P1   take   horse   "he took a horse (today)"

   b. ā nɪ̂n lɔ̄gə́ m̄bā → [ā nɪ̂n lɔ̄gə́ mbā]
        he P1   fetch   meat   "he fetched meat (today)"

   c. bɔ́ nɪ̂ŋ kwɛ́rə̄ fɔ́rə̄ → [bɔ́ nɪ̂ŋ 'kwɛ́rə̄ fɔ́rə̄]
        they P1   fetch   horse   "they took a mouse (today)"

   d. bɔ́ nɪ̂n lɔ̄gə́ m̄bā → [bɔ́ nɪ̂n lɔ̄gə̄ mbā]
        they P1   fetch meat   "they fetched meat (today)"

   e. ā nɪ̂n lɔ̄gə́ lə̄ŋə́ → [ā nɪ̂n lɔ̄gə̄ lə̄ŋə̄]
        he P1   fetch horse   "he took a horse (today)"

   f. bɔ́ nɪ̂n lɔ̄gə́ → [bɔ́ nɪ̂n lɔ̄gə̄]
        they P1   fetch   "they fetched (it) (today)"

In the above examples the verbs remain distinct. Basically it can be said that the verbs maintain their inherent tones, especially as evidenced by (13a,b,d). The H tone of the LH verb tone pattern becomes LM by T-rule 1. However, in (13c) there is a slight drop in the level of the H tones of the verb. After the H tone of the tense marker /nɪ̂ŋ/ the H tone of the verb downsteps. We also find that in (13e,f) the underlying LH tone of the verb becomes LL. The LL tone pattern in (13f) is caused by intonation, which lowers the last surface M tone of the verb to L when it occurs before pause. The LL tone in (13e) is brought about by a dissimilation process (cf. T-rule 9 in 4.8.9). It should also be noted that in (13b,d) the L tone of the prefix of the object m̄bā is deleted by T-rule 5. The derivation of (13c) is given here below:

(14) a. bɔ́ nɪ̂ŋ kwɛ́rə̄ ˉfɔ́rə̄   underlying
     b. bɔ̄ nɪ̂ŋ kwɛ́rə̄ fɔ́rə̄   tone grounding to the right
     c. bɔ́ nɪ̂ŋ 'kwɛ́rə̄ fɔ́rə̄   tone simplification and ds

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In (14a) the underlying tone of the string are given. In b.
the H tone of the noun prefix grounds to the right where it is
absorbed by the H tone of the noun stem. In (14c) the HL contour
tone simpifies to H causing the following H tones of the verb to
downsteps.

The derivation of (14e) is as follows:

(15) a. à nɪ̄n lɔ̄gɔ́ lɔ́ŋɔ́   underlying
     b. à nɪ́n lɔ̄gɔ́ lɔ́ŋɔ́   simplification by absorption
     c. à nɪ́n lɔ̄gɔ́ lɔ́ŋɔ́   tone lowering
     d. à nɪ́n lɔ̄gɔ̀ lɔ́ŋɔ́   dissimilation
     e. à nɪ́n lɔ̄gɔ̀ lɔ̄ŋɔ̄   tone lowering

In (15a) the underlying tones are given. In (15b) the contour
tone on the marker simplifies to H by absorption. In (15c) the L
tone of the pronoun lowers the H on the marker to M. In (15d) the
H tone of the second sylible of the verb becomes L in proximity to
the H tone of the object by a dissimilation process (cf. T-rule
9). In (15e) the preceding L tone lowers the H tones of the object
to M.

14.4.2 Today Past (b) (P1b) /ˇ nɪ̄N⁻ /

There is an alternative form of the P1 tense which is marked
by the morpheme /ˇ nɪ̄N⁻ / with underlying tones as indicated. The
semantic difference between the P1 forms given in (13) above and
those in (16) here below is that the latter are used to emphasize
the completed nature of the event. It is the P1 but when this form
is selected it is to focus on the fact that the act was acually
carried out or completed.

(16) a. à ˇ nɪ̄ŋ⁻ kwɛ̄rɔ́ ˉ lɔ́ŋɔ́ ⟶ [à nɪ̄n kwɛ̄rɔ̄ lɔ́ŋɔ́]
        he   P1b take   horse   "he took a horse
                                        (today)"

     b. à ˇ nɪ̄n⁻ lɔ̄gɔ́ ˉ lɔ́ŋɔ́ ⟶ [à nɪ̄n lɔ́'gɔ́ 'lɔ́ŋɔ́]
        he   P1b fetch   horse   "he fetched a horse
                                        (today)"

     c. bɔ̄ ˇ nɪ̄ŋ⁻ kwɛ̄rɔ́ ˉ lɔ́ŋɔ́ ⟶ [bɔ̄ nɪ̄n kwɛ̄rɔ̄ lɔ́ŋɔ́]
        they   P1b take   horse   "they took a horse
                                        (today)"

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d. bô ˋ nĩnˊ lɔ̃ŋə̃ ˊ lə̃ŋə̃ → [bô nĩn lɔ̃'gə̃ 'lə̃ŋə̃]
    they P1b fetch   horse   "they fetched a horse (today)"

We notice in the above examples that the underlying tones of the verbs change. These changes are caused mostly by the tones of the tense marker, as will be seen in the derivations given below.

The derivation of (16a) is as follows:

(17) a. à ˋ nĩŋˊ kwɛ́rə̃ ˊlə̃ŋə̃   underlying
      b. à nĩŋˊ kwɛ́rə̃ ˊlə̃ŋə̃   tone grounding to the left
      c. à nĩŋˊ kwɛ́rə̃ ˊlə̃ŋə̃   tone lowering
      d. à nĩŋ kwɛ́rə̃ ˊlə̃ŋə̃   tone grounding to the right
      e. à nĩŋ kwɛ̄rə̃ ˊlə̃ŋə̃   tone lowering
      f. à nĩŋ kwɛ̄rə̃ lə̃ŋə̃   tone grounding to the right

In (17a) the underlying tones are given; in (17b) the floating L tone of the marker is grounded to the left where it is absorbed into the L tone of the pronoun. In (17c) the L tone on the pronoun lowers the following HL tone on the marker to ML. In (17d) the floating H tone of the marker is grounded to the right where it is absorbed by the H tone of the verb. In (17e) the L tone of the ML on the marker lowers the following H tone of the verb to M. In f. the H of the noun prefix grounds to the right where it is absorbed by the H of the noun stem.

The derivation of (16d) is given here below:

(18) a. bô ˋ nĩnˊ lɔ̃gə̃ ˊlə̃ŋə̃   underlying
      b. bô nĩnˊ lɔ̃gə̃ ˊlə̃ŋə̃   tone grounding to the left
      .c. bô nĩnˊ lɔ̃gə̃ ˊlə̃ŋə̃   tone lowering
      d. bô nĩn lɔ̃gə̃ ˊlə̃ŋə̃   tone grounding to the right
      e. bô nĩn lɔ̃gə̃ lə̃ŋə̃   tone grounding to the ritht
      f. bô nĩn lɔ̃'gə̃ 'lə̃ŋə̃   simplification and ds

In (18a) the underlying tones are given. In (18b) the floating L tone of the marker is grounded to the left on the H tone pronoun where it forms a HL contour tone. In (18c) the HL tone on the marker is lowered to ML by the L of the HL on the preceding pronoun. In (18d) the floating H tone of the marker grounds to the right on the first syllable of the verb where it creates a HL contour tone. In (18e) the H of the noun prefix grounds to the right and is absorbed by the H of the noun stem.

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In (18f) the contour tone on the verb simplifies causing the following high tones to downstep. It should be noted that there is a double ds on the the H tones of the noun.[2]

The derivations of (16b,c) are similar to (17) and (18) above.

14.5 Yesterday Past (P2) /kɨ/

The P2 tense is marked by the morpheme /kɨ/ and the replacive tone pattern L HL on both the L and H tone verbs. The following examples illustrate the use and tonal patterns of the P2 tense.

(19) a. à kɨ kwɛ́rá ˋ ˆ m̄bā   →   [à kɨ kwɛ̀rā mbā]
          he P2 take   T   meat   "he took meat (yesterday)"

      b. à kɨ lɔ́gá   ˋ ˆ ˊlə́ŋá →   [à kɨ lɔ́gá'ˋ 'lə́ŋá]
          he P2 fetch   T   horse   "he fetched a horse
                                            (yesterday)"

      c. bó kɨ kwɛ́rá ˋ ˆ ˊlə́ŋá →   [bó kɨ kwɛ̀rá'á 'lə́ŋá]
          they P2 take   T   horse   "they took a horse
                                            (yesterday)"

      d. bó kɨ lɔ́gá ˋ ˆ m̄bā   →   [bó kɨ lɔ́gā mbā]
          they P2 fetch T   meat   "they fetched meat
                                            (yesterday)"

From the examples above we find that the tonal contrast between the two tone classes is neutralized as both receive a L HL replacive tone pattern. This tone pattern affects the tone of the object, in a way similar to what we saw in the TO tense above. The following derivations will serve to illustrate tonal behaviour in the P2. The derivation of (20a) is as follows:

(20) a. à kɨ kwɛ́rá ˋ ˆ m̄bā   underlying
      b. à kɨ kwɛ̀rā   m̄bā   P2 verb replacive tone pattern
      c. à kɨ kwɛ̀rā   m̄bā   tone lowering
      d. à kɨ kwɛ̀rā   mbā   nasal desyllabification and
                                     tone grounding

In (20a) the underlying tones are given, and and (20b) the replacive verb tones are given. In (20c) the the HL tone on the second syllable of the verb is lowered to ML by the T-rule 1. In

(20d) the nasal prefix of the object desyllabifies and its tone is assigned to the left where it is absorbed by the low tone on the adjacent syllable of the verb.

The derivation of (19b) is given here below:

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(21)    a.   à kɨ lɔgɔ́ ˘ ˆ ˉlɔ́ŋɔ́    underlying
        b.   à kɨ lɔgɔ̀        ˉlɔ́ŋɔ́    P2 replacive verb tone
        c.   à kɨ lɔgɔ̂ˉ        lɔ́ŋɔ́    tone tone grounding
        d.   à kɨ lɔgɔ̂'ˉ        'lɔ́ŋɔ́    simplification and ds
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In (21a) the underlying tones are given. In (21c) the H tone of the noun grounds to the left onto the tone of the verb thereby creating a HLH complex contour tone. In (21d) the contour tone simplifies to H'H and also causes the H tones of the following noun to downstep.[2]

The time adverb /ˉyɔ́ɔ́/ is normally used with the P2 tense. When it is used with the P2 it means yesterday. This adverbial can also be used with the future tense (F1) to mean tomorrow. Its meaning is, therefore, the day adjacent to (before or after) the day of speaking. This adverb also exists in Ngyemboɔn with the same usage as in Bafut (Anderson, 1980). Another thing to note about the P2 is that it can be used with last week, last month, and last year. This gives the P2 /kɨ/ a relative meaning describing the unit of time immediately before the unit of reference: day, week, month, and year.

14.6 Remote Past (P3) /lɛ̂N/

The remote past tense (P2) is used to describe events which took place earlier than the day before (yesterday), earlier than the time described by the P2 tense. It is used for actions that took place in the distant past. It is marked by the morpheme /lɛ̂N/. Following the behaviour of the P3 marker in context we have posited a HL underlying tone for it, just as for the P1 marker above. The following examples illustrate the tonal behaviour involved in the P3 tense.

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(22) a. à lɛ̃ŋ kwɛ́rə́ ⁻lə́ŋə́ → [à lɛ̃ŋ kwɛ́rə́ lə́ŋə́]
        he P3   take   horse   "he took a horse
                                    (long ago)"

    b. à lɛ̃ŋ lɔ́gə́ m̀bà → [à lɛ̃n lɔ́gə́ mbà]
        he P3   fetch meat   "he fetched meat
                                  (long ago)"

    c. bó lɛ̃ŋ kwɛ́rə́ ⁻fórə́ → [bó lɛ̃ŋ 'kwɛ́rə́ fórə́]
        they P3   take   mouse   "they took a mouse
                                      (long ago)"

    d. bó lɛ̃n lɔ́gə́ m̀bà → [bó lɛ̃n lɔ́gə́ mbà]
        they P3 fetch meat   "they fetched meat
                                  (long ago)"

    e. à lɛ̃n lɔ́gə́ ⁻lə́ŋə́ → [à lɛ̃n lɔ́gə́ lə́ŋə́]
        he P3   fetch horse   "he fetched a horse
                                    (long ago)"

    f. bó lɛ̃n lɔ́gə́ → [bó lɛ̃n lɔ́gə̀]
        they P3 fetch   "they fetched it
                              (long ago)"

It can be noticed that the tonal behaviour of the verbs and
the other words involved in the P3 are exactly the same as we have
seen for the P1 in (13a-f). The underlying HL tone of the marker
causes the following H tones of the verb to downstep. The LH tone
of the L tone verb is lowered to LM by T-rule 3 and it is lowered
to LL by the dissimilation rule (cf. T-rule 9) and intonation
respectively. For the derivations of the tones in (22) above
reference should be made to the derivations given for the examples
in (13) above.

14.7   The Future Tenses

There·are four future tenses in Bafut. These are generally
marked by /kà/. Three of these tenses are further marked and
distinguished from the simple future tense.

14.8   Simple Future (FO) /kà + ø/

The simple future is the unmarked future tense despite the
fact that it has the common future marker /kà-/. This tense is

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used for future actions when the time of the action is not specified.

(23) a. à kā ø kwέrə ⁻ləŋə → [à kā kwέrə ləŋə]
      he F O take   horse   "he will take a horse"

    b. à kā ø lɔgə m̄bà → [à kā lɔgə mbà]
      he F O fetch meat   "he will fetch meat"

    c. bɔ́ kā ø kwέrə ⁻fɔ́rə → [bɔ́ kā 'kwέrə fɔ́rə]
      they F O take   mouse   "they will take a mouse"

    d. bɔ́ kā ø lɔgə m̄bà → [bɔ́ kā lɔgə mbà]
      they F O fetch meat   "they will fetch meat"

    e. à kā ø lɔgə ⁻ləŋə → [à kā lɔgə lɔŋə]
      he F O fetch horse   "he will fetch a horse"

    f. bɔ́ kā ø lɔgə → [bɔ́ kā lɔgà]
      they F O fetch   "they will fetch (it)

The common future marker /kā/ has a surface H tone but from its behaviour in context we have posited an underlying HL tone for it thus: /kā/. The H tone of the marker becomes M after a L tone. In general the verbs retain their underlying tones. However, the LH pattern of the L tone verbs becomes LL when they occur prepause as a result of intonation (cf.23f) and when they occur before a non-low tone by application of T-rule 9, i.e. by a process of dissimilation (cf.23e). The derivation of (23c) is as follows:

(24) a. bɔ́ kā   kwέrə ⁻fɔ́rə   underlying
    b. bɔ́ kā   kwέrə fɔ́rə   tone grounding to the right
    c. bɔ́ kā 'kwέrə fɔ́rə   tone simplification and ds

In (24a) the underlying tones are given. In b. the H of the noun prefix grounds to the right where it is absorbed by the H of the noun stem. In (24c) the contour tone on the marker simplifies to H and causes the following H tones to downstep.

(25) a. à kā lɔgə ⁻ləŋə   underlying
    b. à kā lɔgə ləŋə   tone grounding to the right
    c. ā kā lɔgə ləŋə   simplification
    d. ā kā lɔgə ləŋə   tone lowering
    e. ā kā lɔgə ləŋə   tone dissimilation
    f. ā kā lɔgə ləŋə   tone lowering

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In (25a) the underlying tones are given. In (25c) the contour tone of the marker simplifies to H. In (25d) the H tone of the marker is lowered by the preceding L tone of the pronoun; in (25e) the H tone of the second syllable of the verb becomes L thus yielding the pattern L L by application of T-rule 9. In (25f) the H tone of the object is lowered to M by the preceding L on the verb.

14.9 Today Future (F1) /kā + lɔ̃/

The Today Future tense, labelled F1, is used to refer to actions that are expected to take place in the same day.

The F1 is marked by /lɔ̃/ in addition to the common future marker /kā/. The F1 marker /lɔ̃/ is realized on the surface with a LM glide by T-rule 1.

(26) a. à kā lɔ̃ kwɛ́rə́ ⁻lə̃ŋə́ → [à kā lɔ̃ kwɛ́rə́ lə̃ŋə́]
         he F   1   take   horse   "he will take a horse
                                            (today)"

     b. à kā lɔ̃ lɔ̃gə́ m̀bà → [à kā lɔ̃ lɔ̃gə́ mbà]
         he F   1   fetch meat   "he will fetch meat
                                         (today)"

     c. bɔ́ kā lɔ̃ kwɛ́rə́ ⁻lə̃ŋə́ → [bɔ́ kā lɔ̃ kwɛ́rə́ lə̃ŋə́]
         they F   1   take   horse   "they will take a horse
                                              (today)"

     d. bɔ́ kā lɔ̃ lɔ̃gə́ m̀bà → [bɔ́ kā·lɔ̃ lɔ̃gə́ mbà]
         they F   1   fetch meat   "they will fetch meat
                                           (today)"

In the above examples, we notice that the tones of the verbs are not changed. The underlying tone of the F1 marker /lɔ̃/ becomes M after a H tone and LM elsewhere.

14.10 Tomorrow Future (F2) /kā + lɔ̃/

The F2 tense is used to describe actions that are expected to take place tomorrow.[3]

The tomorrow future (F2) is marked by /lɔ̃/ with a LH tone in addition to the common future marker /kā-/.

The following examples illustrate the use of this tense and its tonal behaviour.

(27) a. à kā lɔ̌ kwɛ́rə́ ˉlə́ŋə́ → [à kā lɔ̌ kwɛ́rə́ lə́ŋə́]
        he F 2 take horse "he will take a horse
                                 (tomorrow)"

     b. à kā lɔ̌ lɔ́gə́ m̄bà → [à kā lɔ̌ lɔ́gə́ mbà]
        he F 2 fetch meat "he will fetch meat
                               (tomorrow)"

     c. bɔ́ kā lɔ̌ kwɛ́rə́ ˉlə́ŋə́ → [bɔ́ ká lɔ̄ kwɛ́rə́ lə́ŋə́]
        they F 2 take horse "they will take a horse
                                  (tomorrow)"

     d. bɔ́ kā lɔ̌ lɔ́gə́ m̄bà → [bɔ́ ká lɔ̄ lɔ́gə́ mbà]
        they F 2 fetch meat "they will fetch meat
                                 (tomorrow]"

The tonal behaviour of the F2 tense markers is the same as that of the F1 tense markers. The HL contour tone on /kā/ simplifies to H. the LH tone of the marker /lɔ̌/ becomes M after H. The underlying tones of the verbs do not change except where affected by T-rule 1.

14.11 Remote Future (F3) /kā + yǐ /

The F3 tense is used to describe actions that are expected to take place sometime later than tomorrow or the time covered by the F2 tense.

It is marked by /kā + yǐ /, i.e. by /yǐ/ with a LH tone in addition to the common future marker.

(28) a. à kā yǐ kwɛ́rə́ ˉlə́ŋə́ → [à kā yǐ kwɛ́rə́ lə́ŋə́]
        he F 3 take horse "he will take a horse
                                (in the distant future)"

     b. à kā yǐ lɔ́gə́ m̄bà → [à kā yǐ lɔ́gə́ mbà]
        he F 3 fetch meat "he will fetch meat
                               (in the distant future)"

     c. bɔ́ kā yǐ kwɛ́rə́ ˉlə́ŋə́ → [bɔ́ ká yǐ kwɛ́rə́ lə́ŋə́]
        they F 3 take horse "they will take a horse
                                 (in the distant future)"

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d. bɔ́ ká yI lɔ̃gə́ m̄bà → [bɔ́ ká yI lɔ̃gə́ m̄bà]
   they F 3   fetch meat   "they will fetch meat
                                 (in the distant future)"

As in the other future tenses we notice that the underlying
tones of the verbs do not change. The LH tone of the marker
becomes M after H just as we have noticed for the F1 and F2
markers.

14.12 Tone Patterns of Tenses

In our treatment of the various tenses we have paid
particular attention to the tonal behaviour of the tense marker or
morpheme and the verb. We have also described the effect of the
tones of adjacent words (subject and object) on the tones of the
verb. In each tense we have determined its characteristic tone as
an abstraction in relation to the phonetic influence of adjacent
tones. It thus happens that in many cases the tone pattern of a
tense is different from the surface or phonetic tones because of
the effect of its tonal environment, e.g. the tone pattern of L
tone verbs in the future tenses is LH even though this tone
pattern can be realized as L L by application of T-rule 9, or when
the verb occurs prepause (cf. 23e,f).

The following table presents the tone patterns of the tenses
we have treated:

(29)   High tone verbs   Low tone verbs

  a) Underlying tones   HH   LH

  b) Verb Forms   High tone verbs   Low tone verbs

     Tense   Marker   Verb stem   Verb stem

       P3   HL   H H   L H
       P2   L   L HL   L HL
       P1   HL   H H   L H
       P1b   LHLH   H H   L H
       P0   HL   L L   L L
       T0   ∅   L HL   L HL
       F0   HL#LH   H H   L H
       F1   HL#LH   H H   L H
       F2   HL#LH   H H   L H

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F3   HL#LH   H H   L H

In most of the verb forms we have seen that the tense morpheme comes immediately before the verb except in the PO where the morpheme comes immediately after the verb.

Notes to Chapter Fourteen

[1] This is realized phonetically as [bó sāŋ bā]. (cf. 3.8)

[2] As we have seen in the associative construction (cf. 8.3.2 (30)), the surface tone pattern H 'H (H'H) causes double downstep. In the verb forms, as well as in the associative construction, this tone pattern derives from an underlying L HL (LHL) tone pattern.

[3] See 14.5 concerning the use of the P2 marker /kɨ/ and the adverb /˜yɔ́ɔ́/.

Chapter Fifteen

ASPECT

15.1 Definition

In the preceding chapter we have treated the various tenses in Bafut. In this chapter we are going to treat aspect. We are, however, going to make constant reference to tense since these categories are closely interrelated. Aspect, just like tense, is a grammatical caterory in Bafut. In our treatment of aspect in Bafut we are going to retain traditional terms, where applicable, as much as possible, although Welmers (1973:343-382) thinks these do not apply fittingly in Niger-Congo languages and thus prefers to use the term "verbal constructions" to avoid confusion. Jackson (1980) in her treatment of aspect and tense in Tikar also adopts this position.

Our discussion of aspect in Bafut will be within the general framework of Comrie's 1976 model of perfectivity and imperfectivity. We will, however, draw on other linguists for terminology which better describes more specific semantic distinctions within the Bafut aspectual system.

Our study of aspect in Bafut does not aim so much to bring out all the possible aspectual meanings but rather to see how various aspectual meanings are mediated morphologically. In doing this, we shall pay special attention to the tonal alternations or characteristics of the grammatical categories and lexical components involved.

In their treatment of aspect Lyons (1968), Palmer (1971, 1974) and Anderson (1979) bring out the distinction between the perfective and imperfective aspects as one of opposition between the notion of completion versus incompletion or duration. Quirk and Greenbaum (1973:40) define aspect in contrast or in relation to tense in the following terms:

"... by tense we understand the correspondence between the form of the verb and our concept of time. Aspect concerns the manner in which the verbal action is experienced or regarded (for example as completed or in progress)."

Comrie (1976), who gives a more elaborate and up-to-date treatment of the subject of aspect defines it in terms of perfective versus imperfective. In the perfective aspect the verbal form "presents the totality of the situation without reference to its internal temporal constituency: the whole of the situation is presented as a single unanalysable whole, with a beginning, middle and end rolled into one...." (p.3)

On the other hand, a verbal form with imperfective meaning presents a situation or action with internal temporal structure, i.e. viewed from within as having a beginning, middle and an end or simply drawn out. In our treatment of aspect in Bafut the various meanings of the perfective and imperfective aspects will be illustrated.

15.2 Perfective

In the preceding chapter, while studying the various tenses (Present, Past, Future) we treated the verbs in their perfecive forms. The perfective in Bafut has the following components in its meaning: completeness, completion, iterative distributive, attenuative, and perfect.

15.2.1 Completeness

In this aspectual meaning the action or situation is presented as a complete whole without considering its beginning, middle or end. The whole action from its beginning to end is bundled or rolled up into one unit; for example,

(1) a.   à kɨ wã ˋ ˆ ˊnãã   ⟶   [à kɨ wã nãã]
          "he slaughtered an animal (yesterday)"

     b.   à nɨ̃ŋ kúrə́ m̃bã   ⟶   [à nɨ̃ŋ kúrə́ mbã]
          "he ate meat (today)"

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The tonal derivation in (1a) has been given in (14.5) above; while the tonal derivation of (1b) has been treated in (14.4) above.

15.2.2 Completion

In the completive aspectual meaning emphasis is given to the fact that the action was completed, accomplished or actually carried out.

(2) a. à kwɛ́rə̄ ˆ ˜ mə̄ m̄bā → [à kwɛ̄rə̄ mə̄ mbā]
      "he has taken meat"

   b. à nɪ̄ŋ kwɛ́rə̄ m̄bā → [à nɪ̄ŋ kwɛ̄rə̄ mbā]
      "he has taken meat (today)"

   c. bō ˋnɪ̀ŋˊ kwɛ́rə̄ m̄bā → [bō nɪ̄ŋ kwɛ̄rə̄ mbā]
      "they have taken meat (today)"

For the tonal behaviour of (2a) cf. 14.3, (2b) cf. 14.4.1, (2c) cf. 14.4.2.

The aspectual meanings of completeness and completion are not morphologically marked. The differences in meaning are not formally marked but they are rather semantic interpretations.

15.2.3 Aspectual meaning of verb suffixes

The aspectual meanings: iterative, distributive and attenuative are expressed by verb suffixes.

15.2.3.1 Iterative /-kə/

The iterative meaning is expressed by the verb suffix /-kə/. The meaning of this aspect is that the action or situation is repeated several times, or that the same action or situation is carried out or experienced by several people in several places or in several instances. Emphasis is, however, on the action. The iterative suffix is used almost exclusively with intransitive verbs.

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(3)   verb   iterative

    a.   kwŏ   "die!"   kwŏkɛ́ "die one after another!"
    b.   wŏ   "fall!"   wŏkɛ́   "fall several times!"
    c.   jɛ̃ɛ̃   "urinate!" jɛ̃ɛ̃ŋkɛ́ "urinate several times!"

15.2.3.2 Distributive /-tə/

The distributive has the same meaning as the iterative with
the sole difference that the suffix /-tə/ is used with transitive
verbs.

(4)   verb   distributive

    a.   düü   "uproot!"   dümtɛ́ "uproot one
                                          after the other!"

    b.   tsɔ́'ɔ́ "pull out!"   tsɔ́'ɔ́tɛ́ "pullout one
                                          after another!"

    c.   kɛ́kɛ́   "cut!"   kɛ́kɛ́tɛ́ "cut several times!"

15.2.3.3 Attenuative /-tə/

The attenuative is expressed by the verb suffix /-tə/. It has
different shades of meanings, but the general idea is that the
action or the effect of the action is reduced, weakened or
attenuated. Here are examples of verbs showing this meaning:

(5)   verb   attenuative

    a.   nɔ̃'ɔ́ "squeeze!" nɔ̃'ɔ́tɛ́ "squeeze a little!"
    b.   yɛ̃'ɛ́ "sweep!"   yɛ̃'ɛ̃tɛ́ "sweep a little portion!"
    c.   tsū   "wet!"   tsūtɛ́   "wet a bit!"
    d.   fɛ́ɛ́   "slap!"   fɛ́ntɛ́   "pat, tap (on the back)!"

15.2.3.4 Tone Patterns

In 15.2.3.1-4 the verbs are given with their underly tones.
The tones follow the normal patterns for both classes, HH and LH.
The last syllable of the H tone verb class has a H tone so that
H+suffix → H-H; HH+suffix → HH-H.   The suffix tone is separated
from the stem by a hyphen, -.   In the citation form the last

syllable of LH verbs is M so that: LM + suffix → L-M;
LM + suffix → LL-M; The patterns are summarized thus:

H tone			Low tone		
H + suffix	→	H-H	LM + suffix	→	L-M
H H + suffix	→	H H-H	L M + suffix	→	L L-M

From the above analysis it can be noticed that the suffixes
in themselves have no inherent tone. They copy the tone of the
preceding syllable of the verb. In the H tone verbs the suffix
copies the preceding H tone of the verb stem. In the L tone verbs
the suffix copies the preceding M, which is the last tone of the
verb stem, while this M tone is replaced by a L tone in order to
maintain the normal tone patterns LM or LLM, otherwise
impermissible patterns like *LM M or *LMM could be created on the
verb.

15.3 Perfect

The perfect denotes a past action or situation which has
current relevance (Palmer: 1974:51). There are various meanings
attached to past situations with present relevance or effects. In
Bafut these various meanings are expressed by corresponding
markers or morphemes or adverbials. This will be illustrated
below.

15.3.1 Recent Past

The aspectual meaning of recent past or "Hot News Perfect"
(McCawley, 1971) is expressed in Bafut by the PO and the
lexicalized adverbial /ghɛ̀sɘ̄/.

(6) a. à kwɛ́rɘ̄ ˋ ˜ mɘ̄ m̄bà   → [à kwɛ́rɘ̄ mɘ̄ mbà]
       "he has taken meat"

    b. à ghɛ̀sɘ̄ ˋ ˜ mɘ̄ ŋkwɛ́rɘ̄ m̄bà → [à ghɛ̀sɘ̄ mɘ̄ ŋkwɛ́rɘ̄ mbà]
       "he has just taken meat"

    c. à ghɛ̀sɘ̄ ŋkwɛ́rɘ̄ m̄bà   → [à ghɛ̀sɘ̄ ŋkwɛ́rɘ̄ mbà]
       "he has just taken meat"

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For the description of the tonal behaviour of the verbal forms cf. the PO and TO tenses.

15.3.2 Resultative Perfect

Houis (1967:212) calls a past action with present relevance or result resultative perfect.

(7) a. à sŏ ˋ ˜ àbô yì˜   → [à sô abô yɪ]
         "he has pierced his hand"

     b. à kɔ́ɔ́ ˋ ˜ àtū ˜ yì˜ → [à kɔ́ɔ̀ atū yɪ]
         "he has shaved his head"

For the tonal description of the verb forms in (7a,b) reference should be made to the TO in 14.2. Reference should be made to 11.4 for the description of the possessive construction.

15.3.3 Experiential Perfect

If the past action forms part of a person's total experience Welmers (1973) calls this the "experiential" perfect. In Bafut the experiential perfect is used when the action forms part of a person's rare experiences, i.e. actions that are not part of his every-day experience. This action, although forming part of his total experience, is regarded as belonging to the distant past. The experiential perfect is marked by /lέɛN˜ /.

(8) a. à lέɛŋ˜ kūrə́ ñsə́ə̀ → [à lέɛŋ kūrə́ nsə́ə̀]
         "he has once eaten elephant meat"

     b. à lέɛŋ˜ ghɛ̄ɛ́ Kumba → [à lέɛŋ ghɛ́'ɛ́ Kumba]
         "he has once or some time been to Kumba"

     c. à lέɛŋ˜ yə́ ŋ̀kū   → [à lέɛŋ yə́ ŋkū]
         "he has once seen/he once saw a ghost"

The tone of the experiential perfect marker is HLH. The tonal derivation of (8a) is as follows:

(9) a. à lɛ́ɛ̀ŋ˘ kúrə̄ ñsə́ə̀   underlying
     b. à lɛ́ɛ̀ŋ   kúrə́ ñsə́ə̀   tone grounding to the right
     c. à lɛ́ɛ̀ŋ   kūrə̄ ñsə́ə̀   tone lowering
     d. à lɛ́ɛ̀ŋ   kūrə̄ nsə́ə̀   nasal desylabification
                                      and tone deletion

In (9a) the underlying tones are given; in (15b) the floating
tone of the marker grounds to the right where it is absorbed by
the H tone of the verb. In (9c) the L tone of the marker lowers
the H tones of the verb to M. In (9d) the nasal prefix
desyllabifies and its L tone is deleted.

The derivation of (8b) is as follows:

(10) a. à lɛ́ɛ̀ŋ˘ ghɛ̀ɛ̄ Kumba   underlying
      b. à lɛ́ɛ̀ŋ   ghɛ̀ɛ̄ Kumba   tone grounding to the right
      c. à lɛ́ɛ̀ŋ   ghɛ́'ɛ̄ Kumba   simplification and ds

In (10a) the underlying tones are given. In b. the floating
H tone of the marker is grounded to the right where it creates a
HL contour tone on the verb. In c. the contour tone simplifies
causing the H tone of the verb to downstep.

Another thing to note about the experiential perfect is that
the first H tone of its marker is not lowered by L tone.

If the action is unique or can never be repeated and it took
place a few days (weeks, months) ago, the experiential perfect is
marked by /kɨ̀ɨ̀N˘/.

(11) a. à kɨ́ɨ̀n˘ jwɨ́ → [à kɨ́ɨ̀n jwɨ́]
              "she gave birth"

      b. à kɨ́ɨ̀m˘ fɛ̀'ɛ́ wâ ñdâ → [à kɨ́ɨ̀m fɛ́'ɛ́ wá'˘ ndâ]
              "he moved out of the house"

The tone of the marker is HLꞪ as in (8) above. The
derivation of the tones in the above examples is the same as for
those in (8b).

15.4 Imperfective

The imperfective aspect in Bafut portrays the general meaning
of duration or continuousness. It includes in its meaning the

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progressive and habitual. These two meanings are distinguished only by context because the aspectual marker is the same for both meanings. Of the two meanings the progressive is the more common. The progressive combines freely with tense and mood. Thus it has different markers depending upon the tense.

15.4.1   IMPF TO

The present tense imperfective aspect (IMPF TO) in Bafut can be given either a progressive meaning or habituality depending upon the context. This aspect can be glossed as the present progressive. It is marked simply by tone, i.e., a HL replacive tone on the pronoun.

(12)   a.   à ⌒ kwɛ́rə́ m̄bā   ⟶   [á 'kwɛ́rə́ mbā]
                T "he is taking meat"

       b.   à ⌒ sāŋə̄ m̄bā   ⟶   [á sāŋə̄ mbā]
                T "he is drying meat"

       c.   bő ⌒ kwɛ́rə́ m̄bā   ⟶   [bő 'kwɛ́rə́ mbā]
                T "they are taking meat"

       d.   bő ⌒ sāŋə̄ m̄bā   ⟶   [bő sāŋə̄ mbā]
                T "they are drying meat"

As can be observed in (12), the imperfective differs from the forms of the TO perfective only by tone (cf. 14.2). In (12a) the marker is an underlying HL tone on the subject pronoun /â/. The derivation of (12a) is given here below:

(13)   a.   à ⌒ kwɛ́rə́ m̄bā   underlying
       b.   â   kwɛ́rə́ m̄bā   TO replacive tone on pronoun
       c.   á   'kwɛ́rə́ m̄bā   tone simplification and ds
       d.   á   'kwɛ́ré mbā   desyllabification and tone deletion

In (13a) the underlying tones are given. In (13b) the TO HL tone replaces the L tone of the pronoun. In (13c) the contour tone is simplified causing the following H tone of the verb to downstep. In (13d) the syllabic nasal of the noun desyllabifies and loses its tone.

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We also notice that in (12c) the H tone of the verb is downstepped. This downstep is caused by the simplification of the HL replacive tone which replaces the underlying H tone of the pronoun /bó/ to give the form /bõ/. The derivation of (12c) is as follows:

(14) a. bõ ˆ kwɛ́rɔ́ m̄bã   underlying
      b. bõ   kwɛ́rɔ́ m̄bã   TO replacive tone on pronoun
      c. bõ 'kwɛ́rɔ́ m̄bã   tone simplification and ds
      d. bõ 'kwɛ́rɔ́ mbã   desyllabification

In (14a) the underlying tones are given. In (14c) the contour tone on the pronoun is simplified, thus causing the following H tone of the verb to downstep. In (14d) the nasal prefix of the object is desyllabified and its tone is deleted.

15.4.2 IMPF P1

The P1 imperfective differs from the perfective P1 solely by tone. The imperfective P1 is marked by a HL tone on the subject pronoun and a L H̍ tone pattern on the tense morpheme.

(15) a. ã ˆ nɪ̃ŋˇ kwɛ́rɔ́ m̄bã → [á nɪ̃ŋ kwɛ́rɔ mbã]
          T "he was taking meat (today)"

      b. ã ˆ nɪ̃nˇ sãŋɔ́ m̄bã   → [á nɪ̃n sá'ŋɔ́ mbã]
          T "he was drying meat"

      c. bõ ˆ nɪ̃ŋˇ kwɛ́rɔ́ m̄bã → [bõ nɪ̃ŋ kwɛ́rɔ mbã]
          T "they were taking meat (today)"

      d. bõ ˆ nɪ̃nˇ sãŋɔ́ m̄bã → [bõ nɪ̃n sá'ŋɔ́ mbã]
          T "they were drying meat (today)"

The derivation of (15a) is as follows:

(16) a. ã ˆ nɪ̃ŋˇ kwɛ́rɔ́ m̄bã   underlying
      b. ã   nɪ̃ŋˇ kwɛ́rɔ́ m̄bã   IMPF P1 tone on pronoun
      c. á   nɪ̃ŋˇ kwɛ́rɔ́ m̄bã   tone simplification
      d. á   nɪ̃ŋ kwɛ́rɛ́ m̄bã   tone grounding
      e. á   nɪ̃ŋ kwɛ́rɔ́ m̄bã   tone lowering
      f. á   nɪ̃ŋ kwɛ́rɔ́ mbã   desyllabification and
                               tone deletion

In (16a) the underlying tones are given. In b. the HL IMPF P1 tone replaces the underlying L tone of the pronoun. In c. the HL contour tone on the pronoun simplifies to H. In d. the floating H tone of the marker grounds to the right where it is absorbed by the H tone of the verb. In (16e) the L tone on the marker lowers the following H of the verb to M. In (16f) the nasal prefix of the noun desyllabifies and its tone is deleted.

The derivation of (15d) is as follows:

(17) a. bō ˆ nǐn˄ sāŋə̄ m̄bā   underlying
      b. bō   nǐn˄ sāŋə̄ m̄bā   IMPF P1 tone on pronoun
      c. bō   nǐn˄ sāŋə̄ m̄bā   tone simplification
      d. bō   nǐn sāŋə̄ m̄bā   tone grounding
      e. bō   nǐn sā'ŋə́ m̄bā   simplification and ds
      f. bō   nǐn sā'ŋə́ mbā   desyllabification and
                                   tone deletion

In (17a) the underlying tones are given. In b. the HL IMPF tone replaces the underlying H tone of the pronoun. In (17c) the HL contour tone on the pronoun is simplied by a process of absorption whereby the L tone is absorbed into the following L tone of the P1 marker. In (17d) the floating H tone of the marker grounds to the right on the first syllable of the verb where it forms a HL contour tone. In (17e) the contour tone on the verb simplifies causing the following H tone to downstep. tone pattern. In (17f) the nasal prefix of the object desyllabifies and its tone is deleted.

15.4.3 IMPF P2 /kǐ sî̄/

The imperfective P2 is marked by the P2 tense marker, /kǐ/ (for tense) and /sî̄/ (for aspect).

(18) a. ā kǐ sî̄ kwérə̄ m̄bā   →   [ā kǐ sî'̄ 'kwérə̄ mbā]
              "he was taking meat"

      b. ā kǐ sî̄ sāŋə̄ m̄bā   →   [ā kǐ sî'̄ sāŋə̄ mbā]
              "he was drying meat"

      c. ā kǐ sî̄ sāŋə̄ ˆ tǐtá → [ā kǐ sî'̄ sāŋə̄ tǐtá]
              "he was drying pepper"

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d. bó kɨ sɨ˅ kwɛ́rɔ́ m̄bā   →   [bó kɨ sɨ'˅ 'kwɛ́rɔ́ mbā]
   "they were taking meat"

Two changes can be noticed in the tones of the verbs: the H tone verb downsteps in (18a,d) while the LH pattern of the L tone verb becomes LL in (18c). The derivation of (18a) is given below:

(19) a. ā kɨ sɨ˅   kwɛ́rɔ́ m̄bā underlying
      b. ā kɨ sɨ'˅ 'kwɛ́rɔ́ m̄bā simplification and ds
      c. ā kɨ sɨ'˅ 'kwɛ́rɔ́ mbā desyllabification and
                                  tone deletion

In (19b) we notice that the contour tone simplifies and causes both the following H tone and the H tones on the verb to double downstep. In (19c) the nasal prefix of the object desyllabifies and loses its tone by P-rule 4 and T-rule 5 respectively.

The derivation of (18c) is given below.

(20) a. ā kɨ sɨ˅   sāŋɔ́ ˉ tɨtá   underlying
      b. ā kɨ sɨ'˅ sāŋɔ́ ˉ tɨtā   simplification and ds
      c. ā kɨ sɨ'˅ sāŋɔ̂   tɨtā   tone grounding to the right
      d. ā kɨ sɨ'˅ sāŋā   tɨtā   dissimilation
      e. ā kɨ sɨ'˅ sāŋā   tɨtá   tone lowering
      f. ā kɨ sɨ'˅ sāŋā   tɨtā   simplification

In (20a) the underlying tones are given. In (20b) the contour tone on the marker simplifies, causing the following H tone to downstep In c. the floating tone of the noun grounds to the right where it creates a HL contour tone. In d. the H tone of the verb dissimilates to L. In e. the preceding L tone lowers the HL tone of the noun to ML. In f. the ML contour tone simplifies to M.

15.4.4 IMPF P3 /lɛ̄N sɨ˅/

The P3 imperfective aspect is marked by the P3 tense marker and the imperfective morpheme, /sɨ˅/.

(21) a. ā lɛ̄n sɨ˅ kwɛ́rɔ́ m̄bā   →   [ā lɛ̄n sɨ'˅ 'kwɛ́rɔ́ mbā]
          "he was taking meat a long time ago."

b. ā lɛ̄n sî˞ sã̄ŋə̄ m̄bã̀ → [ā lɛ̄n sí'˞ sã̄ŋə̄ mbã̀]
"he was drying meat"

c. ā lɛ̄n sî˞ sã̄ŋə̄ ˞tītá → [ā lɛ̄n sí'˞ sã̄ŋə̄ tītá]
"he was drying pepper"

d. bó lɛ̄n sî˞ kwɛ́rə̄ m̄bã̀ → [bó lɛ́n 'sí'˞ 'kwɛ́rə̄ mbã̀]
"they were taking meat"

The tonal behaviour of the verb forms in the IMPF. P3 are the same as in the IMPF P2 above. In (21a) the simplification of the contour tone on the IMPF. marker /sî˞/ causes the downstep in the H tone verb as already seen in (19b); a dissimilation rule derives the LL tone pattern in (21c) as we have already seen in (19c). In (21d) the L tone of the pronoun /ā/ causes the P3 marker /lɛ́n/ to be lowered to M tone cf. T-rule 1. The rest of the derivation is as in (19) above.

15.4.5 Progressive and Habituality

It was said earlier that the imperfective construction could also be given habitual meaning. However, habituality is not compatible with the P1 and P2 since it takes longer periods than the time span that the P1 and P2 are associated with. The IMPF TO or IMPF P3 have both progressive and habitual meanings as in the following examples.

(22) a. [ā 'bɔ̄ɔ́ā ndā]
          "he is building houses/a house"   PROG
          "he builds houses/he is a builder"   HAB

      b. [ā lɛ̄ sí'˞ bɔ̄ɔ́ā ndā]
          "he was building houses/a house"   PROG
          "he used to build houses"   HAB

The additional suffix /-a/ to the verb bɔ̄ɔ́ is an optional morpheme which may or may not be present. The derivation of (22a) is similar to (13) as far as the verbal constructions or forms are concerned; (22b) is derived in a similar way to (19) as can be seen below:

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(23)  a.  à lɛ̃ sɨ ˉ    bɔ̃ɔ̃  à ñdã̂    underlying
      b.  à lɛ̃ sɨˉ      bɔ̃ɔ̃  à ñdã̂    tone grounding to the left
      c.  à lɛ̃ sɨˉ      bɔ̃ɔ̃  à ñdã̂    tone lowering
      d.  à lɛ̃ sɨˉ      bɔ̃ɔ̃  à ñdã̂    tone simplification
      e.  à lɛ̃ sɨ'ˉ    'bɔ̃ɔ̃  à ñdã̂    simplification and ds
      f.  à lɛ̃ sɨ'ˉ    'bɔ̃ɔ̃  à ndã̂    desyllabification and
                                         tone grounding to the left
      g.  à lɛ̃ sɨ'ˉ    'bɔ̃ɔ̃  à ndã̂    tone lowering
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15.4.6 IMPF Future

The imperfective can combine with all the future tenses. The aspectual meaning of the imperfective in the future is generally the progressive.

15.4.6.1 IMPF FO /kâ kɨ̂/

The FO imperfective form is marked by /kâ kɨ̂/. The imperfective marker, /kɨ̂/, like /kâ/, has a surface H tone but following its behaviour in context, we postulate an underlying HL tone for it thus /kɨ̂/, just as we did for /kâ/.

```
(24)  a.  à kâ kɨ̂ kwɛ́rɔ́        →  [à kā kɨ̂ 'kwɛ́rɔ́]
          "he will be taking"

      b.  à kâ kɨ̂ sàŋɔ́ m̀bã̂     →  [à kā kɨ̂ sàŋɔ́ mbã̂]
          "he will be drying meat"

      c.  bɔ́ kâ kɨ̂ kwɛ́rɔ́ m̀bã̂  →  [bɔ́ kā 'kɨ̂ 'kwɛ́rɔ́ mbã̂]
          "they will be taking meat"

      d.  bɔ́ kâ kɨ̂ sàŋɔ́ ˉtɨ̀tã́ →  [bɔ́ kā 'kɨ̂ sàŋɔ́ tɨ̀tã́]
          "they will be drying pepper"
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In (24a) the underlying HL tone of the imperfective marker /kɨ̂/ causes the H tones of the verb to downstep. In (24c,d) the underlying L tone of the FO marker /kâ/ causes the following surface H tone of the imperfective marker /kɨ̂/ to downstep. The lowering of the H tone of the FO marker to M by the L tone of the preceding pronoun /à/ is of general application for the future tenses, as already discussed in the preceding chapter.

The derivation of (24a) is as follows:

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(25)  a.  à kâ kɨ  kwɛ́rɔ̄     underlying
      b.  à kā kɨ  kwɛ́rɛ̄     tone lowering
      c.  à kā kɨ  kwɛ́rɔ̄     tone simplification
      d.  à kā kɨ 'kwɛ́rɔ̄     tone simplification and ds
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In (25a) the underlying tones are given. In (25b) the L tone
of the pronoun lowers the following HL of the FO marker to ML. In
(25c) the contour tone on the FO marker simplifies to M. In (25d)
the HL contour tone of the imperfective marker simplifies to H
thus causing the following H tones of the verb to downstep.

Following is a derivation of (24d).

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(26)  a.  bō kā   kɨ sāŋɔ́ ˉtɨtá    underlying
      b.  bō kɨ  'kɨ sāŋɔ́ ˉtɨtá    tone simplification
      c.  bō kā  'kɨ sāŋɔ́ ˉtɨtá    tone simplification and ds
      d.  bō kā  'kɨ sāŋɔ́  tɨtá    tone grounding
      e.  bō kā  'kɨ sāŋɔ̀  tɨtá    dissimilation
      f.  bō kā  'kɨ sāŋɔ̀  tɨtá    tone lowering
      g.  bō kā  'kɨ sāŋɔ̀  tɨtá    simplification
```

In (26a) the underlying tones are given. In (26b) the HL
contour tone on the FO marker simplifies to H thus causing the
following H on the imperfective marker to downstep. In (26c) the
HL contour tone on the imperfective marker simplifies to H. In
(26d) the floating H tone of the noun prefix grounds on the first
stem syllable where it creates a HL tone. In (26e) the H tone on
the second syllable of the verb becomes L by a dissimilation
process (cf. T-rule 9). In (25f) the HL contour tone on the first
syllable of the noun is lowered to ML by T-rule 1. In (26g) the
ML tone simplifies to M.

The desyllabification of the nasal prefix of the object /m̀bà/
in (24b,c) and the deletion of its tone have been discussed in the
preceding sections.

15.4.6.2 IMPF F 1-3

The F 1-3 imperfective aspect is formed by adding the
imperfective aspect marker /kɨ/ to the markers of the various
future tenses as illustrated in 15.4.6.2.1-3 below.

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15.4.6.2.1   IMPF F1 /kâ lə̃ kɨ/

(27)   a.   ã kâ lə̃ kɨ kwɛ́rə́ m̀bã → [ã kā lə̃ kɨ 'kwɛ́rə́ mbã]
               "he will be taking meat (today)"

       b.   ã kâ lə̃ kɨ sãŋə́ m̀bã → [ã kā lə̃ kɨ sãŋə̄ mbã]
               "he will be drying meat (today)"

       c.   bó kâ lə̃ kɨ kwɛ́rə́ m̀bã → [bó ká lə̃ kɨ 'kwɛ́rə́ mbã]
               "they will be taking meat (today)"

       d.   bó kâ lə̃ kɨ sãŋə́ m̀bã → [bó ká lə̃ kɨ sãŋə̄ mbã]
               "they will be drying meat (today)"

15.4.6.2.2   IMPF F2 /kâ lŏ kɨ/

(28)   a.   ã kâ lŏ kɨ kwɛ́rə́ m̀bã → [ã kā lŏ kɨ 'kwɛ́rə́ mbã]
               "he will be taking meat (tomorrow)"

       b.   ã kâ lŏ kɨ sãŋə́ m̀bã → [ã kā lŏ kɨ sãŋə̄ mbã]
               "he will be drying meat (tomorrow)"

       c.   bó kâ lŏ kɨ kwɛ́rə́ m̀bã → [bó ká lŏ kɨ 'kwɛ́rə́ mbã]
               "they will be taking meat (tomorrow)"

       d.   bó kâ lŏ kɨ sãŋə́ m̀bã → [bó ká lŏ kɨ sãŋə̄ mbã]
               "they will be drying meat (tomorrow)"

15.4.6.2.3   IMPF F3 /kâ yɪ kɨ/

(29)   a.   ã kâ yɪ kɨ kwɛ́rə́ m̀bã → [ã kā yɪ̂ kɨ 'kwɛ́rə́ mbã]
               "he will be taking meat (in the distant future)"

       b.   ã kâ yɪ kɨ sãŋə́ m̀bã → [ã kā yɪ̂ kɨ sãŋə̄ mbã]
               "he will be drying meat (in the distant future)"

       c.   bó kâ yɪ kɨ kwɛ́rə́ m̀bã → [bó ká yɪ kɨ 'kwɛ́rə́ mbã]
               "they will be taking meat (in the distant future)"

       d.   bó kâ yɪ kɨ sãŋə́ m̀bã → [bó ká yɪ kɨ sãŋə̄ mbã]
               "they will be drying meat (in the distant future)"

    The tonal characteristics of the future tense markers have
already been described in the preceding chapter cf. 14.7-14.12.
The underlying tone of the impefective marker for all the future
tenses is HL. This tone, as in the rest of the cases, simplifies
and consequently causes the H tones of the verb following it to
become downstepped H.

PART II E

THE SENTENCE

Chapter Sixteen

MOOD

16.1 Definition

Mood is best understood in relation to statements, which are sentences that state simple facts. Statement sentences are traditionally regarded as being in the indicative or declarative mood. The Shorter Oxford English Dictionary defines mood as follows:

> "Any one of the groups of forms in the conjugation of a verb which serve to indicate the function in which the verb is used; i.e. whether it expresses a predication, a command, a wish, or the like;" (1972 edition)

In the preceding sections we have been dealing with sentences in the indicative mood. Mood is not as prominent in Bafut as either tense or aspect. However, there are two classes of sentences that tend to be quite distinct from the others with respect to their modal meaning. These are the imperative and interrogative (or question) sentences. Two others, the conditional sentence and contrafactual sentence, will be treated in the chapter on complex sentences.

16.2 Imperative

Imperative sentences are used very much in Bafut. They are used in giving commands. It is the imperative that is taken as the basic form of the verb in Bafut. In our treatment of the imperative we are going to look only at the verb and its tonal alternation. This is because the verb in its imperative form carries the underlying tones.

16.2.1 Tones

To find the underlying tones of verbs we use the verb in an imperative sentence with a (low tone noun) as object.

(1) a. kō nāā yā   "catch the animal!"
    b. fá mbā yā   "give the meat!"
    c. kwέrə̂ mbā yā   "take the meat!"
    d. kūrə̂ mbā yā   "eat the meat!"
    e. kəgətə̂ mbā yā   "chop the meat!"
    f. kɔ́'ɔ́tə̂ 'mɔ́'ɔ́ wā "kindle the fire!"

In the above examples we find that the verbs are all H tone verbs. The tone patterns of the verbs according to the number of syllables are as follows. H; HH; HHH. As already said above, these are underlying H tones. These tone patterns change when there are no objects for example,

(2) a. kō   "catch!"
    b. fā   "give!"
    c. kwέrə̂   "take!"
    d. kūrə̂   "eat!"
    e. kəkə́tə̂   "chop!"
    f. kɔ́'ɔ́tə̂   "kindle!"

We notice above in (2) that when the verb is used alone, i.e., in the imperative without an object, the last H tone ends in a falling tone.

The following are examples of verbs with defferent tone patterns as used in the imperative:

(3) a. sɔ̄⁻ m̄bā yā   → [sɔ̌ mbā yā]   "pierce the meat!"
    b. tū⁻ m̄bā yā   → [tǔ mbā yā]   "spit out the meat!"
    c. sɔ̄⁻ ⁻lə̄ŋə́ wā → [sɔ̀ lə̄ŋə́ wā]   "pierce the horse!"
    d. lɔ̄ɔ̄ m̄bā yā   → [lɔ̌ɔ̄ mbā yā]   "look for the meat!"
    e. lɔ̄gə́ m̄bā yā → [lɔ̌gə́ mbā yā]   "fetch the meat!"
    f. lɔ̄'ɔ̄sə̄ m̄bā yā → [lɔ̌'ɔ̄sə̄ mbā yā] "hide the meat!"
    g. bɔ̄ɔ̄ntə̄ m̄bā yā → [bɔ̄ɔ̄ntə̄ mbā yā] "cover the meat!"
    h. bɔ̄ɔ̄ntə̄ ⁻fɔ́rə́ wā → [bɔ̄ɔ̄ntə̄ fɔ̄rə́ wā] "cover the mouse!"

The surface tone patterns that we notice above are LM, L M, LLM. However, we find L and LLL in (3c,h). These are caused by the

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dissimilation rule which changes the last mid tone to L before a H
tone object (cf. T-rule 9.)

Just as we saw for the H tone verbs above, when the verbs in
(3) above are used in the imperative without the object, they end
in a down glide:

(4) a. sŏˉ   →   [sŏ]   "pierce!"
    b. tŭˉ   →   [tŭ]   "spit out!"
    c. lɔ́ɔ́   →   [lɔ́ɔ́]   "look for!"
    d. lɔ́gə́   →   [lɔ́gə̄]   "fetch!"
    e. lɔ́'ɔ́sə́   →   [lɔ́'ɔ́sə̄]   "hide!"
    f. bɔ́ɔ́ntə́   →   [bɔ́ɔ́ntə̄]   "cover!"

The falling tone, as noticed at the end of each of the above
verbs, is caused by intonation.

16.3 Interrogative

Question sentences in Bafut are marked by question words
(WH-questions) and by intonation.

16.3.1 Question words

The following words mark question sentences in Bafut:

fə	"where?"	á 'yá	"why?"
kə	"what?"	wo	"who?"

16.3.1.1 Fə

The usage of fə is illustrated in the following sentences.

(5) a. ò ˉ̄ ghɛ̀ɛ́ à fə   →   [ó ghɛ̀ɛ́ fə̀]
          "where are you going?"

    b. ò ˉ̄ ghɛ̀ɛ́ à fə   →   [ó ghɛ̀ɛ́ fə́]
          "where are you going?"

    c. ò ˉ̄ lɔ́ˉ à fə   →   [ò lɔ́ā fə̀]
          "where are you from?"

d. bő lő˝ ā fə → [bő lőâ fȝ]
       they leave suff. where
          "where are they from?"

    e. bő kɪ sî˝ ghɛ̀ɛ ā fȝ → [bő kɪ sɪ'˝ ghɛ̀ɛ fə]
       they p2 imp go   suff. where
          "where were they going (yesterday)?"

From the above usages we notice that the tone of the question
word /fə/ changes depending upon the preceding tone, i.e., it
copies the tone of the preceding syllable. It is H when preceded
by a non-low tone and L when preceded by a L tone. The tonal
alternation in the verbs is the same as we have described above
concerning tense and aspect. We present, for example, the
derivation of (5a) in 6 here below:

(6) a. ɔ̌ ˆ ghɛ̀ɛ ā fə   underlying
    b. ȏ   ghɛ̀ɛ ā fə   IMPF TO replaces tone on pronoun
    c. ȭ   ghɛ̀ɛ ā fə   tone simplification
    d. ȭ   ghɛ̄ɛ ā fə   tone lowering
    e. ȭ   ghɛ̄ɛ ˋ fə   V-deletion
    f. ȏ   ghɛ̄ɛ   fə   tone grounding
    g. ȭ   ghɛ̄ɛ   fȝ   tone copying

In (6a) the underlying tones are given. The HL replacive
tone pattern of the IMPF replaces the underlying tone of the
pronoun. In (6c) the contour tone is simplified to H. In (6d) the
H tone of the verb is lowered by T-rule 2. In (6e) the vowel
suffix is deleted, and its tone is grounded to the left in (6f).
In (6g) The Q-word copies the L tone of the preceding syllable.

It is also worth noting that the /ā/ is another Q-marker
(which is more or less optional depending upon the structure of
the sentence and its intonation). This marker behaves in the most
varied way, as we can notice in the above examples: In (5a) it is
deleted but its tone remains while in (5b,e) it is deleted along
with its tone. In (5c,d) it is not deleted. It appears that the
deletion or retention of this morpheme depends on such
non-linguistic factors as attitude or intonation. Reference
should be made to the sections on intonation (cf. 5.5.3) and vowel
deletion (cf. 3.7) for details on the behaviour of this morpheme.

It should also be noted that the Q-word /fə/ can be used alone in asking questions and in this usage it carries a H tone; e.g.

(7)   Fá   "where?"

16.3.1.2 kə, wo, á 'yá

In the following paragraphs we are going to treat the rest of the question words, /kə/, /wo/ and /á 'yá/. The words, /kə/ and /wo/ are unspecified for tone, as will be seen in the derivations given below. They copy the tone of the preceding words. The following sentences illustrate the usage of these words:

(8) a. ā nɨ ā kə   → [ā nɨ kə̀]   "what is it?"
     b. ā nɨ ā wo   → [ā nɨ wò]   "who is it?"
     c. ā nɨ yā̄ ā kə → [ā nɨ yā̄ à kə̀] "what did he see?"
     d. ā nɨ yā̄ ā wo → [ā nɨ yā̄ à wò] "whom did he see?"
     e. ā nɨ yā̄ ā kə → [ā nɨ yā̄ 'kə́]   "what did he see?"
     f. ā nɨ yā̄ ā wo → [ā nɨ yā̄ 'wó]   "whom did he see?"

The derivation of (8a) is as follows:

(9) a. ā nɨ ā kə   underlying
     b. ā nɨ ā kə   tone simplification
     c. ā nɨ ā̀ kə   tone lowering
     d. ā nɨ ˜ kə   V-deletion
     e. ā nɨ̂ kə   tone grounding
     f. ā nɨ̂ kə̀   tone copying

The thing to note here is that the tone of the deleted vowel is grounded to the left where it forms a ML falling tone and that the Q-marker /kə/ copies the L tone of the preceding segment. In this derivation it is also important to note that the Q-word does not copy the whole tone pattern, i.e., the ML contour tone, on the immediately preceding syllable, but rather the L, which is the last level tone of the sequence. This fact goes to confirm our treatment of contour tones as a sequence of level tones. The derivation of (8b) is the same as (9) above.

In (8c,d) the L tone of the subject pronoun lowers the derived H tone of the P1 marker to M while the Q-words, /kə/ and /wo/ copy the L tone of the preceding suffix, /ā/.

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The derivation of (8e) is given here below:

(10) a. ā nɨ yə̄ ā kə   underlying
      b. ā nɨ yə́ ā kə   tone lowering
      c. ā nɨ yə́ ā kə   simplification
      d. ā nɨ yə̄ ˋ kə   v deletion
      e. ā nɨ yə̂ kə   tone grounding
      f. ā nɨ yə̄ 'kə̄   tone simplification, ds
                             and tone copy

In (10a) the full form of the question (i.e. with the morpheme /ā/) is given. It can be seen that it is actually the form of the question as given in (8c); in (10d) the vowel morpheme is deleted and in (10e) its tone is grounded to the left on the verb stem where it forms a HL contour tone. In (10f) we see that three tone processes take place: (i) the HL contour tone simplifies to H, (ii) the Q-marker /kə/ copies the H tone (iii) the downstepping process, which is the result of the contour simplification, takes place at the same time with the tone copying process.

We have already given arguments in support of the fact that in Bafut, and the other Ngemba languages which we have studied, simplification and downstep have to take place at the same time (cf. 4.8.2). Logically tone copying in the above example ought to take place after simplification but since in our situation simplification and downstep take place simultaneously, it also follows that tone copying cannot take place after simplification because this would eliminate the condition for the downstep, which is realized on the Q-marker.

It will be noticed that the derivation of (8f) follows the same derivational process as (8e). From the above two derivations, (9) and (10) we can perceive that there certainly is a tone copying process involved whereby the Q-word copies the immediately preceding tone. Here we should note that tone copying is from the left and not from the right. This is illustrated in the following sentences.

(11) a. ō nɨ yə̄ ā wô bɨ'ˉ
        you P1 see Q Q Bi
        "Bi, whom did you see?"

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b. ō nɨ yə́ 'wó ŋgwā
   you P1 see Q Ngwa
      "Ngwa, whom did you see?"

c. ō kɨ sɨ'⁻ fā'ā kə ghū
   you P2 impf. work Q there
      "what were you doing, there?"

In (11a,b,c) the Q-words, /wo/ and /kə/ are followed by words
with dissimilar tones. In (11a) /wo/ is followed by Bi which
carries a H'H tone glide but the Q-word /wo/ copies the L tone of
the preceding word to the left. In (11b) it copies the H tone of
the preceding word /yə́/ and not the L tone of the following word,
ŋgwa; in (11c) /kə/ copies the L tone of the ML falling tone but
not the M tone of the following word /ghū/.

The question words /á 'yá/ are used together. /ya/ is bound
to /a/. It is used in Q-sentences as follows:

(12) a. ō zɪ⁻ ā⁻ yá → [ō zɪ ā 'yá]
        you come why
           "why have you come"

   b. ō kɨ kūrə nɨŋɔ̄ɔ̄ nyá'⁻ 'ā yá
      you P2 eat plantain the Q
         "why did you eat the plantain?"

The derivation of (12a) is as follows:

(13) a. ō yɪ ā yá   underlying
     b. ō yɪ ā yá   simplification
     d. ō yɪ ā 'yá   simplification and ds

In (13a) the underlying tones are given. In (13b) the the
contour tone on the verb simplifies to M. In (13c) the HL contour
tone on /ā/ simplifies to H causing the following H tone on the
second Q-word to downstep.

The Q-words /kə/ and /wo/ can be used together with /ā/ just
as we have seen for /á 'yá/ to form questions in themselves, for
example:

(14) a. á 'yá   "why?"
     b. á 'kə   "what?"
     c. á 'wó   "whom?"

The derivation of the tones of these Question phrases is same as (13) above.

16.3.2 Questions Marked by Tone

Some questions are distinguished from statements solely by tone, for example.

(15) a. à nɨ fɨtə̀ə̀   "it is a calabash"
      b. à nɨ fɨtə̄ə̄   "is it a calabash?"
         it be calabash

(16) a. à kɨ lɔ̄gə̄ mbā yā "he took the meat"
      b. à kɨ lɔ̄gə̄ mbā yā "did he take the meat?"
         he P2 take meat the

In the above examples (15a) and (16a) end in a low tone. These are statement sentences; (15b) and (16b) are question sentences and end in a level M tone because the voice is raised at the end of the sentence to mark it as a question. However, in some sentences, especially those that end in H tone, it is very difficult to distinguish a statement from a question except from context:

(17) a. á 'jɨ   "he is eating"
      b. ā 'jɨ   "is he eating?"

It is also hard to distinguish statements from question sentences when these have no question words and end in L tone.

(18) a. à kɨ kūrə̄ nɨngɔ̀ɔ̀
         "he ate plantains (yesterday)"

      b. à kɨ kūrə̄ nɨngɔ̀ɔ̀
         "he ate plantains (yesterday)?"

In the above sentences both statement and question are generally said the same way and their meanings are read from context. However, in some circumstances the two sentences might be differentiated on the basis of intonation. For example, an

enphatic statement would end in a raised low while the sentence ending in Level L tone will indicate a question, e.g.

(19) a. à kɨ kūrā ìnɨ̀ŋɨ́gɔ̀ɔ̄   "he ate plantains!"
      b. à kɨ kūrā nɨ̄ŋgɔ̀ɔ̄   "he ate plantains?"

(19a) puts emphasis on plantain; and it thus means: "he ate plantains, (not cocoyams or some other thing)".

Chapter Seventeen

NEGATION

17.1 General Considerations

Negation can combine with tense, aspect and mood. The negative construction in Bafut is fairly regular. In the present chapter we are going to study negation in the various tenses, aspects and in the imperative mood. In the study we are going to pay attention particularly to the tone of the negative marker and the verb. In the negative construction the verb comes last in the sentence and it generally acquires a replacive tone pattern. This will be fully illustrated in the various verb forms. The negative marker is a discontinuous morpheme, separated by the subject.

17.2 NEG TO /ˉkáá sɪ̆/

NEG marker is /ˉkáá...sɪ̆/ as illustrated below.

(1) a. ˉ káá à sɪ̆ m̄bà kwɛ́rə̄ ˊ ˋ → [kāā sɪ̀ mbà kwɛ̄rə̀]
       Neg he Neg meat take   T   "he has not taken meat"

   b. ˉ káá à sɪ̆ m̄bà sāŋə̄ ˊ ˋ → [kāā sɪ̀ mbà sāŋə̀]
       Neg he Neg meat dry   T   "he has not dried meat"

   c. ˉ káá à sɪ̆ ˉtɪ̄tá sāŋə̄ ˊ ˋ → [kāā sɪ̀ tɪ̄tá sáŋə̀]
       Neg he Neg pepper dry   T   "he has not dried pepper"

   d. ˉ káá bó sɪ̆ m̄bà kwɛ́rə̄ ˊ ˋ → [kāā bó sɪ̆ mbà kwɛ̄rə̀]
       Neg they Neg meat take   T   "they have not taken meat"

   e. ˉ káá bó sɪ̆ m̄bà sāŋə̄ ˊ ˋ → [kāā bó sɪ̆ mbà sāŋə̀]
       Neg they Neg meat dry   T   "they have not dried meat"

   f. ˉ káá à sɪ̆ sāŋə̄ ˊ ˋ → [kāā sɪ̆ sāŋə̀]
       Neg he Neg dry   T   "he has not dried"

   g. ˉ káá bó sɪ̆ yə̀'ə̄ ˊ ˋ → [kāā bó sɪ̆ yə̄'ə̀]
       Neg they Neg cry   T   "they have not cried"

   h. ˉ káá bó sɪ̆ kwɛ́rə̄ ˊ ˋ → [kāā bó sɪ̆ kwɛ̄rə̀]
       Neg they Neg take   T   "they have not taken"

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In the above examples we find that the underlying tones of the Neg morpheme are ↓HH...LH. These tones come out on the surface as MM..LM by T-rule 1. We have posited a ↓ tone before /káá/ in order to explain the surface MM tones on it. As in the case of the possessive pronouns (cf. 11.4 (10)), the ↓ lowers the following HH to MM before dropping out by application of the T-rule 5.

The verb acquires a HL replacive tone pattern for both classes such that the distinction between the H and L verb tone classes is neutralized. The vowel of the 3rd person singular pronoun /ā/ is deleted and its tone is grounded to the left on the first part of the NEG morpheme, /kāā/. We also notice that the second part of the NEG morpheme, /sɨ/, undergoes tonal perturbation: it is simplified to M after the H tone of the pronoun /bō/ and is lowered to L by the dissimilation rule (cf. T-rule 9). When it is in an environment that favours both processes of assimilation and dissimilation, it will obey the dissimilation rule. When there is no object the NEG tone pattern of the verb still obtains.

The derivations that follow describe the processes involved in producing the tonal changes and their surface realizations.

The derivation of (1a) is as follows:

```
(2)  a.  ˉ káá ā sɨ m̃bà kwɛ́rə̀ ˉ ˉ       underlying
     b.  ˉ káá ā sɨ m̃bà kwɛ́rə̀          NEG replacive tone
     c.  ˉ kāā ā sɨ m̃bà kwɛ́rə̀          tone lowering
     d.    kāā ā sɨ m̃bà kwɛ́rə̀          tone deletion
     e.    kāā ā sɨ m̃bà kwɛ́rə̀          tone lowering
     f.    kāā ˉ sɨ̌ m̃bà kwɛ́rə̀          V-deletion
     g.    kāā   sɨ̌ m̃bà kwɛ́rə̀          tone grounding
     h.    kāā   sɨ̌ m̃bà kwɛ́rə̀          simplification
     i.    kāā   sɨ̌ mbà kwɛ́rə̀          desyllabification
                                         and tone deletion
     j.    kāā   sɨ̌ mbà kwɛ̄rə̀          tone lowering
```

In (2a) the underlying tones are given. Note should be taken of the floating L tone of the NEG morpheme /ˉ káá/ and the NEG verb replacive tone pattern, which is HL. In c. the floating L tone of the NEG marker lowers the underlying H tones to M before

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being deleted in d. In (2f) the vowel of the 3rd. person pronoun is deleted and its tone gets grounded to the left where it eventually lowers the last syllable of the NEG /kāā/ (2g,h). In (2l) the syllabic nasal desyllabifies and loses its L tone. In j. the L tone of the noun stem lowers the H tone on the verb to M.

The following is a derivation of (1e).

```
(3)  a.   ⁻ kāā bố sɪ̄ m̄bà sā́ŋə̄ ⁻ ⁻     underlying
     b.   ⁻ kāā bố sɪ̄ m̄bà sá́ŋə̄       NEG verb tone
     c.   ⁻ kāā bố sɪ̄ m̄bà sá́ŋə̄       tone lowering
     d.     kāā bố sɪ̄ m̄bà sá́ŋə̄       tone deletion
     e.     kāā bố sɪ̄ m̄bà sá́ŋə̄       simplification
     f.     kāā bố sɪ̄ mbà sā́ŋə̄       desyllabification
                                      and tone deletion
     g.     kāā bố sɪ̄ mbà sā̄ŋə̄       tone lowering
```

The particular point to note in the above derivation is the assimilation process whereby the LH tone of /sɪ̄/ simplies to level M in (3e) as a result of the preceding H tone of the pronoun /bố/. We have also noticed this in the derivation of the tones of the F1-3 markers (cf. 14.9-11).

Here below is a derivation of (1h)

```
(4)  a.   ⁻ kāā bố sɪ̄ kwɛ́rə̄       underlying
     b.   ⁻ káā bố sɪ̄ kwɛ́rə̄       NEG verb tone
     c.   ⁻ kāā bố sɪ̄ kwɛ́rə̄       tone lowering
     d.     kāā bố sɪ̄ kwɛ́rə̄       tone deletion
     e.     kāā bố sɪ̄ kwɛ́rə̄       dissimilation of LH to L before H
     f.     kāā bố sɪ̄ kwɛ̄rə̄       tone lowering
```

What this derivation illustrates is the fact that the dissimilation rule is stronger than the assimilation rule in the NEG construction. In (3e) /sɪ̄/ is raised by the H tone of bố to M but in (4d); where the same condition of assimilation is fulfilled, the rule does not apply, rather it is the dissimilation rule that applies and lowers the LH tone of /sɪ̄/ to L before the H tone of the verb /kwɛ́rə̄/. Another way of explaining this is that the LH contour tone simplifies to L by the process of absorption.

17.3 NEG IMP /tsʊ́ʊ́/

The imperative NEG marker is /tsʊ́ʊ́/. Unlike the NEG marker /tsʊ́ʊ́/ is not a discontinuous morpheme. It has an undelying LH tone pattern. Unlike in the other NEG constructions, the NEG IMP verb does not have a characteristic replacive tone. The NEG IMP construction is illustrated below:

(5) a. tsʊ́ʊ́ m̄bā   kwɛ́rə́   ⟶ [tsʊ́ʊ́ mbā kwɛrə̄]
         NEG   meat take   "do not take meat"

     b. tsʊ́ʊ́ ˋ lə̄ŋə̄ kwɛ́rə́ ⟶ [tsʊ̀ʊ̀ lə̄ŋə̄ kwɛ́rə́]
         NEG   horse take   "do not take a horse"

     c. tsʊ́ʊ́ m̄bā sə̄ŋə́   ⟶ [tsʊ́ʊ́ mbā sə̀ŋə̀]
         NEG   meat dry   "do not dry meat"

     d. tsʊ́ʊ́ kwɛ́rə́   ⟶ [tsʊ̀ʊ̀ kwɛ́rə́]
         NEG   take   "do not take"

     e. tsʊ́ʊ́ sə̄ŋə́   ⟶ [tsʊ́ʊ́ sə̄ŋə̀]
         NEG dry   "do not dry"

As we have seen above, the tone of the NEG morpheme is affected by adjacent tones. Although there is no particular NEG tone pattern, the tone of the verb is affected by its phonetic environment. In (5a) the L tone of the object noun lowers the H tones of the verb to MM. In (5b) the following H tone of the object causes the tone of the NEG to be lowered by dissimilation. It should be noted that in this context the dissimilation rule does not apply where the following word is a verb. (cf. 5d,e). In (5c) the tone of the verb is lowered by intonation from LM to LL (cf. 5.5.4).

17.4 NEG P1-3 /ˋ káə́...wá'ə̄/

The NEG construction for the past tenses, P1, P2 and P3 is similar in all cases as can be seen below.

17.4.1 <u>NEG P1</u>

(6) a. ˉ kā̃ā̃ ā nɨ̃ wā'ã̃ m̃bã̃ kwɛ̃rã̃ ˉ ˉ → [kā̃ā̃ nɨ̃ wā'ã̃
NEG he P1 NEG   meat take   T   mbã̃ kwɛ̄rã̃]
"he did not take meat"

b. ˉ kā̃ā̃ ā nɨ̃ wā'ã̃ ˉlã̃ŋã̃ kwɛ̃rã̃ ˉ ˉ → [kā̃ā̃ nɨ̃ wā'ã̃
NEG he P1 NEG horse take   T   lã̃ŋã̃ kwɛ̃rã̃]
"he did not take a horse"

c. ˉ kā̃ā̃ ā nɨ̃ wā'ã̃ m̃bã̃ sã̃ŋã̃ ˉ ˉ → [kā̃ā̃ nɨ̃ wā'ã̃
NEG he P1 NEG   meat dry   T   mbã̃ sã̃ŋã̃]
"he did not dry meat"

d. ˉ kā̃ā̃ bõ nɨ̃ wā'ã̃ m̃bã̃ kwɛ̃rã̃ˉ ˉ → [kā̃ā̃ bõ nɨ̃ 'wā'ã̃
NEG they P1 NEG meat take T   mbã̃ kwɛ̄rã̃]
"they did not take meat"

e. ˉ kā̃ā̃ bõ nɨ̃ wā'ã̃ ˉfõrã̃ sã̃ŋã̃ˉ ˉ → [kā̃ā̃ bõ nɨ̃ 'wā'ã̃
NEG they P1 NEG mouse dry T   fõrã̃ sã̃ŋã̃]
"they did not dry mouse"

17.4.2 <u>NEG P2</u>

(7) a. ˉ kā̃ā̃ ā kɨ̃ wā'ã̃ m̃bã̃ kwɛ̃rã̃ ˉ ˉ → [kā̃ā̃ kɨ̃ wā'ã̃
NEG he P2 NEG   meat take   T   mbã̃ kwɛ̄rã̃]
"he did not take meat"

b. ˉ kā̃ā̃ ā kɨ̃ wā'ã̃ m̃bã̃   sã̃ŋã̃ ˉ ˉ → [kā̃ā̃ kɨ̃ wā'ã̃
NEG he P2 NEG   meat dry   T   mbã̃ sã̃ŋã̃]
"he did not dry meat"

c. ˉ kā̃ā̃ bõ kɨ̃ wā'ã̃ m̃bã̃   kwɛ̃rã̃ ˉ ˉ → [kā̃ā̃ bõ kɨ̃ wā'ã̃
NEG they P2 NEG meat take   T   mbã̃ kwɛ̄rã̃]
"they did not take meat"

d. ˉ kā̃ā̃ bõ kɨ̃ wā'ã̃ m̃bã̃ sã̃ŋã̃ ˉ ˉ → [kā̃ā̃ bõ kɨ̃ wā'ã̃
NEG they P1 NEG meat dry   T   mbã̃ sã̃ŋã̃]
"they did not dry meat"

e. ˉ kā̃ā̃ ā kɨ̃ wā'ã̃ kwɛ̃rã̃ ˉ ˉ → [kā̃ā̃ kɨ̃ wā'ã̃
NEG he P1 NEG take   T   kwɛ̄rã̃]
"he did not take"

f. ˉ kā̃ā̃ bõ kɨ̃ wā'ã̃ yã̃'ã̃ ˉ ˉ → [kā̃ā̃ bõ kɨ̃ wā'ã̃
NEG they P1 NEG cry   T   yã̃'ã̃]
"they did not cry"

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17 4.3 NEG P3

(8) a. ˉ kā́ā́ ā̀ lɛ̄ wā'ā̀ m̄bā̀ kwɛ́rə́ ˉ ˉ ⟶ [kā̀ā̀ lɛ̄ wā'ā̀
     NEG he P3 NEG meat take   T   m̄bā̀ kwɛ̄rə̀]
     "he did not take meat"

   b. ˉ kā́ā́ bɔ́ lɛ̄ wā'ā̀ ˉkā́ā́ sā̀ŋə́ˉ ˉ ⟶ [kā̀ā̀ bɔ́ lɛ̄ 'wā'ā̀
     NEG they P3 NEG crab dry T   kā̀ā̀ sá́ŋə̀]
     "they did not dry a crab"

   c. ˉ kā́ā́ bɔ́ lɛ̄ wā'ā̀ sā̀ŋə́ ˉ ˉ ⟶ [kā̀ā̀ bɔ́ lɛ̄ 'wā'ā̀
     NEG they p3 NEG dry T   sā̀ŋə̀]
     "they did not dry"

   d. ˉ kā́ā́ ā̀ lɛ̄ wā'ā̀ kwɛ́rə̀ ˉ ˉ ⟶ [kā̀ā̀ lɛ̄ wā'ā̀
     NEG ne P3 NEG   take T   kwɛ̄rə̀]
     "he did not take"

The following remarks could be made about the NEG P1-3. The NEG morpheme for all these tenses is /ˉkā́ā́ ...wā'ā̀/, a discontinuous morpheme. The underlying tone of /ˉkā́ā́/ is LHH while that of /wā'ā̀/ is H LH. The tone of /ˉkā́ā́/ is lowered by the tone of the deleted 3rd person singular pronoun, e.g., as in (8a). The derivation of this has already been seen in (2) above. The tone of /wā'ā̀/ undergoes both processes of dissimilation and assimilation. In (6b,e, 8b) the LH tone of /wā'ā̀/ goes down to L before the H tone of the object noun and the verb, i.e., it simplifies by the process of absorption. The verb still acquires a NEG replacement tone pattern of HL in general. However, when the NEG construction does not have an object the LH pattern of the L tone verbs goes down to LL; this is most probably a result of intonation (cf.5.5.4). The tones of the tense markers behave in accordance with their character as described in the section on tense.

17.5 FO, F1-3 /ˉ kā́ā́...wā'ā̀/

The future NEG construction behaves in the same way as we have seen for the past tenses. This is illustrated in the following examples:

17.5.1 NEG FO

(9) a. ˉ káā ā kā wá'ǎ m̃bā kwɛ́rə́ ˉ ˉ ⟶ [kāā kā wá'à
       NEG he FO NEG meat take   T   mbā kwɛ̄rə̀]
       "he will not take the meat"

    b. ˉ káā ā kā wá'ǎ ˊlə̄ŋə́ kwɛ́rə́ˉ ˉ ⟶ [kāā kā wá'à
       NEG he FO NEG horse take T   lə̄ŋə̄ kwɛ́rə̀]
       "he will not take the horse"

    c. ˉ káā bɔ́ kā wá'ǎ m̃bā sāŋə́ ˉ ˉ ⟶ [kāā bɔ́ kā 'wá'à
       NEG they FO NEG meat dry   T   mbā sāŋə̀]
       "they will not dry meat"

    d. ˉ káā bɔ́ kā wá'ǎ kwɛ́rə́ ˉ ˉ ⟶ [kāā bɔ́ kā 'wá'à
       NEG they FO NEG take   T   kwɛ̄rə̀]
       "they will not take"

17.5.2 NEG F1

(10) a. ˉ káā ā kā lə̀ wá'ǎ m̃bā kwɛ́rə́ ˉ ˉ   ⟶
       NEG he F 1 NEG meat take   T

       [kāā kā lə̀ wá'à mbā kwɛ̄rə̀]
       "he will not take meat"

    b. ˉ káā ā kā lə̀ wá'ǎ ˉtɪ̄tá sāŋə́ ˉ ˉ ⟶
       NEG he F 1   NEG   pepper dry   T

       [kāā kā lə̀ wá'à tɪ̄tá sáŋə̀]
       "he will not dry pepper"

    c. ˉ káā bɔ́   kā lə̄ wá'ǎ m̃bā kwɛ́rə́ ˉ ˉ ⟶
       NEG they F 1 NEG meat take   T

       [kāā bɔ́ kā lə̄ wá'à mbā kwɛ̄rə̀]
       "They will not take meat"

    d. ˉ káā bɔ́   kā lə̄ wá'ǎ sāŋə́ ˉ ˉ   ⟶
       NEG they F 1   NEG   dry   T

       [kāā bɔ́ kā lə̄ wá'à sāŋə̀]
       "they will not dry"

17.5.3 NEG F2

(11) a. ˉ káā ā kā lɔ̌ wá'ǎ m̃bā kwɛ́rə́ ˉ ˉ ⟶
       Neg   he F 2 Neg meat take T

       [kāā kā lɔ̌ wá'à mbā kwɛ̄rə̀]
       "he will not take meat"

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b. ` káá à kā lŏ wá'à ˉlə̄ŋə̄ kwɛ́rə̄ ´ ˉ ⟶
NEG he F 2 NEG horse take T

[kāā kā lŏ wá'à̀ lə̄ŋə̄ kwɛ́rə̄]
"he will not take a horse"

c. ` káá bó kā lŏ wá'à m̄bà sāŋə̄ ´ ˉ ⟶
NEG they F 2 NEG meat dry T

[kāā bó ká lō wá'à̀ mbà sāŋə̄]
"they will not dry meat"

d. ` káá bó kā lŏ wá'à kwɛ́rə̄ ´ ˉ ⟶
NEG they F 2 NEG take T

[kāā bó ká lō wá'à kwɛ́rə̄]
"they will not take"

17.5.4 NEG F3

(12) a. ` káá à kā yĬ wá'à m̄bà kwɛ́rə̄ ´ ˉ ⟶
NEG he F 3 NEG meat take T

[kāā kā yĬ wá'à̀ mbà kwɛ́rə̄]
"he will not take meat"

b. ` káá à kā yĬ wá'à ˉtɨ̄tá sāŋə̄ ´ ˉ ⟶
NEG he F 3 NEG pepper dry T

[kāā kā yĬ wá'à tɨ̄tá sáŋə̄]
"he will not dry pepper"

c. ` káá bó kā yĬ wá'à m̄bà kwɛ́rə̄ ´ ˉ ⟶
NEG they F 3 NEG meat take T

[kāā bó ká yĬ wá'à̀ mbà kwɛ́rə̄]
"they will not take meat"

d. ` káá bó kā yĬ wá'à sāŋə̄ ´ ˉ ⟶
NEG they F 3 NEG dry T

[kāā bó ká yĬ wá'à sāŋə̄]
"they will not dry"

As we have mentioned above, the rules that operate in the NEG construction are fairly regular and there are few changes with the different tenses and aspects. Comparing the NEG P1-3 and NEG FO, F1-3 we find that the tonal behaviour of the NEG morpheme and the verbs are similar. If we compare, for example, (9a) and (6a), (10d), (12d) and (8c), (7f), we shall see that the tonal realizations of the verbs are exactly the same. In (9c,d) the

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simplification of the HL contour tone of /kâ/ causes the following H of the NEG marker to downstep (cf. 14.8). The rules that work in FO, F1-3 are the same as those that have been described so far in this section.

17.6 NEG IMPF

So far we have looked at the NEG in the perfective aspect. In the following paragraphs we are going to treat NEG in the imperfective aspect.

17.6.1 NEG IMPF, TO /ˋkáá...sî´/

The NEG IMPF TO is marked by /ˋkáá...sî´/ with HH - HLH tones. As will be seen, the tonal behaviour of the NEG IMPF TO is very different from that of the perfective NEG TO.

(14) a. ˋkáá à sî´ m̄bà kwérá ˊ ˊ → [kàā sí'ˉ
NEG   he NEG meat take   T   m̄bà kwērā]
"he is not taking meat"

b. ˋkáá à sî´ m̄bà sàŋá ˊ ˊ → [kàā sí'ˉ
NEG   he NEG meat dry   T   m̄bà sá'ŋá]
"he is not drying meat"

c. ˋkáá à sî´ ˊfórá sàŋá ˊ ˊ → [kàā sí'ˉ
NEG   he NEG mouse dry T   'fórá sá'ŋá]
"he is not drying a mouse"

d. ˋkáá bó sî´ m̄bà kwérá ˊ ˊ → [kàā bó sí'ˉ
NEG   they NEG meat take   T   m̄bà kwērā]
"they are not taking meat"

e. ˋkáá bó sî´ ˊtìtá kwérá ˊ ˊ → [kàā bó sí'ˉ
NEG   they NEG pepper take   T   'tìtá kwérá]
"they are not taking pepper"

f. ˋkáá bó sî´ kwérá ˊ ˊ → [kàā bó sí'ˉ
NEG   they NEG take   T   'kwérá]
"they are not taking (it)"

g. ˋkáá bó sî´ sàŋá ˊ ˊ → [kàā bó sí'ˉ
Neg   they Neg dry   T   sàŋá]
"they are not drying"

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The following remarks are pertinent for the NEG IMPF TO:
/˘kââ.../ behaves as we have seen so far in the rest of the
cases. The surface tone on /...sí'˘/ does not fluctuate. The
surface tone pattern H'H as found on /...sí'˘/ maintains its
downstepping influence on following H tones cf. (14c), (14e), and
(14f). It should also be noted that after a downstepped H (ds) no
immediately following H tone can go any higher than the 'H tone,
that is, the only pitch peak level permitted after a ds is one of
equal level. This also points out the difference between a ds
high tone and lowered high (lh) tone in Bafut (cf. 4.5.2.3).

The tone pattern of the NEG IMPF TO is H H. This tone
pattern does not replace the underly tones of the verb but it is
superimposed on the underlying tones of each tone class. With the
H tone verbs, the superimposition does not change the underlying
tones but there is simply tone absorption since the tones are
identical. So the high tone verbs stay high unless downstepped or
lowered to M by a preceding L tone. cf. (14a,f). As for the L
tone verbs, the superimposition results in a HL H tone pattern.
This tone pattern comes out on the surface as a H 'H by T-rule 2.
As in other cases of this grammatical tone pattern, it retains its
downstepping effect on following H tones. This surface tone
pattern obtains when the NEG construction has an object (cf.
14b,c) and it is replaced by a LL pattern when there is an
explicit absence of a noun object (cf. 14g).

The following derivations are presented to explain the
operation of the rules stated above. Here is a derivation of
(14a).

(15)							
a.	˘	kââ	â	sí	˘	m̀bà kwɛ́rə́ ˘ ˘	underlying + NEG IMPF TO tones
b.	˘	kââ	â	sí	˘	m̀bà kwɛ́rə́	superimp. of NEG IMPF TO tones
c.	˘	kââ	â	sí	˘	m̀bà kwɛ̀rə́	tone lowering (T-rule 1)
d.		kââ	â	sí	˘	m̀bà kwɛ̀rə́	tone deletion (T-rule 5)
e.		kââ	˘	sí	˘	m̀bà kwɛ̀rə́	V-deletion (P-rule 3)
f.		kââ		sí	˘	m̀bà kwɛ̀rə́	tone grounding (T-rule 4)
g.		kââ		sí	˘	m̀bà kwɛ̀rə́	tone simplification (T-rule 7)
h.		kââ		sí˘		m̀bà kwɛ̀rə́	tone grounding
i.		kââ		sí'˘		m̀bà kwɛ̀rə́	simplification and ds (T-rules 7, and 2)
j.		kââ		sí'˘		mbà kwɛ́rə́	desyllabification (P-rule 4) and tone deletion (T-rule 5)
k.		kââ		sí'˘		mbà kwɛ̀rə́	tone lowering (T-rule 1)

The rules involved in the above derivation are given. What should really be noted is the V-deletion process and the fact that the H H tone pattern of the NEG IMPF TO is superimposed on the H tone verb in (15b). There is a process of tone absorption where this tone pattern is absorbed by the H tones of the verb. However, the H tones of the verb stem are eventually lowered as a result of its phonetic environment, e.g., in (15k) where it is lowered by the preceding L tone of the noun (object).

Here below in (17) is the derivation of (14c):

(17) a. ` kāā à sî ´   ´fŏrā sāŋā ´ ´   underlying
      b. ` kāā à sî ´   ´fŏrā sāŋā   superimposition of
                                            NEG IMPF TO verb tones
      c. ` kāā à sî ´   ´fŏrā sāŋā   tone lowering
      d.   kāā à sî ´   ´fŏrā sāŋā   tone deletion
      e.   kāā `´ sî ´   ´fŏrā sāŋā   V-deletion
      f.   kāā sî ´   ´fŏrā sāŋā   tone grounding
      g.   kāā sî ´   ´fŏrā sāŋā   tone simplification
      h.   kāā sî´   ´fŏrā sāŋā   tone grounding
      i.   kāā sî´   fŏrā sāŋā   tone grounding
      j.   kāā sî'´   'fŏrā sāŋā   simplification and ds
      k.   kāā sî'´   'fŏrā sā'ŋā   simplification and ds

The points illustrated by (17) are: the downstepping property of the surface H'H tone of the NEG IMPF marker in (17j); in (17b) the H H tone pattern of the NEG IMPF TO is superimposed on the underlying L H of the verb creating a HL H pattern which in turn simplifies and yields the H'H surface tone in (17k).

The underlying L H of the L tone verbs is lowered to a LL pattern when the verb has no object. This is illustrated below in (18).

(18) a. ` kāā bŏ sî´   sāŋā   underlying
      b. ` kāā bŏ sî´   sāŋā   tone lowering
      c.   kāā bŏ sî´   sāŋā   tone deletion
      d.   kāā bŏ sî'´   sāŋā   simplification and ds
      e.   kāā bŏ sî'´   sāŋā   lowering

We notice that in (18e) the LH tone of the verb is lowered to LL. As we have seen in the other verb forms (cf. 14.6) the lowering here is the effect of intonation (cf. 5.5.4).

17.6.2 NEG IMPF IMP /tsūū...kɨ/

The imperfective imperative negative constructions is marked by the morpheme /tsūū...kɨ/ with surface tones as indicated. Following the behaviour of the imperfective marker in context, we have posited a HL underlying tone for it, thus /kɨ/. Examples of this construction are given below:

(19) a. tsūū   m̄bâ   kɨ   kwɛ́rə́ → [tsūū mbâ kɨ 'kwɛ́rə́]
          NEG-IMP   meat   IMPF   take   "do not be taking meat"

      b. tsūū   ⁻lə̄ŋə́ kɨ   kwɛ́rə́ → [tsūū lə̄ŋə́ kɨ 'kwɛ́rə́]
          NEG-IMP   horse IMPF take   "do not be taking a horse"

      c. tsūū   m̄bâ   kɨ   sə̄ŋə́ → [tsūū mbâ kɨ sə̄ŋə́]
          NEG-IMP   meat   IMPF   dry   "do not be drying meat"

      d. tsūū   kɨ   kwɛ́rə́ → [tsūū kɨ 'kwɛ́rə́]
          NEG-IMP   IMPF   take   "do not be taking"

      e. tsūū   kɨ   sə̄ŋə́ → [tsūū kɨ sə̄ŋə́]
          NEG-IMP   IMPF   dry   "do not be drying"

The NEG-IMP particle /tsūū/ changes as indicated in (5) above; it is affected by a dissimilation rule as in (19b). The underlying HL tone of /kɨ/ downsteps the following H tones of the verb kwɛ́rə́ (cf. (19a,b,d)). The LH tone pattern of the verb receives replacement tone pattern of LL. Here is the derivation of (19b) to illustrate some of these processes:

(20) a. tsūū ⁻lə̄ŋə́ kɨ   kwɛ́rə́   underlying
      b. tsūū lə̄ŋə́ kɨ   kwɛ́rə́   tone grounding
      c. tsūū lə̄ŋə́ kɨ   kwɛ́rə́   dissimilation
      d. tsūū lə̄ŋə̄ kɨ   kwɛ́rə́   tone lowering
      e. tsūū lə̄ŋə̄ kɨ   'kwɛ́rə́   tone simplification and ds

In (20a) the underlying tones are given. In (20c) the L H tone pattern of the NEG-IMP marker is lowered to LL by a dissimilation process. In (20d) the preceding L tone on the NEG-IMP marker lowers the following H of the noun to M. In (20e) the HL contour tone of the IMPF marker simplifies to H thus causing the following H of the verb to downstep.

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1`.6.3   NEG IMPF P1-3 /` káá ...wá'ǎ/

The marker of the NEG in the imperfective past tenses (P1-3)
i. the same as for the perfective past (P1-3). /` káá...wá'ǎ/
b haves almost exactly the same as for the past tenses. For
c mparative purposes the examples given below will follow the same
o ler of presentation as for NEG P1-3 (cf. 17.4.1-3)

1`.6.3.1   NEG IMPF P1

(1)   a.   ` káá ǎ nɪ̃ wá'ǎ m̃bǎ kwɛ́rə́ ´ ~   →
            NEG   he P1 NEG   meat take   T

            [kāā nɪ̃ wā'ằ mbǎ kwɛ̄rə̀]
            "he was not taking meat"

      b.   ` káá ǎ nɪ̃ wá'ǎ ´lə̃ŋə́ kwɛ́rə́ ´ ~   →
            NEG   he P1 NEG   horse take   T

            [kāā nɪ̃ wā'à lə̃ŋə̀ kwɛ́rə̀]
            "he was not taking a horse"

      c.   ` káá ǎ nɪ̃   wá'ǎ m̃bǎ sǎŋə́ ´ ~   →
            NEG   he P1   NEG   meat dry   T

            [kāā nɪ̃ wā'à mbǎ sāŋə̀]
            "he was not drying a meat"

      d.   ` káá bő nɪ̃ wá'ǎ m̃bǎ kwɛ́rə́ ´ ~   →
            NEG they P1 NEG meat take   T

            [kāā bő nɪ̃ wā'à mbǎ kwɛ̄rə̀]
            "they were not taking meat"

      e.   ` káá bő nɪ̃   wá'ǎ ´tɪ̄tá sǎŋə́ ´ ~ →
            NEG they P1   NEG   pepper dry T

            [kāā bő nɪ̃ wā'à tɪ̄tá sáŋə̀]
            "they were not drying pepper"

1`.6.3.2   NEG IMPF P2

(2)   a.   ` káá ǎ kɪ̃ sɪ̃⁻   wá'ǎ m̃bǎ kwɛ́rə́ ´ ~   →
            NEG   he P2 IMPf Neg meat take   T

            [kāā kɪ̃ sɪ̃'⁻ 'wā'ằ mbǎ kwɛ̄rə̀]
            "he was not taking meat"

b. ` káá ã kɪ sɪ´ wá'ã m̄bã sãŋә ´ ` →
     NEG he P2 IMPF NEG meat take T

     [kãã kɪ sɪ'´ 'wá'à mbã sãŋә]
     "he was not drying meat"

c. ` káá bõ kɪ sɪ´ wá'ã m̄bã kwɛ́rә ´ ` →
     NEG they P2 IMPF Neg. meat take T

     [kãã bõ kɪ sɪ'´ 'wá'ã mbã kwɛrә]
     "they were not taking meat"

d. ` káá bõ kɪ sɪ´ wá'ã m̄bã sãŋә ´ ` →
     NEG they P2 IMPF NEG meat dry T

     [kãã bõ kɪ sɪ 'wá'à mbã sãŋә]
     "they were not drying meat"

e. ` káá ã kɪ sɪ´ wá'ã kwɛ́rә ´ ` →
     NEG he P2 IMPF NEG take T

     [kãã kɪ sɪ'´ 'wá'à kwɛrә]
     "he was not taking"

f. ` káá bõ kɪ sɪ´ wá'ã yә'ә́ ´ ` →
     NEG they P2 IMPF NEG cry T

     [kãã̄ bõ kɪ sɪ'´ 'wá'ä yә'ә]
     "they were not crying"

17.6.3.3 NEG IMPF P3

(23) a. ` káá ã lɛ sɪ´ wá'ã m̄bã kwɛ́rә ´ ` →
        NEG he P3 IMPF NEG meat take T

        [kãã lɛ sɪ'´ 'wá'à mbã kwɛrә]
        "he was not taking meat"

b. ` káá bõ lɛ sɪ´ wá'ã ´tɪtá sãŋә ´ ` →
     NEG they P3 IMPF NEG pepper dry T

     [kãã bõ lɛ sɪ'´ 'wá'ä tɪtá sãŋә]
     "they were not drying pepper"

c. ` káá bõ lɛ sɪ´ wá'ã sãŋә ´ ` →
     NEG they P3 IMPF NEG dry T

     [kãã bõ lɛ sɪ'´ 'wá'à sãŋә]
     "they were not drying"

Comparing 17.6.3.1-3 with 17.4.1-3 we find that the NEG
morpheme and the verb have a lot of things in common with respect

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to their tonal behaviour. However, there are certain points of particularity about 17.6.3.1-4 that should be noted. In NEG IMPF P1 i.e. in 17.6.3.1, the underlying L tone of the deleted vowel of the 3rd person singular pronoun does not affect the preceding NEG particle, ˜ káá. This is because, as will be explained by the following derivation (cf. 21a), the pronoun receives the IMPF HL tone which entually simplifies to H and grounds to the left where it is absorbed by the H tone of the NEG morpheme.

(24)	a.	˜ káá	ã	˜ nĩ	wá'ã	m̃bã	kwérá	˜ ˜	underlyig
	b.	˜ káá	ã	nĩ	wá'ã	m̃bã	kwérə		NEG IMPF P3
									replacive tones
	c.	˜ káá	á	nĩ	wá'ã	m̃bã	kwérə		simplification
	d.	˜ káá	˜	nĩ	wá'ã	m̃bã	kwérə		V-deletion
	e.	˜ káá		nĩ	wá'ã	m̃bã	kwérə		tone grounding
	f.	˜ kāā		nĩ	wá'ã	m̃bã	kwérə		tone lowering
	g.	kāā		nĩ	wá'ã	m̃bã	kwérə		tone deletion
	h.	kāā		nĩ	wā'ã	m̃bã	kwérə		tone lowering
	i.	kāā		nĩ	wā'ā̀	m̃bã	kwérə		tone lowering
	j.	kāā		nĩ	wā'ā̀	mbā	kwérə		desyllabification and
									tone deletion
	k.	kāā		nĩ	wā'ā̀	mbā	kwērə		lowering

In (24a) the underlying tones are given; these include the NEG H L verb tone pattern and the IMPF replacive HL tone pattern. In b. the pronoun /ã/ and the P3 marker /nĩ/ receive the IMPF aspect replacive HL and L tones respectively (cf. 15.4.2(16)). The H tone verb also receives the NEG H L tone pattern. The rest of the steps of the derivation are obvious since we have already discussed the processes involved.

Another point of general application here in 17.6.3.2-3 that does not apply to 17.4.1-3 is the fact that the H'H of the imperfective marker causes the following H tone on the second element of the NEG morpheme /wá'ã/ to downstep.

17.6.4   NEG IMPF FO, F1 - F3 /˜ káá...wá'ã...káN/

The future imperfective NEG construction is marked by /˜ káá ...wá'ã/ which conditions, an imperfective marker /káN/. The morpheme /káN/ has an underlying H tone. This imperfective marker is particular to the NEG construction because it is different from

/kɨ/ found in the impf FO, F 1-3 verb forms. It is also found in one form of the consecutive construction. In the examples that follow we would show how its tone changes.

17.6.4.1 NEG IMPF FO

(25) a. ˋ káá à kā wá'ǎ m̄bā káŋ kwɛ́rɛ̄ →
    NEG he FO NEG meat IMPF take

    [kāà kā wá'à mbā kāŋ kwɛ́rɛ̄]
    "he will not be taking meat"

  b. ˋ káá à kā wá'ǎ m̄bā kán sāŋɛ́ →
    NEG he FO NEG meat IMPF dry

    [kāà kā wá'à mbā kān sá'ŋɛ́]
    "he will not be drying meat"

  c. ˋ káá bó kā wá'ǎ ˉ tɨ̄tá kán kwɛ́rɛ́ →
    NEG they FO NEG pepper IMPF take

    [kāā bó kā 'wá'à tɨ̄tá káŋ kwɛ́rɛ́]
    "they will not be taking pepper"

  d. ˋ káá bó kā wá'ǎ ˉ tɨ̄tá kán sāŋɛ́ →
    NEG they FO NEG pepper IMPF dry

    [kāā bó kā 'wá'à tɨ̄tá kán sá'ŋɛ́]
    "they will not be drying pepper"

  e. ˋ káá bó kā wá'ǎ kán kwɛ́rɛ̄ →
    NEG they FO NEG IMPF take

    [kāā bó kā 'wá'à kāŋ kwɛ̄rɛ̄]
    "they will not be taking"

  f. ˋ káá bó kā wá'ǎ kán sāŋɛ́ →
    NEG they FO NEG IMPF dry

    [kāā bó kā 'wá'à kān sá'ŋɛ́]
    "they will not be drying"

17.6.4.2 NEG IMPF F1

(26) a. ˋ káá à kā lɔ̄ wá'ǎ m̄bā kán kwɛ́rɛ́ →
    NEG he F 1 NEG meat IMPF take

    [kāà kā lɔ̄ wá'à mbā kāŋ kwɛ́rɛ́]
    "he will not be taking meat"

b. ` káá à kâ lə̃ wá'ǎ m̃bà kán sə̀ŋə́ →
   NEG he F 1   NEG meat IMPF dry

   [kāà kā lə̃ wá'ǎ mbā kān sǎ'ŋə́]
   "he will not be drying meat"

c. ` káá bə̃  kâ lə̃ wá'ǎ ` tìtá kán kwɛ̃rə̃ →
   NEG they F 1 NEG pepper IMPF take

   [kāā bə̃ kā lə̃ wá'ǎ tìtá kán kwɛ̃rə̃]
   "they will not be taking pepper"

d. ` káá bə̃  kâ lə̃ wá'ǎ ` tìtá kán sə̀ŋə́ →
   NEG they F 1 NEG pepper IMP dry

   [kāā bə̃ ká lə̃ wá'ǎ tìtá kán sǎ'ŋə́]
   "they will not be drying pepper"

e. ` káá à kâ lə̃ wá'ǎ kán kwɛ̃rə̃ →
   NEG he F 1   NEG   IMPF take

   [kāà kā lə̃ wá'ǎ kān kwɛ̃rə̃]
   "he will not be taking"

f. ` káá à kâ lə̃ wá'ǎ kán sə̀ŋə́ →
   NEG he F 1   NEG   IMPF dry

   [kāà kā lə̃ wá'ǎ kān sǎ'ŋə́]
   "he will not be drying"

17.6.4.3 NEG IMPF F2

(27) a. ` káá à kâ lɔ̃ wá'ǎ m̃bā kán kwɛ̃rə̃ →
     NEG he F 2   NEG meat IMPF take

     [kāà kā lɔ̃ wá'ǎ mbā kān kwɛ̃rə̃]
     "he will not be taking meat"

b. ` káá à kâ lɔ̃ wá'ǎ m̃bà kán sə̀ŋə́ →
   NEG he F 2   NEG meat IMPF dry

   [kāà kā lɔ̃ wá'ǎ mbā kān sǎ'ŋə́]
   "he will not be drying meat"

c. ` káá bə̃  kâ lɔ̃  wá'ǎ ` tìtá kán kwɛ̃rə̃ →
   NEG he F 2 NEG pepper IMPF take

   [kāā bə̃ ká lɔ̃ wá'ǎ tìtá kán kwɛ̃rə̃]
   "they will not be taking pepper"

d. ` káá bə̃  kâ lɔ̃  wá'ǎ ` tìtá kán sə̀ŋə́ →
   NEG they F 2   NEG pepper IMPF dry

   [kāā bə̃ ká lɔ̃ wá'ǎ tìtá kán sǎ'ŋə́]
   "they will not be drying pepper"

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e.   ˋ káā bó   kā lŏ   wá'ă kāŋ kwɛ́rə́   →
     NEG they F 2   NEG IMPF take

     [kāā bó kā lŏ wá'ă kāŋ kwɛ̄rə̄]
     "they will not be taking"

f.   ˋ káā bó   kā lŏ   wá'ă kāŋ sāŋə́   →
     NEG they F 2   NEG IMPF dry

     [kāā bó kā lŏ wá'ă kān sá'ŋə̄]
     "they will not be drying"

17.6.4.4 <u>NEG IMPF F3</u>

(28) a. ˋ káā ā kā yI wá'ă m̃bā kāŋ kwɛ́rə́ →
          NEG he F 3   NEG meat IMPF take

          [kāā kā yì wá'ă mbā kāŋ kwɛ́rə́]
          "he will not be taking meat"

      b. ˋ káā ā kā yI wá'ă m̃bā káŋ sāŋə́ →
          NEG he F 3   NEG meat IMPF dry

          [kāā kā yì wá'ă mbā kān sá'ŋə́]
          "he will not be drying meat"

      c. ˋ káā bó   kā yI wá'ă ˊ tītá kāŋ kwɛ́rə́ →
          NEG they F 3   NEG pepper IMPF take

          [kāā bó ká yI wá'ă tītá kāŋ kwɛ̄rə̄]
          "they will not be taking pepper"

      d. ˋ káā bó   kā yI wá'ă ˊ tītá kāŋ sāŋə́ →
          NEG they F 3   NEG pepper IMPF take

          [kāā bó ká yI wá'ă tītá kāŋ sá'ŋə́]
          "they will not be drying pepper"

      e. ˋ káā ā kā yI wá'ă kāŋ kwɛ́rə́   →
          NEG he F 3   NEG IMPF take

          [kāā kā yì wá'ă kāŋ kwɛ̄rə̄]
          "he will not be taking"

      f. ˋ káā ā kā yI wá'ă kān sāŋə́   →
          NEG he F 3   NEG IMPF dry

          [kāā kā yì wá'ă kān sá'ŋə́]
          "he will not be drying"

In the NEG IMPF FO, F1-3, the NEG particles /ˋ káā...wá'ă/
behave in the same way as we have described in the preceding
sections (cf. NEG P1-3 17.4.1-3). As regards the tonal behaviour

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of the future tense morphemes, reference should be made to chapter 14.   In the NEG IMPF FO, the HL of /kã/ causes the following H of the NEG morpheme /wá'ã/ to downstep as already explained in 14.7.

The imperfective marker /kãN/ is lowered to M by a preceding L tone and lowered to L tone by a dissimilation process as will be illustrated in (30h) below.   There is no replacement tone pattern for the verbs.   They maintain their underlying tones, which are of course affected by adjacent tones.   The LH tone verbs in the NEG construction acquire a surfacee H 'H tone pattern.   This is caused by the tone of the imperfective marker /kãŋ/, which spreads onto the L tone of the verb where it creates a HL contour tone.   The derivations presented here below will help to illustrate these points: We present first the derivation of (27.c).

(29) a. ⌐ kãã bõ kã lõ wã'ã ⌐ tĩtã kãŋ kwérã   underlying
      b. ⌐ kãã bõ kã lõ wã'ã ⌐ tĩtã kãŋ kwérã   tone lowering
      c.   kãã bõ kã lõ wã'ã ⌐ tĩtã kãŋ kwérã   tone deletion
      d.   kãã bõ kã lõ wã'ã ⌐ tĩtã kãŋ kwérã   simplification
      e.   kãã bõ kã lõ wã'ã ⌐ tĩtã kãŋ kwérã   simplification
      f.   kãã bõ kã lõ wã'ã ⌐ tĩtã kãŋ kwérã   dissimilation
      g.   kãã bõ kã lõ wã'ã   tĩtã kãŋ kwérã   tone grounding
      h.   kãã bõ kã lõ wã'ã   tĩtã kãŋ kwérã   simplification

The following points in particular should be noted about the above derivation: in (29f) the LH tone on the NEG particle /wá'ã/ is caused by the floating H tone of the following noun to dissimilate, i.e., to acquire a L tone in contrast to the following H tone as we have already seen above; in (29h) the HL contour tone on the noun simplifies to M. It will also be noted, as indicated above, that the verb retains its underlying H tone.

The following is a derivation of (26.f):

(30) a. ˋ káā ā kā lŏ wā'ā kán sāŋə̄   underlying
      b. ˋ kāā ā kā lŏ wā'ā kán sāŋə̄   tone lowering
      c.   kāā ā kā lŏ wā'ā kán sāŋə̄   tone deletion
      d.   kāā ˋ kā lŏ wā'ā kán sāŋə̄   V-deletion
      e.   kāā   kā lŏ wā'ā kán sāŋə̄   tone grounding
      f.   kāā   kā lŏ wā'ā kán sāŋə̄   simplification
      g. ˋ kāā   kā lŏ wā'ā kán sāŋə̄   simplification
      h.   kāā   kā lŏ wā'ā kán sāŋə̄   tone lowering
      i.   kāā   kā lŏ wā'ā kán sāŋə̄   tone lowering
      j.   kāā   kā lŏ wā'ā kán sāŋə̄   tone dissimilation
      k.   kāā   kā lŏ wā'ā kán sāŋə̄   tone spreading
      l.   kāā   kā lŏ wā'ā kán sā'ŋə́   simplification and ds
      m.   kāā   kā lŏ wā'ā kān sā'ŋə́   dissimilation

The tone rules that are operating in the above derivation are
given. What should be noted is that the H tone of /kán/ spreads
onto the stem of the verb in (30k) and then simplifies in (30l)
creating a H 'H tone pattern on the verb stem. In (30n) the H
tone of the marker /kán/ becomes L tone by dissimilation.

Chapter Eighteen

CONSECUTIVE CLAUSE (CNS)

18.1 Definition

In the consecutive construction two verbs are juxtaposed without the use of a conjunction. In this construction many verbs can come together such that the action in one clause closely follows that in the preceding clause. It can be used in all the tenses, aspects and moods. The consecutive construction is marked by a nasal /Ǹ-/ with a basic L tone. This marker, however, does not surface in the future tense and in one of the forms of the CNS negative construction. It also serves a pronominal function, i.e., in the consecutive construction it serves to indicate that the agent or referent in the following clause is the same as in the preceding clause. It thus serves as a same subject marker (cf.9.3.1). In this function the CNS marker and the personal pronouns per se are mutually exclusive. The CNS marker is prefixed to the verb root, providing thus the only instance in Bafut where the verb, functioning as such, has a prefix. In a story or description, the role of any tense, e.g. the past tense is to set the time; and once, this is done, the consecutive verb form is used for most of the time thereafter. The aspect or mood of the whole sentence is indicated in the first clause, whose verb normally is not in the consecutive form. The CNS verb form is never found in the first clause in Bafut discourse. This has also been reported to hold true for a majority of African languages. Bennett (1975:58), in relation to this point, says:

> "In a majority of African languages the initial clause must normally contain a non-consecutive verb form."

In the following discussion the examples given will have one CNS verb form. The CNS verb form is preceded by a non-CNS verb form.

18.2 P1, P3 CNS

(1) a. à nĭn zĬ ŋ̄-kwɛ́rə̄ ˊ ˉ m̄bà → [à nĭn zĬ ŋkwɛ̄rə̄ mbà]
         he P1 come CNS-take T meat   "he came and took meat"

    b. à nĭn zĬ n̄-lɔ̄gə̄ ˊ ˉ ˉlə̂ŋə̄ → [à nĭn zĬ nlɔ́'gə̄ 'lə̂ŋə̄]
         he P1 come CNS-fetch T horse   "he came and
                                            took a horse"

    c. à lɛ̂n zĬ n̄-sàŋé ˊ ˉ m̄bà → [à lɛ̂n zĬ nsá'ŋə́ mbà]
         he P3 come CNS-dry T meat   "he came and dried meat"

    d. bó lɛ̂m fú ŋ̄-kwɛ́rə̄ ˊ ˉ m̄bà → [bó lɛ̂m 'fú ŋ-kwɛ́rə̄ mbà]
         they P3 go   CNS-take T   meat   "they went (to the farm)
                                            and took meat"

In the above examples the tones of the first verbs, the tense
markers and object have already been treated in the tense section
(cf. chapter 14). The CNS marker behaves like the homorganic
syllabic nasal (or prefix) (cf.3.8 and 3.9). It desyllabifies and
loses its tone in the above examples.

The tone pattern of both the H and L tone verbs in the P1 CNS
and P3 CNS construction is HH. As for the NEG IMP TO, this whole
tone pattern is superimposed on the underlying tone of the verb.
The HH tone pattern of the verb /kwɛ́rə̄/ is affected by its
phonetic environment such that in (1a) it is lowered to MM by
T-rule 1 and in (1d) it is downstepped after the 'H of the first
verb. For the derivation of the surface H 'H tone pattern on the L
tone verbs, as seen in (1b,c), reference should be made to the NEG
IMP TO (cf. 17.6.1).

18.3 P2 CNS

(2) a. à kĭ zĬ ŋ̄-kwɛ́rə̄ m̄bà → [à kĭ zĬ ŋkwɛ́rə̄ mbà]
         he P2 come CNS-take meat   "he came and took meat"

    b. à kĭ zĬ n̄-lɔ̄gə́ m̄bà → [à kĭ zĬ nlɔ̄gə́ mbà]
         he P2 come CNS-fetch meat   "he came and fetched meat"

    c. bó kĭ zĬ ŋ̄-kwɛ́rə̄ m̄bà → [bó kĭ zĬ ŋkwɛ́rə̄ mbà]
         they P2 come CNS-take meat   "they came and took meat"

    d. bó kĭ zĬ n̄-lɔ̄gə́ m̄bà → [bó kĭ zĬ nlɔ̄gə́ mbà]
         they P2 come CNS-fetch meat   "they came and
                                          fetched meat"

In the P2 tense, the CNS marker desyllabifies and its L tone is deleted as already seen for (1a-d) in the P1 and P3 tenses. The underlying tones of the verb are maintained.

18.4 PO CNS

(3) a. ä zÍ ˘ ˘ mə ŋ-kwɛrə ˉ lōŋō ⟶ [mà zÍ mə ŋkwɛrə lōŋō]
      he come T PO CNS-take horse   "he has come and
                                         taken a horse"

   b. à jÍ ˘ ˘ mə m̃-fɛ'ɛ ⟶ [à jÍ mə mfɛ''ɛ]
      he eat T PO CNS-go out   "he has eaten and
                                         gone out"

   c. bó zÍ ˘ ˘ mə ŋ-kwɛrə ˉ lōŋō ⟶ [bó zÍ mə ŋkwɛrə lōŋō]
      they come T PO CNS-take horse   "they have come and
                                         taken a horse"

   d. bó jÍ ˘ ˘ mə m̃-fɛ'ɛ ⟶ [bó jÍ mə mfɛ''ɛ]
      they eat T PO CNS-go out.   "they have eaten
                                         and gone out"

The CNS verb forms following the PO verb form are identical to those seen for P3, and P1 in (1a-d) above. The tonal changes are also similar in both cases.

18.5 TO CNS

(4) a. à ø zÍ ˘ ˘ ŋ-kwɛrə m̃bà ⟶ [à zÍ ŋkwɛrə mbà]
      he TO come T CNS-take meat   "he has come and
                                         taken meat"

   b. à ø zÍ ˘ ˘ ñ-lōgə m̃bà ⟶ [à zÍ nlōgə mbà]
      he TO come T CNS-fetch meat   "he has come and
                                         fetched meat"

   c. bó ø zÍ ˘ ˘ ŋ-kwɛrə m̃bà ⟶ [bó zÍ ŋ'kwɛrə mbà]
      they TO come T CNS-take meat   "they have come
                                         and taken meat"

   d. bó ø jÍ ˘ ˘ ñ-tsyă̌ ŋgwà ⟶ [bó jÍ ntsyă̌ ŋgwà]
      they TO eat T CNS-pass Ngwa   "they have eaten
                                         more than Ngwa"

The CNS forms after the TO verb forms are similar to those seen for the P2 in (2a-d). However, we notice that in (4c) the H of the CNS verb stem is downstepped. The derivation of this tone pattern is as follows:

(5) a. bõ zI ˘ ˘ ŋkwɛrə   underlying
     b. bõ zI˘   ŋkwɛrə   TO tones
     c. bõ zI˘   ŋkwɛrə   tone spreading
     d. bõ zI   ŋkwɛrə   tone superimposition
     e. bõ zI   ŋkwɛrə   nasal desyllabification
                              and tone deletion
     f. bõ zI   ŋ'kwɛrə   tone simplification and ds

In (5b) the TO tense tones (cf.14.2) replace the underlying tones of the verb. In c. the H tone of the pronoun spreads onto the L tone of the verb and creates a HL contour tone. In d. the floating contour tone is superimposed on the verb tone where it is absorbed into the first HL contour tone. In (5e) the syllabic nasal of the CNS marker desyllabifies and its tone is deleted. The contour tone on the verb stem simplifies in (5f) causing the H tone of the CNS verb stem to downstep.

18.6 Imperative CNS

(6) a. zI ŋ-kwɛrə ˘ lə́ŋə́ wâ → [zǐ ŋkwɛrə lə́ŋə́ wâ]
         come CNS-take horse the   "come and take the horse!"

     b. zI ñ-lɔ́gə́   m̄bà yâ → [zǐ nlɔ́gə́ mbà yā̃]
         come CNS-fetch meat the   "come and fetch the meat!"

     c. fũ ŋ-kwɛrə ˘ lə́ŋə́ wâ → [fũ ŋ'kwɛrə lə́ŋə́ wâ]
         go CNS-take   horse the   "go (to the farm)
                                      and take the horse!"

     d. fũ ñ-lɔ́gə́   m̄bà yâ → [fũ nlɔ́gə́ mbà yā̃]
         go CNS-fetch meat the   "go (to the farm)
                                     and fetch meat!"

The CNS forms after the imperative verbs are the same as seen for the TO above. Here too the regular underlying tones do not change. The derivation of (6c) is similar to (5) above.

18.7 Future CNS

The CNS marker /Ñ-/ is not realized on the surface before the CNS verb form in the future tenses. However, there are indications that this marker exists underlyingly. The nasal segment of this marker has been deleted but its L tone still persists as a floating L tone. This will be seen in the examples below.

(7) a. ā kā ø jî ŋ̄-kūrá m̄bā   → [ā kā jî 'kūrá mbà]
         he F 0 eat CNS-eat meat   "he shall eat and
                                               eat meat"

     b. bó ká lá zî ń-lɔ́gá m̄bā → [bó ká lá zî lɔ́gá mbà]
         they F 1 come CNS-fetch meat   "they will come and
                                               fetch meat"

     c. ā kā lɔ̌ fú ŋ̄-kwέrá ˉláŋá → [ā kā lɔ̌ fú 'kwέrá láŋá]
         he F 2 go CNS-take horse   "he will go (to the farm)
                                             and take a horse"

     d. bó kā yî fú ń-lɔ́gá m̄bā → [bó ká yî fú lɔ́gá mbà]
         they F 3 go CNS-fetch meat   "they will go
                                            (to the farm)
                                            and fetch meat"

We notice from the above examples, that the underlying tones of the verbs are generally maintained in the CNS verb form. The H tone of the CNS verb form is downstepped as a result of the L tone of the deleted CNS marker.

The derivation of (7a) is as follows:

(8) a. ā kā jî ŋ̄-kūrá m̄bā   underlying
     b. ā kā jî ŋ̄-kūrá m̄bā   simplification
     c. ā kā jî ŋ̄-kūrá m̄bā   tone lowering
     d. ā kā jî ŋ̄-kūrá m̄bā   nasal desyllabification
     e. ā kā jî ˉ kūrá m̄bā   nasal deletion
     f. ā kā jî   kūrá m̄bā   tone grounding
     g. ā kā jî   'kūrá m̄bā   tone simplification and ds
     h. ā kā jî   'kūrá m̄bā   nasal desyllabification
     i. ā kā jî   'kūrá mbā   tone deletion

In (8a) the underlying tones are given. Note should be taken of the underlying form of the CNS marker. In b. the contour tone of the F0 marker simplifies. In (8c) the L tone of the pronoun lowers the H on the F0 marker to M. In (8d) the syllabic nasal of

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the CNS marker desyllabifies by P-rule 4 and in (8e) it is deleted. Its tone is grounded to the left on the H of the preceding verb as indicated in (8f) thereby creating a HL contour tone which later on simplies in (8g) causing the following H of the CNS verb to downstep. The nasal prefix of the object desyllabifies in (8h) and its tone is deleted in (8i). This derivation thus shows that, although the CNS nasal marker does not surface in the future tenses, it is there in the underlying form of the CNS construction.

The derivation of (7c) is similar to the one given for (7a) in (8) here above.

The derivation of (7b) is given below:

```
(9)   a.  bő kâ lā zÍ ñ-lɔgɔ́ m̄bā       underlying
      b.  bő ká lā zÍ ñ-lɔgɔ́ m̄bā       simplification
      c.  bő ká lā zÍ m̄-lɔgɔ́ m̄bā       simplification
      d.  bő ká lā zÍ ñ-lɔgɔ́ m̄bā       tone lowering
      e.  bő ká lā zÍ ñ-lɔgɔ́ m̄bā       nasal desyllabification
      f.  bő ká lā zÍ    lɔgɔ́ m̄bā       nasal and tone deletion
      g.  bő ká lā zÍ    lɔgɔ́ m̄bā       tone lowering
      h.  bő ká lā zÍ    lɔgɔ́ mbā       nasal desyllabification
                                         and tone deletion
```

In (9a) the underlying forms are given. The tone processes involved in the above derivation have been seen in the previous chapter (cf. 14.9). What should be noted is the fact that in (9f) both the CNS nasal and its L tone are deleted.

The derivation of (7d) is similar to (9) above.

18.8 Imperfective CNS

The CNS marker is present in the imperfective aspect. The CNS verb can also be marked for imperfectivity as will be seen here below.

18.8.1   Imperfective TO CNS

(10) a. à   `ˆ`   ø   ghἒɔ̄   ā   ŋ̄-kwɛ́rɔ̄   m̄bā →
     he IMPF TO go   to CNS-take   meat

     [á ghἒɛ̄ ŋkwɛ́rɔ̄ mbā]
     "he is going to take meat"

   b. bɔ́   `ˉ`   ø   fú á   ñ-lɔ̄gɔ̄   m̄bā →
     they IMPF TO go to   CNS-fetch meat

     [bɔ́ 'fú nlɔ̄gɔ̄ mbā]
     "they are going (to the farm) to fetch meat"

   c. à   `ˆ`   ø   ghἒɛ̄   ŋ̄-kwɛ́rɔ̄ `ˉ ˉ` nɪ̄   m̄bā →
     he IMPF TO go   CNS-take T IMPF   meat

     [á ghἒ ŋkwɛ̄rɔ̄ nɪ̄ mbā]
     "He is going and taking meat"

   d. bɔ́   `ˉ`   ø   tsɔ́ m̄-bɪ̀'ɪ   `ˉ ˉ` nɪ̄   ŋ̄kɪ̄   →
     they IMPF TO go   CNS-carry T IMPF water

     [bɔ́ 'tsɔ́ mbɪ''ɪ nɪ̄ ŋkɪ̄]
     "they are going to the stream and carrying water"

     In (10a-b) the first verbs are in the TO imperfective aspect
(cf.15.4.1). The second verb in each case is in the infinitive,
which is marked by the preposition /á/ (cf.12.2.1.3) above. This
preposition or infinitive marker is deletable (cf. 3.7). After
the infinitive marker /á/ the infinitive verb carries the CNS
nasal marker.

     The   examples   in   (10c-d)   are   typical   consecutive
constructions. Both the first verb and the following CNS verb are
in the imperfective aspect. The tones of the first verb form have
already been discussed in the section on aspect (cf.15.4.1). The
tone pattern of the CNS verb stem is H H for both the H and L tone
verbs, just as we have seen for the P1 and P3 CNS (cf. 18.2). The
derivation of the surface tones in this verb form is similar to
what we have seen for the NEG IMP TO in 17.6.1. above. The marker
of imperfectivity in the CNS verb is /nɪ̄/ with an underlying HL
tone pattern. This marker follows the CNS verb.

18.8.2 P2, P3 Imperfective CNS

(11) a. à kɨ sɨ˜ zI n̄-sàŋə̄ ˜ ˜ nɨ m̄bã̄ →
        he P2 IMPF come CNS-dry T IMPF meat

   [à kɨ sɨ'˜ zI sá'ŋə́ nɨ mbã̄]
   "he was coming and drying meat"

   b. bó kɨ sɨ˜ fū ŋ-kó   ˜ ˜ nɨ m̄bã̄ →
      they P2 IMPF go CNS-catch T IMPF meat

   [bó kɨ sɨ'˜ 'fū ŋkó nɨ mbã̄]
   "they were going (to the farm) and catching animals
    for meat"

   c. à lɛ̂n sɨ˜ fū ŋ-kyã̄   ˜ ˜ nɨ ˜ kɔfI →
      he P3 IMPF go CNS-harvest T IMPF coffee

   [à lɛ̂n sɨ'˜ 'fū ŋkyá nɨ kɔfI]
   "he was going to the farm) and harvesting coffee"

   d. bó lɛ̂n sɨ˜ fū m̄-bI'I ˜ ˜ nɨ ˜ kɔfI →
      they P3 IMPF go CNS-carry T IMPF coffee

   [bó lɛ̂n sɨ'˜ 'fū mbI''˜ nɨ kɔfI]
   "they were going (to the farm) and carrying coffee"

As seen in the above examples, the CNS verb form after the P2
and P3 imperfective aspect has a H H tone pattern (for both the L
and H tone verbs) just as we have seen for the Imperfective TO CNS
in 18.8.1 above. Consequently, the H tone verbs maintain their
basic tones while the L tone verbs receive a H 'H tone pattern.
The CNS imperfective marker is the same as for the imperfective TO
CNS in (10), i.e., /nɨ/.

18.9 Negative CNS

In the CNS construction it is possible to negate just the CNS
clause or both the non-CNS clause and CNS clauses.

18.9.1 Negation of Both Clauses

(1) a. ˋ káá bó nɨ wá'ǎ m̀bǎ yǎ fʊ́ ŋ-kwɛ́rə́ →
          Neg they P1 Neg   meat the go CNS-take

          [kāā bó nɨ 'wá'ǎ mbǎ yā   fʊ́ ŋ'kwɛ́rə́]
          "they did not go (to the farm) and take the meat"

     b. ˋ káá bó   kɨ wá'ǎ   m̀bǎ yǎ fʊ́ ñ-lɔ̌gə́ →
          Neg they P2 Neg   meat the go CNS-fetch

          [kāā bó kɨ wá'ǎ mbǎ yā fʊ́ nlɔ̌gə̌]
          "they did not go (to the farm) and fetch the meat"

     c. ˋ káá bó   lɛ̂n wá'ǎ m̀bǎ yǎ zɨ m̀-fèé →
          NEG they P3 NEG   meat the come CNS sell

          [kāā bó lɛ̂n 'wá'ǎ mbǎ yā yɨ mfé'é]
          "they did not come and sell the meat"

     d. ˋ káá bó   kā lɔ̃ wá'ǎ m̀bǎ yǎ zɨ ŋ-kwɛ́rə́ →
          NEG they F 2 NEG meat the come CNS-take

          [kāā bó ká lɔ̃ wá'ǎ mbǎ yā zɨ ŋkwɛ́rə̄]
          "they will not come and take the meat"

     e. ˋ káá bó   kā yɨ wá'ǎ m̀bǎ ·yǎ fʊ́   m̀-bèns ə́ →
          NEG they F 3 NEG   meat the go   CNS-return

          [kǎā bó ká yɨ wá'ǎ mbǎ yā fʊ́ mbèns ə̌]
          "they will not go to the farm and return the meat"

     f. ˋ káá bó kɨ sɨ́ˊ wá'ǎ nɨ ˉ láŋə́ wǎ zɨ ñ-sɨ'í ˉ ˊ →
          NEG they P2 IMPF NEG IMPF horse the come CNS-wash T

          [kāā bó kɨ sɨ'ˊ 'wá'ǎ nɨ lə̄ŋə̄ wǎ zɨ nsɨ''ɨ]
          "they were not coming and washing the horse"

We notice that the CNS marker is present in the above negative CNS clause. The negation construction has already been described in chapter 17. The underlying tones of the H tone verbs are not changed in the CNS negative form. Any changes that the H tone undergoes, e.g., lowering are purely on a phonetic basis. The LH pattern of the L tone verbs receives a surface H 'H tone pattern when the preceding verb is a L tone verb. We notice from (12f) that the L tone verb in this case has a superimposed H H tone pattern. The underlying L H of the L tone verb is lowered to a L L pattern when the preceding verb is a H tone verb. In the

imperfective aspect the HL tone of the CNS imperfective marker receives a replacive L tone before a noun object.

18.9.2 Negation of the CNS Clause

The more common negative construction of the CNS clause is one where only the CNS verb form is negated. The CNS marker together with its tone is deleted in this construction. The H and L tone verbs both receive a HL replacive tone pattern. The CNS imperfective marker also receives a replacive tone, as seen in (12) above.

(13) a. bó   ø zI   ˋ kãã   wá'ã ˈlə̃ŋə̃   ø   kwɛ́rə̃ ˊ ˋ →
        they TO come NEG   NEG   horse CNS take T

   [bó zI kãã wá'ã lə̃ŋə̃ kwɛ́rə̃]
   "they went (to the farm) and did not take a horse"

   b. bó   nîm fũ ˋ kãã   wá'ã ˈlə̃ŋə̃   ø   lɔ̃gə̃ ˊ ˋ →
      they P1 go NEG   NEG   horse CNS   fetch T

   [bó   nîm 'fũ kãã wá'ã lɔ̃gə̃ lɔ̃gə̃]
   "they went (to the farm) and did not take a horse"

   c. bó   kⁱ zI   ˋ kãã   wá'ã ˈlə̃ŋə̃   ø   fã ˊ ˋ   →
      they P2 come NEG   NEG   horse CNS give T

   [bó kⁱ zI kãã wá'ã lə̃ŋə̃ fã]
   "they came and did not give a horse"

   d. bó   lɛ́n zI   ˋ kãã   wá'ã ˈlə̃ŋə̃   ø   fẽé ˊ ˋ   →
      they P3 come NEG   NEG   horse CNS   sell T

   [bó lɛ́n zI kãã wá'ã lə̃ŋə̃ fẽé]
   "they came and did not sell a horse."

   e. bó   kã ø kwɛ́ɛ   ˋ kãã wá'ã ˈlə̃ŋə̃   ø   kwɛ́rə̃ ˊ ˋ →
      they F O come-home NEG NEG   horse CNS   take   T

   [bó kã 'kwɛ́ɛ kãã wá'ã lə̃ŋə̃ kwɛ́rə̃]
   "they will come home and will not take a horse"

   f. bó   kã lɔ̃ zI   ˋ kãã wá'ã Iə̃ŋə̃   ø   lɔ̃gə̃ ˊ ˋ →
      they F 2   come NEG NEG   horse CNS   fetch T

   [bó kã lɔ̃ zI kãã wá'ã lə̃ŋə̃ lɔ̃gə̃]
   "they will come and will not take a horse"

g. bõ lɛ̃ sî˜ ghɛ̀ɛ̃ ˋ kāá wá'ă nî m̄bā ø kwɛ́rə́ ˋ ˋ →
    they P3 IMPF go   NEG NEG IMPF meat CNS take T

[bõ lɛ̃ sî'˜ ghɛ̀ɛ̃ kāá wá'ā nî mbā kwɛ̄rə̀]
"they were going and not taking meat"

18.10 CNS and Sequential Construction[1]

The sequential construction differs from the consecutive in the fact that it involves a change of subject. Thus by making the subject of the following verb different from that of the preceding one, a consecutive construction is changed to a sequential one. The consecutive construction has same subject marking and the sequential indicates different subject marking. We have already seen this in our discussion of coreference and switch reference (cf.9.3.1 and 9.3.2).

(14) a. à ø zî ˋ ˉ ˉ bõ ø kwɛ̄rə́ ˋ ˉ m̄bā →
          he TO come T   they TO take T   meat

          [ã zî bõ kwɛ̄rə̀ mbā]
          "he came and they took meat"

      b. bõ ø kwɛ́ɛ̃ ˋ ˆ ã sãŋə́ ˋ ˉ ˉ kɔ̄fî →
          they TO come T   he dry   T   coffee

          [bõ kwɛ́ɛ̃ ã sãŋə̀ kɔ̄fî]
          "they came home and he dried coffee"

      c. à nîn yə́ ŋgwã á kwɛ́tə́ ˋ ˋ yî →
          he P1 see Ngwa he help T him

          [ã nîn yə́ ŋgwã á kwɛ́tə̀ yî]
          "he saw Ngwa and he (Ngwa) helped him"

      d. à kî túmə́ ˉ nããŋgwɛ̀ yî kghə̆ ˋ ˉ →
          he P2 shoot leopard it run T

          [ã kî tūm nããŋgwɛ̀ yî khə̀]
          "he shot a leopard and it ran away"

      e. bõ lɛ̃n yúū m̄bã mə̀ kúrə́ ˋ ˉ →
          they P3 buy meat I eat   T

          [bõ lɛ̃n 'yúū mbã mə̀ kūrə̀]
          "they bought meat and I ate (it)"

f. à kâ lõ yúū m̄bã bó   kūrə́ →
    he F   2   buy meat they eat

    [à kā lŏ yúū mbã bō kūrə́]
    "he shall buy meat and they will eat (it)"

g. à kâ yĬ fá   m̄bã mə̀ sã̀ŋə́ ́ ́ →
    he F   3   give meat I   dry   T

    [à kā yĬ fá mbã mə̀ sã́'ŋə́]
    "he will give meat and I shall dry (it)"

h. à lɛ̂ sî˴   bū'ū   ŋgɔ̀ɔ̀ bó   bēnə́ ́ ̀ →
    he P3 IMPF   beating drum   they dance T

    [à lɛ̂ sǐ'˴ 'bū'ū ŋgɔ̀ɔ̀ bō bénə̀]
    "he was drumming and they were dancing"

i. à lɛ̂ sî˴   fá   m̄bã bó   sã̀ŋə́ ́ ̀ →
    he p3 IMPF   give meat they dry   T

    [à lɛ̂ sǐ'˴ 'fá mbã bō sã́ŋə̀]
    "he was giving meat and they were drying(it)"

In the above examples, both the L tone and H tone verbs
receive a replacive HL tone pattern in the sequential clause
except in the future tenses. In the future tenses, the H and L
tone verbs in the sequential clause, just as the P1 and P3 CNS,
have a H H tone pattern.

Although our treatment of the consecutive construction has
been based on one CNS verb, theoretically there is no limit to the
number of verbs that can be strung together in a series. The
consecutive and sequential constructions are very important in
Bafut discourse. For any text to be stylistically natural it has
to have some forms of the consecutive or sequential construction.

In a narrative or story the CNS tense is used as mentioned
above. When a subject noun or pronoun precedes the verb, the CNS
marker normally deletes (cf. the nasal deletion rule). Both the
CNS and the sequential constructions are used in narrative texts.

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Notes to Chapter Eighteen

[1] This term is used by Hyman (1981).

Chapter Nineteen

COMPLEX SENTENCES

19.1 Introduction

In the preceding chapters we have treated mostly simple sentences, i.e. single clause sentences. In the present chapter we are going to study the common types of complex sentences in Bafut. This study is in a way a study of the various conjunctions that mark complex sentences in Bafut. Complex sentences are subdivided into co-ordinative and subordinative sentences.[1]

19.2 Co-ordinative Sentences

Co-ordinative sentences are marked by the conjunctions /bô/, /nî/ and /kîN/. The first two of these, as can be noticed, have an underlying HL contour tone while /kîN/ has an underlying H tone. All these conjunctions, however, have a surface H tone.

19.2.1 /bô/

The conjunction /bô/ is used to join two different 3rd person subjects of the same verb, e.g.,

(1) a. ŋgwà bô Àsô kì tsó ˋ ˉ á ŋkì ⟶ [ŋgwà bô sô kì tsó' ŋkì]
       "Ngwa and Aso went to the stream"

   b. Àsô bô Nìbà'à lɛ̂m fú á àfɔ ⟶ [Àsô bô Nìbà'à lɛ̂m 'fú fɔ]
       "Aso and Niba went to the farm"

   c. ŋgwà bô Sûū lɛ̂n lɔgá m̄bà ⟶ [ŋgwà bô sûū lɛ̂n lɔgá mbà]
       "Ngwa and Shu took meat"

In (1) the underlying tones of the words are given on the left of the arrow while the output string is given to the right of the arrow. In all three examples most of the rules working to produce the final strings have been treated in the preceding

sections. We will give a sample derivation of the tones of the
verb phrase in (1a) just to show how the tone rules working here
are same as those we have already discussed.

(2) a. kɨ tsó ˜ ˉ á ŋkɨ   underlying
    b. kɨ tsõˉ   á ŋkɨ   P2 replacive tone
    c. kɨ tsõ   á ŋkɨ   tone absorption
    d. kɨ tsõ   ˉ ŋkɨ   V-deletion
    e. kɨ tsõˉ   ŋkɨ   tone grounding
    f. kɨ tsõ'ˉ   ŋkɨ   simplification and ds
    g. kɨ tsõ'ˉ   ŋkl   nasal desyllabification and
                                 tone deletion

In (2a) the underlying tones are given. The tense of this
verb phrase is yesterday past (P2). So the tones of the verb
behave according to the description given in 14.5. The different
rules working to produce each tone process have been indicated so
reference should be made to them in the appropriate section.

What we should pay attention to is the NP and the tonal
behaviour of the conjunction /bõ/. The derivation of the NP in
(1a) will serve to explain the tone changes found on the
conjunction.

(3) a. ŋgwà bõ Ãsõ   underlying
    b. ŋgwà bó Ãsõ   simplification
    c. ŋgwà bõ Ãsõ   tone lowering
    d. ŋgwà bõ ˉ sõ   V-deletion
    e. ŋgwa bõ sõ   tone grounding
    f. ŋgwà bõ sõ   simplification

In (3a) the underlying tones are given. In (3b) the contour
tone on the pronoun simplifies to H. In (3c) the tone of /bõ/ is
lowered by the preceding L tone to M. In (3d) the V-prefix of
/Ãsõ/ is deleted (cf. P-rule 3) and its tone is grounded to the
left on the conjunction creating a ML glide. In (1b,c) we note
that the tone of the conjunction /bõ/ acts across phrase boundary
as shown in the derivation of the relevant section of (1b).

(4) a. ãsõ bõ Nɨbã'ã lɛm fũ   underlying
    b. Ãsõ bõ Nɨbã'ã lɛm fũ   simplification
    c. Ãsõ bõ Nɨbã'ã lɛm fũ   simplification
    d. ãsõ bõ Nɨbã'ã lɛm 'fũ   simplification and ds

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In the above derivation the H of the conjunction /bő/ moves across phrase boundary (i.e. from NP to VP) and maintains the basic H of the P3 marker /lēŋ/ thus blocking the lowering effect of the preceding L tone on /Nìbā'ā/. In (4a) the underlying tones are given. In (4b) the HL contour tone on /Āső/ simplifies to M. In (4c) the HL contour tone on the conjuction /bő/ simplifies to H. In (4d) the HL contour tone on /lēŋ/ is simplified to H causing the following H of /fū/ to downstep. The effect of the H tone of the conjunction can be clearly seen, if we take it away from the sentence:

(5) nìbā'ā lɛ̄ŋ fū   "Neba went (to the farm)"

We notice that by taking away the conjunction and its tone we take away the effect of its H tone which maintains the basic tone of the P3 marker or its underlying HL, which in turn, by its simplification, causes the following H of the verb /fū/ to downstep.

Another way of explaining the H tone in (1b,c) is to attribute it to the presence of the tone of the personal pronoun /bő/, "they", which very likely has been deleted in this context but its tone is left floating. The underlying representation of (1b) in this case would be:

(5) b.   /Āső bő Nìbā'ā bő   lēm fū/
          Aso and Neba   they P3 go (to the farm)

9.2.2 /nî/

The second co-ordinative conjunction /nî/ behaves in the same way as /bő/. /nî/ is used when one of the conjoined subjects includes a 1st person pronoun.

(6) a.   mā̀ nî Āső kì tsō á ŋ̀kì → [mā̀ nî sō kì tsó'⁻ ŋ̀kì]
          "I and Aso went to the stream"

     b.   Āső nî mā̀ lēm fú á ā̀fɔ̄ → [Āsɔ̄ nî mā̀ lɛ́m 'fú fɔ̄]
          "Aso and I went to the farm"

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c. mə̀ nî sṳ̀ṳ lɛ̂n lɔ̌gə̀ m̀bà → [mə̀ nî sṳ̀ṳ lɛ́n lɔ̌gə̀ m̀bä
    "I and Shu took meat"

It should be noted that here, in the above examples, the surface H tone of /nî/ also affects tones of words across phrase boundary. The derivations of (6a,b,c) are the same as those given for (1a,b,c) above.

19.2.3 /kîN/

The third coordinative conjunction /kîN/ is used to conjoin two clauses with the same subjects, e.g.,

(7) a. ā nîn jî ātsṳ̄gə̀ kin nô m̀lṳ̀'ṳ̀ →
         [ā nîn jî 'tsṳ̀gə̀ kin nô m̀lṳ̀'ṳ̀]
         "he ate fufu and also drank wine"

     b. ā nîn kṳ̄rə́ ānsáŋ kíŋ kṳ̄rə́ āmbɔ̄rə̀ →
         [ā nîŋ kṳ̄rə́ ānsāŋ kíŋ kṳ̄rə́ āmbɔ̄rə̀]
         "he ate maize and also ate vegetables"

     c. bô nîn lɔ̌gə̀ m̀bà kin lɔ̌gə̀ m̀bàŋ →
         [bô nîn lɔ̌gə̀ m̀bà kin lɔ́'gə̀ m̀bàŋ]
         "they took meat and also took kernels"

     d. bô nîn sɔ̌ m̀bä kin sɔ̌ ˉ lə́ŋə́ →
         [bô nîn sɔ̌ m̀bä kin sɔ́'ˉ 'lə́ŋə́]
         "they pierced meat and also pierced a horse"

In the above examples the tones of the first clauses have already been treated in the chapter on tenses, so reference should be made to chapter 14. In (7c,d) the tone of the conjunction is lowered by a preceding L tone to M by application of T-rule 1. The underlying tones of the H tone verbs in the second clause do not change. The L tone verbs receive a H 'H tone pattern after the conjunction. This is caused by the H tone of the conjuction, which spreads onto the L tone of the verb stem, where it creates a HL contour tone. This contour tone eventually simplifies, thus resulting in the H 'H tone pattern. The tones of the H tone object [lə́ŋə́] in (7d) are downstepped by the preceding H'H tone pattern (cf. 22.2.1.2 (19) and (20)).

19.3 Subordinative Sentences

There are different types of subordinative sentences in Bafut. Each type of subordinative sentence is marked by a conjunction.

19.3.1 Objective Subordinative Sentence /ˉ mə́/

Objective subordinative sentences are sentences where the subordinative clause is the object of the main verb. The objective subordinative sentence is marked by the conjunction /ˉ mə́/. The surface tone of the conjunction is H, but following its behaviour in context we have posited an underlying ḶH tone pattern for it. The following sentences are examples of objective sentences:

(8) a. à n̄n swɔ́ŋə́ ˉ mə́ yú ghɛ̀ɛ́ á mɪ̀tàà ——→
      [à n̄n swɔ́ŋ 'mə́ yú ghɛ̀ɛ́ á mɪ́'tàá]
         "he said that he (ss) was going to market"

    b. bó mɔ̀ɔ̀ntə́ ˉ mə́ à jwɪ́ mə̀ ——→
      [bó mɔ́'ɔ̀ntə́ 'mə́ à jwɪ́ mə̀]
         "they think that she has given birth"

As can be seen in (8a) above, the H tone of the conjunction is downstepped after the H tone of the preceding verb. This is caused by the floating L tone we have posited before it. The derivation of this tonal realization is as follows:

(9) a. à nɪ̄n swɔ́ŋə́   ˉmə́   underlying
    b. à nɪ̄n swɔ́ŋə́   ˉmə́   tone lowering
    c. à nɪ̄n swɔ́ŋə́   ˉmə́   tone simplification
    d. à nɪ̄n swɔ́ŋˉ   ˉmə́   V-deletion
    e. à nɪ̄n swɔ́ŋ   ˉmə́   tone grounding
                         and absorption
    f. à nɪ̄n swɔ̀ŋ   mə́   tone grounding
    g. à nɪ̄n swɔ́ŋ   'mə́   tone simplification and ds

In (9a) the underlying forms are given; in (9b) the L tone of the subject pronoun lowers the following HL tone on the P1 marker to ML, which further simplifies to M in (9c). The form,/swɔ́ŋə́/, becomes /swɔ́ŋ/ before the nasal of the conjunction, /mə́/ (cf.3.6).

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The steps followed are given in (9d-e). In (9f) the floating
tone of the conjunction is grounded to the left where it forms a
contour tone on the verb. In (9g) the HL contour tone is
simplified thus causing the following H tone on the conjunction to
downstep. The tones of the elements of the clauses joined by the
conjunction behave according to the rules we have seen in the
appropriate sections above. In (8b) the verb of the first clause
carries the tone of TO (cf. 14.2).

In (8a) the second clause carries the tones of the
imperfective TO (cf.15.4.1) so reference should be made to that
section for a derivation of the tones there.

For a derivation of the second clause of (8b) reference
should be made to the PO tense in 14.3.

19.3.2   Relative /⁻mə̄/

The relative subordinative sentence is marked by the
morpheme, /⁻mə̄/, which has an underlying LH tone pattern.

(10) a.   à nɪ̀n yə̄ nɪ̀ngɔ̄ɔ̄ nyâ⁻ ⁻ mə̄ bó kɪ̀ kwɛ̄rə̄ ⁻·⁻ ā →
          [à nɪ̀n yə̄ nɪ̀ŋgɔ̄ɔ̄ nyâ'⁻ 'mə bó kɪ̀ kwɛ̄rə̄ā]
             "he saw the plantain that they had taken"

     b.   à nɪ̀n lɔ̄gə̄ m̄bə̄ yâ⁻ ⁻ mə̄ bó kɪ̀ bɪ̀'ɪ̀ ⁻ ⁻ ā   →
          [à nɪ̀n lɔ̄gə̄ mbə̄ yə̀'⁻ 'mə bó kɪ̀ bɪ̀'ɪ̀ā]
             "he took the meat that they carried"

     c.   kó fórə̄ wâ⁻ ⁻ mə̄ yə̀'ə̄ ⁻ ⁻ ā   →
          [kó fórə̄ wâ'⁻ 'mə yə̀'ə̄ā]
             "catch the mouse that is crying!"

In the above examples, the main clause in each case precedes
the conjunction /⁻mə̄/. The main clauses in (10a,b) are both in
the P1 tense. For the derivation of the tones in these clauses
reference should be made to 14.4. In (10c) the main clause is in
the imperative mood and reference should be made to 16.2 for an
appropriate description of the tonal behaviour of the verb form.

A sample derivation of the tones of the noun phrase that
includes the relative pronoun is as follows:

(10) d. i.   nɪŋɔ̀ɔ̀ nyā˘   ˘ mā   underlying
     ii.   nɪŋɔ̀ɔ̀ nyá'˘   ˘ mā   simplification and ds
     iii. nɪŋɔ̀ɔ̀ nyá'˘   mā   tone grounding
     iv.   nɪŋɔ̀ɔ̀ nyá'˘   'mā   simplification and ds

In the above derivation we see that the downstepped H tones come from the simplification of the HL contour tones.

In (10a,b) the verbs in the relative clause (both the H and L tone verbs) are in the P2 tense and so these have the P2 L HL tone pattern. The verbs in the relative clauses are followed by the particle /-ā/, with a L tone. Reference should be made to 14.5 (20) for the derivation of the verb tones in the relative clause.

19.3.3 Purpose /á/

The subordinative sentence of purpose is marked by the morpheme /á/ (which is also the infinitive marker). Examples of this type of sentence are given below:

(11) a. ā zɪ ˘ ˘ á   ɲlɔ̀gá˘ m̄bā → [ā zɪ'˘ nlɔ̀gā mbā]
         "he has come to take meat"

   b. ā zɪ ˘ ˘ mā á ŋkwɛ́rá˘ nɪ̀bɔ̀'ɔ̀ → [ā zɪ mā'˘ ŋ'kwɛ́rā nɪ̀bɔ̀'ɔ̀]
         "he has come to take a pumpkin"

   c. ā nɪ̀m fú á ŋkó˘ ˘ fórá̄ → [ā nɪ̄ fú ŋ'kó 'fórā̄]
         "he went (to the farm) to catch a mouse"

   d. bó kɪ̄ fú ˘ ˘ á ŋkó˘ ˘ fórá̄ → [bó kɪ̄ fú'˘ ŋ'kó 'fórā̄]
         "they went (to the farm) to catch a mouse"

As can be noticed in the above examples, the tone of the purpose clause marker /á/ is H. In (11a) the deletion of the marker /á/ is optional. The tone pattern of the verb stem in the purpose clause depends upon the verb tense. The clauses in (11a) and (11b) are in the T0 tense, (11c) in the P0, and (11d) in the P2. Reference should be made to chapter forteen where the verb tones have been described. A sample derivation of (11b) is given in (12) below.

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(12)  a.  ã zI  ¯  ¯  mә́ ä́ ŋ́kõ ¯  ¯  fṍrә́    underlying
      b.  ã zI      mә́ ä́ ŋ́kõ ¯  ¯  fṍrә́    PO replacive tone
      c.  ã zI      mә́ ä́ ŋ́kõ     ¯  fṍrә́    subord. clause verb tone
      d.  ã zI      mә̀ ä́ ŋ́kõ        fṍrә́    tone grounding to the right
      e.  ã zI      mә̀ ¯ ŋ́kõ        fṍrә́    V-deletion
      f.  ã zI      mә̀¯  ŋ́kõ        fṍrә́    tone grounding to the left
      g.  ã zI      mә̀'¯ ŋ́kõ        fṍrә́    simplification and ds
      h.  ã zI      mә̀'¯ ŋkõ        fṍrә́    nasal desyllabification and
                                              tone grounding to the left
      i.  ã zI      mә̀'¯ ŋ'kõ       fṍrә́    simplification and ds
      j.  ã zI      mә̀'¯ ŋ'kõ      'fṍrә́    simplification and ds
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In (12a) the underlying tones of the string are given, in (12b) the immediate past tense (PO) replacive tone pattern is placed on the verb /zI/ by T-rule 11. In (12c) the subordinate clause verb tone is placed on the verb stem. In (12d) the H tone of the noun prefix grounds to the right on the noun stem. In (12e) the V segment of the sentence marker is deleted (cf. P-rule 3) and in (12f) its tone is grounded to the left on the PO marker where it creates a HLH contour tone. In (12g) the HLH contour tone simplifies to H'H. In (12h) the syllabic nasal desyllabifies by P-rule 4 and its tone is grounded to the left where it creates a contour tone. In (12i) the contour tone simplifies and causes the following HL tone to downstep. In (12j) the HL contour tone on the verb stem simplifies, causing the following H tones of the noun to downstep by T-rule 2.

The derivation of (11c) is given below:

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(13)  a.  ã nǐm fú ä́ ŋ́kõ ¯  ¯ fṍrә́    underlying
      b.  ã nǐm fú ä́ ŋ́kõ    ¯ fṍrә́    subord. clause verb tone
      c.  ã nǐm fú ä́ ŋ́kõ      fṍrә́    tone grounding to the right
      d.  ã nǐm fú ä̀ ŋ́kõ      fṍrә́    tone lowering
      e.  ã nǐm fú ¯ ŋ́kõ      fṍrә́    V-deletion
      f.  ã nǐm fú   ŋ́kõ      fṍrә́    tone grounding to the left
      g.  ã nǐm fú   ŋ́kõ      fṍrә́    nasal desyllabification
      h.  ã nǐm fú   ŋkõ      fṍrӗ    tone grounding
      i.  ã nǐm fú   ŋ'kõ     fṍrә́    simplification and ds
      j.  ã nǐm fú   ŋ'kõ    'fṍrә́    simplification and ds
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In (13a) the underlying tones are given. The main clause is in the today past (P1). In (13b) the subordinate clause verb stem tone pattern is given. The rest of the tone processes involved in

the derivation are given. These rules are similar to those involved in the derivation in (13) above.

The derivation of (11d) is similar to that of (11b). So reference should be made to (12).

19.3.4 Temporal /m̄bɔ̄ŋ˞ (tâ)/

The temporal subordinative sentence is marked by the morphemes /m̄bɔ̄ŋ˞ (tâ)/ with underlying tones as indicated. The second morpheme, /tâ/ is a subject marker. It is used to show that different subject are involved. This will be illustrated in the examples below.

(14) a. ā nɪ̄n zɪ̄ m̄bɔ̄ŋ˞ tâ bő jɪ̄ ˉ ˉ → [ā nɪ̄ zɪ̄ mbɔ́ŋ'˞ tâ bō jɪ̄]
    "he came before they ate"

   b. ā nɪ̄n zɪ̄ m̄bɔ̄ŋ tâ bő ghɛ̄ɛ̄ ˉ ˉ →
    [ā nɪ̄ zɪ̄ mbɔ́ŋ'˞ tâ bō ghɛ́'ɛ́]
    "he came before they went"

   c. bő nɪ̄n zɪ̄ m̄bɔ̄ŋ˞ yū'ū ˉ ˉ → [bő nɪ̄n zɪ mbɔ́ŋ'˞ 'yū'ū]
    "they came before receiving the news"

   d. ā nɪ̄m fá m̄bɔ̄ŋ˞ fɛ̄'ɛ̄ ˉ ˉ → [ā nɪ̄m fá mbɔ́ŋ'˞ fɛ̄'ɛ]
    "he gave (it) before going out"

As can be observed in the above examples the second morpheme /tâ/ is used to indicate switch reference of two subjects while its absence as in (14c,d) indicates coreference of two subjects (cf. 9.3). In the above examples, the main clause comes before the sentence marker. The tones of the main clauses act according to the tone patterns described for the today past (P1) (cf. 14.4). We shall therefore discuss only the tones of the subordinate clause in each case.

The derivation of the second clause of (14a) is as follows:

(15) a. m̄bɔ̄ŋ˞ tâ bő jɪ̄ ˉ   underlying
    b. mbɔ̄ŋ˞ tâ bő jɪ̄ ˉ   subordinative verb tone
    c. mbɔ̄ŋ˞ tâ bő jɪ̄   tone grounding
    d. mbɔ̄ŋ˞ tâ bő jɪ̄   nasal desyllabification
                  and tone deletion
    e. mbɔ́ŋ'˞ tâ bő jɪ̄   simplification and ds
    f. mbɔ́ŋ'˞ tâ bō jɪ̄   tone lowering

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In (15a) the underlying tones are given. In (15b) the H H
tone pattern of the subordinative verb is superimposed on the
underlying tone pattern of the verb. In (15c) the floating tone
of the verb is grounded to the left on the verb stem where it is
absorbed by its H tone. In (15d) the homorganic nasal
desyllabifies by P-rule 4 and loses its tone. In (15e) the HL
contour tone on the conjunction simplifies and causes the
following H tone to downstep. In (15f) the L of the falling tone
on the morpheme /tâ/ lowers the H of the pronoun /bő/ to M. The
tone of the verb is not changed.

The derivation of the second clause of (14b) is similar to
that of (14a) given above. The clause after the conjunction has
an aspect of the subjunctive mood. This kind of clause is
introduced by /tâ/. The tone pattern of this verb form is H H for
both the L and H tone verbs. This explains the H 'H tone pattern
on the L tone verbs. For the derivation of the tones in this verb
form, reference should be made to the NEG IMPF TO in 17.6.1 (15)
and to the TO CNS in (18.5 (4d)). In the clauses where there is
coreference (same subject marking), and thus where /tâ/ is absent,
the underlying LH tone pattern of the L tone verbs becomes LL, as
in (14d). The H tone verbs maintain their basic tone pattern
except when affected by other tone rules, as will be seen in
(16c).

A derivation of the second clause of (14c) is given below:

(16) a. m̄bɔ̂ŋ⁻ yū˙ū   underlying
     b. mbɔ̂ŋ⁻ yū˙ū   desyllabification of nasal
                         and tone deletion
     c. mbɔ́ŋ'⁻ 'yū˙ū   simplification and ds

In (16a) the underlying tones are given. In (16b) the
homorganic nasal desyllabifies and loses its tone as in (15b)
above. In (16c) the HL contour tone on the conjuction simplifies
causing the following H tones to downstep as indicated.

19.3.5 Reason /áá ñlóŋ ⁻ mə̄...áä/

The subordinative sentence of reason is marked by /áá ñlóŋ ⁻ mə̄...áä/ with underlying tones as indicated.

(17) a. à kɪ kūrə́ ⁻ ⁻ áá ñlóŋ ⁻ mə̄ bó kɪ fá ⁻ ˆ áä   →
         [à kɪ kūrá'á n'lóŋ 'mə̄ bó kɪ fáää]
             "he ate (it) because they gave (it to him)"

     b. à kɪ tūū ⁻ ⁻ áá ñlóŋ ⁻ mə̄ à kɪ bwɛ̆ ⁻ ˆ áä   →
         [à kɪ tūá'á n'lóŋ 'mə̄ kɪ bwɛ̆áä]
             "he refused it because it was rotten"

     c. bó kɪ lɛ̆ ⁻ ⁻ áá ñlóŋ ⁻ mə̄ m̄bə̄ŋ yá kɪ lóó ⁻ ⁻ ə̄ä →
         [bó kɪ lɛ̆á'á n'lóŋ 'mə̄ mbə̄ŋ yā kɪ lòää]
             "they stayed the night because it rained"

     d. bó kɪ ghɛ̆ɛ̆ ⁻ ⁻ aa ñlóŋ ⁻ mə̄ bó kɪ kɔ̄ŋə́ ⁻ ⁻ áä   →
         [bó kɪ ghɛ̆á'á n'lóŋ 'mə̄ bó kɪ kɔ̄ŋáä]
             "they went away because they wanted to"

     e. à nɪ̄ŋ kūrə́ áá ñlóŋ ⁻ mə̄ à nɪ̄n yə́ áä   →
         [à nɪ̄ŋ kūráá n'lóŋ 'mə̄ nɪ̄n yə́áä]
             "he ate it because he saw it"

     f. à nɪ̄n yə̀'ə́ áá ñlóŋ ⁻ mə̄ à nɪ̄n wò áä   →
         [à nɪ̄n yə̀'áä nlóŋ mə̄ nɪ̄n wòää]
             "he cried because he fell"

In the above examples (17a-d) are in the past (P2), i.e., both main and subordinative clauses are in the P2 (yesterday past) and so the verbs acquire the P2 L HL replacive tones. In (17e,f) the verbs are in the P1 tense (today past) and so have the P1 tones. We notice that, in the above examples, in addition to the marker /ñlóŋ ⁻ mə̄/ the verbs in both clauses have the suffix /-áá/ and /-áä/, which are in themselves also the clause markers. The tones of these suffixes are HH (used in the main clause) and HL (used in the subordinative clause). A sample derivation of the main clause will illustrate these points. We present below the derivation of (17a):

(18) a. à kɪ kūrə́ ⁻ ˆ áá   underlying
     b. à kɪ kūrə́   áä   P2 replacive tones
     c. à kɪ kūrə̄   áä   V-assimilation
     d. à kɪ kūrə̄   á   V-deletion
     e. à kɪ kūrə̄'á   simplification and ds

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In (18a) the underlying tones of the strings are given. In (18b) the H tone verb acquires the P2 L HL replacive tone pattern. In (18c) the vowel of the second syllable of the verb assimilates to that of the suffix. In (18d) the first vowel of the suffix is deleted. In (18e) the contour tone of the verb simplifies and causes the following H tone of the suffix to downstep.

A derivation of the subordinative clause of (17a) is given below to illustrate the derivation of (17a-d):

(19) a. ñlɔ́ŋ ˋ mǝ́ bó kɨ̀ fá ˋ ˉ áà   underlying
      b. ñlɔ́ŋ ˋ mǝ́ bó kɨ̀ fà^   áà   P2 replacive tones
      c. ñlɔ́ŋ ˋ mǝ́ bó kɨ̀ fà^   áà   tone lowering
      d. ñlɔ́ŋ   mǝ́ bó kɨ̀ fà^   áà   tone deletion
      e. ñlɔ́ŋ   mǝ́ bó kɨ̀ fà   áà   tone deletion

In the above derivation what should be noted is the derivation of the tones of the verb and the suffix. In (19b) the P2 tones are given. The HL contour tone of the verb is deleted as seen in (19e). Another thing to note about the above derivation is the fact that the surface tones of the conjuction /ñlɔ́ŋ ˋ mǝ́/ come out differently from what they are in (17a) since only part of the whole sentence has been given here. In (17a) the intervening L tones cause the following H tones to downstep. Another thing to note in the above derivation is the fact that T-rule 1 does not apply to lower the H on the suffix /-áà/. Normally we expect the preceding L tone on the verb stem to lower this following H tone. However, we see that this is not the case. The only possible explanation is the fact that this H tone is a grammatical tone. The application of T-rule 1 can be blocked by a grammatical H tone or in grammatical constructions like the associative construction (cf. 8.3.2 (30) and 8.4.2 (45b).

In (17e,f) the clauses are in the P1 (today) tense. The tone patterns of the verbs in both clauses are as described in the tense section (cf. 14.4). The tone processes involved in the derivation of the tones in these clauses are similar to those involved in (18) and (19) above.

19.3.6 Conditional /bɛ́ɛ́, bə̂⁻ ...bɔ́ŋ/

The conditional sentence is marked by either /bɛ́ɛ́/ or
/bə̂⁻ ...bɔ́ŋ/, with tones as indicated on the morphemes.

(20) a. bɛ́ɛ́ bɔ́ nîn zI ̀ ò jɛ̄'ɛ̄ ⁻ ⁻ wáá   →
          [bɛ́ɛ́ bɔ́ nîŋ zI ̀ ò jɛ̄'ɛ̄ wáá]
             "If they come (today) feed them"

      b. bɛ́ɛ́ bɔ́ lɔ̃ŋ ⁻ ⁻ kwɛ́ɛ́ ò lɔ̄gə́ ⁻ ⁻ wáá   →
          [bɛ́ɛ́ bɔ́ lɔ́'ŋ⁻ 'kwɛɛ ò lɔ̄gə̄ wáá
             "If they come home tomorrow (you) fetch them"

      c. bɛ́ɛ́ bɔ́ yĨŋ ⁻ ⁻ kwɛ́ɛ́ bɔ́ lɔ̄gə̄ ⁻ ⁻ yI'I →
          [bɛ́ɛ́ bɔ́ yI'ŋ⁻ 'kwɛ́ɛ́ bɔ́ lɔ̄gə̄ yI'I]
             "If they come (in the distant future), they
             should fetch us"

      d. bɛ́ɛ́ bɔ̄ lɔ̃ɔ̃ ⁻ ⁻ , ò fá ⁻ ⁻   →
          [bɛ́ɛ́ bɔ̄ lɔ̃ɔ̃, ò fā]
             "If they beg, you should give (it) to them"

      e. bɛ́ɛ́ bɔ́ yə̀'ə̄ ⁻ ⁻ , ò mã̀'ãtə́ ⁻ ⁻   →
          [bɛ́ɛ́ bɔ́ yə̀'ə́, ò má'ãtə̀]
             "If they cry, you should leave (it)"

      f. ò bə̂⁻ zI bɔ́ŋ ò yə́ ⁻ ⁻   →
          [ò bə̀'⁻ zI bɔ̄ŋ ò yə̀]
             "If you come you will see"

      g. bɔ́ bə̂⁻ yə́ bɔ́ŋ bɔ́ kwɛ́rə́ ⁻ ⁻   →
          [bɔ́ bə̀'⁻ 'yə́ bɔ́ŋ bɔ́ŋ bɔ́ kwɛ́rə̀ŋ]
             "If they see, they will take"

The conditional sentence marker /bɛ́ɛ́/ can be used in
sentences denoting actions to take place in the future (today,
tomorrow or in the distant future). The today future conditional
tense marker is /nĩŋ/ while the tomorrow future conditional marker
is /lɔ̃N/. The distant future conditional marker is /yĨN/. The
underlying tones of these three markers are as indicated. The
future markers, /lɔ̃N/ and /yĨN/, like the verbs in this clause,
receive a superimposed HH tone pattern. This results in a HLH
tone pattern that is realized on the surface as H'H by T-rule 2.
The verbs (both H and L verbs) in the conditional clause receive a
H H superimposed tone pattern when in the TO tense, as seen in
(20d) and (20e). The marker /bɛ́ɛ́/ occurs before the conditional

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clause. The conditional clause is followed by the main clause. The tone pattern of both the H and L tone verbs in the main clause is H L.

The derivation of (23a) is as follows:

```
(21)  a.  bɛ́ɛ́ bó nɪ̌n zɪ̀, ɔ̃̀ jɛ́'ɛ̂  ¯ ˋ  wáá      underlying
      b.  bɛ́ɛ́ bó nɪ̌n zɪ̀, ɔ̃̀ jɛ́'ɛ̂     wáá      replacive
      c.  bɛ́ɛ́ bó nɪ́n zɪ̀, ɔ̃̀ jɛ́'ɛ̂     wáá      tone simplification
      d.  bɛ́ɛ́ bó nɪ́n zɪ̀, ɔ̃̀ jɛ́'ɛ̂     wáá      intonation
      e.  bɛ́ɛ́ bó nɪ́n zɪ̀, ɔ̃̀ jɛ́'ɛ̂     wáᾱ      tone lowering
      f.  bɛ́ɛ́ bó nɪ́n zɪ̀, ɔ̃̀ jɛ́'ɛ̂     wāā      tone lowering
```

In (21a) the underlying tones are given. In (21b) the H tone verb receives a replacive tone pattern of HL. in (21c) the underlying HL tone of /nɪ̌n/ simplifies to H as indicated. In (21d) the LH pattern of the L tone verb is lowered to L by intonation (cf. 5.5.4); In (21e) the L of the pronoun /ɔ̃̀/ lowers the H of the replacive HL tone to ML; and in (21f) the L of the HL tone of the verb lowers the following H tone of the object pronoun /wáá/ to M.

The derivation of (20c) is given below:

```
(22)  a.  bɛ́ɛ́ bó yɪ̌n ˘ ¯ kwɛ́ɛ́ bó lɔ̄gə́ ¯ ˋ yɪ̀'ɪ́   underlying
      b.  bɛ́ɛ́ bó yɪ̌n¯     kwɛ́ɛ́ bó lɔ̄gə́ ¯ ˋ yɪ̀'ɪ́   superimposed tone
      c.  bɛ́ɛ́ bó yɪ̌n¯     kwɛɛ bó lɔ̄gə̄    yɪ̀'ɪ́   replacive tone
      d.  bɛ́ɛ́ bó yɪ̌'n¯   'kwɛ́ɛ́ bó lɔ̄gə̄    yɪ̀'ɪ́   simplification
                                                   and ds
      e.  bɛ́ɛ́ bó yɪ̌'n¯   'kwɛ́ɛ́ bó lɔ̄gə̄    yɪ̀'ɪ́   tone lowering
```

In (22a) the underlying tones of the string are given. The HH tone pattern of the F3 conditional clause verb is superimposed on the underlying contour tone of /yɪ̌n/ and thus creating a HLH complex contour tone on it as shown in (22b). In (22c) the verb of the main clause receives a HL replacive tone pattern. In (22d) the HLH contour tone on the F3 conditional F3 marker simplies to H'H and also causes the following H tones of the verb to downstep. In (22e) the L tone of the replacive tone on the verb lowers the following H of the object pronoun yɪ̀'ɪ́ to M.

The derivation of (20b) is similar to that of (20c). The conditional sentence markers /bə̄¯ ...bón/ are used for present tense conditional actions. This marker is a discontinuous morpheme

that encloses the verb of the conditional subordinative clause. The tone patterns of the verb in the conditional clause are changed by their phonetic environment while the verb of the main clause receives a replacive tone pattern of HL just as in (20a-c) above. The derivation of (20f) is as follows:

(23) a. ɔ̄ bɜ̂⁻   zĪ bóŋ ɔ̀ yɜ̄ ⁻ ⁻   underlying
      b. ɔ̄ bɜ̂⁻   zĪ bóŋ ɔ̀ yɜ̄   replacive tone
      c. ɔ̄ bɜ̄'⁻ zĪ bóŋ ɔ̀ yɜ̄   simplification and ds
      d. ɔ̄ bɜ̄'⁻ zĪ bóŋ ɔ̀ yɜ̄   tone absorption
      e. ɔ̄ bɜ̄'⁻ zĪ bóŋ ɔ̀ yɜ̄   tone lowering
      f. ɔ̀ bɜ̄'⁻ zĪ bōŋ ɔ̀ yɜ̄   tone lowering

In (23a) the underlying tones are given. In (23b) the verb of the main clause receives a HL replacive tone pattern. In (23c) the contour tone on the marker, /bɜ̂⁻ /, simplifies and causes the following H tone to downstep. In (23d) the H tone part of the LH contour tone of the verb /zĪ/ is absorbed by the following H tone on /bóŋ/. In (23e) the L tone on the verb then lowers the following H tone of the marker /...bóŋ/ to M. In (23f) the HL tone on the verb of the second clause is lowered to ML by the preceding L tone of the pronoun /ɔ̄/.

The derivation of (20g) is given below.

(24) a. bō bɜ̂⁻   yɜ̄ bóŋ bō kwɛ́rɜ̀ ⁻ ⁻   underlying
      c. bō bɜ̂⁻   yɜ̄ bóŋ bō kwɛ́rɜ̀   replacive tone
      b. bō bɜ̄'⁻ 'yɜ̄ bóŋ bō kwɛ́rɜ̀   simplification and ds

In (24a) the underlying tones are given. In (27b) the verb of the main clause receives a replacive HL tone pattern. In (27c) the contour tone simplifies and causes the following H tones to downstep.

19.3.7 Contrafactual /báá̄⁻ ...bóŋ/

Contrafactual sentences are unfulfilled conditional sentences. Ordinary conditional sentences are either in the present or future tenses, while contrafactual sentences are in the past tenses. Contrafactual sentences are marked by the

discontinuous morpheme. /bāā⁻ ...bóŋ/ with underlying tones as indicated.

(25)   a.   à nĩm bāā⁻ yə́ bóŋ à twṍŋə̀ ⁻ ⁻   ⟶
             [à nĩm báá 'yə́ bóŋ à twõ̀ŋə̀]
                "If he had seen he would have called"

       b.   à kĩ báá⁻ ⁻ ⁻ yə́ bóŋ à lɔ̃gə́ ⁻ ⁻   ⟶
             [à kĩ bāā'⁻ 'yə́ bóŋ à lɔ̃gə̀]
                "If he had seen, he would have taken it"

       c.   bó kĩ báá⁻ ⁻ ⁻ wā'ā́tə̀ bóŋ bó lɔ̃gə́ ⁻ ⁻   ⟶
             [bó kĩ bāā'⁻ 'wā'ā́tə̀ bóŋ bó lɔ̃gə̀]
                "If they had remembered they would have taken it"

       d.   bó lɛ̃m báá⁻ bétə́ bóŋ bó fā ⁻ ⁻   ⟶
             [bó lɛ̃m 'báá 'bétə́ bóŋ bó fā]
                "If they had asked they would have been given"

As can be seen in the above example, in the contrafactual sentence, the subordinate clause can be used with all the past tenses (P1, P2, P3). The subordinative clause comes before the main clause. The dependent verb comes between the two particles of the contrafactual sentence marker. The main clause comes after the subordinative clause. The tone of the first clause marker, /bāā⁻ / changes according to its tense. This particle is conjugated as a verb and thus takes on the tones of the verb form in question. The main clause, which is the second clause in the construction, is always in the TO tense and so the verb carries the TO tones (cf. 14.2). The derivations below will serve best to illustrate the tone processes involved in the contrafactual construction.

Following is the derivation of (25a):

(26)   a.   à nĩm báá⁻   yə́ bóŋ à twó̃ŋə̀ ⁻ ⁻   underlying
       b.   à nĩm báá⁻   yə́ bóŋ à twõ̀ŋə̀   TO replacive tones
       c.   à nĩm báá⁻   yə́ bóŋ à twõ̀ŋə̀   simplification
       d.   à nĩm báá⁻   yə́ bóŋ à twõ̀ŋə̀   tone lowering
       e.   à nĩm báá   yə́ bóŋ à twõ̀ŋə̀   tone grounding
       f.   à nĩm báá   'yə́ bóŋ à twõ̀ŋə̀   simplification and ds
       g.   à nĩm báá   'yə́ bóŋ à twõ̀ŋə̀   tone lowering

In (26a) the underlying tones are given. In (26b) the main clause verb receives the TO L HL replacive tone pattern. In (26f)

the contour tone on /bāā/ simplifies and causes the following H
tones to downstep. The rest of the tone processes have been
discussed in the tense chapter.

The derivation of (25b) is as follows:

(27) a. à kɨ báá˅ ˉ ˆ yɔ́ bɔ́ŋ à lɔ̄gɔ̂ ˉ ˆ   underlying
      b. à kɨ bāâ˅   yɔ́ bɔ́ŋ à lɔ̄gɔ̂ ˉ ˆ   P2 verb tones
      c. à kɨ bāâ˅   yɔ́ bɔ́ŋ à lɔ̄gɔ̂   T0 verb tones
      d. à kɨ bāâ   yɔ́ bɔ́ŋ à lɔ̄gɔ̂   tone grounding
                                            to the left
      e. à kɨ bāâ˅   yɔ́ bɔ́ŋ à lɔ̄gɔ̂   tone spreading
                                            to the left
      f. à kɨ bāâ'˅   'yɔ́ bɔ́ŋ à lɔ̄gɔ̂   simplification and ds
      g. à kɨ bāâ'˅   'yɔ́ bɔ́ŋ à lɔ̄gɔ̂   tone lowering

In (27a) the underlying tones are given. In (27b) the P2
verb tones are placed on the marker, /bāā˅ /, while in (27c) the
T0 verb tones are placed on the verb, /lɔ̄gɔ́/. The tone processes
involved in the rest of the derivation have already been discussed
in the preceeding chapters (especially in chapter 14).

The derivation of (25c) is similar to that of (25b).

The derivation of (25d) is as follows:

(28) a. bɔ́ lɛ̂m   báá˅ bɛ̄tɔ̄ bɔ́ŋ bɔ́ fá ˅ ˉ   underlying
      b. bɔ́ lɛ̂m   báá˅ bɛ̄tɔ̄ bɔ́ŋ bɔ́ fā˄   T0 verb tones
      c. bɔ́ lɛ̂m   'bāā˅ bɛ̄tɔ̄ bɔ́ŋ bɔ́ fā˄   simplification and ds
      d. bɔ́ lɛ̂m   'bāā bɛ̄tɔ̄ bɔ́ŋ bɔ́ fā˄   tone grounding
      e. bɔ́ lɔ̄m   'bāā 'bɛ̄tɔ̄ bɔ́ŋ bɔ́ fā˄   simplification and ds
      f. bɔ́ lɛ̂m   'bāā 'bɛ̄tɔ̄ bɔ́ŋ bɔ́ fā   simplification

In (28a) the underlying tones are given. In (28b) the T0 verb
LHL tone pattern is placed on the verb of the main clause. The
rest of the processes involved in the derivation are indicated.

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Notes to Chapter Nineteen

[1] This terminology is adopted from _Elementary Grammar Analysis_ (SIL, 1980).

PART II F

THE EXPERIMENT

Chapter Twenty

TONE IN THE ORTHOGRAPHY OF BAFUT

20.1 <u>Introduction</u>

Orthography in general deals with the symbols and conventions or rules that enable us to write a language well. Before going to tone orthography it will be helpful to take a brief look at writing systems in general and to consider some of the theoretical issues involved.

Writing in general has a long standing history that has developed, for example, from ideography to the syllabic writing system and finally to where people devised alphabets in which individual signs stood for particular sounds. Most written languages use the alphabetic writing system. In the development of writing systems, morphemic representation and phonemic representation are systems that have been widely used. In a morphemic writing system, graphic signs are used to represent morphemes. Chinese writing is mostly morphemic. In a phonemic writing system graphic signs are used to represent the meaningful sounds or phonemes of a language.

Considering the theoretical basis of orthographies, the two issues which have been the subject of a lot discussion by linguists are phonemic writing system and morphemic or morphophonemic writing system.

The phonemic theory of orthography maintains that there is a direct relation between speech and writing while those who argue for a morphophonemic writing system, find support for their arguments from the claim that writing is independent from speech.

Those who have spoken much for a phonemic writing system are mostly the traditional phonologists including Pike (1947), Gudschinsky (1953, 1959). The following quotation states the main point of a phonemic writing system:

"A practical orthography should be phonemic. There should be a one-to-one correspondence between each phoneme and the symbolization of that phoneme." (Pike 1948:208)

Those who have supported the morphophonemic writing system include generative phonologists like Chomsky and Halle (1968), Berry (1977) and Venezky (1977).

Tauli (1977), discussing the position of those who argue for a morphophonemic writing system, says this:

"In recent years some linguists, although hesitating, have been in favor of the morphological or morphophonemic orthography. Weir maintains: 'An orthography then should be basically morphophonemic, and

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account for both the phonemic and morphemic structures.'" Tauli (1977:25)

While the phonemic theory maintains that the individual letters or graphemic units do not express meaning, but phonemes of sound (concrete speech units), the supporters of the morphophenemic system say that letters or graphemes should express meaning. The following quotation brings out their point:

"Spelling the plural with the same form regardless of its sound is an aid toward meaning in that it allows a more rapid translation from spelling to meaning than would a pure phonemic system. This same principle should be considered in the design of new orthgraphies, especially where frequently occurring affixes serve grammatical functions.
 The consistent spelling of the plural is one of several morphemic spellings in English which facilitate translation from spelling to meaning." (Venezky 1977:44-45)

Venezky argues that morphophonemic spelling makes for graphic distinction of homophones and foreign words. He also says that morphophonemic orthography will enable people to recognize the graphic identity of the base of English words as in these: sane/sanity; cone/conic; reduce/reduction.

Although the morphemic writing system has been used for a long time in languages like Chinese and Japanese, and despite the fact that a morphophonemic spelling has some advantages as those given by Venezky above, some linguists have spoken strongly against it. Hocket (1958), for example, says that the morphemic writing system such as used in writing Chinese, is less efficient than a phonemic writing system. It is burdensome to learn because the number of morphemes in any language is very large. Smalley (1963:32) says this in support of the above statement:

"... Educators familiar with Chinese are very much aware that the Chinese writing places a tremendous burden upon the educational system because in order to learn to read a minimum of useful material the symbols representing the various words in Chinese have to be individually memorized... This means that [a person's] reading

cabulary is very limited. The cost of time spent in school is ry enormous."

Vietnamese once had a Chinese-type writing system but switched over completely to a writing system which represents ounds by its symbols (i.e., a phonemic writing system). Smalley ays that although the writing system of Vietnamese is not fully nsistent, it is more consistent than English or French and that he amount of time needed by Vietnamese children to learn to read heir own language is much less than is required by either apanese or Chinese or even French or English. He says that in bout two years of normal school study a Vietnamese child can read ny thing which he sees in print, he can pronouns what he sees ritten. In contrast, a Chinese child at the same point can at est pronounce a few hundred words when he sees them in print.

Comparing the English writing system with that of Spanish, malley says that the child learning to read English meets elatively more difficulties. The English child learning to read is own language requires many grades of drilling in school before e could be said to read everything he sees in print. By ontrast, he says that the Spanish-speaking child in a year or two eaches the point where he can from there read anything which he meets. This is a result of the differences in the two systems of writing. The Spanish wriiting is more phonemic than that of English. The English writing system is more morphophonemic. It very inconsistently represents only part of what is spoken. This is why the cost in learning time is considerably greater.

Noam Chomsky and Morris Halle (1968) maintain that English orthography "comes remarkably close to being an optimal orthography system for English." Tauli (1977) describes this viewpoint as the "most counter-intuitive and incredible." He says that the models proposed by Chomsky and Halle and the many rules involve go to show that English orthography is very irregular, uneconomic and causes great difficulties in learning to read for children during several school years. These difficulties are more evident when one takes note of the results of phonemic orthographies used in languages like Estonian. He says that the

Estonian orthographic system is described in a few rules and the exceptions to phonemic orthography are few. Commenting on morphophonemic orthography, Tauli says this:

> "It seems that the advocates of morphophonemic orthography have taken notice only of some morphophonemic spellings in English and some other languages, ignoring the opposite spellings, without pondering over the consequences of a consistent morphophonemic orthography. It is obvious that morphophonemic orthography cannot be recommended as a universal principle for all orthographies. Application of morphhophonemic orthography in a language with extensive allomorphism would make the reading of such a language impossible, not to speak of learning to read. This would mean that reading presupposes a knowledge of the entire morphophonemics and even of a great part of the lexicon of a language.
> "... There is no doubt that a general phonemic orthography is easier to read and to write than a morphophonemic one, even in languages with relatively slight allomorphism." (Tauli, 1977:25,26)

Considering the above arguments and the practical problems of a morphophonemic tone marking system, we did not even want to consider this as a possibility among the tone writing systems to be tested. Some of the practical reasons that made us not to test a morphophonemic tone marking system include the following:

1. It is difficult for the learner to know the difference between purely phonological rules and grammaticalized rules. Although he can see that some changes are caused by grammar or certain grammatical forms, it is generally difficult for the learner to distinguish between grammatical and phonological tone processes. This problem is further complicated by the fact that grammatical tones often interact with lexical tones. This will be demonstrated and explained in 24.4.1.3.

2. In Bafut and some other Grassfields languages tone is so closely tied to the grammar . This means that marking grammatical tones will entail marking a lot of tones. This system of marking tone will require that all tones (H, L, M, HL, LH, etc.,) be marked since tones are not otherwise marked.

3. Where tone is very important in making lexical distinctions, it

is not efficient to mark only morphophonemic tones. In Limbum, for example, the functional load of lexical tones is so important that it will not be good to mark only grammatical tones.

4. In a system that marks morphophonemic tones it would be difficult to know what to do with floating tones and replacive tones. Since we have a lot of floating tones in Bafut and other Grassfields languages, it will be difficult to represent them orthographically.

In view of the arguments against a morphemic or morphophonemic representation, we decided in general to base our orthography on the phonemic theory without adhering strictly to the main principle of one-to-one correspondence between phoneme and symbol. An important principle that we have adopted from the phonemic theory is the fact that there should be a direct relation between writing and speech. Writing should as much as possible represent speech. This is the basis of one of our central hypotheses: that surface tones should be marked rather than underlying tones.

As far as the representation of the segments is concerned, we made a few practical adaptations to the phonemic system. We have, for example, used diagraphs and have included /r/, which is a variant of the phoneme /l/, in the Bafut alphabet.

With regard to tone orthography, although we agree with the phonemic principle that surface tones should be written, the demand by Pike (1948:37) that all the tonemes of a tone language should be written was not acceptable to us. Empirically we found that this principle made the reading of tone and the Bafut language in general difficult. The principles of writing tone partially or totally ignoring tone in writing, also caused reading problems. Since a strict phonemic principle of one-toneme one-symbol could not fully satisfy us, we decided to find out by means of experiment which writing system would solve our reading problems.

We set out first to find out the role of tone in Bafut and secondly, how to represent it in the writing system of the language.

Our analysis has shown that for distinguishing lexical items and grammatical constructions, tone carries a heavy functional load. In the orthography of Bafut, could we get along without it? If not, what would be the best way of marking it?

Our analysis has shown that tone has to be marked in Bafut since lexical items and grammatical constructions are distinguished solely on the basis of tone. So we started with the assumption that tone should be marked. Our final aim was therefore to find out how best to mark it.

20.2 Tone marking systems

After considering a number of tone marking systems, we settled on four, which we present here below. The reasons that led us to choose these four tone marking systems will be given in 20.6 where each system is discussed and compared with the rest of the others.

20.2.1 System 1

In system 1 we decided to mark low tone and a combination of low and the other tones. We therefore marked /ˇ/ (Low), /ˆ/ (High-low) and /ˉ/ (Low-mid). This system reduces a possible number of eleven different tones in Bafut to 3 tone marks and zero, i.e., the absence of any tone mark (cf. (13) below). Mid and high tones are not marked. Mid-low grouped with high-low are both marked as /ˆ/. High-mid glide (i.e. H'H), /ˊ/ is not marked at all just as H and M are not marked. This again means that no distinction is made between /ˊ/ (H), /ˉ/ (M) and /ˊ/ (H'H).

In this system, words are written as they are pronounced, which means that tone changes are, to a certain extent, marked orthographically. This system will be presented fully below.

20.2.2 <u>System 2</u>

In this system only the basic tones[1] of words are written. This means that only lexical tones are taken into consideration. Perturbations, i.e., tone changes in context, and grammatical tones are therefore not written except in cases of ambiguity. The basic tones of words in Bafut are not always obvious. The citation tones are not always the same as the basic tones. To find the basic tone of nouns the demonstrative is placed after the noun, for example

(1) a. nó yâ   "the snake"
      b. àbō yâ   "the hand"
      c. àtə̄ə̄ yâ   "the calabash"

In citation form the above nouns are realized as follows:

(2) a. nô   "snake"
      b. àbō   "hand"
      c. àtə̄ə̀   "calabash"

However, their basic tones are as follows: /nó/, /àbō/ and /àtə̄ə̄/. The basic tones of verbs are determined by using them in the imperative mood and placing a noun object after them, for example:

(3) a. fá níbè nyà   "give the colanut!"
      b. kwέrə̄ níbè nyà "take the colanut!"
      c. lɔ̄gə̄ mbà yà   "fetch the meat!"
      d. sɔ̀ mbà yà   "pierce the meat!"

The verbs in the above sentences occur in their basic tones /fá/ "give!", /kwέrə̄/ "take!", /lɔ̄gə̄/ "fetch!", and /sɔ̃/ "pierce!". However, this is how they are realized in isolation:

(4) /fâ/, /kwέrə̄/, /lɔ̄gə̄/, /sɔ̃/

It important to notice that the above words are affected by intonation, as has already been discussed in chapter five. In teaching this system it is essential from the beginning to teach people how to find the basic tones of words. In this system, it is

necessary to mark the tones on grammatical words and pronouns as they are realized in context in order to reduce potential ambiguities. This means that tense, aspect and modal morphemes have to be marked as pronounced.

(5) a. a saŋā mba [à sâŋā m̀bà]
                    "he has dried meat"

     b. á saŋā mba [á sâŋā mbà]
                    "he is drying meat"

     c. bó níŋ kwέrə́ abāā [bó níŋ 'kwέrə́ abáà]
                    "they took corn fufu (today)"

     d. bô níŋ kwέrə́ abāā [bô nîŋ kwērə̄ báà]
                    "they took corn fufu (today)"

     e. a kɨ sɨ saŋā tɨtá [à kî sɨ'‛sàŋà tɨtá]   ·
                    "he was drying pepper (yesterday)"

In this system all the basic tones are marked although not always pronounced. Low tone is not marked and as a result, any syllable with no tone mark is to be pronounced with low tone most of the time, except in cases where deleted prefixes are still written (cf. Lessons 6 and 7 in Practical Guide). For practical reasons, the H'H tone (which occurs mostly on grammatical words or morphemes) was marked as a HM contour tone, /ˉ/.

     We shall see more about this system later on.

20.2.3 System 3

     In this system no tones are marked except in cases of potential ambiguities. Tone is therefore to be partially marked. People are advised to mark tone in such a way as to distinguish among sets or pairs of words differentiated only on the basis of tone.

     L tone is marked where L contrasts with H or where L contrasts with M. for example:

(6) àbàā "bag" and àbāā "corn fufu"

The word with Low tone is to be marked whereas "corn fufu" is to be written with no tone marks thus, abaa. M tone would be marked where it contrasts with H tone, e.g., The following string would be marked as follows to bring out the difference in meaning:

(7) a. à zi ŋkwɛrə mba   "he has come to take meat"
     b. à zī ŋkwɛrə mba   "he has come and taken meat"

The words /bɔ́ɔ́/ "build!" and /bɔ̄ɔ́/ "cover!" would be differentiated thus, /bɔɔ/ "build!" and /bɔ̄ɔ/ "cover!". In a set of words differing only by tone all words would be marked except one, normally the one with H tone.

   Where potential ambiguity could be cleared by context, tone was not marked, e.g.

(8) a. a ba'a abaa   "he is weaving a bag"
     b. a ba'a ala'a "he is treating a wound"

In (8a) all the words are potentially ambiguous: /a/ "he" could be read with H or L tone depending upon the aspect of the sentence but in this situation it should be read with H tone since the absence of L tone would imply this; which would be in accordance with previous instructions. The word /ba'a/ in isolation could be read either with HH tone pattern to mean "weave!" or LM to mean either "treat a wound!" or "beat something out of the hand of another person!" (while he is being distracted, as in a children's game). The word /abaa/ could, as we have already seen, mean either "bag", said with L tone or "corn fufu" said with a L MM tone pattern. However the context logically helps native speakers to read the meaning "he is weaving a bag" as a result of commonly shared knowledge or experience. There is a slim chance of reading "he is beating bread (out of the hands of other children)", but very few people would immediately give the sentence this reading, because, from experience, it is unlikely that people would spend time (cf. the imperfective aspect) beating bread or corn fufu out of the hands of others. Experience and the logic of the situation also would show that once a person has been taken off his guard in

the game, he would learn to cling onto the object so that it should never be beaten out of his hand.

As regards the second sentence, "he is treating a wound," the context logically allows only this meaning to be read, i.e., reading /ba'a/ with a LM tone pattern to mean "treat wound" since "wound" can collocate only with "treat" here.

As we have said already, in a pair of sentences as in (9), the context does not remove the ambiguity; and so they must be marked as indicated to give the desired meaning.

(9) a. ko abaa ya "catch the bread!"
    b. kŏ âbàà ya "take the bag!"

20.1.4 System 4

In the 4th system tone is marked on all syllables except on deleted noun prefixes (which we continue to write even where these are not pronounced). This means that both lexical and grammatical tones have to be written and therefore, all tone perturbations have to be marked. However, only the three phonemic tones and contour tones are required to be written, thus phonetic tones like 'H (downstepped high) and ↑L (raised low) are not to be marked. L tone was not marked but it was understood that any syllable without a tone mark would be read with L tone. For practical purposes, the H'H was marked as a HM contour tone /˜/.

20.3 Pedagogical Materials

In order to test out these four systems of marking tone, we prepared a Practical Guide to Bafut Tone Orthography a manual meant to teach native speakers of the language how to read and write tone in their language. As stated in the introduction to the book, the material is prepared for native speakers of Bafut who are literate in the English language.

This pedagogical material was designed to teach tone and to test the transitional competence of subjects learning to read and

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write tone in their own language. In other words the book was constructed to measure performance in the learning process. The subjects were in general people who had little knowledge of what tone is all about, i.e., they did not know how to distinguish the different tone levels in Bafut and consequently, they did not know how to read or write tone in the language. The pedagogical material was therefore primarily to measure the performance of the subjects as they were taught to read and write tone in the Bafut language using the different tone marking systems that we set out to test. The performance of the students in each group would be an indication as to how easy or difficult each system was. This in turn would show the efficiency of each system. The exercises in the book were therefore meant to ensure a progressive evaluation of those learning to read and write tone.

Since it is mainly those learning to read and write the language who face more problems of orthography, our experiment had to focus on the needs and performance of the learner or beginning reader. This is important because any tone orthography should be devised to help those who are learning to read and write the language. Success in any literacy programme depends, to a large extent, on the way the learner is helped to read tone effectively. An inefficient tone orthography can discourage people from reading and writing tone.

It was also our intention to find out a good tone pedagogy in the experiment. Consequently, in constructing the pedagogical material we tried to present the material to be taught in a way that will enable easy teaching and easy learning.

The pedagogical material was then constructed in so as to help us choose the best tone orthography out of the four tone marking systems proposed for testing and thus enabling us to verify our hypotheses. The best tone orthography would be one that enables the learner to learn easily how to read and write tone in the language. This implies that the best tone orthography should be one that would be easy to teach.

The alphabet used in Practical guide is based on the one worked out by Crozier (1980b) and conforms with the Alphabet

Générale des langues Camerounaises. Since tone plays an important role in the grammar of Bafut, we had to go through the grammar in order to portray the grammatical tones. As the contents would show, the book portrays in outline form the grammar of Bafut, beginning with the phoneme and passing through the morpheme to word, phrase, sentence and eventually presenting texts for reading.

The book is divided into 5 parts. Part I consists of 3 lessons and contains the segmental phonemes (letters) of Bafut. Emphasis is given to those letters that are not found in the English language. In these lessons tone is not treated or considered in any detail. Tone is marked nevertheless since the students have to learn both the vowels and their tones.

In Part II (lessons 4-6) tone in the noun and noun prefixes is treated. Part III deals with tone in the associative noun phrase and grammatical words - pronouns, demonstratives, prepositions, adverbs and adjectives. It consists of 4 lessons, lessons 7-10. Part IV (lessons 11-14) treats tone in the verb phrase. In Lesson 11 the lexical tone patterns of the verb are presented. In lessons 12-14 verb forms, i.e., tense and aspect, are treated, mainly present, past, future and consecutive constructions. In Part V (lessons 15-17) sentences are presented: Negative sentences, Simple sentences, Question sentences, Complex sentences and the various conjunctions that conjoin clauses to form compound and complex sentences.

These 17 lessons of the Practical Guide were to be completed in two weeks of teaching, i.e., about 24 class hours. Experience showed, however, that this was not enough. For effective teaching it would have been better to have had 3 weeks or 36 hours for the lessons. In order to acquire a fair control of the alphabet so as to be able to read without much difficulty, 1/3 of the time allowed for the whole course needs to be devoted to teaching and reviewing the alphabet per se. If we had had a trial of this material prior to the test, we would have perhaps increased the duration of the course. However, increasing the duration of an experiment like this one to three weeks would increase the risk of

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not finding people to attend the course for this length of time. Perhaps the best solution would be to spend as much time as possible within the two-week period practising the alphabet all along as the tone lessons were being taught. This also means that the course would be planned in such a way as to fit the 36 hours needed to complete the course smoothly within this two-week period. This is the solution we adopted in the Limbum tone experiment. This aspect of planning reveals the importance of a pretest trial, which will enable us to test the pedagogical materials before the experiment.

However, these pedagogical considerations do not in any way suggest invalidation of the testing methods and the ultimate results because the problem of reading and writing tone is faced mostly by beginners, i.e., those learning to read and write the language. Indeed since our experiment concerned solving the reading and writing problems faced by those learning to read and write the language, we did not need to concentrate unnecessarily on the problems of reading the letters of the alphabet. Indeed following experience gained from the experiment we now recommend that people learning to read and write their own language should be introduced to tone before ever they are taught to read syllables. This therefore means that tone is actually introduced before the vowels and consonants. We found that for effective understanding of tone by the beginning reader, tone has to be introduced early in the primer or reader and thus be taught at the same time as the vowels and consonants.

As we shall see below, in order to test the student's competence in reading and writing tone, we designed a test which took into consideration all that is taught in the Practical Guide. This reading test and the text that the students wrote towards the end of the experiment were achievement tests meant to measure the competence of the students.

20.4 The Experiment

Before going into a description of the experiment, it is appropriate to consider what a good orthography should be.

For a long time it has been maintained that the ideal orthography is one which relates letter to sound in a one-to-one correspondence.

> "In an ideal orthography there is a one to one correspondence between the symbols and the phonemes of the language." (Gudschinsky 1959:68)

Tauli (1977:24) says that a good orthography should employ the fewest symbols and rules to represent speech. Such a system, he says, certainly is easier to learn to read and write. He too is of the opinion that the best orthography is phonemic: "It is essential to stress this simple BASIC, phonemic principle of orthography, in spite of practical difficulties in applying it in many languages."

Williamson (1984:7-11) discusses the principles of a good orthography under the following five headings: accuracy, consistency, convenience, harmonization and familiarity.

Smalley (1963:34) lists the following 5 criteria for a good writing system:

1. Maximum motivation for the learner. This means that any orthography must be such as would be accepted and used readily.

2. Maximum representation of speech. In general an ideal orthography is one that represents speech as fully as possible.

3. Maximum ease of learning. A good orthography should not be too complicated for the learner.

4. Maximum transfer. The orthography should enable the learner to learn to read a more widely used language easily. In order to facilitate this, the letters representing the sounds of the local language should not be too different from those of the trade language.

5. Maximum ease of reproduction. Consideration should be given to ease with which the letters of the alphabet are typed or printed.

These criteria are listed in order of importance. Although this list is fairly comprehensive and thus covers most aspects of orhography, the order of importance is open to question. Smalley considers the first criterion, which deals with socio-cultural factors as the most important factor. Although socio-cultural and political factors should be taken into account in the design of practical orthographies, these should be subordinate to linguistic, psychological and pedagogical considerations.

In view of the arguments given in 20.1 and the demands of a good orthography in general, as those considered by Smalley, we deduced a number of factors that should be taken into consideration as we searched for an ideal tone orthography. It is also important to say here that although there are some principles that are vital for orthography in general, the principles that work for segmental orthography might not necessarily work with tone orthography.

We therefore had a number of hypotheses and assumptions concerning a good tone orthography when we set up the experiment. The experiment was then conducted to verify some of these assumptions and hypotheses. The hypotheses and assumptions included the following:

1. A tone orthography should be designed mainly for native speakers. This is because native speakers are the main users of the language. This assumption is also supported by Voorhoeye (1963:130). Since it is the native speaker we aim to satisfy, we also need to take his reactions into consideration. This hypothesis is in line with current linguistic theory as can be seen from the following quotation:

> "It is worth mentioning perhaps that concern with the native speaker's reactions to a proposed writing system is well in line not only with present sociolinguistic thinking but also with the infuential theories in linguistics of the transformational-generative grammarians who give a central impportance to the native speaker's intuitions about the structure of his language and who have reverted in the area of phonology to a view of the phoneme similar to Sapir's abstract view." (Berry 1977:6)

In the context of promoting literacy in African languages, it is

crucial to do everything to encourage the native speakers. A lot of people still have to be convinced of the value of reading in the local language. Most people will not learn to read, if they see that it will take long for them to learn how to read. It is in this light that we favour a writing system that is simple to one, say, which demands a higher learning effort that might pay off in the long run.

2. In a good tone orthography tone should be marked in a systematic way. This would facilitate both the teaching and learning of the orthography. This hypothesis supports Smalleys third criterion, i.e., maximum ease of learning. This includes the fact that a good tone orthography should be simple enough to facilitate the teaching and learning process. This principle is supported by the phonemic theory which maintains that a good writing system should be consistent.

3. An orthography that marks too many tones would not be efficient. This also implies that a tone orthography that marks too few tones would not be effective. An ideal tone orthography would be one that strikes a balance between too many tone marks and too few tone marks. This hypothesis comes as a reaction to the demand of the phenemic theory. We have seen above that Pike demandes that all the tonemes of a tone language should be represented. This is also a reaction against the idea that no tone marks or only a few tone marks should be written. As we shall see later on in this chapter, Longacre (1963) supports this hypothesis.

4. Surface tones should be marked rather than underlying tones or basic tones. This means that a tone orthography that marks underlying tones or basic tones would not be efficient. The main basis of this hypothesis, as we have seen above, is the phonemic theory. Following our model, as presented in 1.1, the systematic orthographic representation is fed mainly by the taxonomic phonemic representation and, to a certain extent, by the systematic phonetic representation. The taxonomic phonemic level establishes the phonemic tones which then feed the orthographic level. The orthographic level then selects the tones to be

marked. Our systematic orthographic level works from the surface level. The diagrams (4 and 5) on pages 10-11 explain our point better. Although we agree in principle with the phonemic theory that surface tones should be marked, we do not agree with their principle of maximum representation. Although in principle we agree with them that writing should represent speech, and therefore surface forms, we have not totally adhered to this. There are cases where we have continued to write deleted segments. This point favours the writing of underlying forms. This principle has not been adopted in the writing of tones. It is less practical to write underlying tones in Grassfields languages because the underlying forms are sometimes far removed from the surface forms. The fact that there are a lot of floating tones in Grassfields languages makes the writing of underlying tones very impractical. For example, it will be difficult and awkward to represent the underlying tones as shown in (16a) and (16b) of 24.4.1.2. It would not also be convenient to enter words in the dictionary with a string of underlying tones, especially when some of them have no tone bearing segments. It is not advisable to write underlying tones because the learner will find it difficult to determine the underlying tones of many words. It took us a long search to establish the underlying tones of some of the morphemes.

5. We assumed that a tone orthography that marks H and M tone and leaves L tone unmarked would be more efficient than one that marks L tone and leaves H and M tones unmarked. This was based on the orthography that was already being used in the writing of the Bafut language. This system is also used in some Nigerian languages, for example in Idoma (Williamson 1985:43).

6. The tone that is relatively more stable should be marked. This means that the tone whose pitch varies a lot should not be marked. The concept of stability considers variation in pitch value. It considers the range of fluctuation of a phonemic tone. It does not include processes where, for example, a H becomes a L. In this case it has simply changed its status. It does not also regard the processes of deletion or absorbtion. These are common

tone processes that affect tones. These processes are not perceived by the learner because they are not immediately obvious in his speech. More will be said about the concept of stability later on in the study, especially in 29.5.

As we have said above, the pedagogical materials were designed to test the above hypotheses. As it will be seen in the concluding section of this chapter and also in chapter thirty-two, the results of this experiment and those of the Limbum experiment revealed other facts that we had not anticipated.

In order to test the 4 tone marking systems discussed above and consequently to verify the above hypotheses and assumptions, experimental classes were organized to run for two weeks.

The course was organized by the local authorities. It was fully backed by the churches, the Bafut Language Committee and the Fon of Bafut. The students were chosen and sent by local churches. Even though these classes were experimental in nature, the students were highly motivated. After the course the students were expected to go back and be helpful to their churches, for example, in teaching others how to read. The students were to be given attestations at the end of the course.

The course started with 18 students enrolled, but only 16 of them attended regularly. The students were divided into 4 groups according to the 4 tone marking systems. This gave an average of 4 students in each class.

It could be argued that the number of students in each group were too few. However, given the nature of the experiment, putting many students in a group would make it difficult for the teacher to follow up closely each student as intended. Each student needs to be followed up closely and evaluated accurately during the whole experiment. Indeed, we had planned for five students in each class. This would be an ideal number. Any number below 4 would be considered few and any number above six would be many.

Most of the students were primary school leavers. i.e., they had done at least 7 years of schooling. There was, however, one woman who had had only 6 years of formal school; but this was

offset by her experience since she was a leader in the women's group in her church. She was one of the bright students in her group. Most of the students were between 14 and 30 years old. There was, however, an elderly man of 60. He turned out to be very useful in cross-checking the language in the textbook for naturalness. He was quite alert and fairly smart in his class. Two of the students had had previous experience in reading Bafut, but this did not make much difference in their overall performance in class. They still faced similar problems to those experienced by the other students in reading and writing tone. Their previous experience had been limited to reading or writing the segmental phonemes or letters, since tone is not treated in any detail in the book which hitherto had been used to teach people how to read and write the Bafut language.

The distribution turned out to be fairly even and quite ideal. So with regard to educational standard and intelligence the groups were fairly and evenly matched.

I taught all four groups more or less at the same pace and timed the lessons as I taught each class. The material taught was the same for all groups except for instructions concerning the system of tone marking. Even though each group was marking tone differently, all were drilled in hearing and making distinctions in tone levels. Even the students in group 3 who were not supposed to write tone except in cases of ambiguity were carefully taught to hear the various distinctive tones in the language. Thus each group was taught all the 7 tone differences in Bafut: H, L, M and HL, LM, (which were represented as LH for groups 1-3) were introduced successively in this order. HM [H'H] and then ML were introduced later in the text book. These were not treated in their own right in the book in separate lessons like the rest of the levels. The attention of the students was drawn to these tone levels as we treated the associative Noun Phrase and verb aspect. These tones are purely grammatical tones. Groups 1 and 3 did not have to write the tone glide HM [H'H] while 2 and 4 had to; and so these groups were carefully taught how to hear and write it.

From the start it was hard for the students to perceive and distinguish the different tones. They were introduced first to H tone and immediately this was contrasted with L tone. It was noticed that these two levels, being the two extremes, were easy to perceive and distinguish. It was difficult for the students to make the difference between H and M; but with practice they were able to recognize it. It was even more difficult for them to distinguish the different tones when they occurred mixed on a word. They would easily notice that /fóré/ "mouse" has H tone and that /nìbà/ "wing" has L tone, while it was difficult for them to recognize the tones in /máà/ "grandmother" or /mátà/ "mat" or /sárè/ "weaver bird". However, given /máà/ and /mátà,/ it would be easier for them to hear the tones in /mátà/ than in /máà/. It was much more difficult again to hear tone glides, e.g., given /mátà/ and /mátāā/ "trap" it was more difficult to hear the HL glide on the first syllable of mátāā than the level H tone on /mátà/.

After introducing the students to the first 4 tones, they were given much practice in hearing, reading and writing them. The following words were given to enable them to practice the lexical tones in nouns: /àkĬkúŋ/ "owl", /tákūmbàŋ/ "a kind of juju", /lãm/ "lamp". These words were written on the blackboard, in the top right corner and they were there throughout the whole course. Later a fifth lexical tone, LM, found on verbs, eg. sŏ "pierce", was added to them. Whenever a student had difficulty in telling the tone of a word, he was asked to refer to these words which served as key, or tone reference words. This proved very useful even in finding out the different tone levels in sentences, for example, the following sentence has five different tones which could be compared to the tones in the key or reference words:

(10) [yĬ wùrā ndá yâ]   "come and build the house!"

This leads us to the conclusion that even though the tonal behaviour of verbs may be different from that of nouns, the tone realizations are the same for both groups. The same tones are found in the noun phrase as are in the verb phrase, even though

different tone rules might be operating at different levels in these groups.

The first 3 lessons, i.e., the part dealing with the alphabet, took approximately 3 hours to teach. As we went along it was necessary to give at least 15 minutes each day to reviewing the alphabet. It was not until about half way through the course, i.e., after 7 days, that the students started to indicate a certain degree of familiarity with the alphabet.

The students were encouraged as much as possible to practise reading and writing at home. For example, they were asked not only to study and learn how to say the alphabet as presented in lesson 1, but also to take each letter and illustrate the sound with a number of words in Bafut. This emphasis on the letters was necessary to prepare them for the reading and writing exercises that were used to evaluate them, particularly for the writing and reading tests at the end of the course. However, as we advanced in the course, the students were more and more familiarized with the letters since there were reading and writing exercises all along.

It should be noted that the emphasis given here to the practice of the alphabet was to counterbalance the emphasis given to the teaching of tone. This does not suggest the need to teach the alphabet or letters before tones. The teaching of the alphabet, i.e., consonants and vowels, should not be separated from the teaching of tones.

Given the size of each class it was possible to keep track and evaluate the performance of each student and each group. The strong motivation of the students made the task easy. I was able to watch and evaluate each group and consequently each of the 4 tone marking systems throughout the whole course. The Practical guide is constructed with built-in exercises to permit a constant evaluation of the performance of the students in reading and writing tone. In some of the exercises it was difficult to evaluate the performance of group 3, which was not marking tone except in cases of ambiguity. However, there were some exercises where every group had to mark tone. Some of the exercises were revised and others added to enable a better and valid evaluation

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of the situation. Exercises *5 of Lesson 6 and *9 of Lesson 7
were added to the book as we went along.

Here, for example, are some of the exercises where every
group had to write tone:

L 7 *9   (i.e. Lesson 7, exercise 9) Read the following and
mark tones where necessary.

    (i)   atəə maa   "calabash of grandmother"
    (ii) ŋgu maa   "fowl of grandmother"
    (iii) ŋgu taa   "fowls of father"
    (iv) abaa forə   "bag of mouse"

This is how the different groups were expected to mark tone in
this exercise.

Group 1

    (i)   àtəə maà   "calabash of grandmother"
    (ii) ŋ̂gû maà   "fowl of grandmother"
    (iii) ŋ̂gu taà   "fowls of father"
    (iv) àbàà forə   "bag of mouse"

Group 2

    (i)   atə̄ə̄ máa   "calabash of grandmother"
    (ii) ŋgū máa   "fowl of grandmother"
    (iii) ŋgū tāa   "fowls of father"
    (iv) abaa fôrə́   "bag of mouse"

Group 3

    (i)   atəə maa   "calabash of grandmothen"
    (ii) ŋ̂gû maa   "fowl of grandmother"
    (iii) ŋgu taa   "fowls of father"
    (iv) àbàà forə   "bag of mouse"

Group 4

    (i)   atə̄ə̄ máa   "fowl of grand mother"
    (ii) ŋgù̄ māa   "fowl of grandmother"
    (iii) ŋgū táa   "fowls of father"
    (iv) abaa fōrə̄   "bag of mouse"

The following is part of L 14 *1:

Write the necessary tones in the following sentences:

7. a ghεε mfa nibɔ'ɔ nya   "he has gone to give
                                    the pumpkin"
8. a ghεε mfa nibɔ'ɔ nya   "he has gone and given
                                    the pumpkin"
9. a ghεε mfa nibɔ'ɔ nya   "he is (in the process of)
                                    going to give the pumpkin"

This is how the different groups were to mark tone:

Group 1

7. à ghɛ̂ɛ mfa nìbɔ̀'ɔ̂ nyâ   "he has gone to give
                                    the pumpkin"
8. à ghɛɛ mfa nìbɔ̀'ɔ̂ nyâ   "he has gone and given
                                    the pumpkin"
9. a ghɛ̂ɛ mfa nìbɔ̀'ɔ̂ nyâ   "he is (in the process of)
                                    going to give the pumpkin"

Group 2

7. a ghεε̄ mfá nibɔ'ɔ nyā   "he has gone to give
                                    the pumpkin"
8. a ghε̄ε̄ mfá nibɔ'ɔ nyā   "he has gone and given
                                    the pumpkin"
9. á ghεε̄ mfá nibɔ'ɔ nyā   "he is (in the process of)
                                    going to give the pumpkin"

Group 3

7. à ghɛ̀ɛ mfa nibɔ'ɔ nya   "he has gone to give
                                    the pumpkin"
8. à ghε̄ε̄ mfa nibɔ'ɔ nya   "he has gone and given
                                    the pumpkin"
9. a ghɛ̀ε̄ mfa nibɔ'ɔ nya   "he is (in the process of)
                                    going to give the pumpkin"

Group 4

7. a ghεε̄ mfá nibɔ'ɔ nyā   "he has gone to give
                                    the pumpkin"
8. a ghε̄ε̄ mfá nibɔ'ɔ nyā   "he has gone and given
                                    the pumpkin"
9. â ghεε̄ mfá nibɔ'ɔ nyā   "he is (in the process of)
                                    going to give the pumpkin"

Towards the end of the course the students were asked to write a text of about half a page long, marking tone where necessary according to their respective systems of tone marking. These texts were submitted on the last day of the course. Some of the students produced long texts while others wrote short ones. A part of the text consisting of an equal number of words for

everybody was taken and marked in order to evaluate the performance of each group. In evaluating the students, only the tone marking system was taken into consideration. No particular attention was paid to the segmental phonemes or letters of the words. The students had been asked to provide a word-for-word translation of the text so that even in the case where a word was not spelt correctly, it would be obvious what he had intended to write.

It was not possible to evaluate the text written by group 3 because they did not mark tone. The final evaluation exercise in the course consisted of a text to be read by every student. The text of this test was prepared after the Practial Guide had been written. It was a short descriptive text of 164 words describing the shopping activities of Aso on a rainy market day in Bafut. The text took into consideration most of the lessons treated in the text book. It was written in a style which was as natural as possible despite the built-in components geared to suit the purpose of the test. The text had not been seen by the students before. However, similar texts were included in the textbook to give them practice in reading and to prepare them for the final test. The text was marked according to the different conventions of the 4 groups. The students had been told about the test in advance and instructed as to what should be done. They were not to spend more time on the text than needed. They were also told that they would be timed. If they spent a lot of time they would lose marks and if they rushed through the text without paying enough attention to the words and tones they would also lose marks for not reading correctly. They were, therefore, to steer a kind of middle course in the whole process. They were also warned that their readings would be tape recorded. Timing started at the moment the text was handed to the student.

The fact that each reading was recorded enabled accurate correcting and an objective evaluation of the performance of each student and consequently the four tone marking systems. The evaluation of the 164 word text was based on the number of words read correctly. The fastest reader took 4 minutes while the

slowest took as long as 14 minutes. The best students took a shorter time, between 4 and 7 minutes, while those who read poorly took longer. Since in this case there was no correlation between the length of time taken and good reading, the amount of time taken was not considered in evaluating the performance of the students. The timing thus revealed that the more difficulty the student faced, the longer it took him to read.

The text is presented here below in four versions following the different tone marking systems used in the various groups.

G 1

À kì bə yîjòŋ Àso fɛ'ɛ̀ mìtaa nyuu ɲ̀joò ji. À fɛ̂'ɛ̀ mə̄, m̀bə̀ŋ kâŋ loo, a ghɛɛ̀ ŋkwɛrɛ akoɲə a mbo mumaà yì ntsirə ta karə lɔɔ̀ njoo jìi me â kì tswe nì nyûuà. Kaa ndùu njoo kì wa'à si'i maa njwi tìì nloŋ me m̀bə̀ŋ ya kì sì loo à. A kì yuu ɲ̀ga'a nìŋgɔɔ yîwè tsi'i nì ŋkghì ji tarə nì mìwum mintaà. À kì kì nyuu atu naà bo nìkà'à nì kaù a bɔ'ɔ abàa ànsaŋə. À kì sì màŋsə a nyuu ɲ̀joo jya m̀bə̀ŋ ya kì ntswanə. A ghɛɛ̀ mbènsə àkoŋ ya kaa wâ'à mumaà yì wa yə̂; ɲ̀tigə nlogə ŋkwɛɛ nì yu. À kwɛ̀ɛ̀ mə̂ ŋkuu a nda nyə laà nìŋgɔ̀ɔ̀ nì àtsətsa'a atsə̀'ə yu. M̀burə waŋsə ntso'ɔ ntsu a mûm ŋkì. A tsù mə̄ mbɔŋ wa'atə me kaa kàrəsi sì a nda tswê. La a tìgà nìŋ nìke ghu nləə me yu ka lo tìgə ghɛɛ yuu karəsi a tìtugə bɔŋ sì'i laà nìŋgɔ̀ɔ̀ wa ghu.

G 2

A kì bə̄ yijoŋ Asɔ̄ fɛ'ɛ̄ mìtaa nyúú njɔ̄ɔ̄ jī. A fɛ'ɛ̄ mə̂, mbəŋ kàŋ lóó, a ghɛɛ̄ ŋkwɛ̄rə̄ akɔ̄ŋə̄ á mbō múmáa yi ntsírə tā káré lɔ̄ njɔ̄ɔ̄ jiī mə a kì tswé nì nyúúa. Kāā nduu njɔ̄ɔ̄ kì wá'ā sí'i máā njwī tìī nlóŋ mə mbəŋ yā kì sì lóó a. A kì yúú ŋgā'ā nìŋgɔɔ yíwe tsi'i nì nkghì ji tárə̄ nì miwúm mintáa. A kì kī nyúú atū naa bo nika'a nì káu á bɔ'ɔ̄ abaa ansāŋə̄. A kì sì maŋsə̄ á nyúú njɔ̄ɔ̄ jyə̄ mbəŋ yā kì ntswáⁿə́. á ghɛɛ̄ mbensə̄ akɔ̄ŋ yā kāā wá'ā múmáa yi wā yə̂; ntīgā nlogē ŋkwɛ́ɛ́ nì yú. A kwɛ́ɛ́ mə̄ ŋkúú á ndā nyé laa nìŋgɔɔ nì atsātsá'á atsə'a yú. Mbúrə́ waŋsə̄ ntsó'ɔ́ ntsū á mûm ŋki. A tsù mə̄ mbɔ̄ŋ wá'átə́ mə́ kāā karəsī sī á ndā tswé. Lá á tìgə̄ nìŋ nìke ghū

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ɲləə̄ mə̄ yú ká lɔ̃ tɨgə ghɛɛ̄ yúú karəsɪ̄ á tɨtūgə̄ bɔ̃ŋ si'ɪ̄ laa nɨŋcɔ
vā ghú.

G 3

A kɨ bə yijoŋ Aso fɛ'ɛ mɨtaa nyuu njoo ji. A fɛ'ɛ mə, mbəŋ
kan loo a ghɛɛ ŋkwɛ̄rə̄ akoŋə a mbo mumaa yi ntsɨrə tā karə lɔɔ njoo
jɨi mə a kɨ tswe nɨ nyuua. Kaa nduu njoo kɨ wa'a si'i maa njwi tɨi
ɲloŋ mə mbəŋ ya kɨ sɨ loo a. A kɨ yuu ŋga'a nɨŋcɔ yiwe tsi'ɪ nɨ
ŋkghɨ ji tarə nɨ mɨwum mintaa. A kɨ kɨ nyuu atu naa bo nika'a nɨ
kau a bo'ɔ abâā ansaŋə. A kɨ sɨ maŋsə a nyuu njoo jya mbən ya kɨ
ntswanə. A ghɛɛ mbɛ̀nsə akoŋ ya kaa wa'a mumaa yi wa yə; ntɨgə
ɲlɔgə ŋkwɛɛ nɨ yu. A kwɛɛ mə ŋkuu a nda nyə laa nɨŋcɔ nɨ
utsətsa'a; a atsə'ə yu. Mburə waŋsə ntsɔ'ɔ ntsu a mum ŋki. A tsu
mə mbɔŋ wa'atə mə kaa karəsi sɨ a nda tswe. La a tɨgə nɨŋ nɨke
ghu nləə mə yu ka lo tɨgə ghɛɛ yuu karəsi a tɨtugə bɔŋ si'ɪ laa
nɨŋcɔ wa ghu.

G 4

A kɨ bə̄ yîjoŋ Asō fé'ɛ mɨtáá nyúú ɲ̂jōo jɪ̄. A fɛ'ɛ mə̄, mbəŋ
kān lōō á ghéɛ ŋkwɛ̄rə̄ akóŋə̄ á mbó múmáa yi ntsɨ̄rə tā kárə lɔ̃ njōō
jɪ̄ a kɨ tswē nɨ nyuūa. Kāā nduū njóó kɨ wā'a sɪ̄'ɪ máā njwɨ tɨi
ɲlōŋ mə̂ mbəŋ yā kɨ sɨ̄ lóó a. A kɨ yūū ŋgá'ā nɨŋcɔ yîwe tsɪ̄'i nɨ
ŋkghɨ jɪ̄ tárə̄ nɨ mɨwūm míntáə. A kɨ kɨ nyúú atū náa bō nika'a nɨ
káu á bo'ō abāā ansāŋə̄. A kɨ sɪ̄ maŋsé ā nyúú ɲ̂jōō jyá mbəŋ yá kɨ
ntswāné. Á ghéɛ mbensə̄ àkōŋ yá kāā wá'ā múmáa yi wā yê; ǹtɨ̄gə̄
ɲlógə̄ nkwéɛ nɨ yū. A kwɛɛ mə̄ ŋkūū ā ndá nyə̂ lâa nɨŋcɔ nɨ
ātsə̄tsâ'á atsə'ə̄ yú. ǹbūrə̄ wăŋsə̄ ntsó'ó ntsú ā mūm ŋki. A tsu mə̄
mbɔ̃ŋ wá'átə̂ mə̂ kāā karəsɪ̄ sɨ ā ndá tswê. Lá á tɨgə nɨn nɨké ghú
ɲləə̄ mə̄ yú ká lō tɨgə̂ ghɛɛ̄ yúú kárəsɪ̄ á tɨtūgə̄ bɔ̃ŋ si'i lāa nɨŋcɔ
wā ghú.

20.5 The Results

The performance of the students was evaluated and the four
systems rated in 10 exercises. The results obtained in these
exercises are presented in the tables below. For each exercise the

mean score for the whole group is given in the table and, beside
it, the percentage of the number of points obtained as being
correct is given. L stands for lesson and * (star) stands for
exercise, thus L6*5 stands for Lesson 6, exercise 5. Apart from
the reading test and the text that the students were asked to
write, all the exercises are found in the Practical Guide.

Results: Table 1

Group	L 6 * 5		L 7 * 8		L 7 * 9		L 9 * 2	
	mean	per-cent	mean	per-cent	mean	per-cent	mean	per-cent
1	2.75	55	3.4	68	2.75	68.7	6	75
2	2	40	2.56	51	2	50	3.87	48.4
3	–	–	–	–	1.5	37.5	–	–
4	2	40	1.33	26.6	.75	18.7	3.75	46.8

Results: Table 2

Group	L 10 * 1		L 11 * 3		L 12 * 1		L 14 * 1	
	mean	per-cent	mean	per-cent	mean	per-cent	mean	per-cent
1	3.83	76.6	2.66	66.5	6.33	79.1	7.62	89.6
2	3.5	70	1.37	34.5	4.87	60.9	5.39	59.7
3	–	–	2.5	62.5	5.1	63.7	5.40	60
4	2.12	42.4	2.25	56.2	3.16	39.5	5.78	63.4

Results: Table 3

Group	Reading Test		Written Text		class Exercises		Overall
	mean	per-cent	mean	per-cent	mean	per-cent	per-cent
1	146	89.8	19	63.3	35.34	72.31	73.16
2	101	61.5	19	63.3	25.56	51.81	53.88
3	97	59.5	–	–	18.87	55.9	56.64
4	93	57.1	10.5	35	21.14	41.7	42.57

Following the evaluation and the results presented above,
group 1 had the highest scores in almost all the exercises except
in the written text where it had the same scores as group 2. The

overall percentages as given in the last column in the table above are as follows:

<div align="center">

Group 1   73.16 percent

Group 2   53.88 percent

Group 3   56.64 percent

Group 4   42.57 percent

</div>

It can be seen that group 1 is remarkably ahead of the other groups. Its scores are greater than: group 3 by 16.52 percent; group 2 by 19.28 percent; group 4 by 30.59 percent. Groups 3 and 2 come next in their scores. The closeness of the scores of these two groups to each other makes it hard to say which group is actually better. On the other hand, group 4 is 14.07 points below group 3, 11.31 points below group 2, and 30.59 below group 1. There are, therefore, two very conclusive sets of results. The performance of group 1 shows that the system of tone marking used there, i.e., marking L tone and a combination of L tone and others (falling and rising) is by far the best way of writing tone in Bafut. It shows that this system is the easiest way of writing tone of the four ways tested and also permits easy and good reading. The results of group 4 show that the system of marking all the tones is the most difficult system of writing tone in Bafut. Although it may do away with most of the ambiguities in the language, it does not make for easy reading and even less for confident writing.

20.6 Discussion: Comparison of the Tone Marking Systems

If we chose to test any of the four marking systems, it was obviously because we found some good points which could possibly make it work as a writing system. We also recognized the fact that each system did not only have advantages but it also had its weak points or disadvantages.

System 4, where all the tones and tone changes were marked, had the advantage that it reduced ambiguity to minimum. This

system is also good for teaching foreigners learning to read the language. Pike (1948:36-39) talking about "Practical Orthographies in Tone Languages" makes the following point:

> "... tonemes substituted in morphology or syntax or sandhi should be written as pronounced. Failure to observe this principle obscures the functional system of the language, hinders the natives in learning to read and imposes unnecessary burdens on the foreign student. In general, also one should insist that the tonemes of a tone language be written, and not ignored even though they are hard to read." (Pike 1948:37)

Despite these advantages, our experiment rightly proved that this system has serious weaknesses. Even Pike in the above quotation admits that it is a difficult system and makes it hard to read. Longacre (1963:137) writes:

> "Diacritical marks not strictly necessary for the recognition of a word or phrase may perhaps hinder rather than aid the person learning to read."

This point is supported by Voorhoeve (1963) and by the results of the experiment conducted by Essien (1977) on reading Efik.

As already pointed out, the students found this system very difficult. They complained strongly against it and said they would prefer a simpler system. This is the system used in the book How to Read and Write the Bafut Language (Crozier, 1980a). Members of the Bafut Language committee admit that the system is difficult and also complain that there are too many diacritical marks.

System 2, where we proposed that basic or lexical tone be marked, also had its merits. Voorhoeve (1963:129-131) argues very strongly in favour of this system. He says that the basic form of the word is the most identifiable and more distinctive than any of the forms that change. It makes for consistency of word-image which in turn simplifies the process of learning. So he concludes that the basic form should be written instead of the changed or derived form. This argument in itself is not sufficient as can easily be seen in English. Should we propose to write, e.g. "go"

even where we would say "goes", "going", "gone", or "went"? Nobody wants to write "he go yesterday" or "he is go to buy stamps this afternoon" just because the form "go" is the best identifiable or basic form.

It is true that writing only basic or lexical tone is perceivable and reasonable and it can even work in some languages, especially where tone changes are predictable because they are well defined by grammatical rules. Essien (1977) reports that this system proves to work for Efik, following the results of the experiment he conducted with native speakers of Efik.

Some of the tone changes in Bafut can be predicted especially in verb forms where tense and aspectual morphemes could be used as clues to determine the changed forms. When we proposed this tone marking system, we counted on this possibility but we soon discovered that the predictability depended on a lot of factors. One would need in this case to know the tone class of the verb, the pronoun, especially the tone of the pronoun, the aspect, and the tense or the tense marker (where this was present). Knowing the tone of the pronoun can be a difficult task because even the basic tone of the pronoun changes to indicate aspect or tense. All these factors are indeed too many to work out so that it would take much longer to compute them than to read the tone marks even in a case where all the tone changes were marked.

Another point against marking the basic tone is that it is not always obvious what the basic tone in Bafut is. This has already been mentioned and illustrated above. It is also difficult to teach the basic forms where the basic tone differs from the citation tone.

Yet another point against marking basic tone in Bafut is the fact that you still have too many tone marks. Many of the tones marked do not read as marked because of the changes involved. It is easy to see that symbols or marks that are not read will hinder more than help people to read.

When we mark only basic tones we end up with many more cases of ambiguity than marking only L tone as in system 1. This could be verified from the system proposed for group 2. It is therefore

more reasonable and conceivable why this system was proved relatively deficient by the results of the experiment.

Psychologically, people tend to prefer system 3 where no tones were marked except in cases of ambiguity. Some of the people even said that, with time, one would learn to read without tones. This position, as we have argued before, is hardly tenable given the extent of potential ambiguity in Bafut. Miller (1970:43) argues strongly against this assumption.

> "... I think that those who say that native speakers can understand writing without diacritical marks do not take into account the almost infinite possibilities of expression."

Those who support the fact that tone should not be marked are influenced by the alphabet of the English language. They would want their language to look like English. Here again it stands to reason that we cannot sacrifice meaning for aesthetics.

However, even where we propose to write tone only in cases of potential ambiguity we also find serious handicaps in the system. Longacre (1963) raises objection to a system like this which proposes occasional marking of tone based on a list of items and makes two points which I find pertinent: firstly he says that the list can be very long, which I find particularly true for Bafut. Secondly he says that an encyclopaedic knowledge of the language could never be assumed or guaranteed with regard to individuals, particularly those who are still learning the language. As a result of this, any such list would need constant revising.

Another point against this system is that people do not always think contrastively. When we write, we are not always conscious of potential ambiguities. For example, after marking potential ambiguities in the reading test and in other texts used in the experiment, I was surprised to discover some more cases of ambiguities as the students read. It is obvious that I had not been aware of these.

This system, which marks tone only where needed, is not very systematic. Burmeister (1980:8) says:

> "tones should be marked in as systematic a
> fashion as possible in order to facilitate both
> reading and writing of the language."

Indeed, I found system 3 the most difficult to teach and since it does not offer many principles for guidance, it is likely to cause a lot of confusion to people learning to write tone. However, considering what has been said about systems 4 and 2 and considering the results of the experiment, one could say that there is some merit in it. If more guiding principles were put into it in order to make it more systematic, it might work to a certain extent. If many more native speakers, who had a good knowledge of the vocabulary and grammar of the language, were trained and put to work at it in order to come up with an exhuastive list of the potential words and constructions that differ minimally only by tone, there is a possibility that it might work. Even so, we must take into account the fact that vocabulary is an open system. The workability of this system will have to be tested with time in order to prove that at a given stage it would work better than system 1 which has proved to work best for the present.

It might be said that by marking only low tone and a combination of it and other tones, i.e., /˅/, /˄/ and /˅/, creates a situation of underdifferentiation since it represents only three out of a possible number of ten or eleven different tones in Bafut. This is how I felt when I first thought about it. However, the experiment has shown that it makes just the distinctions that are necessary. As we have seen above in the discussion, not all the pitch distinctions need to be marked even though tone is of considerable importance both with regard to lexical and to grammatical tones in Bafut. It strikes a kind of balance between the too many tone marks that hinder reading and too few or no tones at all, which results in ambiguity. This fits one of the criteria for a good tone orthography given by Longacre (1963:33)

> "... in devising the system [i.e. of tone
> marking], it would constantly be necessary to steer
> a middle course between the conflicting demands for
> economy of diacritical marks and for unambiguous

transcription - neither demand can be met one hundred percent."

It might also be argued that since it marks tone changes, it makes reading difficult for the native speaker as Voorhoeve (1963) and Essien (1977) have said. However, we have just argued against this point and established that we need to mark necessary tone changes. It can be true that at the beginning of classes on tone, it is difficult for native speakers to hear tone changes, but it is also true that they can eventually come to be conscious of even the most subtle pitch distinctions, if they are properly drilled.

One of the points that makes system 1 workable is the fact that it is highly principled and thus systematic. It therefore facilitates both teaching and learning.

Low tone is relatively more stable than the rest of the tones in Bafut and it seems logical that it should be the tone to be marked. Although L tone could be raised in Bafut, it still holds true that it is the most stable tone. Mid tone, for example could be raised or lowered. It is different in the citation form, i.e. it is affected by intonation (cf. 5.3.2) and other syntactic features. H tone is also affected by intonation and it can be lowered or downstepped.

The stability factor of L tone makes it easier for the native speaker to hear and be more sensitive to it than the other tones. Indeed, when we started analysing the tones in Bafut, I found it much easier to hear L tone than the rest of the tones.

The rule that any lexical H tone is lowered by a preceding L (or falling) tone makes it very logical to mark L tone rather than H tone. This rule makes it still possible to maintain the pitch distinction between H and M tones even though only L tone is marked. In the following, for example, a native speaker who reads the constructions naturally following the marked tones will bring out the distinctions among H, M, HL, ML and LM tones even though only Low tone and its combinations are marked.

(11) a. forə ghû   [fórə̄ ghû]   "this mouse here"

      b. bᵻforə bû   [bifőrə̄ bû]   "these mice here"

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c. àtəə yù   [àtə̄ə̄ yù]   "this calabash here"

d. maà ghû   [máà ghũ̄]   "this grandmother here"

e. bìmaà bû   [bìmā̀ā bũ̄]   "these grandmothers here

f. fìtəə fù mə   [fìtə̄ə̄ fũ̄ mə̂] "this calabash here that..."

g. fìbwɛ̃ fâ   [fìbwɛ̃ fã̄]   "my fish"

This makes system 1 acceptable in that even though it marks only L tone it makes it possible to distinguish 6 out of the 7 more frequent tones in Bafut. It is even possible that in certain grammatical constructions the 7th tone HM (i.e [H'H]) could be distinguished, for example, in the following constructions it is possible to distinguish (12a) from (12b).

(12) a. a atu ndâ   [á tú ndâ]   "on the roof"

      b. àtu ndâ   [àtú'‾ndâ]   "head of house or roof"

This system of marking tone, while meeting the demands of economy of tone marks, also maximally meets the demand of unambiguous writing since it makes most of the distinctions that help remove ambiguities. In the whole book, i.e., <u>Practical Guide to Bafut Tone Orthography</u>, we found out that we needed to mark M tone only in two instances in order to clear up ambiguity. So there is reason to believe that system 1 is the best way of marking tone in Bafut. The following diagram shows a possible number of tones in Bafut and how they are a represented orthographically.

(13) Tones   H   'H   M   ↑L   L   H'H   HL   'HL   ML   LM   LML

     Orth.   -   ˇ   -   -   -   ˇ   ˇ

20.7 Problem Areas

Although the test convincingly proves system 1 to be the best way of marking tone for now, this system still has to be tried over a period of time before the final conclusions are made.

This system does not clear all ambiguities in the language since there are still some distinctions that can not be made, for example, the examples given in 4.2.1 (16). This system is not the best way of marking tone for non-native speakers of the language since it does not mark all the tones. System 5 would be more suitable to the foreign learner of the language than system 1.

20.8 Conclusions

The experiment has enabled us to verify the hypotheses and assumptions that we have given above with regard to a good tone orthography. The following were confirmed by the results of the experiments:

1. A tone orthography should be designed mainly for native speakers. This is because native speakers are the main users of the language. As we shall see in 32.7, the foreigner who has acquired a working knowledge of the language would be able to function ably with the orthograpy designed for the native speaker.

2. In a good tone orthography tone should be marked in a systematic way. This would facilitate both the teaching and learning of the orthography. This is one of the main reasons why system 3 did not work. As can be verified from the result tables above, there are a number of points where it was not possible to evaluate the students using system 3 because it was not systematic.

3. An orthography that marks too many tone marks would not be efficient. This also implies that a tone orthography that marked too few tones would not be effective. An ideal tone orthography would be one that strikes a balance between too many tone marks and too few tone marks. This explains why systems 4 and 2 did not

work in the experiment. In both these systems too many tones were marked whereas sytem 3 marked too few tones.

4. Surface tones should be marked rather than underlying tones or basic tones. This means that a tone orthography that marks underlying tones or basic tones would not be efficient. This, as we have said above, is one of the reasons why system 2 did not work well in the experiment.

5. We had assumed that a tone orthography that marked H and M tone and left L tone unmarked would be more efficient than one that marked L tone and left out H and M tones unmarked. As can be verified from the results in the tables above, this assumption was proved wrong. As we shall see in 32.5, this system marks too many tones, since it marks at least two times the number of tones that system 1 is marking. We thus see that system 1 which marked L tone proved more efficient than any system that marked H and M.

We thus see that system 1 is quite superior to the rest of the systems that were tested. Most of the arguments against the rest of the systems are logically arguments in favour of system 1 and thus give the reasons why this system proves more efficient than the rest.

The experiment also revealed some facts that we had not anticipated when we conceived it. One of the most important revelations was the fact that marking L tone was more efficient than marking H or M tone. We realized during the experiment that L tone was more easily perceived by the native speaker than the rest of the tones. As we shall see in later chapters, this follows from the fact that L tone is more stable than H tone.

The experiment has not only helped us to determine a good and efficient tone orthography for Bafut, but it has also given us indications concerning a good tone pedagogy. We present here in summary form some of the points concerning tone pedagogy:

1. Lexical tones should be taught first before grammatical tones. Grammatical tones should be taught later in the course with the appropriate grammar drills!

2. Level tones should be taught first before contour tones. The teaching of level tones should begin with L and H tones before

going on to M tone. It is helpful to start with words with only L and H tones respectively before going on to introduce words with these tones mixed in the syllables of the same word. As we saw in 20.4 above, it is better to teach, for example, words with the tone patterns L L or H H before those with H L or L H. On the other hand it is advisable to teach words with a H L pattern before those with HL contour tones.

3. Since L tone is more stable and thus more easily perceived by those learning to read and write tone, it should be introduced and taught before H or M tones.

4. It is advisable to teach tones of nouns before those of verbs and consequently it is helpful to teach the tones in noun contructions before tones in verb constructions.

There are other things that could still be said about tone pedagogy which cannot be possibly and fully treated in this study. Reference should therefore be made to Mfonyam (1987) and Wiesemann (forthcoming) for more details.

The results of the experiment show that the pedagogical materials constructed for the test served their intended purpose. The lessons and the exercises in the Practical Guide enabled us to have the desired results since these provided valid teaching material and evaluation exercises. The final reading test and the text that the students wrote towards the end of the course were both useful since these enabled us to evaluate the achievement of the students. The perfomance in the class exercises, which measured transitional competence, and performance in the final reading test and the text written towards the end of the course, both of which could be regarded as achievement tests, can be correlated. As can be seen in the results table 3, the performance of the students in both the class exercises and the reading test are indicative of the relative efficiency of the systems tested. The results of the written text are not very conclusive given that it was not possible to evaluate system 3. From the results it can be seen that the results of the exercises that measured the performance of the students in the process of learning to read and write tone are more conclusive.

In general we can conclude that the experiment has not only verified the hypotheses and assumptions that we had before the test but it has also succeeded in giving us insights into the evaluation of good tone orthographies and tone pedagogy.

Notes to Chapter Twenty

[1] The term basic tones as used in this chapter and in some parts of the thesis is different from underlying tones. The concept of basic tone was introduced for pedagogical reasons. In order to conduct the Bafut experiment, there was a need to describe the tones that the native speaker would recognize as being basic to a word in question. These were the tones that those that were taught to use system 2 had to mark.

PART III

TONE SYSTEMS OF OTHER NGEMBA LANGUAGES

BAMBILI TONE

21.1 Introduction

Bambili is a Grassfields Bantu language spoken in the North West Province of Cameroon. It falls within the Ngemba subgroup. Bambili has a noun class system that is similar to the other Ngemba languages like Bafut, Nkwen, Mankon, Mbui, etc. Since tone plays an important role in the grammar of Bambili, a tonal analysis implies a grammatical study of the language.[1]

21.2 Lexical tones

There are three phonemic level tones in Bambili: high (´), mid (¯) and low (`). These tones contrast in the following lexical sets:

(1)   H   M   L

  ñjáŋ   "xylophone"   ñjāŋ   "kernel"   ǹjàŋ   "a kind of
                                                              dance"

  ābɔ́ɔ́   "corn fufu"   āyɔ̄ɔ̄   "path"   àbɔ̀ɔ̀   "bag"

  ātɔ́'   "tin/can"   nĪbɔ̄'   "pumpkin"   àtɔ̀'   "(raffia
                                                              bush"

These tones also contrast in the following set of constructions where the nouns are used as objects of the verb:

(2)   a.   Yə́ n'jáŋ   H   'H   [¯˘¯]   "see a xylophone!"

         b.   Yə́ njāŋ   H   M   [¯˘¯]   "see kernels!"

         c.   Yə́ ǹjàŋ   H   L   L   [¯˘_ _]   "see a kind of dance!"

In (2a) above the downstep is caused by the underlying L tone which is realized as M tone on the nasal prefix of /ñjáŋ/ "xylophone". The tone processes involved here will be discussed later (cf. 21.3.2 and 21.3.4.2). The tone of the nasal prefix of /ñjāŋ/ "kernels" simply drops out. It is crucial to note right at this point that there is a difference between downstepped H tone ('H) and M tone in Bambili. It thus follows that H, 'H and M tones are different tone pitches. This difference is indicated by

the marks within the square brackets beside the constructions in
(2) above. This point will be discussed more in detail later on
(cf.21.3.4 and 21.3.5).

21.2.1 Tone patterns of nouns

Most noun stems in Bambili are monosyllabic. The usual noun
structure consists of a prefix and a monosyllabic stem. The
prefix can be zero (Ø), CV, V, nasal (N):

(3)   a.   Ø   Ø-shíŋ   "bird"

        b.   CV   nÎ-bɔ̄'   "pumpkin"

        c.   V   ā-tsáŋ   "prison"   ͘

        d.   N   m̀-bàŋ   "walking stick"

In the citation form, the noun prefix can bear either low
tone or mid tone. As we have seen, and shall still see later on,
the tone of the prefix can be deleted.

The following tone patterns have been attested on
monosyllabic noun stems:

(4)   a.   H   shíŋ   "bird"
                      sháŋ   "month"

        b.   M   Î-shōm   "farm"
                      ñ-jāŋ   "kernels"

        a.   L   m̀-jàŋ   "a kind of dance"
                      m̀-bàŋ   "walking stick"

So far no contour tones have been found on monosyllabic word
stems in isolation or in their citation forms. As we shall see
later on, contour tones occur on words in grammatical
constructions.

Although a majority of Bambili noun stems are monosyllabic,
there are quite a number of them that are disyllabic and yet a
fewer number that are multisyllabic. In our study we are going to
concentrate most of the time on words that are either monosyllabic
or disyllabic.

The following patterns occur on disyllabic nouns:

(5)   a.   Ø-H H   -kɔ́ɔ́   "crab"

              M-H H   ā-bɔ́ɔ́   "corn fufu"

    b.   Ø-M M   -tyɛ̄ɛ̄   "father"

              M-M M   n̄-dɔ̄ɔ̄   "song"

    c.   Ø-L L   -kìghə̀   "weaver bird"

              L-L L   à-bɔ̀ɔ̀   "bag"

    d.   Ø-L M   -tàtā   "father"

              L-L M   ì-yə̀gā   "thief"

21.2.2 Tone patterns of verbs

As we have seen for nouns, a majority of Bambili verbs are either monosyllabic or disyllabic. There are two major verb classes: H tone verbs and L tone verbs.

The following tone patterns are found on monosyllabic verbs:

(6)   a.   H   Yə́   "see!"

    b.   LH   gɨ̌   "go!"

As seen above the verb, /gɨ̌/ is a low tone verb. The monosyllabic verbs have the underlying tone LH (˘). This is common among the languages within the Ngemba group. As in other languages of this group, the verb, /kɔ̀/, which is an irregular verb, is the only verb that has been found to have a level low tone when used alone as in the form below.

(7)   L   kɔ̀   "take!"

Following are patterns that are found on disyllabic verbs (in the imperative mood):

(8)   a.   H H   fíghə́   "give!"

    b.   L H   shàŋə́   "dry!"

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As can be seen above in (8), the low tone verb has an underlying L H tone pattern.

The unederlying LH and L H tones of the L tone verbs come out on the surface respectively as LM and L M by T-rule 1 (cf. 4.8.1).

21.3 Tone Processes

The lexical tone patterns of nouns and verbs that we have seen above change considerably when used in grammatical constructions. The lexical tones of words in Bambili change either because of the intervention of grammatical tones per se or because of phonenetic assimilation rules which operate when words of different tones come together in constructions. For a discussion of grammatical and lexical tones, reference should be made to 24.4 and 26.5.1. Most contour tones occur either as grammatical tones or in grammatical contructions in the language. The few contour tones that occur on words in their citation form are realized on monosyllabic L tone verbs, which have the LM contour tone.

Most of the tone rules that we have seen operating in Bafut underly the tone processes in Bambili. It is important to note here that there is no automatic downdrift in Bambili although there is downstep.

In the following paragraphs we are going to discuss mainly tone lowering, L tone raising, tone simplification and downstep. The other tone processes will be described where appropriate, e.g., when we discuss the role of tone in the grammar of Bambili or in derivations.

21.3.1 Tone Lowering

As we have already seen in 21.2.2, the tone lowering rule operates in Bambili. We have seen that the underlying LH or L H is lowered to LM or L M by T-rule 1 (cf.4.8.1). This rule is further illustrated by the following examples:

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(9) a. bìshíŋ → bìshíŋ   [1]"birds"
     b. bìkɔ́ɔ́ → bìkɔ́ɔ́   "crabs"

21.3.2 Low Tone Raising

Related to tone lowering is what we have called "low tone raising." This rule concerns mostly L tone noun prefixes. We have noticed that in many cases the underlying L tone of the noun prefix is raised to M before a H or M tone of the noun stem. This process can be captured by a rule of the following form:

$$(10) \quad \begin{array}{c} L \\ Npfx \end{array} \quad \rightarrow \quad M \; / \; \_\_\_ \quad \left\{ \begin{array}{c} H \\ M \end{array} \right\}$$

This rule is illustrated by the follows examples:

(11) a. àtɔ́ˋ   →   [ātɔ́]   "head"

     b. àbɔ́ɔ́ →   [ābɔ́ɔ́]   "corn fufu"

(12) a. ǹjàŋˋ →   [ñjāŋ]   "kernel"

     b. àtɨˋ   →   [ātɨ̄]   "tree/stick"

We notice that the underlying tones of the nouns in (11) are different from those of the nouns in (12). The derivation of the surface tones in the above examples will be given later after we have discussed the process of tone simplification.

As we must have noticed, the L tone raising rule in Bambili is different from T-rule 3 which we have discussed for Bafut in 4.8.3. Whereas the process described by rule (10) above has been phonologized in Bambili and has therefore become fairly general in its application, T-rule 3 has not been fully phonologized in Bafut. This is why T-rule 3, as we have said earlier, is very limited in its application.

The L tone raising that we are discussing here is also different from the B L tone and C L tone raising rules that we have seen in 4.8.12, i.e., T-rule 14 and T-rule 15. These rules are totally different tone processes. As we said concerning these

tone processes, these rules are operating on citation tones not on underlying tones, as the rule in (10) above.

21.3.3 Tone Simplification

Tone simplification is the process whereby a contour tone becomes a level tone. We have already discussed this in Bafut (T-rule 7) so reference should be made to 4.8.7. However since the process of tone simplification in Bambili reveals some differences we shall discuss it as it operates in this language. Tone simplification in Bambili requires two rules of the forms given below:

(13) a. HL → H

b. LH → M

The rule in (13a) states that a HL contour tone simplifies to H while (13a) says that a LH contour tone simplifies to M. We have already seen an exception to (13b) in (6). This means that monosyllabic L tone verbs maintain their contour tones in the citation form or in the imperative form. The contour tone simplification rules explain why we have not found contour tones in the citation forms of nouns (especially in non-compound words).

The derivations that we present below will illustrate the application of the tone raising rule and the tone simplification rules. The derivation of the tones in (11a) is as follows:

(14) a. àtɔ́`   underlying
b. ātɔ́`   L tone raising to M (10)
c. ātɔ̂   tone grounding
d. ātɔ́   tone simplification (13a)

In (14a) the underlying tones are given. In b. the L tone raising rule raises the L tone of the prefix to M (cf. (10)). In c. the floating tone of the noun stem grounds to the left where it creates a HL contour tone (cf. T-rule 4). In d. the HL contour tone of the noun stem simplifies to H by rule (13a).

It is worthwhile noting that [3] the tone raising rule here blocks the H tone lowering rule (cf. T-rule 1). We should also note that the tone grounding rule, as observed in (14b) above, is similar to what is happening in Bafut and so reference should be made to 4.8.4.

The derivation of the tones of the example in (11b) is as follows:

(15) a. àbɔ̂ɔ̂   underlying
     b. ābɔ̂ɔ̂   L tone raising (rule (10))
     c. ābɔ̂ɔ̂   tone spreading (T-rule 6)
     d. ābɔ́ɔ́   simplification (rue (13a))

In (15a) the underlying tones are given. In b. the L tone raising rule raises the L tone of the noun prefix to M. In c. the underlying H tone of the noun stem spreads to the following stem L tone where it creates a HL contour tone (cf. T-rule 6). In d. the HL contour tone simplifies to H by rule (13a).

We again notice that in the above derivation the L tone raising rule blocks the H tone lowering rule. We also notice that there is a tone spreading process in Bambili, just as we have in Bafut and in the other Ngemba languages (cf. 4.8.6).

The derivation of the (12a) is as follows:

(16) a. ǹjàŋˊ   underlying
     b. ǹjǎŋ   tone grounding (T-rule 4)
     c. ǹjāŋ   simplification (rule (13b))
     d. n̄jāŋ   L tone raising rule (rule (10))

In (14a) the underlying tones are given. In b. the floating H tone of the noun stem grounds to the left where it creates a LH contour tone. In b. the LH contour tone simplifies to M by rule (13b). In c. the underlying L tone of the prefix is raised to M by the L tone raising rule (cf. (10)) above.

The derivation of the surface tones of (12b) is the same as that of (12a).

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21.3.4 Downstep

As said above, there is downstep in Bambili. There may be a series of downsteps in a row in an utterance. Downstep is caused by a number of circumstances as will be illustrated below.

21.3.4.1 Floating Low Tones

The most common remote cause of downstep in Bambili, and also in some other Grassfields languages, is the presence of floating tones that create the contour tones whose eventual simplication is the immediate cause. The associative construction marker of noun classes 1 and 9 is a floating low tone. This floating tone normally causes downstep in this construction. The following examples illustrate the point:

(17)   a. shíŋ `` mwóó → [shíŋ 'mwóó]   "bird of child"

       b. mə́ ` míghə́ → [mə́'míghə́]   "(mother of mother) grandmother"

In (17a) above the first floating L tone is the associative marker for noun class 1, as we have seen in 8.2. The second floating L tone is the tone of N2 prefix. Some nouns have lost their segmental prefiexes but the tone of the deleted prefix still remains floating. The examples in (18) further illustrate this fact.

(18)   a. fíghə́ ` mwóó → [fíghə́ 'mwóó]   "give a child"

       b. yə́ ` móó → [yə́ 'móó]   "see fire!"

The word /`móó/ "fire" has an underlying low tone which must have been the tone of its prefix which no longer exists in the synchronic surface form of the word. The same can be said of /`mwóó/ "child". These processes have been described in Bafut and derivations of the tones of similar words and constructions given

(cf. 4.8.2, for example) and so we shall not go into details here. What should be noted is that the same rules as in Bafut are operating here.

21.3.4.2 Underlying Low Tone

An underlying L tone that is not deleted but exists underlyingly between two H tones, would cause the following H tone to downstep. This is illustrated in the following example:

(19)   yé ǹjáŋ   →   [yé n'jáŋ]   "see a xylophone"

The derivation of the tones in (19) is as follows:

(20) a. yé ǹjáŋ   underlying
     b. yê njáŋ   desyllabification (P-rule4)
                      and tone grounding (T-rule 4)
     c. yé n'jáŋ   simplification and ds (T-rule 2)

In (20a) the underlying tones are given. In b. the nasal prefix desyllabifies and its tone is assigned to the left where it grounds on the verb and creates a HL contour tone. In c. the HL contour tone simplifies to H causing the following H tone on the noun stem to downstep.

21.3.4.3 Preceding Downstepped H Tone

Generally, a H tone following a 'H tone is realized on the same phonetic level as the preceding downstepped H tone. In principle, a 'H would not permit any tone that is higher than its pitch until after a M tone, a L tone or a pause, at which point a following tone is then allowed to go up to the original height of a normal H tone. This point will be discussed and illustrated later on. The following example shows how a downstepped H tone can cause following H tone to be realized also at the level of the downstep:

(21)   à ˉkwé ˉkɔ́ɔ́ → [á 'kwé kɔ́ɔ́]   "he is taking a crab"

         L HL H H HH → H   'H   HH   [ˉ - -]

In (19) above we find that the H tone on the verb /kwé/ is
downstepped and because this is a 'H, the H tones on the noun
/kɔ́ɔ́/, which follow it are at the same pitch level, as indicated
by the marks within the square brackets. The derivation of the
tones in the above construction is as follows:

(22) a.   à ˉkwé ˉkɔ́ɔ́   underlying
     b.   â   kwé ˉkɔ́ɔ́   IMPF replacive tone
     c.   â   kwé kɔ́ɔ́   tone grounding
     d.   á   'kwé kɔ́ɔ́   simplification and ds

In the a. the underlying tones are given. In b. the HL tone,
which is the IMPF replacive tone (cf. 15.4.1) replaces the
underlying L tone of the pronoun. In c. the floating H tone of
the noun prefix grounds to the left where it is absorbed by the H
tone of the noun stem. In d. the contour tone on the pronoun
simplifies to H and causes the following H tone to downstep and,
as a result, the H tones on the noun [kɔ́ɔ́] are caused to be
realized on the same level as the preceeding downstep.

21.3.5 Downstepped High Tone and Mid Tone

In Bambili, as we have said above, there is a difference
between a 'H and a M tone. The downstepped high tone is higher
than the mid tone . Following are more examples to illustrate
this fact:

(23)   a. [fíghé   n'ján]   ʼ   H 'H   [ˉ _]
           give   xylophone
        "give a xylophone!"

        b. [fíghé   njāŋ]   H   M   [ˉ _]
           give   kernels
        "give kernels!"

        c. [á 'kwéshé 'mwóó]   H 'H H   'H H   [ˉ ˉ ˉ _ _]
           he help   child
        "he is helping a child"

        d. [á kwéshā mwóó]   H   H M H H   [ˉ ˉ _ ˉ ˉ]
           he help   child
        "he helped a child"

As we saw above, the tone on the stem of "xylophone" in (23a)
is a 'H while the tone on the stem of "kernels" in (23b) is M.
The M tone realized on "kernel" is lower than the 'H tone that is
realized on xylophone. This is why speakers can make and hear
this distinction. The M tone on the second syllable of /kwéshā/
in (23d) is distinct from the 'H tone on the same syllable in the
same word in (23c). Here again the M tone is lower than the 'H
tone in (23c). The phonetic differences as realized here can be
indicated as in the following diagram:

(24)   a. H ⎡ ˉ   ⎤
       b. 'H ⎢   _ ⎥
       c. M ⎣   _ ⎦

The derivation of the tones in (23a) is the same as (20)
above. The derivation of the tones of the string in (23b) is
given in (25) below.

(25) a. fíghé ñjàŋ˘   underlying
     b. fíghé ñjāŋ   tone grounding (T-rule 4)
     c. fíghé njāŋ   nasal desyllabification (P-rule 4)
                           and tone deletion (T-rule 5)
     d. fíghé njāŋ   simplification (rule (13b))

The rules involved in the above derivation are indicated at
each point. The derivation of (2b) is similar to that of (25).
The derivation of (23c) is similar to the derivtion given in (22)
above. The derivation of (23d) is given in (26) below.

(26) a. à ˉ kwéshə̂ ˉ ˘ ˊmwóó   underlying
      b. á kwéshə̆ ˊmwóó   Narrative Past tones
      c. á kwέshə̄ ˊmwóó   simplification by rule (13b)
      d. á kwéshə̄ mwóó   tone deletion

In (26a) the underlying tones are given. The narrative past tense has a replacive H tone (after the pronoun /à/) and H LH tones (after the verb). The floating L tone before the noun is the tone of the noun prefix. In b. the underlying tones of the pronoun and of the verb are replaced by the narrative past tense tones as indicated. In c. the LH contour tone on the second syllable of the verb simplifies to M by rule (13b). and in (26d) the floating L tone of the noun prefix is deleted (cf. T-rule 5).

Just as there is a difference between 'H tone and M tone, there is also a difference between the contour tones H'H and HM. This is illustrated in the following examples:

(27)   a. [á kwέ'ˉ 'kɔ́ɔ́]   H H'H 'H H $\left[\begin{array}{cc}\bar{}\rceil & \bar{}\end{array}\right]$
           he take crab
           "he has taken a crab"

        b. [á kwέ kɔ́ɔ́]   H HM   H H $\left[\begin{array}{cc}\bar{}\rceil & \bar{}\end{array}\right]$
           he take crab
           "he took a crab"

The tone on the word /kwέ/ "take in (26a) is a H'H contour tone while the tone on the same word in (26b) is a HM tone, /ˆ/. The H'H tone has a higher pitch than the HM tone. What makes us sure that the tone in (26a) is a H'H contour tone while that in (26b) is a HM contour tone is the fact that the H'H tone causes the following H tone to downstep whereas the HM tone does not cause a downstep. The H tones on the word /kɔ́ɔ́/, "crab" after the HM tone stay high. Thus, after a downstep it is possible to have a tone of the same pitch level or lower than it, but not higher; while after a true M tone it is possible to go to a higher tone. This means that it is possible to have a H tone after a M tone but not after a 'H tone. The realizations of these different tones are indicated in the diagrams above beside each string. The derivation of the tones in (27a) is given in (28) below.

```
(28) a. à ´ kwé ´ ` ´kɔ́ɔ́      underlying
     b. á   kwé`      ´kɔ́ɔ́      PO replacive tone (T-rule 11)
     c. á   kwê      ´kɔ́ɔ́      tone grounding (T-rule 4)
     d. á   kwê´     kɔ́ɔ́       tone grounding (T-rule 4)
     e. á   kwé'`    'kɔ́ɔ́      simplification and ds (T-rule 2)[2]
```

In (28a) the underlying tones are given. Note should be taken of the PO replacive tones, H (before the verb) and H L (after the verb). In (28b) the PO replacive tones replace the underlying tones of the pronoun and of the verb (cf. T-rule 11). In (28c) and (28d) the floating tones ground to the left on the verb. In (28e) the complex HLH contour tone simplifies to H'H and at the same time the H tones on the noun are downstepped.[2]

The derivation of the tones in (27b) will be given in (36) below.

The normal M tone can occur in the following environments:

(29)   a. Before or after a pause:

              nɪ̄bɔ̄'   "pumpkin"

          b. After a L tone   (cf. example in c. below)

          c. Before a H tone

              ʃàtɪ̄ mwóó1   "stick of child"

          d. After a H tone

              tákɪ̄mbə̀ŋ   "a kind of juju"

The 'H tone is found only after H tone or after another 'H tone.

From the above discussion, we see that H tone is higher than 'H tone while 'H tone is higher than M tone, as we seem in (24) above.

21.3.6 **Phonetic Pitches**

In a construction, it is possible to have as many as five phonetic pitch levels although there is no automatic downstep or downdrift in Bambili. The following examples will illustrate this point:

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(30) a. [á 'kwɛshə 'mwóó]   "he is helping a child"

    H 'H H   'H H

```
┌ ―          ┐  1
│      ― ―    │  2
└         ― ― ┘  3
```

  b. [àshó'ó tyɛ'ɛ]   "hoe of father"

    L H 'H H 'H

```
┌     ―        ┐  1
│        ― ―    │  2
│           ―   │  3
└ ―            ┘  4
```

  c. [à kɨ lígh'ə 'kwɛshə 'mwóó ɨ zōō]   "he helped a child
                                          yesterday."

    L L H 'H 'H H   M M H M M

```
┌      ―              ―      ┐  1
│         ―                  │  2
│            ― ―              │  3
│                 ― ―  ― ―    │  4
└ ―   ―                       ┘  5
```

The diagrams below the strings above help us to see the tone pitches. The numbers to the right indicate the relative pitches in each string. These numbers do not indicate any absolute values since these represent the different tones as perceived by the ear.

It would appear that in Bambili a triple downstep has the same phonetic level as a normal M tone and thus loses the inherent downstepping characteristic of a downstepped high tone. Thus the level of the 'H tones on /mwóó/ in (30c), for example, is the same as that of a normal M tone. This is indicated by the fact that in (30c) it is possible to go up to a normal H tone after the triple downstepped tone on /mwóó/. The important fact revealed here is that the M tone in Bambili has a psychological reality for the native speaker. This is an indication that M tone is a phonemic level identifiable to the native speaker. The M tone level rule in Bambili would then be of the form:

(31)   'H → M / 'H^{x} __

The M tone level rule as formulated above, states that a 'H is reinterpreted as M tone after an x number of downsteps. In the case of Bambili, in the light of (30c) and (32i), the value of x is 3, i.e., a triple ('H'H'H) downstep. As we shall see in 26.4.3, the value of x in Limbum would be 1.

In order to show how the series of downsteps are derived we will give in (32a) the underlying tones posited for the string in (30c):[3]

(32a) à kì líghə̀˙ ˋ kwέshə́ ˋ mwóó   ́i   ˋzòó
       he P2   help   child   preposition   yesterday

A possible derivation of the tones in the above construction is as follows:

(32) a. à kì líghə̀˙ ˋ kwέshə́ ˋmwóó í ˋzòó   underlying
     b. à kì líghə̀˙ ˋ kwέshə́ ˋmwóó í ˋzòó   tone spreading
     c. à kì líghə̄ ˋ kwέshə́ ˋmwóó í ˋzòó   tone grounding
     d. à kì líghə̄ ˋ kwέshə́ ˋmwóó í ˋzòó   tone absorption
     e. à kì lí'ghə́ ˋ kwέshə́ ˋmwóó í ˋzòó   simplification
                                                 and ds
     f. à kì lí'ghə́   kwέshə́ ˋmwóó í ˋzòó   tone grounding
     g. à kì lí'ghə́ 'kwέshə́ ˋmwóó í ˋzòó   simplification
                                                 and ds
   _ h. à kì lí'ghə́ 'kwέshə̄ mwóó   í ˋzòó   tone grounding
     i. à kì lí'ghə́ 'kwέshə́ 'mwóó   í ˋzòó   simplification
                                                 and ds
     j. à kì lí'ghə́ 'kwέshə́ mwōō   í ˋzòó   M tone level and
                                                 level resetting
     k. à kì lí'ghə́ 'kwέshə́ mwōō   í zòó   tone grounding
     l. à kì lí'ghə́ 'kwέshə́ mwōō   í zòō   tone spreading
     m. à kì lí'ghə́ 'kwέshə́ mwōō   í zòō   simplification
                                                 by rule (13b)
     n. à kì lí'ghé 'kwέshə́ mwōō   í zōō   L tone raising (10)

In the above dirivation what is of particular interest is the M tone that is derived from the process of downstep. In (32i) we notice that there is a triple downstep on the word ['mwóó]. At this point the downstep reaches the level of a M tone so that the 'H H is, by rule (31), reinterpreted as M M (as indicated in (32j)) and at this point the level of the following 'H on ['í] is reset to a normal H by T-rule 13 (4.8.13). The M tone level rule thus lends support to our H tone level resetting rule (T-rule 13).

Given that the M tone level process being described here is a completely new idea in the literature, it still needs further investigation. However, as we shall see in chapter twenty-six (cf. 26.3 (16e)), there is evidence in Limbum that the M tone level process is even more established in this language. The M tone level rule in Limbum reinterprets 'H as M. We thus see that M tone level process is not limited to Bambili.

21.4 Tone in Grammar

As we have seen in the above analysis of the Bambili tone system, tone plays an important role in the grammar of the language. This means that any study of the tone system of Bambili, implies a study of the grammar of the language and vice versa. The following examples further illustrate the role of tone in the grammar of Bambili.

(33) a. m̀bí˘ ˘yà → [m̀bí yâ]   "my goat"
        goat   my

     b. m̀bí˘ ´yá → [m̀bí yá]   "my goats"
        goats   my

In the above examples we see that the difference between the two constructions is made soley by tone. The noun in (33a) is a class 9 noun so the tone of both the possessive and the concord marker for this class is L. The noun in (33b) is from noun class 10 and so the tone of both the concord marker and the possessive is H. For a discussion of the tones of the possesssive, reference should be made to 11.4. The derivation of the tones in the above examples is related to the derivations given in 21.3.2 above. What should be noted is that in both (33a) and (33b) the floating tones of the concord marker ground to the right where they are absorbed by the tone of the possessive (4.8.4).

Tone also plays an important role in Bambili verb forms. Tense, aspect, or mood may be marked solely by tone. This is illustrated in the following examples:

```
(34) a. à  ˆ kwέshə̂ ˋmwóó      →   [á 'kwέshə̂ 'mwóó]
        he T help    child          "he is helping a child"
     b. à  kwέshə̂ ˋ ˆ ˋmwóó     →   [à kwὲshə̂' ˆ 'mwóó]
        he help   T   child          "he has helped a child"

     c. à  ˊ kwέshə̂ ˊ ˇ ˋmwóó  →   [á kwέshə̄ mwóó]
        he T help    T   child       "...he helped him"

(35) a. à  ˆ shàŋə́ ˊnɔ̀ɔ́       →   [á shâŋ nɔ̄ɔ́]
        he T dry    meat             "he is drying meat"

     b. à ˋˆ shàŋə́ ˊnɔ̀ɔ́       →   [à shâŋ nɔ̀ɔ́]
        he T dry    meat             "he has dried meat"

     c. à ˊˇ shàŋə́ ˊnɔ̀ɔ́       →   [á shâŋ nɔ̄ɔ́]
        he T dry    meat             "...he dried meat"
```

In the above set of sentences, a. is in the T0 imperfective,
b. in the T0 perfective, while c. is in the narrative past tense.
The derivation of (34a) is straightforward. The downsteps are
caused by the intervening floating L tones in the input string.
The imperfective HL tone replaces the underlying L tone of the
pronoun and later simplifies to H, thus causing the following H
tones of the verb to downstep (cf. 15.4).

For the derivation of the tones in (34b) reference should be
made to 23.4 (18) below where the derivation of the same
construction in Bambui has been given.

The derivation of (34c) is given in (36) below.

```
(36) a. à́ kwέshə̂ ˊ ˇ ˋmwóó    underlying
     b. á kwέshə̄          ˋmwóó    narrative replacive tones
     c. á kwέshə̄          ˋmwóó    tone simplification
     d. á kwέshə̄          mwóó    tone grounding to the right
```

In (36a) the underlying tones are given. In b. the narrative
tense replacive tones are given. The underlying L tone of the
personal pronoun /à/ "he" is replaced by a H tone while the
underlying H tones of the verb are replaced by a H LH tone
pattern. In c. the contour tone on the verb stem simplifies to M
by rule (13b). In d. the floating L tone of the noun prefix is
deleted.

In (35) we have a L tone verb in the same verb forms as seen
in (34). We notice that the second syllable of the verb together
with its tone drops out. In (35c) the whole narrative H LH

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replacive tone pattern is placed on the first syllable of the verb (since the second syllable is deleted). In (35a) the floating H tone of the noun prefix grounds to the right on the noun stem where it forms a contour tone that simplifies to H tone, which in turn is lowered to M by T-rule 1. In (35b) and (35c) the floating H tone of the noun is simply deleted.

## 21.5 Bambili Tone Orthograpy

We have already seen the role that tone plays in the grammar of Bambili. Since tone has such an important role to play in the grammar of Bambili, it has to be taken into consideration when an orthography is being designed for the language.

In the writing system of Bambili, which tones should be marked? Should all the tones be marked? If all the tones are not to be marked, which ones should not be marked? These are the questions that we would want to answer in view of the analysis that we have done of the Bambili tone system.

As we we saw in the discussion of the Bafut experiment results and as it has also been learned from teaching experience, it is not practical to teach people to write underlying tones because these change, not only in time, but especially when used in constructions. Even the citation tones of words change when they come into contact with those of other words as they are used in grammatical constructions. All the tone processes that we have described above have served to show us how dynamic the tone system of Bambili can be. The rules that predict surface tones from underlying tones are not as straightforward as in those languages where underlying tones would be successfully marked. It is therefore more practical to mark surface tones in Bambili. This means that tone changes are marked and that tones are marked as they are realized in context.

It has been seen from experience that all the tones in a language cannot be marked since this will make both the teaching and the learning processes very difficult. It has also been noticed in our experiments that writing all the tones also makes

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reading difficult for the native speaker. As a result of these facts, we think that in Bambili it would be more useful to mark just the tones that are necessary to help the reader read efficiently. The experiments that we conducted in Bafut and Limbum have been of much enlightenment to us.

Since the tone system of Bambili is very similar to that of Bafut, it is likely that the system of tone orthography proposed for Bafut would work for Bambili too. As a result, reference should be made to 20.5 and 20.6 for a description and discussion of the proposed tone orthography.

We therefore propose that the following tones be marked in Bambili: /ˋ/ (L), /ˆ/ (HL), and /ˇ/ (LH). We have said that the tone LH comes out on the surface as LM by T-rule 1. This means that /ˇ/ represents LM. The tone mark /ˆ/ represents both HL and ML contour tones.

The system of tone marking that we propose for Bambili does not mark H, M, 'H, H'H. The tone lowering rule (i.e., T-rule 1) enables the reader to predict the M tone and therefore makes it possible for M to be distiguished from H. In generally any unmarked tone after L would be realized as M tone since, by T-rule 1, a low tone lowers a following H tone to M.

The examples in (33), (34) and (35) will be marked orthographically as indecated in (37), (38) and (39) respectively.

(37) a. mbi yà        "my goat"
     b. mbi ya        "my goats"

(38) a. a kwɛshə mwoo    "he is helping a child"
     b. à kwɛ̀shə mwoo    "he has helped a child"
     c. a kwɛshə mwoo    "... he helped a child"

(39) a. a shàŋə̀ nɔɔ̂    "he is drying meat"
     b. à shàŋə̀ nɔ̂ɔ̂    "he has dried meat"
     c. a shaŋə̀ nɔɔ̂    "... he dried meat"

We notice that most of the meaning distinctions are made in the above examples. We however see that there is no orthographical distinction between (38a) and (38c). Since the distinguishing tones in these pairs are H and M, which are both not marked in our proposed orthography, this distinction is not

made. This shows a disadvantage of the system adopted. This system does not therefore make all the necessary distinctions in the language. However, given the fact that words and constructions are not used in isolation, we can count on context to make those distinctions that are not made orthographically.

The system of tone orthography proposed for Bambili has to be tested in the field in literacy classes and by writers in the language so as to see whether there are many such instances as those revealed in (38a) and (38c) above. However, if there are just a few cases of such ambiguity, we may not need to worry since context and alternative ways of expression would clear such ambiguities. It is obvious though that it is difficult to think of any system of writing that would eliminate all ambiguities. If therefore our system of tone marking for Bambili reduces ambiguities to a reasonable degree, it is worth adopting since it will reduce the number of tone marks in writing. If because of a few cases that need to be differentiated orthographically, we decide to mark, say, H tone in addition to what we have proposed to mark, we will find out that our load will more than double since we shall have many instances of both H and 'H tones to mark.

# Notes to Chapter Twenty-one

[1] My main informant was Mr Martin N. Akuo. Mr Akuo comes from Ntembang in Bambili. I am very thankful to him for all the patience he showed during all the many long hours that I worked with him. I also would like to thank His Highness the Fon of Bambili for the time he took to answer some of the questions that I had concerning the work. I am also grateful for the data which he provided.

[2] Phonetically, a H following the contour tone H'H is a step lower, as revealed by the 'HH tones on ['kɔ́ɔ́]. This drop is represented in the diagram beside (27a) above. The relationship between a H'H and a following H tone is different when we try to relate it to that which exists between a HL contour tone and a following L tone. Whereas the end point of a HL contour tone is same as a following L, the end point of a H'H contour tone is generally higher than the pitch of a following H tone.

[3] The status of the morpheme /lɨghə̄/ is not very certain. Is it part of the P2 tense marker or it is another verb used as a secondary verb? The other possible interpretation is one which would analyse this form as a compound, made up underlyingly of two morphemes, a main verb plus the verb /gɨ/ "go!", used as a secondary verb. This means that we will then have a serial (or consecutive) construction of the form:

/à   kɨ  lɨ́   gɨ̀  Ǹ-  kwɛ́shə̄  ˈmwóó       ɨ́         ˈzòó/
he P2 stay go CNS help    child   preposition  yesterday

## MANKON TONE

### 22.1 Introduction

Mankon is a Grassfields Bantu language which is spoken in the North West Province of Cameroon. It is one of the languages within the Ngemba subgroup. Mankon has a noun class system that is similar to that of the other Ngemba languages like Bafut, Bambili, Nkwen, etc.

### 22.2 Lexical tones

Leroy (1977:70-74), analyses Mankon as having two phonemic tones, H and L. At the phonetic level she says that in addition to H and L, mankon has a super H tone, a downstepped H tone and the contour tones, HL and LH (found on the citation forms of words). The following examples taken from Leroy (1977:71) illustrate the realization of the above tones:

(1) a. /-kàŋ´/ [-kàŋə̀] "squirrel"
    b. /-kám´/ [-kámə́] "crab"
    c. /-dzà´/ [-dzǎ] "sauce"
    d. /-dâ`/ [-dâ] "house"
    e. /Ø-bú'˘ ì˘ -Ø-síŋ´/ [bú'ʼú sìŋə́] [‾ ‾‾] "the chimpanzee of bird"

The example in (1e) above shows the realization of the super high tone. In her notation, the up-arrow (↑) before a H tone indicates a super H tone while the down-arrow (↓) before a H tone indicates either a return to a normal H or a downstepped H tone. Leroy does not recognize the existence of a M tone in her analyses. In our analysis we have recognized the presence of a M tone but have not recognized the presence of a super H.

Leroy's analysis will be reviewed in 22.5 below. We think that a presentation of our own analysis will enable a better

understanding of the arguments relating both to Leroy's analysis and to ours. Thus we present below our own analysis of the Mankon tone system.

Mankon has a three tone system, H, M, and L, which has developed from an underlying two tone system of H and L.[1] Thus the mid tone in Mankon is a recent development in the language. The occurrence of this mid tone will be defined later.

## 22.2.1 Tone Patterns of nouns

Mankon nouns are made up of a noun prefix and a noun stem. The prefix can be either a vowel (V-), of the form, CV-, or a nasal, (N-) or zero, i.e., Ø. The prefix generally has an underlying low tone but there are a few nouns with with a floating H tone prefix (cf. 25.2.1).

Monosyllabic noun stems may have the following tone patterns:

(2) a. H    bú'    "chimpanzee"

    b. L    ŋù    "person"

Contour tones are found on monosyllabic nouns. However, these tones are treated as a sequence of two different level tones on one syllable (cf. 4.2). The following tone patterns were found on noun stems in isolation:

(3) a. HL    mô    "child"

    b. LM    tákùmbàŋ    "a type of juju"

The following patterns are found on disyllabic noun stems:

(4) a. H H    títá    "pepper"

    b. H L    títà    "father"

    c. M L    tīīŋ    "grandfather"

    d. L L    kîrà    "ant (of termite)"

The pattern, -LH was not attested in words that are used in isolation or in citation forms. In general this is because the H

tone lowering rule (cf. 4.8.1) whereby a preceding surface low tone lowers a following H tone to M. However, this pattern is found in constructions or grammatical phrases where the operation of this rule may be blocked in order to avoid ambiguity in grammatical meaning.

## 22.2.2 Tone Patterns of Verbs

There are two classes of verbs in Mankon: High tone verbs and low tone verbs.

The high tone verbs have the following tone patterns in isolation:

(5) a.    HL        ghâ        "give!"

    b.    H HL      kúrê        "chew!"

The following tone patterns are found on low tone verbs in isolation:

(6) a.    LM        lɔ̃        "go (away)!"

    b.    L M      lɔgê        "fetch!"

Just as in Bafut and the other Ngemba languages the verb /kɔ̀/ "take!" has a level low tone as opposed to the others that have a rising tone pattern and end with a glide when used alone in the imperative. This verb is an irregular verb and is only used in the second person and in the imperative mood:

(6) c.    L        kɔ̀        "take!"

The form of the verbs given in the above examples is the imperative. The imperative form of the verb is the simpliest of the verb forms. Its form reflects in a closer way the underlying tones of the two verb classes, i.e., the high tone and low tone classes. It would be noticed that the last syllable of the verb as given in the examples above ends in a glide. The last syllable of the high tone verbs end in a HL falling glide while that of the low tone verbs ends in a ML falling glide. Monosyllabic low tone

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verbs actually have a rising-falling tone pattern. Thus the tone of the verb form in (6a) above is as follows:

(7)    LML    lə̌              "go (away)!"

As in the case of Bafut (cf. 5.5.1 and 13.3), the low tone that causes the fall in the tone of the verb is purely an intonational feature. The low tone that ends the verb form disappears when another word comes after the verb, such that the verb is no longer in a prepause environment. The tones of the verbs in examples (4) and (5) above are as presented bellow:

(8) a.    H      ghá  mbàb  zâ          "give the meat!"
                 give meat  the

    b.    H H    kúrə́ mbàb  zâ          "eat the meat!"
                 eat  meat  the

    c.    LM     lə̌   ŋghɛ̀ɛ̀            "go away!"
                 leave go

    d.    L M    lə̀gə̄ mbàb  zâ          "fetch the meat!"
                 fetch meat  the

From the above data we can say that the underlying tone patterns of the high tone verbs are:

(9)    a.    H

       b.    H H

The pattern in (9a) is that of a monosyllabic verb stem while the H H pattern of (9b) is that of a disyllabic verb stem.

The low tone verb class is defineable in terms of the first tone of the first stem syllable. In each case, the first tone element is always low. In a monosyllabic stem, the low tone is the starting point of the rising tone. The general tone pattern can be seen as given below:

(10)    a.    LM

        b.    L M

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The pattern in (10a) is the rising tone of the monosyllabic stem while the pattern in (10b) is that of a disyllabic stem. The second tone in each of the above patterns is an underlying H tone that is realized on the surface as M because of the lowering effect of the preceeding low tone.

## 22.3 Tone Processes

Just as in Bafut and Bambili, there is considerable tone perturbation in Mankon. Perturbations in tones are caused by phonetic tone rules and morphophonemic tone rules or morphotonemic rules.

## 22.3.1 Downstep

There is downstep in Mankon but the downstep in Mankon is not automatic. There is therefore no downdrift although there may be a series of downsteps in a row.

## 22.3.1.1 Causes of Downstep

In general downstep in Mankon (and in the other Ngemba languages that we have studied) is caused by floating low tones. The following examples will serve to illustrate this point:

(11)     a. títá ˉ ˊsíŋê  → [títá 'síŋê]  "pepper of bird"

         H H L H H H  →  H H  'H H

         b. ˊkâˑ ˉ ˊbúˑ  → [kâˑ 'búˑ]      "(wine) calabash of
                                             chimpanzee"

         H H L H H  →    H    'H

The constructions in the examples above are associative constructions. The first nouns of these constructions, /títá/ "pepper" and /ˊkáˑ/ "(wine calabash," are both in noun class 1 and so the associative marker is a floating low tone. The floating H tone before the noun is the prefix tones. This simply grounds to

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the right on the noun stem where it is absorbed by the H tone of the stem . Thus it is the floating low tone of the associative marker that causes the following H tone of the second noun in the construction to downstep.

Another cause of downstep in Mankon is an underlying low tone that no longer surfaces as such. The following example illustrates this fact:

(12)    a. ghá ìshòmə́ → [ghá 'shómə́]    "give farm!"

        b. ghá àtì˘  → [ghá 'tì]      "give tree"

The underlying tones of the nouns in (12a) and (12b) are indicated to the left of the arrows. In isolation, both nouns have low tones: /ìshòmè/ "farm" and /àtì/ "tree". In a constructions as in (12), the citation low tones of the stem are raised to H thus partially reflecting the underlying tones of the noun stem. Reference should be made to 4.8.2 (35) for the derivation of the tones in (12a) above. The derivation of (12b), which is similar to that of (12a) is shown below:

(13)    a. ghá  àtì˘      underlying
        b. ghá  àtì       tone grounding
        c. ghá  àtì       tone absorption
        d. ghá  ˋtì       vowel deletion
        e. ghâ  tì        tone grounding
        f. ghâ  'tì       simplification and downstep

In (13a) the underlying tones are given. In c. the contour tone on the noun stem simplifies to H by the process of tone absorption. In (13d) we notice that the vowel prefix is deleted and in (13e) the low tone of the prefix grounds to the left on the verb stem syllable thus creating a falling tone. In (13f) the contour tone simplifies and thus causes the H tone on the noun stem to downstep.


22.3.1.2 H'H and H 'H Tones

As said earlier (cf. 14.2) the tones, H 'H and H'H are common grammatical tones in Ngemba languages. These tones result from

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underlying grammatical replacive tone patterns in verb forms and are also realized on some tense morphemes. They also occur in the associative construction. In the examples below, we present some of the words and constructions where these tones occur:

(14) a. mà ghá ˋ ˆ ˊkám�´ wâ → [mà ghá'ˆ 'kâm wâ]
                                              "I gave the crab"
         L  H L HL H H H  HL

         L  LHL H H  HL        → [ L   H'H   'H  HL]

   b. mà lɔ̀gə́ ˋ ˆ ˊkám˘wâ → [mà lɔ́'gə̂ 'kâm wâ]
                                              "I fetched the crab"
      L  L H L HL H  H H HL

      L  L HL H H  HL         →  L  H 'H  'H  HL

In the examples in (14) above the tones H'H and H 'H mark the remote past (P3) tense. The H'H contour tone replaces the H tone of the monosyllabic verb stem /ghá/ "give!" in (14a) and the H 'H tones replace the L H tones of the low tone verb /lɔ̀gə́/ "fetch!" in (14b). As can be seen in the above examples, the surface H'H tone pattern on the verbs comes from a LHL tone pattern that replaces both the underlying H and LH tone patterns of both the H and L tone verbs. For the derivation of the tones in the above examples, reference should be made to 14.2, examples (4) and (7).

The H'H contour tone also occurs in the future tense morphemes as shown in the following examples:

(15) a. mà mə́'ˆ 'ghá kámə́ "I shall give a crab"
        I  F1   give crab

   b. á á lá'ˆˊ ghɛ̀ɛ̄     "he shall/must go!"
      he  F3    go

In the examples in (15) above, the tone of the future morphemes /mə́'ˆ/ (F1) and /lá'ˆˊ/ (F3) is the H'H contour tone. It is difficult to say what the underlying tones of these morphemes are. We may try to explain them only by positing floating tones as suggested in (16) below:

(16)    a. mà  ˉmə̀ˊghá ˉkámə́    "I shall give a crab"

         L  H LH   H H H H
         L    HLH    H  H H  → [L H'H  'H H H]

        b. á  á ˊ là ̄  ghê̂έ     "he will go"

         H  H  H  L H  L H
         H  H    HLH    L H  → [L H  H'H  L M]

The  H'H  and  H 'H  tones  also  occur  in  the  associative
construction  as  indicated  in  the  examples  in  (17)  below:


(17)    a. ǹtə́m'ˉ  'fúú      "heart of mouse"
           heart   mouse

        b. àká'ŋə́  'fúú      "pan of mouse"
           pan     mouse

The  underlying  tones  of  the  constructions  here  above  can  be
posited  as  seen  in  (18)  here  below:


(18)    a. ǹtə́mˋ ˊ  ˉfúú
           L H L H   H H H
           L HL  H   H H H
           L H  'H  H H H  → [L H'H    'H H]

        b. àkáŋə̀ ˊ  ˉfúú
           L H L H  H H H
           L H LH   H H H  → [L H 'H   H H]

In  (18a)  and  (18b)  the  underlying  tones  and  the  processes
that  produce  the  phonetic  or  surface  tones  of  the  constructions
are  presented.  The  derivation  in  (18a)  is  explained  below:


(19)    a. ǹtə́mˋ ˊ  ˉfúú        underlying
        b. ǹtə̂m  ˊ  ˉfúú        tone grounding
        c. ǹtə̂m  ˊ   fúú        tone coalescence
        d. ǹtə̂m 'ˉ  'fúú        simplication and downstep
        e. ǹtə́m'ˉ   'fúú        tone grounding

In  (19a)  we  can  note  in  particular  the  first  two  floating
tones,  which  are  respectively  the  last  tone  of  N1  and  the  tone  of
the  associative  marker.  The  other  floating  tone,  as  we  have
already  noticed  before,  is  the  prefix  tone  of  N2.  In  b.  the
floating  tone  of  N1  is  grounded,  thus  creating  a  HL  contour  tone
on  the  N1  stem.  In  c.  the  floating  tones  of  the  associative

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marker and of the N2 prefix coalesce. In d. the contour tone simplifies, thus causing the following H tones to downstep. In e. the floating tone of the associative marker, which is now a 'H (downstepped high tone), is grounded on the stem of N1, where it creates a H'H contour tone. We notice that there is a double downstep on the N2 stem. It is not certain what the cause of this double downstep is but it has been seen before that a H'H contour tone regularly causes the following H tones to downstep.[2]

The derivation of (18b) is explained in (20) here below:

(20)    a. àkáŋà       ´    ´fúú      underlying
        b. àkáŋà       ´    fúú      tone coalescence
        c. àkáŋǎ          fúú      tone grounding
        d. àká'ŋé      'fúú      simplification and downstep[3]

The underlying tones are given in a. In b. the H tone of the associative marker and that of the N2 prefix coalesce. In (20c) the H tone of the associative marker grounds onto the last tone of N1 creating a LH contour tone there. In d. the contour tone simplifies causing the following H tones to downstep. Here too we notice that the H tones of the N2 stem are realized as a double downstep. Here again it is not clear what causes this second downstep.[3]

## 22.3.2 Phonetic Pitches

As we have already seen above, there can be a series of different level pitches in a Mankon construction. This has nothing to do with downdrift since there is no downdrift in Mankon. The following example shows that there can be as many as six different level phonetic pitches in an utterance.

(21)        [bɨló'˞m  'bɨ  'mó  'ŋwá]       "husbands of the child"

            L H'H     'H   'H    'H

$$
\begin{bmatrix}
- & & & \\
 & - & & \\
 & & - & \\
 & & & - \\
 & & & & - \\
- & & & \\
\end{bmatrix}
\begin{matrix}
1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6
\end{matrix}
$$

     More will be said about tone pitches and their relative
heights later on (cf. 22.4.2). What is important to note here is
the extent of downstep in Mankon.


## 22.4 Mid tone in Mankon

     As mentioned earlier, there is a phonemic mid tone in Mankon.
This  third  tone has developed from the historical underlying two
tone (H and L) system.  The mid tone in Mankon is a fairly  recent
develoment.    This would explain why its occurrence in the lexicon
of the language is not yet as  extensive  as  in  say,  Limbum  or
Bambili.    A  similar  development  has  been  reported for the Gǔ
language spoken in Porto-Novo.  In a bid to explain the status  of
M tone in this language, Rouget says:


          "Le  plus  raisonnable serait de penser qu'en gǔ on
          est en présence d'un système à trois  tons  qui  en
          est  ou  bien  à  sa  naissance,  ou bien à sa fin.
          C'est-à-dire où le contraste entre ton moyen et ton
          bas  n'a  pas  encore  acquis  la  plénitude  de sa
          fonction distinctive ou l'a  au  contraire  presque
          totalement perdue." (Rouget, 1963:220)   ˙

     The  situation  that  Rouget  is  describing  for  Gǔ is more
marginal than what we have in Mankon.    However,  what  we  should
notice is the fact that M tone is a historical development.


## 22.4.1 Occurrence of M tone

     We do not find many mid tone words in Mankon.  That is why we
say that mid tone in Mankon is recent and that it is still in  the
process  of  developing.    When  the  number  of mid tone words in

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Mankon is compared with those in, say, Limbum or Bambili, it will be seen that the mid tone in these languages is more developed. Even if at this stage there are not many mid tone words in the lexicon of Mankon, its realization in syntax, or constructions and grammatical words is enough evidence for the recognition of its phonemic status in the language.

The following nouns, for example, have mid tone in their citation forms:

(22)    a. tīìŋ        "grandfather"
         b. tákŭmbə̀ŋ  "a type of juju"

As we said above (cf. 22.2.2) the underlying LH pattern of the low tone verbs is generally realized as LM tone pattern on the surface. This means that the second tone of a disyllabic low tone verb is a mid tone. The following constructions support our analysis:

(23)    a. lɔ̀gə̄ mó wíŋə̀    "take that child"
         L M  H  H L

```
⎡   ‒ ‒ ⎤ 1
⎢   ‒   ⎥ 2
⎣ ‒   ‒ ⎦ 3
```

    b. yĭ nzâ        "come and see!"
        LM   HL

```
⎡    ‒  ⎤  1
⎢ ‒     ⎥  2
⎣ ‒  ‒  ⎦  3
```

As can be seen from the examples in (23) above, from the mid tone it is possible to go higher to a normal high tone as the diagrams immediately below the constructions indicate. Other constructions that indicate the reality of the mid tone in Mankon are as follows:

(24)   a. ìkù'ū tsá   "the colocoshia"

        L L M H

    b. àfū kə́   "what leaf?"

        L LM H

c. ŋ̀kừŋ fúú   "tail of mouse"

   L LM H H

The examples in (24) above show that after a low tone one could go to mid and from mid it is possible to go up to high tone.

22.4.2 M tone and other tones

There is a contrast between M and the other tones in Mankon as can be seen in the following constructions:

(25)   a. àtɨ̄ bɨ̀'lóm 'tsá   "the tree of husbands"
             L LM H 'H   'H

```
 ┌        —          ┐ 1
 │             —     │ 2
 │      —         —  │ 3
 └ —                 ┘ 4
```

         b. ǹdāà kām mó 'zá   "the house of crab of child"
             L ML M   H 'H

```
 ┌         —         ┐ 1
 │              —    │ 2
 │    —    —         │ 3
 └ —    —            ┘ 4
```

         c. ǹdá'á 'kám 'mó 'já   "the houses of crab of child"
             L H'H 'H   'H 'H

```
 ┌   —               ┐ 1
 │      —            │ 2
 │         —         │ 3
 │            —      │ 4
 │               —   │ 5
 └ —                 ┘ 6
```

         d. àtú' 'mó ghò wīŋ̀ə   "the head of this child of yours"
             L H'H 'H L M L

```
 ┌   —               ┐ 1
 │      —            │ 2
 │         —         │ 3
 │               —   │ 4
 └ —         —     — ┘ 5
```

In the above examples, the diagrams that plot the relative heights of the tones in each utterance help us to see the

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contrasts between M tone and the other tones: L, H, 'H and H'H.
It should be said here that the numbering in the diagrams below
the examples in (25) do not represent absolute pitch heights. The
pitch levels in each construction are ranked for purely
comparative purposes. However, as a matter of general
observation, the following value could be given to the level tone
pitches:

$$
(26) \quad
\begin{matrix}
\text{H} : \\
\text{'H}: \\
\text{M} : \\
\text{L} :
\end{matrix}
\left[
\begin{matrix}
- & & \\
& - & \\
& & - \\
& & -
\end{matrix}
\right]
\begin{matrix}
1 \\
2 \\
3 \\
4
\end{matrix}
$$

Despite this general tendency, it would appear that in an
utterance where there is a series of downstepped high tones, as in
(21) or (25c) above, the value of each 'H changes since the
integer between each 'H and the next in the series is smaller than
the normal integer, which is the step between the normal H tone
and a following 'H. The pitch values in such a situation would
have to be determined in an experimental phonetics study. For the
moment what we have said here is only on the basis of perception
by the ear.

In (25a) and (25b), we notice that one can go from L to M and
then from M to H in the same utterance. This is thus evidence of
the existence of a real M tone in Mankon. This fact is supported
by the following quote:

> "Ds is distinct from MID, since following LO there
> is only one contrasting tone higher in pitch,
> whereas in a language with HI, MID, and LO, one
> could go up to either MID or to HI following LO."
> (Schuh, 1978:239)

Comparing (25b) and (25c), we notice clearly the difference
between M 'H and H. The underlying tones of both strings are
respectively as follows:

(27) a. ǹdáà ̀kám ̄mó ̀zá ̀
L H L L H H H L L HL HL → [L M L M H 'H]

b. ńdáà ˊ ˋkámá ˋ ˋmó˙ já˙
L H L H H H H H L L H L H L ˃ [L H 'H 'H 'H 'H]

In the examples in (25) above, we can see the difference
between H and 'H and also the difference between L and M. We
notice that there is a difference between H and H'H and 'H. In
(25c) we can see the extent of downstep in an utterance. We have
a series of downsteps in this utterance. Each downstep in the
series originates from an intervening floating L tone, as can be
seen in (27). This last fact is again shown in (28) below where
the derivation of (25c) is given:

```
(28)   a. ńdáà    ˊ  ˊkám˙  ˋ  ˋmó˙ já˙     underlying
       b. ńdáà    ˊ   kám˙  ˋ  ˋmó˙ já˙     tone coalescence
       c. ńdáà       kám˙   ˋ   mó˙ já˙     tone grounding
       d. ńdá'á      'kám˙  ˋ   mó˙ já˙     simplification and double ds[4]
       e. ńdá'á      'kám      ˋmó˙ já˙     tone grounding and absorption
       f. ńdá'á      'kám       mó˙ já˙     tone coalescence
       g. ńdá'à      'kám       mó˙ já˙      tone grounding
       h. ńdá'á      'kám      'mó˙ já˙     simplification and downstep
       i. ńdá'á      'kám      'mô  já˙     tone grounding
       j. ńdá'á      'kám      'mó 'já˙     simplification and downstep
       k. ńdá'á      'kám      'mó 'jâ      tone grounding
       l. ńdá'á      'kám      'mó 'já      simplification
```

In (27a) the underlying tones are given. Special note should
be taken of the intervening floating L tones. The construction
includes two associative constructions: /ńdáà ˊ ˊkám˙/ "house of
crab" and /ˊkám˙ ˋ ˋmó˙/ "crab of child" In c. the H tone of the
associative marker grounds to the left where it creates a LH
contour tone on the preceding syllable. In d. this contour tone
simplifies causing a double downstep.[4] The first downstep is
understandable but, as we have earlier said, the reason why there
is a second downstep is not understood. In e. the floating tone
of N2 stem grounds and is absorbed by the stem tone. In f. the L
tone of the second associative marker and the L tone of the prefix
of the second N2 coalesce. In g. this L tone grounds on the
second noun, which is N1 of the second associative construction,
where it creates a contour tone; and in h. this contour tone
simplifies and causes the following tones to downstep again. In
i. the L floating tone of the third noun is grounded on its stem
where it creates the contour tone that eventually simpifies in j.

and so causes the following tones to downstep again. In k. the floating L tone of the demonstrative grounds on the stem, creating the contour tone that simplifies in l.

This derivation thus shows the cause of each downstep in the series. This also goes to show that downstep in Mankon (and in the Ngemba languages in general) is not automatic. It is caused by floating tones or the simplification of contour tones.

It is important to note that a downstep does not permit an immediately following tone that is higher than itself. Thus, after a real downstep a H tone is not permitted immediately after it. Immediately after a real downstep we have the following alternatives: another tone of the same height, another downstep, a M, or a L tone. But, as we have seen above, a M tone permits a H tone after itself.

As we saw in 4.5, a M tone also resets the pitch level in Mankon after a 'H (cf. T-rule 13).

22.5 Review of previous analysis of Mankon tone system

Jacqueline Leroy has done a considerable amount of work on Mankon. The works I shall address are Leroy, 1979:55-71, A la recherche de tons perdus: structure tonale du nom en ngemba and Leroy, 1977, Morphologie et classes nominales en mankon. I shall limit myself mostly to some of the areas of her analysis that are different from mine.

As we said above in 22.2, Leroy analyses Mankon as having two phonemic tones, H and L. She does not recognize the existence of a mid tone in Mankon. She finds that there is a super high tone or upstepped high tone in Mankon.

In my analysis super high tone has not been recognized. What Leroy calls super high tone is simply a normal high tone. Leroy's main problem stems from two facts: she fails to realize both the existence of a mid tone and the full extent of downstep in Mankon. (We have seen the extent of downstep in (28) above). A look at some of her examples will illustrate what I mean and thus, make the point clear.

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We give here below some of the examples taken from Leroy (1977:73):

(29) a. /Ø-fú ˋ Ø-síŋ´/   [fúꜜ síŋé]   "mouse of bird"
            H↑H ꜜH H

    b. /ì-tì´ í´ Ø-síŋ´/   [ìtɨ̄ síŋé]   "trees of bird"
            L LH H H

    c.   [àtɨ́á bꜜíllómè]   "tree of husbands"
                 L LH ↑H ꜜH L

The phonetic realizations of all the examples above are enclosed in square brackets by Leroy, which means that she gives a phonetic representation of the pitches concerned.

Concerning the example in (29a) the second H tone of N1 of the associative constructtion is not a super high, tone but a normal high tone. As far as I could hear my informant, this tone is a normal high, which is not different from the preceding H. This is also corroborated by evidence from Bafut, Bambili, Bambui and Nkwen and other related languages (cf. 8.2 (4a) and (19)). The following tones of the N2 are simply downstepped high tones. Using the underlying tones that Leroy herself gives, the correct derivation of this construction can be seen below:

(30)   a. fú´ ì´ síŋ´   underlying
       b. fú´ ˋ ˋ síŋ´   vovel deletion
       c. fú´ ˋ síŋ´   tone coalescence
       d. fú̂ síŋ´   tone grounding
       e. fú´ ꜜsíŋ´   simplification and downstep

In (30) above we see the underlying tones as given by Leroy. In b. the vowel of the associative marker drops out leaving its tones floating. In c. the floating tones of the associative marker coalesce and in d. the resultant L tone grounds to the left forming a HL contour tone on the second tone of N1. In e. the contour tone simplifies and thus causes the H tones of N2 to downstep. This correctly gives the tones of the construction as seen below:

(31)   [fú´ ꜜsíŋé]   "mouse of bird"

This gives the tones that are natural to the construction and which conform to what happens in the tone system of Mankon (cf. the examples in (11a) and (11b) above) and other Ngemba languages.

The correct tones of (29b) and (29c) above are given in (32) below:

(32)   a. [ìtì síɲé]   "trees of bird"
           L LM H H

        b. [àtìɜ̄ bí'lómə̀] "tree of husbands"
           L LM H 'H L

The tones that Leroy gives as LH and L H for N1 in (29b) and (29c) are respectively LM and L M as seen in (32a) and (32b). The tone on the prefix of N2 in (29c) is a normal high tone as seen in (32b) and not a super high tone as she asserts. The tone following the N2 prefix is a 'H. This tone is caused by the simplification of a contour tone created by the grounding of the floating tone of the associative marker of N1. This can be seen in the proposed derivation below:

(33)   a. àtìɜ̄ ì ˉ bìlómə̀   underlying
        b. àtìɜ̄ ˉ ˉ bìlómə̀   vowel deletion
        c. àtìɜ̄ ˉ   bìlómə̀   tone coalescence
        d. àtìɜ̄   bìlómə̀   tone grounding
        e. àtìɜ̄   bìlómə̀   tone lowering
        f. àtìɜ̄   bí'lómə̀   simplification and downstep

The derivation of the tones of the construction is clear enough to show us how we arrive at the correct surface tones of (32b).

What has been said about Leroy's analysis in the examples given in (29a), (29b) and (29c) is also true for the analysis that she has given in Leroy, 1979:58-59. Her examples (7c, 8c, and 9c) on page 58 are given in (34) here below:

(34)　　　a. ìfígí bìík'úmə́　　　"and took nobles"
　　　　　　 L H H　↑H 'H H

　　　　　b. n̂dìóg'í nìl'óŋə́　　　"and took a harp"
　　　　　　 L ↑H 'H　H 'H H

　　　　　c. mà lõ̀ ndògì mìk↑ómə́　"I took a long head basket"
　　　　　　 L LH　 L L　H ↑H H

Leroy (1979:61) explains the tone processes involved in the examples given in (34) above by the following rules:

```
R4a:              H ↑H / L __
  b:   HL H  →   ↑H 'H / LH___
  c:               H 'H / elsewhere
```

By R4a: the tones of the noun in (34c) are derived as follows:

(35) (mà lõ̀ dògì) mìkómə́ → (mà lõ̀ ndògì) mì↑kómə́

By the above rule then the simplification of the contour tone on the noun in the above example raises all the following H tones of the noun stem to ↑H and thus yielding H ↑H H, as indicated above.

By her R4b the HL contour tone in (34a) simplifies to super H followed by a normal H after one or more H tones which are preceded by L. Thus (ìfígí) bìkúmə́ yields (ìfígí) ↑bì'kúmə́.

I shall not go into her R4c but will go ahead to give our analysis of the above data.

The correct tones of the constructions that are given above should be as represented in (36) here below:

(36) a. /ìfígí bìkúmə́/ → [ìfígí bì'kúmə́]　　　"and took nobles"
　　　　 L H H HL H H　　 L M M　H 'H H

　　　b. /n̂dògì nìlóŋə́/ → [n̂dó'gí nì'lóŋə́]　　"and took a harp"
　　　　 L HLH HL H H　　 L H 'H　H 'H H

　　　c. /mà lo ndògì mìkómə́/ → [mà lõ̀ ndògì mìkómə́] "I took long
　　　　 L LH　 L L HL H H　　　 L LM　 L L　M H H　head basket"

The tones of the strings to the left of the arrow in the above examples are intermediate tones. These forms are given so

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as to highlight the rules that are[3] immediately relevant in the derivations of the surface tones. The underlying tones and all the rules involved in each string will be given in the derivations below.

The derivation of the tones of (36a) is given in (37) here below:

(37)   a. ì-fígì bìkùmá   underlying
          b. ì-fígì bìkùmá   tone spreading to the right
          c. ì-fīgī bìkùmá   tone lowering
          d. ì-fīgī bìkùmá   tone tone spreading to the left
          e. ì-fīgī bìkúmá   tone absorption
          f. ì-fīgī bì'kúmá   simplification and downstep

In (37a) the underlying tones are given. In b. the H tone of the verb spreads onto the L tone of the noun prefix where it creates a HL falling tone. In c. the L tone of the verb prefix, (ì-), lowers the H tones of the verb to M tone (cf T-rule 1). In d. the H tone of the noun stem spreads leftwards into the preceding L tone where it creates a LH contour tone. In e. the LH contour tone simplifies to H by the process of absorption. In f. the HL contour tone on the noun prefix simplifies and causes the following H tones of the noun to downstep.

The derivation of the tones in (36b) is given here below:

(38)   a. ñ-dɔ̀gə́   nìlòŋə́   underlying
          b. ñ-dɔ̂gə́   nìlòŋə́   CNS tone pattern
          c. ñ-dɔ̂gə́   nìlòŋə́   tone spreading
          d. ñ-dó'gə̂   nìlòŋə́   simplification and ds
          e. ñ-dó'gə̂   nìlŏŋə́   tone spreading to the left
          f. ñ-dó'gə̂   nìlóŋə́   tone absorption
          g. ñ-dó'gə̂   nì'lóŋə́   simplification and downstep

The verb forms in (36a) and (36b) are the past narrative consecutive tense (cf. 18.2). In (38b) we notice that the H H verb tone pattern of the CNS (consecutive construction) is superimposed on the underlying L H tone pattern of the verb stem and thus creating a HL H tone pattern on it (cf. 4.8.13). In (38d) the contour tone on the verb stem simplifies and causes the following H and HL to downstep. In e. there is regressive tone spreading as in (37d) above. In f. the LH contour tone simplifies

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by absorption as in (37e). In g. the contour tone on the noun prefix simplifies and causes the following tones of the noun stem to downstep.

The derivation of the tones of (36c) is given (39) below:

(39)   a. mà lŏ ǹ-dɔ̀gə́ mɨ̀kômə́   underlying
    b. mâ lŏ ǹ-dɔ̀gə̂ mɨ̀kòmə́   tone lowering
    c. mâ lŏ n-dɔ̀gə̂ mɨ̀kòmə́   desyllabification and
                                       tone deletion
    d. mâ lŏ n-dɔ̀gə̂ mɨ̂kòmə́   tone spreading
    e. mâ lŏ n-dɔ̀gə̂ mɨ̂kômə́   tone spreading to the left
    f. mâ lŏ n-dɔ̀gə̂ mɨ̂kómə́   tone absorption
    g. mâ lŏ n-dɔ̀gə̀ mɨ̂kômə́   tone dissimilation
    h. mâ lŏ n-dɔ̀gə̀ mɨ̄kómə̄   tone lowering
    i. mà lŏ n-dɔ̀gə̀ mɨ̄kómə̄   tone simplification

The tone rules that operate in each step of the derivation are given in (39) above. We notice that in c. the nasal prefix of the verb desyllabifies and loses its tone (cf. 4.8.5). In this case, it functions simply as a nasal consonant and forms the coda of the preceding open syllable. In g. the H tone of the verb stem changes to L tone by the dissimilation tone rule (cf. 4.8.9). In i. it is important to note that the simplification of a ML contour tone does not cause downstep.

In the derivations and discussion we have had so far, we have shown the correct tones of the examples given in (29) and (34). The derivations have shown why we have analysed Mankon as having three tones, H, M and L. We have also shown the extent of downstep in Mankon. We have also noticed that quite a number of phonetic and morphophonemic tone rules operate to produce the surface tones. These rules were necessary to explain the derivations.

Given the rules that are operating in the Mankon tonal system, it is more reasonable and, therefore, more natural to recognize a M tone in the language. The tone lowering rule, i.e., T-rule 1 (cf. 4.8.1) is of general application in Mankon. T-rule 2, that is the downstep rule (cf. 4.8.2) also applies very extensively in Mankon. We can notice that using only these two rules (and the simplification rule, which Leroy also uses,) we can easily explain the output tones in (36a) and (36c). In (36a) the

L tone of the verb prefix lowers the H tones of the verb stem to M
while the simplification of the HL contour tone on the noun prefix
to H causes the following H tones on the noun stem to downstep.
In (36c) the preceding L tone on the second syllable of the second
verb lowers the HL tone to ML, which eventually simplifies to M.
In this process of simplification the L tone is simply deleted in
order to avoid the application of T-rule 1, which, had it been
allowed to apply, would have lowered the following H tones of the
noun stem. Since the L tone dropped out, the H tones remained
unaffected.

Leroy's analysis, which recognizes the existence of a super
high tone in the language is not tenable. Postulating a super
high tone in Mankon would be very difficult to explain, given that
the tone rules in the language do not favour or explain it easily
or naturally. Leroy (1977:108-109, 137-143). and by her R4a-c
rules, attributes both downstepped H tone and the super H tone to
contour tone simplication. To me it is natural to see that
downstep in Mankon comes from contour tone simplification but, to
say that super high tone comes from contour tone simplification is
less natural in this language. As we have seen in our analysis of
Bafut, and as it will be noticed in the other Ngemba languages,
the downstep rule, i.e., T-rule 2, is of general application and
thus indicates that this rule is natural in these languages. We
saw in 4.8.2 that downstep in Bafut (and also in the other Ngemba
languages, as we shall see in the rest of the study) is caused by
the simplification of contour tones. And this is why we think
that it is more likely, and therefore more natural,[5] that contour
tone simplification would result in downstep rather than in a
super high tone.

Although in some of the languages where extra H tone exists,
its realization is related to a falling tone, its realization in
Mankon, by Leroy's description, is different or rather unique.
Faraclas (1984:14), who recognizes a similar tone in Obolo, says
that the extra H tone in Obolo comes from two sources: "lexically
it is derived from a falling tone, while grammatically, it has
developed as the result of stress patterns in the language." In

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Mankon we find that Leroy's super high tone does not originate from a falling tone neither can it be said to have developed from any kind of stress pattern since Mankon does not seem to be a stress accent language.

Pike (1970:97) shows that in various languages extra-high tone is conditioned by a following low tone and that it is limited to the negative and a few other contexts. But we notice from Leroy's analysis that her super high tone is neither related to the negative nor is it limited to any defined grammatical context. It might be argued that Leroy's RT 4 has an underlying low tone, as can be seen below and that it is this L tone that would condition the super H tone. However, it should be said that, in the examples given by Pike to illustrate the extra high tone that develops from the fluence of L tone, the conditioning L tone is realized on the surface.

Leroy's tone rule, RT 5, by which she converts a H'H to super H followed by a normal H tone is hard to perceive and thus hardly natural. She starts with RT 4 (tone rule 4) before going to RT 5:

```
RT: 4   HL H → H ↓H
RT: 5   H↓H  → ↑H↓H
```

In her notation, the down arrow, ↓, can represent either a downstep or a return to a normal high tone while the up arrow, ↑, represents a super high tone. RT 4 is a natural phonological rule in the Ngemba languages so this is understandable. But to say that after RT 4 the resultant H↓H is converted to ↑H↓H by RT 5 is questionable. Why will RT 5 be needed at all? This rule tends to make the realization of super high tones a rule rather than an exception or at the most a phonomenon of limited occurrence. According to Leroy's analysis, there are a lot of super high tones in the language, which is rather abnormal. This makes the Mankon situation rather different or unique. In the other languages where the super high tone has been attested, this tone is highly marked and mostly limited to some grammatical particles or to some type of stress or accent. Faraclas (1984) says that in Obolo H and L are found in all environments, but extra high is never found

over verb stems and occurs 'only extrmely rarely over noun prefixes. The following quote underscores our point:

> In Acatlán Mixtec and Engenni extra high tone results from upstep, and, in most of the other languages mentioned above, extra high tone is principally the result of some type of stress, accent, or intonational phenomenon. In these languages, extra high tone has, in some cases, become bound to certain grammatical particles. (Faraclas, 1984:13)

Schuh (1978) says that in Hausa the extra high tone is an intonational feature. The effect of question intonation is to suspend downdrift and raise the last high tone of the phrase to an extra high pitch with a sharp fall.

Following what has been said above about the source of extra high in the other languages, we see that its realization in Mankon, as described by Leroy, is different. In Mankon Leroy's super high tone is not related to intonation nor is it limited to grammatical particles. It is obvious that this tone is not related to any stress pattern in Mankon either. If what Leroy calls super high is fairly extensive, as can be noticed from her rules, it is unlikely that her super high is a real extra high such as attested in the other languages.

Another problem with her analysis is the fact that Leroy says that the down arrow can represent both downstep or a normal high tone (1977:72). This creates a situation for confusion since it makes it difficult to distinguish between her H tone and 'H. If by this she means that at a certain point H and 'H are phonetically identical, then there is obviously a potential problem here. If this is really her point, then this is hardly perceivable in Mankon because there is definitely a difference between a normal high tone and a downstep. In Mankon (just as in the other Ngemba languages) downstep is lower than a normal high tone.

Leroy's analysis requires five tone rules (not counting tone simplification) just to explain the super high tone in her examples given in (29) and (34). The rules required are R4a, R4b,

R4c, RT 4 and RT 5. These rules also require other tone rules, for example, tone simplification. This makes her analysis rather complex and thus complicated. In our analysis the fact that we have recognized the existence of a M tone makes it possible to use only two tone rules (not counting tone simplication), T-rule 1 and T-rule 2, to explain the tones in the same examples reinterpreted and given in (31), (32) and (36). Our analysis is therefore comparatively much simpler than that of Leroy.

Considering the unnecessarily complicated rules that are needed to explain the existence of the super high tone in Mankon, it is very unlikely that this tone is a natural tonal phenomenon in the language. This is why we think that this super high tone is neither needed nor attested in mankon. It is evident in our analysis that this super H is not one of the tone processes in Mankon.

Reconsideration of Mankon super H tone

A preliminary instrumental analysis of Mankon data got from a different informant reveals that the second H tone in example (29a) is actually higher than the first H tone. This seems to support Leroy's argument for the existence of a super H tone in Mankon. However we still need to study more data in other to say what is actually happening with this tone. We still maintain our analysis of the other examples.

An instrumental analysis of her example in (34a) shows that her analysis is questionable. The results of the instrumental analysis tend rather to support our analysis. We present here the relative heights of the different segments of the utterance in hertz:

ì	fĩ	gĩ	bì	'kú	mâ	"and took nobles"
125-130	154	163	190-199	174-179	167-171	

According to Leroy, the tones in the above example are: L H H ↑H 'HH. By her analysis she says that a downstep after a super H tone is a return to a normal H. i.e.. a 'H after a ↑H has the same

pitch as a normal H. Consequently we would expect the 'HH tones on the noun stem to be at the same pitch level as the tones on the verb stem. As can be noticed, the hertz readings clearly show that this is not the case.

According to our analysis, the tones in the above string are: L M M H 'HH. The tones, MM, are actully HH that have been lowered by T-rule 1 to MM (cf. (37) above). We have said that M tone (lowered H) is different from 'H. This is proved by the above instrumental analysis. We see that the syllable, /fī/ (with M) is 154 herts while the syllable, /'kū/ (with 'H) is 174-179 hertz.

If we agree with Leroy that there is a super H tone in Mankon, it follows that an analysis of Mankon tone levels would include the following:

$$
\begin{array}{l}
\uparrow H \\
H \\
'H \\
M \\
L
\end{array}
\left[
\begin{array}{cccc}
- & & & \\
& - & & \\
& & - & \\
& & & - \\
& & & & -
\end{array}
\right]
$$

Leroy does not account for either the pitch difference between H and 'H or the existence of a lowered H (which we call M tone because it has the phonetic properties of a phonemic M tone). If Leroy recognizes that the tones in /fúū/ "mouse" are H H, she ought to recognize that the tones in the stem of /bìfūū/ "mice" are not as high as the H tones in "mouse" and thus account for this difference. But we find that she has failed to account for this tone level in her analysis.

We think that the question of super H in Mankon still needs a lot of investigation. We need to know, for example, whether in a situation of H↑H it is the first H that is being lowered or the second H that is being raised. We also may want to know whether this supper H tone is a question of dialectal variation. Since according to our studies and other surveys the super high tone is very rare in the languages around, it could be that our difference with Lerroy results from dialectal variation in Mankon.

22.6 Mankon tone orthography

From the analysis of the Mankon tone system we see that tone plays an important role in the language. As we saw in (25b) and (25c), words or constructions can be differentiated solely by tone. This means that tone has to be taken into consideration in any writing system proposed for the language. Tone therefore has to be written. The question is to decide which tones to mark.

Surface tones rather than underlying tones should be marked. For example, in the dictionary words like, /ìshòm/ "farm", /àtì/ "tree", /ŋàm/ "animal", etc., would be marked as shown rather than their underlying tones: /ìshòmə́/, /àtì/, and /⁻ŋàm`/. The changes that the tones of these words undergo in constructions would be marked as heard. As we saw in the Bafut experiment, tone marks that are not read as written do not help the reader much. Since underlying tones change depending upon the context in which they are used, it is more helpful to mark surface tones.

Considering L and H tones, it would be seen that H tone is relatively less stable than L tone. This is because of the effect of downstep in Mankon. As we have seen in our analysis, there can be series of downstepped high tones in a single utterance such as in example (21) above. In our study we found that L tone is more stable since there are no downstepped low tones. Given this stability factor we would say that L tone should be marked and that H tone should not be marked.

Considering M tone, we would say that it should not be marked either. This is because it is almost like H tone. Since, as in a number of other languages, it is a derived tone, it is not easily perceived by the learner. It also follows that downstep should not be marked.

The contour tones that are a combination of L and H tones should be marked. This means that LH which is actually LM should be marked as well as HL. The contour tone 'HL should be marked as HL. The contour tone H'H should not be marked since neither H tone nor 'H is to be marked.

Therefore the tones to be marked in Mankon are: L, marked /ˇ/ HL, marked /ˆ/ and LM, marked /˜/. In view of the fact that Mankon tone system is similar to that of Bafut it is likely that this tone orthography would work well for Mankon. This is also based on the experience from the other languages like Limbum. However, with tests and experience in the writing and teaching of Mankon, any limitations of this proposed system would be noted and possible alternatives sought.

The ideal tone orthography is one that is efficient enough to make the reading and writing of the language easy for the native speaker who is learning to read and write his language. This proposed tone orthography is designed mainly with the native speaker in mind.

Notes to Chapter Twenty-two

[1] I am thankful to Mr. Frederick Fon, my informant for all his patience and hard work during the many long working sessions that we had together. Mr. Fon lives in Alabukam, Mankon village but works in Bamenda.

[2] Given what is happening in the derivation in (28), it is perhaps more probable that the second downstep is also caused by another contour tone simplification. In this case, the derivation of the tones of the construction would be similar to that of (20). The underlying form of N1 would be /ñtémè/.

[3] In the associative construction, some people would say /àká'ŋê fúú/, especially in fast speech. However, when I asked people to repeat, they would be more careful and so said it most of the time as, /àká'ŋê 'fúú/.

[4] What is happening in this construction is similar to what we have said about the example in [3] above. /ñdä'á 'kàm/ may be said /ñdä'á kám/ by some speakers. However most of the people would say the former.

[5] We do recognize the fact that our argument that both simplification and downstep must take place in one synchronic step (cf. 4.8.2) describes a rule which, though natural synchronically, might not be a natural diachronic rule, as Hyman and Schuh (1974:93) also say. However, since we are concerned with synchronic rules here our downstep rule is relevant and thus still preferable to Leroy's RT 5.

Chapter Twenty-three

BAMBUI TONE

23.1 Introduction

Bambui, also called Mbui, is one of the Eastern Grassfields
Bantu languages. It belongs to the Ngemba sub-group and it is
spoken in the North West Province of Cameroon. The Atlas
Linguistique du Cameroun (1983:362) classifies it as a dialect of
Bambili under the number 914. However, we do not consider Bambui
as a dialect of Bambili. This is supported by the classification
of linguists like Stallcup (1977:54) and Kay Williamson (1971)
where Bambui is treated as one of the Ngemba languages. Kay
William treats Bambui and Bambili as different languages. As we
shall see in the analysis below. the differences in the tone
systems of Bambui and Bambili are such that make it reasonable for
us to consider them as different languages rather than dialects of
the same language.

23.2 Lexical Tones

Bambui has a three tone system, H. M, and L, which is derived
from an underlying two tone system, H and L.[1]

23.2.1 Tone Patterns of Nouns

Bambui, like the other Ngemba languages, is a noun class
language. Thus the structure of the noun in Bambui consist of a
prefix and a stem. A majority of the noun stems are monosyllabic
and there is a good number of disyllabic nouns and a few with
three or more syllables. The Noun prefix in most cases has an
underlying L tone. However there are a few with M tone in their
citation forms. There are some nouns with no prefix. The prefix
can be zero (Ø), V, CV, or a nasal (N) as illustrated below:

(1) a. Ø   Ø-kɔ́ɔ́   "crab"

     b. V   à-bɔ̄ɔ̄   "corn fufu"

     c. CV   nì-bɔ̀'ɔ̀   "pumpkin"

     d. N   ǹ-jàŋ   "kernel"

The following citation tone patterns are attested on monosyllabic noun stems:

(2) a.   -H   -mɔ́   "child"
                 fɨ̀-nwó   "snake"
                 -nwí   "cutlass"

    b.   -M   m̄-būm   "eggs"
                 fɨ̀-nwī   "knife"

    c.   -L   -nwì   "god"
                 m̀-fɔ̀   "chief"

The following tone patterns were found on disyllabic noun stems:

(3) a. Ø-H H   -bú'ú   "chimpanzee"

     b. Ø-H 'H   -má'ghúm   "hawk"

     c. Ø-H L   -máà   "mother"

     d. M-M M   mɨ̄-tɔ̄ɔ̄   "market"

     e. L-M M   à-bɔ̄ɔ̄   "corn fufu"

     f. Ø-M L   -tāà   "father"

     g. Ø-L L   -nɔ̀ɔ̀   "meat"

     h. L-L L   ŋ̀-gɔ̀'ɔ̀   "stone"

We notice that there are no contour tones in the patterns in (2) and (3). We did not find contour tones in the citation forms of nouns. However, there are contour tones in certain grammatical constructions. As we saw in 4.2, contour tones are derived tones. In Bambui they result mostly from tone spreading and tone grounding (cf. 4.2).

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23.2.2 Tone Patterns of Verbs

The following tone patterns are found on monosyllabic verb stems in the imperative mood:

(4) a.   H   fɨ   "give!"

    b.   LH   gɨ̌   "go!"

The LH tone comes out on the surface as LM, just as in the other Ngemba languages that we have studied.

The following patterns are found on disyllabic verb stems:

(5) a.   H H   kwásə́   "help!"

    b.   L H   sàŋə́   "dry!"

As we saw above, the L H tone pattern comes out as L M on the surface because of the tone lowering rule (cf. T-rule 1). It is worth noting that the verbs in Bambui do not end in a falling tone, as we have seen in the other languages like Bafut.

23.3 Tone Processes

There are quite a number of tone processes in Bambui. Most of the tone processes that we have described for Bafut and the other Ngemba languages operate in Bambui. Some of the rules operating in Bambui will be presented in the following paragraphs.

23.3.1 Tone Lowering

The tone lowering rule, which we have seen in Bafut (cf. 4.8.1) and in the other Ngemba languages, also operates in Bambui. As we have seen in 23.2.2 above, the L H or LH pattern of the verb in its citation form becomes L M or LM by T-rule 1. The following examples further illustrate this process.

(6) a. bɨkɔ́ɔ́   →   bɨkɔ̄ɔ̄   "crabs"

    b. kɔ̌   fúú   →   kò fūū   "take mouse!"
       take

23.3.2 Tone Dissimilation

Just as we saw for Bafut, (cf. 4.8.9) there is tone dissimilation in Bambui. This tone process happens often in the L

tone verb where the underlying L H tone becomes L L before a H
tone of an object. This is illustrated in the following examples.

(7)   lɔ́ɔ̀ kɔ́ɔ́ → [lɔ́ɔ̀ kɔ̄ɔ̄]   "take a crab"
         fetch crab

The derivation of the surface tones in the above example is
given in (8).

(8) a. lɔ́ɔ̀ kɔ́ɔ́   underlying tones
     b. lɔ́ɔ̀ kɔ́ɔ́   dissimilation
     c. lɔ́ɔ̀ kɔ̄ɔ̄   tone lowering

In (8a) the underlying tones are given. In b. the H tone of
the verb becomes L before the H tone of the noun /kɔ́ɔ́/ as a result
of the dissimilation rule (cf. 4.8.9). In c. the H tone of the
noun is lowered by the preceding L tone on the verb.

Hyman and Schuh (1974) handle tone dissimilation (which they
term tone shifting, as can be concluded from the example they
give) as involving the two processes of tone spreading and
absorption. (1974)

23.3.3 Tone Spreading

(9) fí   nìŋgɔ̀m   yâ →   [fí nîŋgɔ̀m yâ] "give the plantain"
    give plantain the

In the above example we see that the H tone of the verb
spreads onto the L tone of the noun prefix where it creates a HL
contour tone.

23.3.4 Tone Simplification and Downstep

The following examples show the processes of tone
simplification and downstep in Bambui.

(10) a. fí   ˋmɔ́ˋ   → [fí ˈmɔ̂]   "give a child!"
         give child
     b. máˋghúm   fuu → [máˈghúm ˈfúú]   "hawk of child"
         hawk   child

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We notice that there are downstepped H tones in the above examples. Downstep, as seen in these examples, is caused by the simplification of the contour tones that result from the grounding of the floating tones that we seen in the underlying strings. A sample derivation will illustrate these tone processes. We present the derivation of (10b) in (11) below.

(11) a. má`ghúm ` fúú   underlying tones
     b. mâghûm ` fúú   tone grounding
     c. mâ'ghúm ` fúú   tone simplification and ds
     d. mâ'ghûm fúú   tone grounding
     e. má'ghúm 'fúú   tone simplification and ds

In (11a) the underlying tones are given. In b. the floating tone of the N1 stem grounds to the left where it creates a HL contour tone. In c. the contour tone simplifies and causes the following H tone to downstep. In d. the floatine tone of the associative marker grounds to the left on the N1 stem where it forms a HL contour tone. In e. the contour tone simplifies and causes the following H tones of N2 to downstep.

In the above derivation we see that apart from tone simplification and downstep, there is also the process of tone grounding. There are other tone processes in Bambui which we will see as we discuss the role of tone in grammar.

23.4 Tone in Grammar

As we have seen for the other Ngemba languages, tone plays an improtant role in the grammar of Bambui. We give below some of the areas in grammar where meaning differences are made solely by tone.

In the associative construction (cf. chapter eight) there are a lot of tone processes. One of the causes of tone changes is the tone of the associative marker. In Bambui the associative marker in noun classes 1 and 9 is a floating L tone. The marker in the other classes is a H tone. The difference in the tone processes involved in the following examples is brought about by the

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difference in the tone of the asscociative marker (which in each case is a tonal morpheme).

(12) a. m̀ví˟ ˋ ˋmɔ́˟ > [m̀vĩ mɔ̃]   "dog of child"
         dog   child

    b. m̀vi˟ ˋ ˋmɔ́˟ → [m̀ví'ˊ 'mɔ́] "dogs of child"
         dog   child

(13) a. m̀vá˟ ˋ ˋmɔ́˟ → [m̀vã mɔ̃]   "fowl of child"
         fowl   child

    b. m̀vá˟ ˋ ˋmɔ́˟ → [m̀vá'ˊ'mɔ́] "fowls of child"
         fowl   child

In the above examples the N1 in both (12a) and (13a) are from noun class 9 and so the associative marker in each case is a floating L tone. The derivation of (12a) is as follows:

(14) a. m̀ví˟ ˋ ˋmɔ́˟   underlying
    b. m̀vî ˋ ˋmɔ́˟   tone grounding
    c. m̀vî ˋ mɔ́˟   tone coalescence
    d. m̀vî   mɔ́˟   tone grounding to the left
    e. m̀vĩ   mɔ́˟   tone lowering
    f. m̀vĩ   mɔ̂   tone grounding
    g. m̀vĩ   mɔ́   tone simplification
    h. m̀vĩ   mɔ̃   tone lowering

In (14a) the underlying tones are given. In b. the floating L tone of the N1 stem grounds and creates a HL contour tone on the noun stem. In c. the floating tone of the N2 coalesces with the tone of the associative marker. In d. this floating tone grounds to the left where it is absorbed into the L tone of N1. In e. the HL tone on the N1 stem is lowered to ML by T-rule 1. In f. the floating L tone of N2 stem grounds and creates a HL contour tone which simplifies in g. In h. the H tone on N2 is lowered to M by T-rule 1.

The derivation of (12b) is as follows:

(15) a. m̀ví`   ˆ  `mɔ́`   underlying
     b. m̀vî   ˆ `mɔ̂`   tone grounding
     c. m̀vî´   `mɔ̂`   tone grounding
     d. m̀vî'ˆ   `mɔ̂`   simplification and ds
     e. m̀vî'ˆ 'mɔ̂`   tone grounding
     f. m̀vî'ˉ 'mɔ̂`   simplification and ds
     g. m̀vî'ˉ 'mɔ̂   tone grounding
     h. m̀vî'ˉ 'mɔ̂   simplification

In (15a) the underlying tones are given. In b. the floating
L tone of N1 stem grounds and creates a contour tone on the noun
stem. In c. the H tone of the associative marker grounds to the
left and creates a HLH complex contour tone on the N1 stem. In d.
this contour tone simplifies to H'H. In e. the floating L tone of
N2 prefix grounds to the left on the N1 stem and forms a H'HL
contour tone, which simplifies to H'H in f. and causes the
following H tone to downstep. In g. the floating L tone of N2
stem grounds and creates a HL contour tone which further
simplifies to H in h.

In the following examples, the difference between the
perfective and imperfective is made by tone.

(16) a. à ˆ kwásə̀ `mɔ́` → [á 'kwäsə̀ 'mɔ́]
        he T help child   "he is helping a child"

     b. à ` ˆ kwásə̀ `mɔ́` → [à kwàsə̂'ˉ'mɔ́]
        he T help child   "he has helped a child"

The imperfective marker in (16a) is a HL replacive tone that
replaces the underlying L tone of the pronoun /à/ "he"
(cf. 15.4.1). In (16b) the TO L HL verb tone pattern replaces the
underlying H H tone pattern of the verb (cf. 14.2).

The derivation of the tones in (16a) is as follows:

(17) a. à ˆ kwásə̀ `mɔ́` underlying
     b. â   kwásə̀ `mɔ́` imperfective tone
     c. á 'kwásə̀ `mɔ́` simplification and ds
     d. á 'kwásə̂ mɔ́` tone grounding
     e. á 'kwásə̀ 'mɔ́` simplification and ds
     f. á 'kwásə̀ 'mɔ́ tone grounding
     g. â 'kwásə̀ 'mɔ́ simplification

In (17a) the underlying tones are given. In b. the HL
imperfective tone replaces the underlying L tone of the pronoun

/à/. In c. this contour tone simplifies to H causing the following H tones to downstep. In d. the floating L tone of the noun grounds to the left on the verb where it creates a HL contour tone, which eventually simplifies in e. and thus causes the H tone on the noun stem to downstep. In f. the floating L tone of the noun stem grounds and forms a HL contour tone which then simplifies in g.

The derivation of (16b) is as follows:

```
(18) a. à kwásê ˋ ˆ ˋmɔ́ˋ  underlying
     b. à kwàsê      ˋmɔ́ˋ  TO verb tone pattern
     c. à kwàsê      mɔ́ˋ   tone grounding to the left
     d. à kwàsê´     mɔ́ˋ   tone spreading to the left
     e. à kwàsê'ˆ    'mɔ́ˋ  simplification and ds
     f. à kwàsê'ˆ    'mɔ̂   tone grounding
     g. à kwàsê'ˆ    'mɔ́   simplification
```

In (18a) the underlying tones of the string are given. In b. the TO verb tone pattern replaces the underlying tones of the verb. In c. the floating L tone of the noun grounds to the left where it is absorbed by the L of the contour tone. In d. the H tone on the noun stem spreads left to the verb where it creates a complex HLH contour tone. In e. the complex contour tone simplifies to a H'H contour tone and also causes the H tone of the noun to downstep (cf. footnote 2 of chapter twenty-one). In f. the floating L tone of the noun grounds on the stem where it creates a HL contour tone, which then simplifies to H tone in g.

The following examples show the difference between statement and question as made by tone.

```
(19) a. à fì ˆ ˋ àbɔ́ɔ̀    →  [à fì'ˆ 'bɔ́ɔ̀]   "he has given
        he give T  c.fufu                        corn fufu"

     b. à fì ˆ ˋ ˆ àbɔ́ɔ̀  →  [à fì bɔ́ɔ́]      "has he given
        he give T  T c.fufu                      corn fufu?"
```

We notice that the tonal difference is at the level of the verb in each example. The tones on the verb in (19a) are the normal TO verb tones (cf. (18) above). It is not sure what the tone of the question marker is. However, given what is happening in other languages (cf. 24.4.1.2) we may say that there is an

intervening H tone which marks the question. It might also be that there is more to this tone than just the question. Could this tone be a focus marker? Whatever the case, more investigation needs to be done in order to be sure of what is happening. In Bambui this tone is added to the TO verb tone. The derivation of (19b) would be as given below:

(20) a.   à fɨ ˋ ˊ ˉ   àbɔ́ɔ̀   underlying

      b.   à fɨ̀ˉ   ˊ   àbɔ́ɔ̀   TO verb tone pattern

      c.   à fɨ̀ˉ ˊ   àbɔ́ɔ̀   Question tone

      d.   à fɨ   ˊ   àbɔ́ɔ̀   tone absorption

      e.   à fɨ̀   àbɔ́ɔ̀   tone deletion

      f.   à fɨ́   àbɔ́ɔ̀   simplification and ds

      g.   à fɨ̄   àbɔ́ɔ̀   tone lowering

      h.   à fɨ̄   ˋbɔ́ɔ̀   V-deletion

      i.   à fɨ̄   bɔ́ɔ̀   tone deletion

      j.   à fɨ̄   bɔ́ɔ̂   tone spreading

      k.   à fɨ̄   bɔ́ɔ́   simplification

    In (20a) the underlying tones are given. In b. the TO verb tones replace the underlying tones of the verb. In c. the Question tone is added to the TO tones. In d. the L tone on the verb stem is absorbed by the L tone of the pronoun thus leaving a HL contour tone on the verb stem. In e. the Q. tone is deleted. In f. the HL contour tone simplifies to H. In g. the L tone of the pronoun /à/ lowers the H tone on the verb stem to M. In h. the V-prefix of the noun is deleted (cf. 3.7). In i. the tone of the noun prefix is deleted. In j. the H tone of the noun stem spreads to the following L tone where it creates a HL contour tone, which later simplifies to H in k.

23.5 Bambui Tone Orthography

    As we have seen from the analysis of the tone system of Bambui, tone is important in the language. This means therefore that tone has to be taken into consideration when an orthography

is being designed for Bambui. The next thing to consider is to see which tones should be marked out of the tones that are in Bambui.

Since Bambui is very similar to Bafut and the other Ngemba languages, most of the recommendations made for these languages are likely to be true for Bambui too. Reference should be made to 21.5, 22.6, 24.5 and to the Bafut experiment results in chapter twenty. The discussion given in 20.6-7 is also relevant for Bambui tone orthography.

The following tone marks are recommended for Bambui: /ˇ/ (L), /ˆ/ (HL), /˜/ (LH). In this tone marking system both HL and ML are marked as /ˆ/. Since the LH pattern comes out most of the time as LM on the surface, /˜/ represents LM. In the tone orthography being proposed, H, M, 'H and the contour tone, H'H are not marked.

The examples in (12), (16) and (19) are marked orthographically as seen in (21), (22) and (23) respectively:

(21)   a. m̀vî mɔ   "dog of child"

        b. m̀vi mɔ   "dogs of child"

(22)   a. a kwasə mɔ "he is helping a child"

        b. à kwâsə mɔ "he has helped a child"

(23)   a. à fi abɔɔ   "he has given corn fufu"

        b. à fi abɔɔ   "has he given corn fufu?"

We notice that the meaning distinctions in (21) and (22) are all made by the proposed tone orthography. However the distinction between (23a) and (23b) is not made, since both H and M tones are not marked in this system. This distinction can be made by the use of punctuation marks, the stop (.) ending the statement, while the question mark would end the question. The system of tone marking proposed for Bambui is therefore likely to make the meaning distinctions that are needed.

Although this system of tone marking seems to make the necessary meaning distinctions that we have in Bambui, it does not

make all the distinctions that are in the language. It does not make the distinction between M and H tones, for example. As we have said before, we think that those distinctions that are not made tonally would be made good in context as words and phrases are used in constructions and in the appropriate contexts.

Notes to Chapter Twenty-three

[1] My main informant has been Mr. James Chu Manjo who is from the Ntahbang area of Bambui village. Most of the data that we worked on came from Mr. Manjo. Mr. Paul Ngafor was my other informant. Mr. Paul Ngafor comes from Tubah area in Bambui. I am very thankful to Mr. Manjo and Mr. Ngafor for all the time they took to work with me.

Chapter Twenty-four

NKWEN TONE

24.1 Introduction

Nkwen is a Grassfields Bantu language that is spoken in the North West Province of Cameroon. It falls within the Ngemba sub-group of the Grassfields languages.

24.2 Lexical Tones

Nkwen has three phonemic tones, H, M and L. As we have seen for Mankon (cf. 22.2) the M tone in Nkwen is relatively recent and is still developing. At the lexical level we do not find many words beginning with M. Most of the M tone words are grammatical words like pronouns.[1]

24.2.1 Tone Patterns of Nominals

The structure of the Nkwen noun is the same as what has been described for Bafut (cf. 6.1) or Mankon (cf. 22.2.1). The following tones are found on monosyllabic stems of nominals:

(1) a. mó   "fire"

    b. mɛ̄   "our (n.class 6)"

    c. ŋù   "person"

Contour tones are found on monosyllabic nouns but, as in Bafut, we treat contour tones as a sequence of two different level tones (cf. 4.2). The following contour tones are found on nouns in their citation forms:

(2) a. HL   mó   "child"

    b. LM   nìgõŋ   "plantain"

    c. H'H   àlí'˙ léŋ   "bat"

    Two other contour tones, ML and LML occur in grammatical constructions, for example, as in (3) below:

(3)   mìŋgõŋ   mã̄   "my plantains"
       L LML   ML

    The following tone patterns were found on disyllabic noun stems:

(4) a.   Ø–H H   –fárɔ́   "mouse"

    b.   Ø–H L   –bɔ́ɔ̀   "children"

    c.   Ø–HL L   –lâmshì   "orange"

    d.   H–L M   í–tàā   "father"

    e.   L–M L   à–tīŋɔ̀   "calabash"

    f.   L–L M   nì–bɔ̀'ɔ́   "pumkin"

    g.   L–L L   ŋ̀–gɔ̀'ɔ̀   "stone"

    We see in the above examples that in most cases the tone of the prefix is L. There is an example of a H tone prefix in c. We found only two nouns with a surface H tone prefix.

24.2.2 Tone Patterns of Verbs

    As in the other languages, we have taken the tones of the verbs in the imperative mood as the underlying verb tones. There are two verb classes in Nkwen: the L tone and the H tone verbs. The H tone verbs have a H tone pattern while the L tone verbs have an underlying LH tone pattern.

    The following patterns are found on monosyllabic verb stems:

(5) a.   H   zé   "see!"

    b.   LH   ghɨ̌   "go!"

The H tone pattern comes out as HL in the citation form, while the L tone verb also ends in a fall, i.e., a LML tone pattern. This same situation has already been described and explained in Bafut (cf. 13.3) and this also is the case in a number of the Ngemba languages, as we have seen already.

The following tone patterns are found on disyllabic verb stems:

(6) a.   H H   kwɛ́sɛ̂   "help!"

    b.   L H   sànɛ̂   "dry!"

The underlying H H tone pattern ends in a falling tone giving a surface H HL tone pattern. In the same way the L H tone pattern of the L tone verb comes out on the surface as L ML. It should be noted that in the case of the L tone verb T-rule 1 converts the L H pattern to L M.

24.3 Tone Processes

There are a number of tone processes operating in Nkwen. However, most of these tone processes have been described in our analysis of the other Ngemba languages. Since we have described these tone processes in detail in chapter four, (cf. 4.8) we do not need to dwell much on them here.

24.3.1 Tone Lowering

The application of the tone lowering rule, T-rule 2 in Nkwen is as general as in Bafut (cf. 4.8.2) or Mankon. In general, in lexical items, a preceding L tone lowers the following H tone to M. This explains why the LH pattern is hardly found on words in their citation forms (cf. (2) and (4) above). This means that an underlying LH comes as LM on the surface (cf. 24.2.2).

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24.3.2 Tone Spreading

There is tone spreading in Nkwen as illustrated by the following examples:

(7) a. fyâ mìngárà myá` → [fyá mìŋgārā myâ] "give the guns!"

b. jí nìbò'ɔ̂ nyá` → [jí nìbò'ɔ̂ nyâ] "eat the pumpkin!"

The tone processes involved in the above examples have been discussed already in the precceding chapters (cf. 4.8.6). What should be noted here is the fact that the H tone of the verb spreads onto the tone of the prefix of the object. In (a) the tone spreading creates a contour tone on the noun prefix whereas in (b) the spreading is followed by the process of tone simplification.

24.3.3 Tone Replacement, Tone Simplification and Downstep

There is downstep in Nkwen. As we have seen in the other languages that we have studied so far. downstep in Nkwen results from the simplification of contour tones. As we have also seen in the foregoing chapters, most contour tones are caused by intervening floating L tones between two H tones. This is illustrated in the following example.

(8) à ˆ kwɛ́sɘ̂ ˉmó` → [á 'kwɛ́sɘ̂ mô] "he is helping a child"

The derivation of the downstep in the above example is given in (9) below:

(9) a. à ˆ kwɛ́sɘ̂ ˉmó`   underlying tones
    b. â   kwɛ́sɘ̂ ˉmó`   replacive IMPERF tone
    c. á   'kwɛ́sɘ̂ ˉmó`   tone simplification and downstep
    d. â   'kwɛ́sɘ̂ mó`   tone grounding
    e. á   'kwɛ́sɘ̂ 'mó`   simplification and ds
    f. á   'kwɛ́sɘ̂ 'mô   tone grounding

In (9a) the underlying tones are given. In b. the IMPERF tone, which is a HL contour tone replaces the underlying L tone of the pronoun /à/. In c. the HL contour tone simplifies to H tone

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and at the same time causes the following tones to downstep. In d. the floating L tone of th noun prefix grounds to the left on the verb where it creates a HL contour tone. In e. the contour tone simplifies to H and causes the H tone on the noun stem to downstep. In f. the floating tone of the noun stem grounds to form a contour tone.

We therefore see that there are four tone processes involved in the above derivation, tone replacement, tone simplification, downstepping of H tone and tone grounding. In tone replacement the inherent tone of a morpheme is replaced by a different tone pattern. As we have seen in 4.8.11, 14.2 and 14.3 the replacement is usually a grammatical tone or tone patttern.

24.4 Tone in Grammar

Tone plays an important role in the grammar of Nkwen. The tone processes that we have seen above and some of the others that we have seen in chapter four, for example, operate in the grammar of Nkwen.

24.4.1 Grammatical Tones

Since tone plays an important part in the grammar of Nkwen, it is expected that there would be a lot of instances of grammatical tones. For a definition of grammatical tones reference should be made to 26.4.1. In Nkwen there are grammatical constructions or verb forms that are differentiated solely by tones. Normally in a grammatical construction there is a particular tone or tone pattern that is characteristic of it and thus functions as its mark. In verb forms, for examples, there is usually a tone pattern that marks off one verb form and thus distinguishes it grammatically from other verb forms. As we saw in chapter 14, apart from lexical tones interacting among themselves as they come together in a construction, there are also verb form tone patterns that also intervene and thus create a complex system of both lexical and grammatical tone processes.

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The verb tone patterns for Bafut, for example have been given in 14.12. As we noticed in Bafut, (cf. also (9) above) the verb form tone pattern either replaces the underlying lexical tones or it is superimposed on the underlying lexical tones. Tone processes, like those in 4.8 and 24.3 above, then operate on these to produce the surface tones or phonetic tones in an output string. Some of the verb forms in Nkwen will be given below to further illustrate the interaction of grammatical tones with lexical tones in constructions.

The examples given below show the importance of grammatical tones and thus illustrate how grammatical tones serve to distinguish grammatical forms.

24.4.1.1 Perfective and Imperfective

(10) a. à ˆ jɨ́ àbánə̀ → [á 'jɨ́ bánə̀]   "he is eating
        he T eat c.fufu   corn fufu"

     b. à jɨ́ ˆ ˆ àbánə̀ → [à jɨ̄ bānə̀]   "he has eaten
        he eat T c.fufu   corn fufu"

(11) a. à ˆ lɔ́ɔ́ àbánə̀ → [á lɔ́ɔ́ bánə̀]   "he is taking
        he T take c.fufu   cornfufu"

     b. à lɔ́ɔ́ ˆ ˆ àbánə̀ → [à lɔ̄ɔ̄ bānə̀]   "he has taken
        he take T c.fufu   cornfufu"

(12) a. à ˆ kwɛ́sə́ mɔ̂ wɛ̂ → [á 'kwɛ́sə́ mɔ̂ wɛ̄]   "he is helping
        he T help ch. the   the child"

     b. à kwɛ́sə́ ˆ ˆ mɔ̂ wɛ̂ → [à kwɛ̂sə̄ mɔ́ wɛ̄] "he has helped
        he help T ch. the   the child"

In the above examples each pair of sentences is distinguished solely by tone. In each pair, (a) is in the imperfective aspect while (b) is in the perfective.

24.4.1.2 Statement and Question

(13) a. à ꞈ jí àbánà zéꞈ ꞈ → [à 'jí bán zɛ̄]
      he T eat c.fufu this T   "is he eating
                                              this corn fufu?"

   b. à ꞈ jí àbánà zéꞈ → [á 'jí bán zɛ̂]
      he T eat c.fufu this   "he is eating
                                              this corn fufu"

(14) a. à jí ꞈ ꞈ àbánà zéꞈ ꞈ → [à jɪ̄ bān zē]
      he eat T c.fufu this T   "has he eaten
                                              this corn fufu?"

   b. à jí ꞈ ꞈ àbánà zéꞈ → [à jɪ̄ bān zɛ̂]
      he eat T c.fufu this   "he has eaten
                                              this corn fufu"

(15) a. à jí ꞈ ꞈ àbánà ꞈ → [à jɪ̄ bānā]
      he eat T c.fufu T   "has he eaten corn fufu?"

   b. à jí ꞈ ꞈ àbánà → [à jɪ̄ bānè]
      he eat T c.fufu   "he has eaten corn fufu"

(16) a. à kwɛ́sə́ ꞈ ꞈ ꞈ → [à kwɛ̀sə̄]
      he help T T   "has he helped?"

   b. à kwɛ́sə́ ꞈ ꞈ → [à kwɛ̀sə̄]
      he help T   "he has helped"

In the examples in (13) to (16) above the difference between each pair of sentences is made solely by tone. In each pair the first, i.e., (a), is a question while the second, i.e. (b), is a statement. The distinguishing tone in each case is the last tone in the utterance. This tone is an example of a grammatical tone since it marks off grammatical constructions or forms and thus gives grammatical meaning to the construction in question. This tone or tone pattern is thus a marker of the construction.

It is important to note that in the above examples the tonal markers in each pair is a grammatical morpheme (which in this case, and as is often the case in Grassfields languages, is purely a tonal morpheme). In these pairs the tonal morphemes serve the same grammatical functions as the fullstop (.) and the question mark (?).[2]

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In the examples given both in 24.4.1.1 and 24.4.1.2, we have three types of grammatical tones:

> (i) a grammatical tone pattern that indicates the verb tense,
>
> (ii) a grammatical tone pattern that indicates mood, and
>
> (iii) a grammatical tone pattern that indicates aspect.

In (12b) above, the grammatical tone pattern is a L HL tone pattern that replaces the underlying lexical tones of the verb (cf. 14.2). It is thus a replacive tone pattern. The function of the tone here is to mark the verb for the TO tense. This tone pattern is therefore a tense marker or tense morpheme which is solely a tonal morpheme rather than a segmental one.

As we have said above, the last tone of each pair of the utterances in the examples in 24.4.1.2 serves to indicate the mood of each sentence. In (15b), for example, the L tone on the last syllable of the sentence marks it as a statement and distinguishes it from (15a), which is a question.

The examples in 24.4.1.1 show the role of tone in marking aspect in Nkwen grammar. In (12a), for example, the imperfective aspect is marked by a HL tone pattern that replaces the underlying tone of the subject pronoun /à/ "he" (cf. (9b)). This replacive tone pattern is a grammatical tone pattern. The role of this grammatical tone pattern is to distinguish (12a), which is in the imperfective aspect, from (12b), which is in the perfective aspect.

24.4.1.3 Interaction of Grammatical and Lexical Tones

As we said above, grammatical tones interact with lexical tones as the tone processes that we have already described operated in an imput string to produce the surface or phonetic tones in the output string. Having described what grammatical tones are, we are now going to see how grammatical tones interact with lexical tones in a construction.

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We have treated lexical tones in 24.2. Lexical tones are the tones that a lexical item has. These tones mark the word at the lexical level, i.e., they characterize the word as a unit and thus differentiate it from other words in the lexicon or dictionary of the language. Lexical tones give lexical meaning to words while grammatical tones give grammatical meaning.

In the examples given in 24.4.1-2 the tones on words in each string to the left of the arrow are lexical tones. In the derivation in (9) we see how the grammatical tone, HL (cf. (9b)) replaces the lexical tone of the pronoun and then interacts with the other lexical tones of the other words or morphemes in the string as tone rules operate on them to produce the surface tones in the final output string in (9c).

In order to further illustrate the above point,we will give the derivation of (12b). The derivation of the tones of the output string of (12b) is as follows:

(17) a. à kwésá ˋ ˆ ˋmɔ́ˋ wɛ́ˋ   underlying tones

     b. à kwêsâ   ˋmɔ́ˋ wɛ́ˋ   TO replacive tones

     c. à kwêsâ   mɔ́ˋ wɛ́ˋ   tone grounding

     d. à kwêsā̄   mɔ́ˋ wɛ́ˋ   simplification

     e. à kwêsā̄   mɔ̂ wɛ́ˋ   tone grounding

     f. à kwêsā̄   mɔ̂ wɛ́ˋ   simplification

     g. à kwêsā̄   mɔ̂ wê   tone grounding

     h. à kwêsā̄   mɔ̂ wɛ̂   simplification

In (17a) the underlying tones are given. The tones on the words of this string are lexical tones. In b. the grammatical tones L HL replace the H H lexical tones of the verb /kwésá/ "help!". The grammatical replacive tones mark the verb for the TO tense. In c. tone rules (or tone processes) start working on both the grammatical tones and lexical tones as they come together in the string. In d. the HL contour tone simplifies to M while in f.

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the HL contour tone on /mɔ̂/, "child", simplifies to H. In h. the HL contour tone on the demonstrative, /wɛ̂/, simplifies to M.

In the examples given below we shall see how a grammatical tone gets onto the lexical tones, instead of replacing them as, we have seen in (17b).

(18) a. àtyɛ̂ ˊ ˋmɔ̂ → [àtyɛ'ˊ 'mɔ̂] "head of child"
     b. nɨ̀byɛ̂ ˊ ˋ zɛ́ → [nɨ̀byɛ̌ zɛ̄] "our fish"

In (18a) the floating H tone is the associative marker of the noun class of the first noun /àtyɛ̂/, "head". This noun belongs to noun class 7 and so its associative marker is a grammatical H tone. The other floating tones are belong to the nouns. The derivation of the surface tones of (18a) is as follows:

(19) a. àtyɛ̂ ˊ ˋmɔ̂ underlying
     b. àtyɛ̂ ˊ ˋmɔ̂ tone grounding to the left
     c. àtyɛ̂ ˋmɔ̂ tone grounding to the left
     d. àtyɛ'ˊ ˋmɔ̂ simplification and ds
     e. àtyɛ'ˊ mɔ̂ tone grounding
     f. àtyɛ'ˊ 'mɔ̂ simplification and ds
     g. àtyɛ'ˊ 'mɔ̂ tone grounding

In (19a) the underlying tones are given. In b. the floating tone of N1 grounds and creates the HL contour tone on the noun stem. In c. the grammatical floating H tone grounds to the left onto the lexical tones of N1 of the construction where it creates a complex HLH contour tone. In d. the HLH contour tone simplies to a H'H contour tone. In e. the floating L tone of the N2 prefix grounds to the left on the N1 where it also creates a complex H'HL contour tone. In f. this contour tone simplifies and causes the following H tone to downstep. In g. the floating tone of the N2 stem grounds and creates a HL contour tone on the noun stem.

In (18b) the tone of the possessive interacts with the lexical tone of the noun. The derivation of (18b) is as follows:

(20) a. nìbyɛ̌ˊ ˋzɛ́   underlying tones
     b. nìbyɛ̌ ˊ ˋzɛ̂   tone grounding
     c. nìbyɛ̌   ˋzɛ̂   tone grounding and absorption
     d. nìbyɛ̌   ˋzɛ́   tone lowering
     e. nìbyɛ̌   zɛ́   tone grounding to the left
     f. nìbyɛ̀   zɛ̀   tone lowering

In (20a) the underlying tones are given. Here the second floating H tone is the possessive marker for the class of the noun /nìbyɛ̌ˊ/, which belongs to noun class 5. The floating L tone is the underlying tone of the possessive concord prefix. Reference should be made to 11.4 for a description of the tones of the possessive construction. In b. the floating tone of the noun grounds and creates the LH contour tone on it. In c. the H tone of the marker grounds to the left where it is absorbed into the H tone part of the LH tone on the noun stem. In d. the LH tone of the noun stem is lowered to LM by T-rule 1. In e. the floating L tone of the possessive concord prefix grounds to the left on the noun stem where it creates a LML complex contour tone. In f. the L tone part of LML contour lowers the H tone of the possessive stem to M (cf. T-rule 1).

As we have seen in 4.8.14, 17.6.1 and 19.3.4, the tone pattern of the verb form is superimposed on the lexical tone pattern of the verb. The lexical and grammatical tones then undergo tone processes together as tone rules apply to produce the surface tones. Reference should be made to 17.6.1 (17) for a good demonstration of how grammatical and lexical tones come together and interact.

It is difficult to make a clear distinction between grammatical and lexical tones in a construction since both types work together at the surface level. However, following the above description and discussion of grammatical and lexical tones in grammar, we see that even though it is difficult to distinguish between the two types of tones, it is possible to separate both types, if we work from their underlying representations. It is important to define both the level of operation and function of both lexical and grammatical tones. This is particularly crucial when it comes to deciding which tones to mark in orthography. We shall elaborate this in the section below.

24.5 Nkwen Tone Orthography

From the analysis of the Nkwen tone system, we see that tone has an important role to play in the language and, therefore, any writing system devised for this language should take this into consideration. It is therefore evident that tone has to be written in Nkwen. The question here is how tone should be written.

Looking at the analysis, we see that the tone system of Nkwen is similar to that of either Bafut or Mankon. This leads us to think that any tone system that works for, say, Bafut would likely work for Nkwen. The same argument given for the system of tone orthography chosen for either Bafut or Mankon (cf. 20.6 and 22.6) would hold true for Nkwen. We will say more about this in chapter twenty-five.

We propose that surface tones should be marked in Nkwen instead of underlying tones. Tone should be marked systematically and not in selected areas.

Just as in Bafut, we propose that the following tones be marked in Nkwen: /ˋ/ (L), /ˆ/ (HL) and /ˇ/ (LH). In this system LM is marked as HL and HL and ML are both marked as HL. H 'H and M are not marked.

The LML contour tone is marked as LH. i.e., /ˇ/. This is because, orthographically, it is not practical to mark the tone as it is realized on the surface since it is a complex tone. This tone is very frequent in the imperative mood. It is realized in the monosyllabic L tone verbs when they are used without an object or when the verb occurs utterance finally (cf. 24.2.2). This tone is represented as /ˇ/ rather than as /ˆ/ because, as we said in 24.2.2. the L tone is an utterance final phenomenon. However, when we consider the LML tone in the possessive, we see that it is more of a problem because the last L tone of the contour is actually realized in this context and is therefore not an utterance final trait (cf. (20)). Looking at its context (cf. (20)), we would see that it is a grammatical tone since it originates from the vicinity of the possessive. This tone is the

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floating tone of the possessive prefix. Since it is one of the tones of a segmental morpheme or word that is still realized segmentally, we can leave it unmarked. So this is why we propose to mark just /˜/ (LH), which is the tone of the noun.[3] However, if the last tone of the complex tone were a grammatical tonal morpheme, it would be important to mark it. In such a case, the LML contour tone would be marked as /ˆ/ so that this morpheme would not be left out. From this, we see that the tone to be marked is influenced by the role or function of the tone. This also leads us to the general principle that, when faced with the choice of marking either lexical or grammatical tones, the latter would need to be marked.

The tone orthography that we have just proposed for Nkwen is likely to work since it makes the necessary distictions that we need in order to avoid most ambiguity in the language. This orthograpy enables us to make the differences that we have seen between the pairs of sentences in 24.4.1.1 and 24.4.1.2 above. This is how the pairs of sentences in (11) and (14) above would be marked orhographically:

(21) a. a lɔɔ abanè   "he is taking corn fufu"

     b. à lɔ̂ɔ àbanè   "he has taken corn fufu"

(22) a. à jî àbanə zɛ   "has he eaten corn fufu?"

     b. à jî àbanə zɛ̂   "he has eaten corn fufu."

We see that the proposed tone orthography is able to make the distinctions in the above pairs of sentences. Reference should be made to (11) for the underlying and surface or phonetic tones of the pair of sentences in (21) and to (14) for those of the pairs of sentences in (22).

Although the tone orthography that we have proposed seems to work and thus makes the distinctions that we have seen above, it is obvious that it cannot make all the distinctions which exist in the language. It does not make a distinction in all the phonemic pitches. We think however that this disadvantage does not make the system of tone marking inadequate for the purposes of writing

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the language since we are going to count on the context of usage (both linguistic and non-linguistic) to make some of the distinctions that might not be made tonally.

Notes to Chapter Twenty-four

[1] My informant was Miss. Catherine Ngenwie Nkwenti. Miss Nkwenti lives around the Nkwen Fon's palace and so the dialect that has been described here is of that area.

I am very thankful to Catherine for all the timè she gave me in order to make it possible for this work to be done. I am also thankful to Mrs. Elizabeth Wong for answering some of my questions concerning the data.

[2] It may be that in the question sentence there is no tonal morpheme involved. The tone difference may simply be a matter of question intonation. The effect of the question intonation would then be to raise the falling tone or the L tone that is realized in the statement.

[3] The decision to mark the LML of the possessive construction as /˜/ has to be tested before being considered as definite, both in Nkwen and in Bafut. Marking the tone in this context as /ˆ/ also has an argument in its favour. Both the Bafut example, (11), in 20.6 and the Nkwen example, (18b), in 24.4.1.3, would be marked as follows:

a. /fɨbwê fâ/   [fɨbwɛ̂ fä]   "my fish"
b. /nɨbyê zɛ/   [nɨbyɛ̂ zɛ̄]   "our fish"

The advantage of writing the LML tone in the above examples as /ˆ/. The L tone of the falling tone enables the tone of the possessive in a. to be read correctly as ML (by T-rule 2) even though it is marked orhorgraphically as HL. The tone of the possessive in b. would by the same token by read correctly as M.

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Chapter Twenty-five

RELEVANCE OF FINDINGS TO TONE ORTHOGRAPHY

25.1 Introduction

In the analysis of the Bafut tone system we saw what role tone plays in the language. Tone plays an important role in the grammar of Bafut. The experiment conducted in Bafut enabled us to determine a workable tone orthography for this language. Insights gained from the work done on Bafut have helped us in the analysis of the tone systems of the other Ngemba languages that we have described in the last four chapters. The analysis that we have done of the tone systems of each of these languages has enabled us to propose a tone orthography for each language. In the light of the analysis of the tone system of each of these languages and in view of the tone orthography proposed for each language, is it possible to draw conclusions regarding a tone orthography that might work for these languages and possibly for the other languages within the same linguistic group? This is the question that we would want to address in this chapter.

25.2 Similarities

As we have seen from the analysis of their tone systems, Bafut, Mankon, Nkwen, Bambui and Bambili, are very similar. The function of tone in these languages is very much the same. In each of these languages, the functional load of tone is important both in the lexicon and in grammar. They have many tonal processes in common.

25.2.1 Underlying Tones

In their underlying representation, these four languages have two tones, H and L. The underlying tones of a good number of

words in each of these languages are the same. This is
illustrated by the following examples:

(1) BAFUT   MANKON   NKWEN   BAMBUI   BAMBILI

a. ´-káá   ´-kámé   ´-káá   ´-kɔ́ɔ́   ´-kɔ́ɔ́   "crab"

b. ´-fórə́   ´-fúú   ´-fórə́   ´-fúú   ´-fóó   "mouse"

c. `-nwí      `-ŋwí   `-nwí      `-nwí   `-ŋwí   "cutlass"

d. ´-mú`      `-mó`       `-mó`      `-mɔ́`       `-mwóó   "child"

e. `-mɔ́'ɔ́    `-mò`´      `-mó   `-múú       `-mōó   "fire"

f. `-táà      `-tíìŋ   í-táá   `-táà       `-tyɛ́ɛ̀   "father"

g. à-báà   à-bánə̀   à-bánə̀   à-bɔ́ɔ́   à-bɔ́ɔ́   "corn fufu"

h. à-tî`   à-tî´   à-tî´   à-tî´   à-tî´   "tree"

i. ǹ-nsòó   ì-shòmé   ì-sóŋ   ì-shòmé   ì-shòmé   "farm"

j. ´-nàà   ´-ŋyàmə́   ´-nàà   ´-nɔ̀ɔ́   ´-nɔ̀ɔ́   "animal"

k. ŋ̀-gɔ̀'ɔ̀   ŋ̀-gɔ̀'   ŋ̀-gɔ̀'ɔ̀   ŋ̀-gɔ̀'ɔ̀   ŋ̀-gɔ̀'ɔ̀   "stone"

   In the above examples we find that the underlying tones of
most of the nouns given are the same in all the Ngemba languages
indicated in the table.

   As can be noticed in the examples given in (2) below, the
verbs in general have the same underlying tone patterns for these
languages.

(2) BAFUT   MANKON   NKWEN   BAMBUI   BAMBILI

a. jí   jí   jí   jí   jí   "eat!"

b. kwétə́   kwátə́   kwésə́   kwási   kwáshə́   "help!"

c. lò´   lò´   lyè´   lù´   lùgə́   "leave!"

d. sàŋə́   sàŋə́   sàŋə́   sàŋə́   sàŋə́   "dry!"

   The underlying tones of the verbs shown in the above examples
are the same in each language.

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25.2.2 <u>Surface Tones</u>

These languages have three level tones on the surface: H, M and L. The surface tones of the words that we have given in (1) are indicated in (3) below:

(3)	BAFUT	MANKON	NKWEN	BAMBUI	BAMBILI	
a.	káá	kámə̂	káá	kɔɔ́	kɔɔ́	"crab"
b.	fórə̄	fúú	fórə̄	fúú	fóó	"mouse"
c.	nwí	ŋwí	nwí	nwi	ŋwí	"cutlass"
d.	mû	mô	mô	mɔ́	mwóó	"child"
e.	mɔ́'ɔ́	mɔ̂'	mɔ́	múù	móó	"fire"
f.	tāà	tɨɨŋ	ɨ-tāā	tāà	tyɛ̄ɛ̀	"father"
g.	àbāà	àbānə̀	àbānə̀	àbɔɔ̄	ābɔ́ɔ́	"c. fufu"
h.	àtì	àtɨ	àtì	àtɨ̀	ātɨ̀	"tree"
i.	ǹsòò	ɨshōmə̀	ɨsòŋ	ɨshōmɔ̄	ɨshōmə̄	"farm"
j.	nàà	ŋyàmə̀	nàà	nɔ̀ɔ̄	nɔ̀ɔ̄	"animal"
k.	ŋ̀gɔ̀'ɔ́	ŋ̂gɔ̀'	ŋ̀gɔ̀'ɔ́	ŋ̀gɔ̀'ɔ́	ŋ̂gɔ̀'ɔ̄	"stone"

In the examples above we notice that although there are differences in the surface tones of some words, there are many more words where the tones are the same in all the given languages.

The underlying tones of the verbs presented in (2) above are realized on the surface as indicated in (4) below. The tones indicated are those of the verb in the imperative mood where the verb is used alone.

(4)	BAFUT	MANKON	NKWEN	BAMBUI	BAMBILI	
a.	jɨ̂	jɨ̂	jɨ̂	jɨ̀	jɨ̂	"eat!"
b.	kwétə̂	kwátə̂	kwésə̂	kwásɨ́	kwáshə́	"help!"
c.	lõ̂	lõ̂	lyɛ̃̂	lū	lùgə̄	"leave!"
d.	sàŋə̄	sàŋə̄	sàŋə̄	sàŋə̄	sàŋə̄	"dry!"

We notice that in the above examples the verbs in Bafut, Mankon and Nkwen end in falling contour tones while the tones of the verbs in Bambui and Bambili stay level. Although we have this difference in the way the surface tones are realized in these languages, the underlying system is basically similar. A good tone orthography should be able to take care of these different surface realizations.

25.3 Tone Processes

The tone processes in the five languages that have been described are very similar. Most of the tone rules that we have described for Bafut in 4.8 also operate in the other four languages.

There is downstepping of H tone in all these languages. The tone lowering rule applies in each of these languages also. The other tone rules that are found in these languages are: tone simplification, tone spreading, tone deletion, tone absorption or coalescence and tone replacement. L tone raising operates mostly in Bambili, Bambui and Bafut. Reference should be made to the paragraphs where tone processes have been described in each of these languages. Although there are some differences in the application of some of the rules in these languages, the similarities are more than the differences.

The function of tone in the different verb forms of these languages is similar. This can be verified in the sections where we have treated tone in the grammar of each language.

25.4 Tone Orthography

We proposed a tone orthography for each of the five languages in the light of the analysis of its tone system. Reference should be made to the sections that treat the tone orthography for each of these languages. The following table gives the tones that are found in each tone system and how those that are marked are represented in orthograhy.

(5)

Tones	H	'H	M	!L	L	H'H	HL	'HL	ML	LM	LML
BAFUT				ˉ	ˋ		ˆ	ˆ	ˇ	ˇ	˜
MANKON				ˋ			ˆ	ˆ	ˇ	ˇ	˜
NKWEN				ˋ			ˆ	ˆ	ˇ	ˇ	˜
BAMBUI				ˋ			ˆ	ˆ	ˇ	ˇ	
BAMBILI				ˋ			ˆ		ˇ		

The tones that are found in all the above languages are: L, M, H, 'H, HL, LM, and ML. We notice that the tones H, 'H and M are not marked at all. The complex contour tone LML was found in Bafut, Mankon, and Nkwen. It was not attested in the data that we studied in Bambui neither was it found in our Bambili data.

We notice from the above table that the tone orthography for all the languages is similar. This is explained by the fact that, as we have seen, their tone systems are similar. In each language the three tones marks used are /ˋ/, /ˇ/ and /ˆ/. As we can notice in the table in (5) above, this does not mean that only the tones L, HL and LH are marked. More tones then these are marked in reality. For example, the mark /ˇ/ represents both HL and ML.

Since this orthography has been proposed for each of the Ngemba languages that we have described, it is likely that this would also work for other Ngemba languages whose tone systems are similar to the ones that we have studied here. As a result of the above discussion, we thus propose that this tone orthography be tried out and adopted for all the Ngemba languages.

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PART IV

LIMBUM

Chapter Twenty-six

LIMBUM TONE SYSTEM

26.1 Introduction

Limbum is an Eastern Grassfields Bantu language. The Atlas
Linguistique du Cameroun (ALCAM) (1983:7) gives it the number
[903], which means that it belongs to the Northern sub group of
the Eastern Grassfields languages.

Quite an amount of linguistic studies have been done on
Limbum. Some of the important ones have been done by Fiore
(1977), Van Reenen and Voorhoeve (1982), Ndi and Ndi (1985),
Higgens and Bradley (1985), and Mfonyam and Ngah (1986).

Among the studies done, few deal specifically with tone.
Fiore (1977:79-81) devotes chapter five of her phonology to tone
in Limbum. Mfonyam and Ngah (1986) is a series of four manuals
that teach people how to read and write tone in Limbum
(cf. chapter 27 below).

26.2 Lexical Tones

Limbum has three phonemic level tones: H, M and L. There are
five glides or contour tones: L (extra L), HL, HM, LM, and ML.[1]
ML and HM contour tones occur mostly in grammatical constructions.
These tones will be illustrated in 26.2.2 below.

26.2.1 Previous Analysis

Fiore (1977:79-81) describes mostly the lexical tones in
Limbum. In her description of tone on non-verbal morphemes, she
says that there are seven contrastive tones given as follows:

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(1)   Tone 1   H
        Tone 2   M
        Tone 3   L

        Tone 1-2   H to M
        Tone 2-3   M to L
        Tone 3-4   L to extra L
        Tone 3-2   L to M

The first three tones, as can be seen, are level tones while the last four are contour tones. In her analysis Fiore treats the HL contour tone as an allotone of the HM contour tone. This is what she says:

> "We conclude that pitches [1-3] and [1-2] are different manifestations of the same tone, which I have chosen to call tone /1-2/. The allophone [1-3] of tone /1-2/ occurs in syllables with short vowels, and the allophone [1-2] occurs in syllables with long vowels" (Fiore 1977:79).

In our analysis we have treated these two tones as different tones since we have examples of words where the HL contour tone occurs on both short and long vowels. This means that this would contrast with HM which occurs mostly on long vowels. This can be seen in the following examples:

(2)   [kwâ:]   "maize"
        [rsi:]   "small rat with squirrel-like tail"

(3)   [rlâ:]   "passion fruit"
        [kâ:]   "crab"

We have also found instances of HM contour tone occurring on both long and short vowels in grammatical constructions. This will be illustrated in 26.5.1. where we treat grammatical tones (cf. (6) and (18)). We thus see that there is enough evidence to justify our treatment of HL and HM contour tones as different tones.

Fiore says that Tone 3-2 occurs only on syllables with long vowels. However, we found examples of words where this tone occurs both on short and long vowels as can be seen in the following examples:

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(4)   [ŋgãr]   "ant"

        [bã:]   "father"

As it will be seen below (cf. 26.5.2), this tone also occurs in the associative construction on both long and short vowels.

In our segmental analysis we have treated long vowels as a sequence of two identical vowels and each vowel has been treated as a syllable nucleus. This therefore means that long vowels are treated as two syllables. Consequently, we would not treat the tones on the long vowels in examples (1) - (4) above as contour tones. We thus treat two different tones on a long vowel not as a contour tone but as two level tones on two syllables.[2]

26.2.2 Noun Tone Patterns

26.2.2.1 Tone on Monosyllabic Nouns

The following tone patterns occur on monosyllabic nouns:

(5) a. H   shán   "prison"

    b. M   ndōŋ   "cup"

    c. L°   mbàŋ   "kernel"

    d. L   mbàŋ   "sceptre"

    e. HL   lî   "language"

    f. LM   ŋgŭr   "bedbug"

    g. ML   tâ   "father"

In the above notation, L represents extra low tone while L° represents a level low tone. The HM contour tone occurs in grammatical constructions. The following examples illustrate the occurance of this tone:

(6) a. HM   [bbãa bcã]³   "those corn fufu (loaves)"

    b.   [έ m sáŋ yɛ̄ɛ̀]   "he wrote a song"

Although most words in Limbum are monosyllabic, there are a few disyllabic nouns. The following patterns occur on disyllabic nouns:

(7) a. H H   lélé   "rainwater"

   b. H M   báŋgā   "swallow"

   c. H L   bárù'   "lion"

   d. M H   tārkú   "grandfather"

   e. M M   jēmōr   "smoke"

   f. M L   bkōkè   "mumps"

   g. L M   kintā   "cross"

   h. L L°   ŋgèrè   "dragon fly"

   i. L L   kàtè   "bush"

Thus we see that out of the 9 possible patterns in a three level phonemic tone system, 8 are attested on disyllabic nouns in citation form. The attested patterns are given in (8) below:

(8)   H H   M H   − −

             H M   M M   L M

             H L   M L   L L°/L L

As can be seen in (8) above, the pattern L H was not found on nouns in the citation form. The contour tone LH was not found either. This is explained by the tone lowering rule (cf. T-rule 1 in 4.8.1). The tone patterns L L° and L L both occur in the citation forms of words.

26.2.2.3 Historical Derivation of Tones

Comparing the reflexes of the Proto Bantu tone sequences in other Mbam-Nkam languages (cf. Hyman and Tadadjeu 1976), we

propose the following stages in the derivation of Limbum tones from PMN:

(9)

<div style="text-align:center">Limbum Reflexes</div>

PB	Stage 1	Stage 2
* L-H-H	-H-H	H
* L-H-L	-H-L	M
* L-L-H	-L-H	L°
* L-L-L	-L-L	L

As can be seen in (9) above, we have posited the following derivation:

(10)

H-H → H

H-L → M

L-H → L°

L-L → L

From (10) above we see the derivation of the synchronic tones from the historical tones. In some cases the underlying tones of the language correspond to facts of a previous diachronic stage. If this were true for Limbum, the derivation of the surface tones from the underlying tones would correspond to (11) below.

(11)

H H → H

H L → M

L H → L°

L L → L

There is no extensive evidence in the data that we have studied showing that L H are the underlying tones of surface L° or that L L are the underlying tones of L (extra low tone). As we shall see in the subsequent sections, the distinction between L° and L is neutralized in context. An obvious reflection of

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historical tones in the underlying tones is the fact that HL contour tones in Limbum often simplify to M. As we shall see in 26.3 below, a good number of the M tones in Limbum result from the application of T-rule 2 and rule (16e) respectivel.

One of the things that we see from the derivation of tones is the fact that Limbum nouns have lost their prefix tones. Historically all the nouns had a L tone prefix, as in the Proto-Mbam-Nkam forms given in (9) above.

26.2.3 Tone Patterns on Verbs

As we have seen for the nouns, a majority of Limbum verbs are monosyllabic.

26.2.3.1 Tone of Monosyllabic Verbs

The monosyllabic verbs fall into two major groups: H tone and L tone verbs, just as in Bantu languages. However, as we have seen for the nouns, the L tone verbs again subdivide into L L° and L L. Following are the patterns found on monosyllabic verb stems:

(12) a. H   fá   [fá]   "give!"

      b. L° vǜ   [vǜ]   "come!"

      c. L   bè·   [bè·]   "count!"

26.2.3.2 Tone on Disyllabic Verbs

There are very few disyllabic verb stems. Most of the disyllabic verbs in Limbum are monosyllabic verb stems that take suffixes. Following are the patterns that are found on disyllabic verbs:

(13) a. H H kósi   "count!"

      b. L H làŋgér   "grumble!"

The L H pattern given above comes out on the surface as L M as a result of the tone lowering rule (cf. T-rule 1). In our data

we found only one verb, /kyèsé/, "add to!", that had the L H pattern on the surface.

The patterns, L L° and L L were not found.

26.3 Tone Processes

There are a number of tone processes in Limbum. A few of them will be described here and the rest of them will be seen when we treat tone and grammar in the subsequent sections of this chapter (cf. 26.4).

26.3.1 Tone Lowering

In general, T-rule 1 applies in Limbum, i.e., a surface L tone lowers the following H tone to M (cf. 4.8.1). This rule was of more general application in the past than it is now. We have already said that it is due to the application of this rule that the tone pattern LH or L H is rare or absent in the citation forms of words. This rule derives LM from an underlying LH tone pattern of the L tone verbs. The application of T-rule 1 is less generalized in Limbum than in Ngemba languages (say, in Bafut). As we shall see, this rule does not apply in some cases, e.g. in the imperative mood where an imperative L tone verb is followed by a H tone object noun (cf. 26.4.3.1).

26.3.2 Extra L Tone in Context

As we have seen above, there are two types of L tones in Limbum, L° (level L) and L (extra L). The level low tone (L°) is higher than the extra low tone (L). L occurs mostly in isolation and in utterance final position. In context or when immediately followed by another syllable or morpheme, L becomes L°. This can be seen in the following example:

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(14)   dù   kàtë → [dù kàtè]   "go to the bush!"

       L   L   L → [L° L L]

In (14) above we notice that the falling L tone of /dù/ "go!"
becomes a level L tone in context.

26.3.3 Downstepped H Tone

There are floating L tones in the underlying forms of some
morphemes in Limbum. These floating tones create contour tones
that eventually simplify and cause following H tones to downstep.
This is illustrated in the following examples:

(15) a. É   ké` fá   bâ   → [ɛ́ ké 'fá bāa]
        he HAB give c.fufu   "he (always) gives corn fufu"

     b. Ɛ́   ké` fá   fúu   → [ɛ́ ké fā fúu]
        he HAB give mouse   "he (always) a mouse"

     c. É ` bá ` cé fá   fúu → [ɛ́ bā cē fā fúu]
        he P1 IMPF give mouse   "he was giving a mouse"

     d. Mɛ̀ ` mɨ̄ ` cé fá lélé → [Mɛ̀ mɨ̄ cē fā lélé]
        I   P2 IMPF give r.water "I was giving rainwater"

The habitual morpheme /ké/ has a surface H tone but because
it consistently causes a following H tone to downstep, we posit a
floating L tone after it so as to give it an underlyig HL tone.
The derivation of the surface tones of (15) above is as follows:

(16) a.   É ké` fá bâa   underlying
      b.   Ɛ́ ké fá bâa   tone grounding
      c.   É ké 'fá bâa   simplification and ds
      d.   É ké 'fá bāa   simplification (to M)

In (16a) the underlying tones are given. In b. the floating
tone of the habitual morpheme grounds. causing a HL contour tone
on the morpheme. In c. the contour tone simplifies and causes the
following H tone of the verb to downstep. In d. the underlying HL
tone of the noun /bāa/ simplifies to M tone (cf. (10) above).

In Limbum the phonetic level of a downstepped H tone is equal
to the level of a phonemic M tone. Thus in (16d) above, the pitch

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of the 'H on /fâ/ is equal to that of the M tone of /bāa/. This
is quite different from what happens in the Ngemba languages that
we have studied. In Bafut, for example, we have seen that there
is a phonetic pitch difference between 'H and M. The string in
(16d) could be represented as /ɛ́ ké fâ bāa/, with the 'H on /'fá/
rewritten as M, since it actually has the level of a M tone. This
leads us to the M tone level rule in Limbum. The M tone level in
Limbum would be of the following form:

(16e) 'H → M

     The above rule states that a 'H is reinterpreted as M, which
means that the level of downstep is equal to that of M tone.
     Although phonetically there is no pitch difference between 'H
and M, 'H can be defined and differentiated distributionally, to a
certain extent. Otherwise, the only sure way of identifying a
downstep is through identifying the processes (e.g., T-rule 2)
involved and the underlying tones from which the 'H is derived.
     In principle there should be no 'H tones in the language
after the application of rule (16e) since these are converted to M
tones. However in the data below we shall maitain 'H tones so
that it would be obvious where the process has applied. What
should be borne in mind is the fact that all instances of 'H are
to be reinterpreted as M tones.
     The derivation of (15c) is given in (17) below.

(17) a. Ɛ́ ` bá ` cé fâ fũu   underlying tones
     b. Ɛ̂   bá ` cé fâ fúu   tone grounding
     c. Ɛ́ 'bá ` cé fâ fúu   simplification and ds
     d. Ɛ́ 'bá   cé fá fúu   L tone deletion
     e. Ɛ́   bā   cē fā fúu   M level (rule (16e) and T-rule 13)

     In (17a) the underlying tones are given. In b. the floating
tone of the P1 tense marker is grounded to the left on the pronoun
where it creates a HL contour tone. In c. this contour tone
simplifies and causes the following H tone to downstep. In d. the
floating L tone of the imperfective marker is deleted. In e. the
'H is reinterpreted as M by rule (16e) and by T-rule 13, (i.e.,

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the H tone level resetting rule) the level of the H tones of the noun /fúu/ is reset.

The derivation of (15b) is similar to (17) above. Following the derivation in (17) above, we can make other conclusions: The effect of downstep is limited to a phrase level. We notice that in (17e), only the tones of the verb phrase morphemes, i.e., /'bá/, /cé/, /ké/ and /fá/ are reinterpreted as M. This shows that the H tones of the noun (object) were not affected by the downstep. This is also true for (15b) and (15d). If this is true, then it is likely that we do not need H tone level resetting rule (T-rule 13) in Limbum. It therefore means that after rule (16e) has applied, the occurrence of a normal H tone (after the former 'H, now reinterpreted as M) is to be expected.

We can also say that the effect of the tone lowering rule (T-rle 1 is the same as the effect of downstep since the resulting tone in both processes is a M tone. This can be seen in (15d): the floating L of the P2 tense morpheme is grounded to the left where it is absorbed by the preceding L of /Mê/ and this L tone eventually lowers the H tone on /mú/ to M by T-rule 1.

Another thing to be noted is that the effect of the L that causes the downstep in Limbum appears to be limited when compared to the effect of downstep in the Ngemba languages that we have studied. It would appear that the downstep rule (T-rule 2) is allowed to apply only once within the phrase, where the structural description favours a series of downsteps. This can be seen in (15c). In Ngemba languages and in the other Bantu languages that we have studied, H LH L H would yield H 'H 'H. However we notice that this sequence is realized as H 'H H in Limbum, as in (15c) and (17d). Of course H 'H H is reinterpreted as H M M by rule (16e). The above points lead us to propose the following downstep application rule for Limbum:

(17f)   HLH + HLH ... → H 'H H H...

The above rule means that a series of H tones and intervening floating L tones, is realized as H tone followed by downstepped H

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tones one level below the preceding H tone.   This   means   that   a
double downstep is not permitted in Limhbum.

Rule   (17f)   is well motivated because it blocks the eventual
lowering of pitches because this would cause a possible   confusion
of   phonemic   tone levels in Limbum.   This rule is needed in order
for Rule (16e) to be valid and applicable.   It is also   needed   to
prevent a situation where the pitch levels of H, 'H or M, L° and L
would be confused.   The difference between 'H (or M) and L°   is   a
matter of one integer.   These two levels would easily be confused,
if the downstep rule were allowed to apply several times.

The tone lowering rule (T-rule 1) and the M tone   level   rule
(rule 16e) explain why there are relatively many occurrences of M
tone in Limbum when compared to either L or H.

26.4 <u>Tone in Grammar</u>

In order to see how tone functions in the grammar of   Limbum,
we   shall   look   at   some   of the grammatical constructions in the
language.   Comparing Limbum with some of the Grassfields languages
that   we have studied so far, we will see that the functional load
of tone in   its   grammar   is   not   as   heavy   as   in   these   other
languages.   The   lexical tones of words or morphemes in Limbum do
not change much when used in grammatical constructions.

26.4.1 <u>Grammatical Tones</u>

Grammatical tones are those tones whose function is   to   make
grammatical   distinctions.   They may make distinctions with regard
to verb forms, such as tenses, aspect and mood, or they   may   fill
certain grammatical slots, thus standing for grammatical words, or
they may function as their markers.   In   most   Grassfields   Bantu
languages, e.g., Bafut, tone is so closesly tied to the grammar of
the language that a study of   the   tone   system   of   the   language
implies   a   study   of   its   grammar,   and   vice versa.   For a more
detailed treatment of grammatical tones reference should   be   made

to Mfonyam, 1986. We have already seen some of the functions of grammatical tones in language in 24.4.

As we have said above the role of grammatical tones in Limbum is minimal, compared with any of the Ngemba languages. This means that we shall not find many constructions in the grammar of the language that are distinguished solely by tone. As we have seen above, (cf. 26.2) tone plays a more important role at the lexical level where it serves to make a lot of meaning distinctions between words.

One of the functions of tone in the grammar of Bantu languages is to make noun class distinctions. We have seen in our study of Ngemba languages that in the associative construction and in the possessive construction, both the markers and possessives of both noun classes 1 and 9 have a characteristtic L tone that marks off these two classes from the rest of the other classes, which have H tone. In Limbum the possessive pronouns for noun classes 1 and 9 have a characteristic L tone. This L tone is one of the few cases in Limbum where tone still makes a grammatical distinction. In the following example we give the possessive pronouns according to the noun classes that are in Limbum.

(18)

		1		2		3	
N.class	sg.	pl.	sg.	pl.	sg.	pl.	
	"my"	"our"	"your"	"your"	"his"	"their"	
1	yà	yèr	yò	yè	yì	yàp	
2	wá	wér	wó	wèe	ví	wáp	
5	lá	lìsèe	ló	lè	lì	láp	
6	má	mìsèe	mó	mèm	mì	máp	
7	yá	yér	yó	yée	yí	yáp	
8	wá	wér	wó	wée	ví	wáp	
9	yà	yèr	yò	yèe	yì	yāp	
10	yá	yér	yó	yée	yí	yāp	

Looking at the table in '(18), we notice that the first second, and third persons (both the singular and plural) possessive pronouns of N. classes 1 and 9 have a grammatical L tone while the others in the rest of the N. classes, have in general a characteristic H tone.

26.4.2 The Associative Noun Construction

In Grassfields Bantu languages the associative construction is one of the grammatical constructions where there are a lot of tonal changes or tone processes. Hower, in Limbum there are relatively very few tone changes in the associative construction. This again supports the fact that in Limbum tone does not play a significant role in grammar. The following table illustrates this point. In (19) below we have given the citation tones of words following the attested tone patterns given in 26.2.2.

(19)

n. class	N1	N2 → H		M		L°		L	
1, 9	H	H	H	H	M	H	L°	H	L
	M	M	H	M	M	M	L°	M	L
	L°	L°	H	L°	M	L°	L°	L°	L
	L	L°	H	L°	M	L°	L°	L°	L
2, 5, 6, 7, 8, 10	H	H	H	H	M	H	L°	H	L
	M	H	H	H	M	M	L°	M	L
	L°	LM	H	LM	M	LM	L°	LM	L
	L	LM	H	LM	M	LM	L°	LM	L

From the the table in (19) above, it can be seen that we have decided to group the tone patterns of N1 (first column to the left) in two major groups, noun classes 1 and 9, forming the first group while the rest of the other classes, 2, 5, 6, 7, 8 and 10 are put together.

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In noun classes 1 and 9 there is the absence of the L tone marker that characterizes the other Bantu languages that we have studied. This explains why the H tone of N2 is not downstepped after the H tone of N1. We thus notice that there are hardly any changes in the construction when N1 is from either noun class 1 or 9.

In the rest of the noun classes, there are a few regular tone changes. The M tone of N1 changes to H tone before a H or M tone of N2. The L° and L of N1 change to a LM contour tone. We also notice that there is no associative marker in these classes either.

26.4.3 Verb Forms

The tone changes in verb forms are also minimal in Limbum. Most of the tone processes in the verb forms conform with what we have described above in 26.4.

26.4.3.1 The Imperative

A study of the imperative form of the verb in Limbum also shows that there are little or no tone changes. The obvious tonal changes are in the L tone verbs with an underlying L H. The citation tone pattern of these verbs is L M. Thus taking the citation forms of the verbs into consideration. we can say that in general the tones of the verbs do not change in the imperative form. The tone of the object of the verb does not change in most cases. The following examples summarize the paradigms and the tone patterns studied in the imperative form:

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(20) a. V   +   O

V	O			
H	H H	→	H H H
H	H LH	→	H H M
H	H L	→	H H L
H	LH H	→	H M H
H	LH LH	→	H M M
H	LLH	→	H LM
H	L° L°	→	H L° L°
H	L L	→	H L L

b. V   +   O

V	O			
L H	H H	→	L M H H
L H	H LH	→	L M H M
L H	H L	→	L M H L
L H	LH H	→	L M M H
L H	LH LH	→	L M M M
L H	LLH	→	L M LM
L H	L° L°	→	L M L° L°
L H	L L	→	LM L L

c. V   +   O

V	O		
L°	H H	→	L° H H
L°	LH	→	L° M
L°	L°	→	L° L°
L°	L	→	L° L

```
d.   V    +    O

     L        H H    →    L°   H H

     L        LH LH  →    L°   M M

     L        L°     →    L°   L°

     L        L      →    L°   L
```

From the above tables we notice that the surface H tone of
the object (in the output string) is not lowered by the L° tone of
a preceding L tone of the verb. We also notice that the L tone of
the verb becomes L° since it is followed by another word or
syllable, and thus is not in a prepause environment.

26.4.3.2 Past Tenses

Like the Ngemba languages that we have studied. Limbum has
three past tenses: P1, P2 and P3. Since we have described these
tenses fairly in detail in chapter 14, we are going to simply
describe the tone processes involved in the Limbum tense system.
Also, since the tone processes in Limbum are fairly
straightforward. we are simply going to describe what is happening
in most cases without necessarily dwelling on particular and
isolated instances.

26.4.3.2.1 Today Past (P1) /`bá/

(21) a. É ` bá fá   bâa   → [É 'bá fá bāa]   "he gave corn fufu"
        he P1 give c.fufu

     b. Mê ` bá fá bâa   → [Mê bā fā bāa]   "I gave corn fufu"
        I   P1 give c.fufu

     c. Mê ` bá làngér   → [Mê bā làngér]   "I grumbled"
        I   P1 grumble

     d. É ` bá dù   → [É 'bá dù]   "he went"
        he P1 go

     e. É ` bá lip   → [É 'bá lip]   "he beat"
        he P1 beat

```

f. É ˋ bá lîp ŋgwê → [É 'bá lĩp ŋgwē] "he beat a dog"
   he P1  beat dog

We notice from the example in (21) above that the P1 marker is /ˋbǎ/, with underlying tones as indicated. The floating L tone of the marker is responsible for the downstep of following H tones as can be seen in (21a). In (21d) and (21e) we notice that the H tone of the marker spreads onto the L tone of the verb where it forms a HL contour tone. In (21f) this contour tone simplifies to M (cf. (10).

26.4.3.2.2 Yesterday Past (P2) /ˋmǘ/

(22) a. É ˋ mǘ fá  bâa   → [É 'mǘ fá bāa]   "he gave
        he P2  give c.fufu                  corn fufu"

     b. Mê ˋ mǜ fá  bâa  → [Mê mǜ fā bāa]  "I gave
        I   P2  give c.fufu                 corn fufu"

     c. Mê ˋ mǘ làŋgér   → [Mê mǜ làŋgēr]  "I grumbled"
        I   P2  grumble

     d. É ˋ mǘ dù nèŋkùr → [É 'mǘ dū nèŋkùr] "I came yesterday"
        he P2  go yesterday

The P2 marker is /ˋmǘ/, with the same underlying tones as the P1 marker. The tone processes involved here are the same as those involved in the P1.

26.4.3.2.3 Remote Past (P3) /m̀/

(23) a. É m̀ fá  bâa   → [É m 'fá bāa]  "he gave corn fufu"
        he P3 give c.fufu

     b. Mê m̀ fá  bâa  → [Mê m fā bāa]  "I gave corn fufu"
        I  P3 give c.fufu

     c. É m̀ yá'ání   → [É m yá'ání]   "he crossed over"
        he P3 cross (over)

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d. Mὲ m̀ làŋgèr → [Mὲ m làŋgēr] "I grumbled"
   I  P3 grumble

e. É m̀ láa bâa → [É m lāa bāa] "he cooked
   he P3 cook c.fufu                    corn fufu"

f. É m̀ sáŋ yὲɛ → [É m sáŋ yὲɛ] "he wrote a song"
   he P3 wrote song

The P3 marker is /m̀/, with an underlying L tone. This morpheme desyllabifies (cf. 3.8) in context and its tone either grounds to the left, as in (23a) or it is deleted, as in (23c). The downstep in (23a) is caused by the L tone of the marker that grounds to the left on the pronoun, /ĕ/, where it creates a HL contour tone (cf. T-rule 2). We notice that the underlying H tone pattern of the verbs in (23e) and (23f) changes to a HM tone pattern. It is difficult to say what motivates this change.

## 26.4.3.3 The Present Tense (T0) /Ø/

The present tense in Limbum, just as in Bafut, is marked solely by tone, it does not have a segmental morpheme like in the past tenses. For a semantic description of the T0, reference should be made to 14.2.

(24) a. É ˋ fá bâa → [É 'fá bāa] "he has given
        he T give c.fufu              corn fufu"

    b. Mὲ ˋ fá bâa → [Mὲ fā bāa] "I have given
        I  T give c.fufu              corn fufu"

    c. Mὲ ˋ mìsí sháŋ → [Mὲ mìsī sháŋ] "I have finished
        I  T finish prison                 the prison
                                            sentence"

    d. É ˋ kóní bâa → [É kóní bāa] "has got
        he T got c.fufu                corn fufu"

    e. É ˋ yέɛ yὲɛ → [É yέɛ yὲɛ] "he has sung
        he T sing song                a song"

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The TO is marked by a floating L tone, which may ground either to the left, as in (24a) or drop out, as in (24d). There is no apparent reason why this floating tone behaves differently in each case. The downstep in (24a) is caused by this floating L tone. The underlying H tone of the verb /yɛɛ/ "sing!" in (24e) changes to HM (cf. (23e)) above.

### 26.4.3.4 Future Tenses /bé˙/

The future tenses in Limbum is similar to what we have described for Bafut in 14.9-11. As we have done for the past tenses 26.5.3.2 above, we are going to focus on the tone processes involved in these verb forms.

### 26.4.3.4.1 Simple Future (FO) /bé˙/

(25) a. É bé˙ fá bâa → [É bé 'fá bāa] "he will give
     he FO give c.fufu                corn fufu"

b. Mè bé˙ fá bâa → [M bé 'fá bāa] "I shall give
     I FO give c.fufu                corn fufu"

c. É bé˙ làngér → [É bé làngēr] "he will grumble"
     he FO grumble

The FO marker is /bé˙/ with an underlying HL tone pattern. Its tone causes following H tones to downstep. In (25b) the vowel element of the personal pronoun /Mè/ drops out together with its tone. This means that the nasal, /m/, is pronounced with the consonant of the following word, /bé/, and thus forms an /mb/ cluster. There are no syllabic nasals in Limbum.

### 26.4.3.4.2 Today Future (F1) /bé˙ lò/

(26) a. É bé˙ lò fá bâa → [É bé lò fā bāa] "he will give
     he F 1 give c.fufu               corn fufu"

b. Mè bé˙ lò fá bâa → [M bé lò fā bāa] "I shall give
     I F 1 give c.fufu               corn fufu"

c. É bé˙ lò làngér → [É bé lò làngēr] "he will
     he F 1 grumble                  grumble"

The F1 marker is /lò/ with an underlying L tone. The tone processes involved in the above examples are the same as those we have described for the F0.

### 26.4.3.4.3 Tomorrow Future (F2) /bé˙fǘ/

(27) a. É bê˙ fǘ fá bāa → [É bé 'fǘ fá bāa]   "he will give
        he F  2  give c.fufu                      corn fufu"

     b. Mè bê˙ fǘ fá bāa → [M bé 'fǘ fá bāa]   "I shall give
        I  F  2  give c.fufu                     corn fufu"

     c. É bê˙ fǘ làngér → [É bé 'fǘ làngēr]   "he will
        he F  2  grumble                        grumble"

The F2 marker is /fǘ/. This marker has an underlying H tone.

### 26.4.3.4.4 Remote Future (F1) /bé˙ kè/

(28) a. É bé˙ kè fá bāa → [É bé kè fā bāa]   "he will give
        he F  3  give c.fufu                   corn fufu"

     b. Mè bé˙ kè fá bāa → [M bé kè fā bāa]   "I shall give
        I  F  3  give c.fufu                    corn fufu"

     c. É bé˙ kè làngér → [É bé kè làngēr]   "he will
        he F  3  grumble                       grumble"

The F3 marker is /kè/, with an underlying L tone. We also notice that the tone processes in all the future tenses are similar. The tone changes are fairly straightforward. The examples in the future tenses thus help us to see how regular the tone processes in Limbum are.

### 26.4.3.5 Imperfective /˙ cé/

The imperfective in Limbum is marked by /˙ cé/. This marker can be used with all the tense markers to form the imperfective form of tenses.

## 26.4.3.5.1 TØ Imperfective

(29) a. Ɛ́ ` cě  fá  bâa    →  [Ɛ́ 'cě fá bāa]   "he is giving
       he MPERF give c.fufu                        corn fufu"

   b. Mɛ̀ ` cě  fá  bâa  →  [M cē fā bāa]    "I am giving
       I   IMPF  give c.fufu                     corn fufu"

   c. Ɛ́ ` cé  làngér    →  [Ɛ́ 'cé làngēr]   "he will
       he IMPF grumble                          grumble"

The tone processes in the above examples are similar to what
we have already seen in the other verb forms. In (29b) we notice
that the effect of the L tone goes as far as the word /fá/. It
does not only lower the tone of the immediately following
imperfective morpheme, /cé/, but also that of /fá/. This has
already been discussed in 26.4.3 (17) above. The changes in the
form of the personal pronoun, /Mɛ̀/, "I" have already been
described (cf. (25b)).

## 26.4.3.5.2 Past Imperfective

Since the tone processes in the past imperfective tenses are
similar, we are going to give an example of each past tense.

(30) a. Ɛ́ ` bá ` cě  fá  bâa    →  [Ɛ́ 'bá cé fá bāa]
       he P1 IMPF  give c.fufu        "he was giving corn fufu"

   b. Mɛ̀ ` mú ` cě  fá  lélɛ́ →  [Mɛ̀ mū cē fā lélɛ́]
       I   P2  IMPF  give r.water     "I was giving rainwater"

   c. Ɛ́ m̀ ` cé  làngér    →  [Ɛ́ m 'cé làngēr]
       he P3 IMPF grumble           "he was grumbling"

It is worth noting that in (30a) the second floating L tone
of the IMPERF morpheme does not cause a double downstep (i.e., a
second ds on /cé/) as would be the case in the Ngemba languages
that we have studied, or, for example, in Basaa. As we saw above,
it is because of rule (17f). As we have mentioned before, the
pitch of the downstepped H tones is equal to that of the M of
/bāa/ "corn fufu". In (30b) the lowering effect of the
intervening L tone of /` cě/ goes as far as /fá/ (cf. (29b)) but

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it does not lower the H tones of /lέlέ/. We have discussed these facts above (cf. rules (16e) and (17f)).

26.4.3.5.3 Future Imperfective

(31) a. É  bé῀ ῀ cé    fà   bâa      →  [É bé 'cé fà bāa]
        he FO  IMPF     give c.fufu        "he will be giving
                                           corn fufu"

     b. È  bé lò ῀ cé   fà   bāa   →  [È bé lò cè fà bāa]
        he F  1  IMPF   give c.fufu        "he will be giving
                                           corn fufu"

     c. Mè bé῀ fú ῀ cé   làngér   →  [M bé 'fú cé làngēr]
        I  F  2  IMPF   grumble          "I shall be grumbling"

     d. Mè bé῀ kè ῀ cé   yá'nì lέlέ →  [M bé kè cē yā'nī lέlέ]
        I  F  3  IMPF   go over r.water "I shall be going over
                                           rainwater"

The tone processes involved in the future imperfective tenses have already been discussed since they are similar to the processes in the verb forms that have already been treated above.

The verb forms that we have treated so far show us what tone processes are attested in Limbum. Our treatment of tone, both in the noun phrase and verb phrase, is meant to show the role of tone in Limbum. This gives us the basis and facts for the tone experiment described in chapter twenty-seven. This study also helps us to compare the tone processes of Limbum with those that we have seen in our study of Bafut and the other Ngemba languages.

We notice from the above study that there are differences between the tone system of Limbum and the tone systems of the Ngemba languages that we have studied. In the Ngemba languages there is a difference between a 'H and a M but, as we have seen, there is no difference between the pitch of 'H and that of M in Limbum. Tone plays a less important role in the grammar of Limbum while in the Ngemba languages tone has a very heavy grammatical load. The extra L tone that is in Limbum is not attested in the Ngemba languages. The M tone in Limbum is much more established than in most of the Ngemba languages. There are many more M tone words in Limbum than in any of the Ngemba languages. Among the

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Ngemba languages that we have studied, it is only in Bambili where the M tone is nearly as developed.

Despite these differences, there are similarities between the tone system of Limbum and that of any of the Ngemba languages. A number of tone processes are attested in both Limbum and the Ngemba languages, for example, tone lowering, tone spreading, tone simplification, downstep, tone grounding, and tone deletion.

Notes to Chapter Twenty-six

1 My main informant was Rev. Samson Ngah. Rev. Ngah is from Wat and so the dialect described in this study is mainly that of the Wat area. However, there are only a few areas where the Wat dialect differs from that of the other Limbum speakers. During the experiment in Ngarum village, the data and what we have described here were verified with the Limbum speakers from other villages.

I am also thankful to Mr. Ernest Bawe with whom I cross-checked some of the data here. Mr. Bawe is from Tabenken area. The dialect spoken in this area is not very different from the Wat dialect.

I am very grateful to Virginia Bradley, the S.I.L. linguist responsible for the Limbum project, who helped a lot in making the practical arrangements that the research and the Limbum experiment required.

2 In the orthography of Limbum it was decided, for economic reasons, that in the case of long vowels, tone should be marked only on the first vowel. This is illustrated as follows:

| | | |
|---|---|---|
| bǎa | [báá] | "madness" |
| bǎa | [báá] | "bag" |
| bǎa | [báá] | "two" |

3 The HM tone on /bca/ varies with H tone, thus, /bcǎ/ varies with /bcâ/ in the speech of the same speaker.

Chapter Twenty-seven

## LIMBUM TONE EXPERIMENT

### 27.1 Introduction

Most of the linguists who have worked on Limbum have consistently marked the tones. Fiore (1977) used the numbers 1, 2, 3, and 4 to mark tones. These are raised numbers written after each syllable to mark them for pitch. The number 1 representing the highest pithch and 5, the lowest. Van Reenen and Voorhoeve (1982) use the following tone marks in their text:/ˉ/, /ˉ/, /ˉ/ and /ˆ/ The marks ˘ indicate extra L tone. Higgens and Bradley (1985) mark /ˊ/ (H), /ˋ/ (L). They leave M tone unmarked. Tone has either been totally ignored or marked very sparingly in other literature. It is in the light of this problem that we started the Limbum tone orthography project in 1984. This research project was carried out on the Limbum Language from December 1984 to July 1986. The aim of the research was to determine the best way of representing tone in the orthography of Limbum. An analysis of the tone system was carried out. After the fundamental research, recommendations as to a workable way of marking tone in Limbum were made to the Limbum language Committee. Following these recommendations, the Limbum Language Committee started marking tones consistently in the literature available. They went through the Limbum Primer marking L tone and a combination of L tone and H or M tones (i.e., contour tones). Also, on the basis of the analysis of the tone system (cf. chapter 26), four systems of marking tone were proposed to be tested in four different experimental classes.

The Limbum experiment was conceived on the same basis as the Bafut experiment. The overall purpose of this experiment was to further verify the hypotheses that we have described in chapter twenty. This means that we shall not repeat the hypotheses and

the assumptions that we set out to verify: reference should therefore be made to chapter twenty for more details on this.

In the Limbum experiment we used the information and practical lessons learnt from the Bafut experiment. We thus had the advantage here of using the lessons we had learnt concerning a good tone pedagogy.

## 27.2 Tone Marking Systems

In order to test these systems, four books were written. Each book taught one of the proposed systems of marking tone. The systems tested were: System 2, System 3, Sytem 4, and System 5. System 1 was the master copy from which the rest of the systems were made. In this system all the tones were marked and this enabled me, as a non-native speaker of Limbum, to identify the tones.

System 2 marked L tone (ˋ), LH tone (ˇ), and HL tone (ˆ). This means that M tone and H tone were not marked. The contour tone LM was marked as /ˇ/ (LH) while the contour tone ML was marked /ˆ/, i.e., both HL and ML were marked the same way. The HM contour tone was not marked and so no distinction was made between H and HM in the orthography.

System 3 marked H tone (ˊ), HL tone (ˉ), and LH tone (ˇ). This system was the same as system 2 except that H tone was marked. Comparing System 2 and System 3, we would see that there were two variables: H tone and L tone. System 3 was constructed thus in order to test it against system 2 which had already been tested in the Bafut experiment and found to be the best out of the four systems tested there. More will be said about this in 27.5 when we discuss the result of the experiment.

System 4 marked only L tone (ˋ). This system thus marked only one out of the eight tones in Limbum.

System 5 marked H tone (ˊ), L tone (ˋ), HL tone (ˆ), LH tone (ˇ), (i.e. LM) and HM tone (ˆ). The ML contour tone was marked as HL such that there was no distinction between HL and ML. Mid tone

was not marked. This system marked the greatest number of tone compared to the rest of the systems tested.

## 27.3 Pedagogical Materials

In order to test the four tone marking systems described above, we prepared the book Reading and Writing Tone in Limbum. This book is one similar to the one that we wrote for the Bafut experiment. The book is about 60 pages long and has 17 lessons.

The first three lessons introduce the segmental phonemes or alphabet of Limbum. Lessons 4 to 6 teach the lexical tones, H, M, L, HM, HL, and LM. Lessons 7 to 17 go through the grammar of Limbum and teach the grammatical tones and those tone changes that lexical tones undergo when words or morphemes are used in grammatical constructions. As the contents of the book would show, it portrays in outline form, the grammar of Limbum. From a master copy, i.e. System 1, the rest of the books, System 2, System 3, System 4 and System 5 were prepared. The contents of the books were the same except for the tone marking system used.

The alphabet used in Reading and Writing Tone in Limbum conforms with the Alphabet Génénal des langues Camerounaises. It is the one approved by the Wimbum Literacy Association for use in writing the Limbum language.

## 27.4 The Experiment

In order to test the four tone marking systems, classes were run from June 25 - July 4 1986 in Ngarum. one of the vilages where the language is spoken. The course was organized by the Wimbum Literacy Association and the leaders of Ngarum village. This course was shorter than the one organized for the Bafut experiment because the book used here is shorter than the one used for the Bafut experiment. As we saw in the previous chapter, the Limbum tone system is not as interwoven in the grammar as that of Bafut. This explains why the Limbum tone textbook is not as thick as that of Bafut, which is 80 pages.

## 27.4.1 Selection of Candidates

The participants at the course came from different villages and constituted thus a cross-section of the Limbum-speaking community. The ages of the participants ranged from 14 to 60 years. The average age of the participants was 31. The level of education required of the participants was at least post primary school. However most of the participants were above this level. A number of them were pastors or trained teachers (Grade III or Grade II).

Sixteen students came to the course and in order to divide them into four groups of about the same intellectual ability, they had to be tested. They were taught the first three lessons of the book together. These lessons taught them the alphabet of Limbum. After teaching them these lessons, they were all tested on the alphabet. This quiz served both to test how the students had learned the alphabet and to classify them as to their intellectual abilities. Following the results of the quiz the students were ranked according to their scores and then distributed systematically into four groups starting with those with the highest scores. This was to make sure that there was a balanced and equitable distribution of the students according to their intellectual abilities. One student scored so poorly that we decided not to consider his subsequent work. He was however put in one of the groups. Although he participated in the whole course, his scores were not taken into consideration when his class was being evaluated. This does not mean that the group in which he was did not have enough people. There were more than the average number of students in his group.

The average number of students per group was 4. Most of the students attended classes very regularly till the end of the course. The fact that they were to be given certificates at the end of the course was one of the motivating factors.

## 27.4.2 Teaching and Evaluation

Once the students were divided into four groups: G2, G3, G4 and G5, each group corresponding to each of the tone marking systems, i.e. System 2, System 3, System 4 and System 5, we started teaching them the tone lessons separately. My language helper, who reads and writes Limbum very well, helped in teaching some of the lessons. He had been trained to hear tone and also to read and write tone in Limbum. When he was teaching, I had to be in class in order to supervise and to judge the progress of each lesson and also to evaluate the students. All the groups were taught at more or less the same rate. Reference should be made to the text book Reading and Writing Tone in Limbum for the structure of the course and of each lesson (cf. Appendix II). The whole book was taught in the course. The principles used in the Bafut experimental classes were also used in the Limbum experiment (cf. 20.4).

The general principle here again, as in Bafut, was to start with lexical tones before proceeding to grammatical tones or tone changes in grammatical constructions. It was useful to start by teaching L tone and contrasting it with H tone in the first tone lessson. The next general pedagogical principle was to teach level tones first before contour tones. Reference should be made to Mfonyam, (1987) for more details concerning tone pedagogy.

At the course the students were also taught to read the Limbum Primer I, i.e. Stories about Tata and Nyako Book I. This was to help the students to read and write Limbum fluently. This helped the students to find it easier to follow the tone lessons since the problems related to the alphabet were reduced with more practice in reading and writing the language. By the end of the second day of the course, the students had done three lesssons of the Primer. By the time we arrived at Lesson 12 in Reading and Writing Tone in Limbum, the students had reached the point where they could both discriminate and write the tones fairly well. At this point they were in Lesson 26 of the Primer, i.e. almost at the end of the book.

The students were evaluated throughout the course using exercises both in reading and writing tone. All the exercises used for evaluation are in the book and will be indicated in the results tables below (cf. 27.4.3).

Two texts were used for final evaluation of the students. One of the texts was in the textbook, i.e., in Lesson 17, exercise 2. The first one hundred words of the text were given to the students to read. This text had been seen by the students. My assistant had read the whole text in class and it is likely that the students had also read it at home on their own since they had the text book. However, it had not been told them that the text would be one of the reading evaluation texts.

The second text had not been seen by the students. All that they had been told was that they would be given a text for their final reading test. This text was .constructed on the same principles as the one used for the Bafut experiment. It was a 200-word descriptive text. This included all the tones that the students had been taught in the course. It was constructed to include ambiguous words and phrases, i.e., words or phrases that would give different meanings, if the tones were not correctly read as marked. We present below the text marked according to the four tone marking systems:

G2

## TÀTA À M Dù NTAA

Tàta à m yuu mbàŋ, a koo ŋkunyăm yì tâ tɛ e bo dù ntaa àwo.
E m lòr kwâa a lɛ njep bàa. E ka' lɛ̀ njo, a lor bãa kwâa a kɛti mbe tu bkuu, a noŋ.
Tù' à ka' raa, e nati, a lor mbàŋ a byê', a tɯr ŋkunyàm à kùɥ, a ce dù ntaa.
E ka' bä', a yɛ enɛ bêe mò' a ce kapni ntaa buu, bêe mò' a ce gèe yap kìnfɛ̀r.
Tàta à suusì mbàŋ embe tù. Ŋwɛ̀ mò' à vɥ a kapni ŋkunyàm, ntaa à tɛɛ ka'. Makɥ yì Nfò à vɥ a yuu a du rkwe àwo.
Tàta à fyèni yì mbàŋ ce e ba tɯr à gee ŋkunyàm. E ka' fyèni, a lor mbãa mbàŋ a kyèse à mɥ̀ mbãa ŋkunyăm. E m yuu buu gòr sẽ. E m yuu ŋgar, ba ŋgo', ba mlaa mbaa, ba mbu', ba ŋkaa, ba bkaa, ba shã'tu, ba sâp, ker ba mbãabɥɥ. E ka' yuu a kɥti â là'.
Ŋgwa yì à ka' yɛ ye, a caŋ a koni ye.
E m laa baa, a laa enɛ Tàta su'si mbo, ye. Tàta à sù'sì mbo, a ye, a yû' rbòŋ.

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E ka' ye, a saa ŋguu.  E ka' saa ŋguu, a saa yi cê'.

G3

## TATA A M DU NTAA

Tata à m yúu mbaŋ, á kôo ŋkunyăm yi tâ té é bó du ntaa awo.

É m lor kwâa á lê njép baa.  é kã' lɛ njo, á lór băa  kwâa  á kɛti mbê tu bkuu, á noŋ.

Tu'  a ká'  raa,  é nati, á lor mbaŋ á byɛ', á túr ŋkunyam a kʉʉ, á cé du ntaa.

É ká' bà', á yɛ́ énɛ bee mo' á ce kapni ntáa buu, bee mo' á cê gee yap kinfɛr.

Tata  a  suusi  mbaŋ  émbe tu.  Ŋwɛ mo' a vʉ á kǎpní ŋkunyam, ntaa à tɛ́ɛ ka'.  Mákʉ yi Nfo a vʉ á yúu á du rkwe awo.

Tata a fyeni yi mbaŋ cé é ba túr a gee ŋkunyam.  É ká' fyeni, á lor mbăa mban a kyesē a mʉ mbăa ŋkunyam.  É m yúu buu gor sê.  É m yúu ŋgar, bá ŋgo', bá mláa mbaa, bá mbú', bá ŋkaa, bá  bkaa,  bá sha'tu, bá sâp, ker ba mbăabʉʉ.  é ká' yuu á kʉtí a la'.

Ŋgwa yi a ká' yé ye, á cáŋ á kóní ye.

É m láa baa, á láa énɛ Tata su'si mbo, ye.  Tata a su'si mbo, á yé, á yû' rboŋ.

é ká' ye, á săa ŋguu.  é ká' saa ŋguu, á saa yi cɛ'.

G4

## TĂTA Ă M Dù NTAA

Tàta à m yuu mbàŋ, a koo ŋkunyam yi ta tɛ e bo dù ntaa àwo.

E m lòr kwaa a lɛ njep bàa.  E ka' lɛ njo, a lor bàa  kwaa  a kɛti mbe tu bkuu, a noŋ.

Tù'  à  ka'  raa,  e nati, a lor mbàŋ a byɛ', a tʉr ŋkunyăm à kʉʉ, a ce dù ntaa.

E ka' bà', a yɛ enɛ bêe mò' a ce kapni ntaa buu, bèe mò' a ce gèe yap kìnfɛr.

Tàta  à  suusì  mbàŋ  embe tù.  Ŋwɛ̂ mò' à vʉ a kapni ŋkunyàm, ntaa à tɛɛ ka'.  Makʉ yì Nfô à vʉ a yuu a du rkwe àwo.

Tàta à fyènì yi mbàŋ ce e ba tʉr à gee ŋkunyàm.  E ka' fyènì, a lor mbàa mbàŋ a kyèse à mʉ mbàa ŋkunyàm.  E m yuu buu gòr se.  E m yuu ŋgar, ba ŋgo', ba mlaa mbaa, ba mbu', ba ŋkaa, ba  bkaa,  ba shà'tu, ba sap, ker ba mbàabʉʉ.  E ka' yuu a kʉti à là'.

Ŋgwa yì à ka' yɛ ye, a caŋ a koni ye.

E m laa baa, a laa enɛ Tàta su'si mbo, ye.  Tàta à sù'sì mbo, a ye, a yu' rbòŋ.

E ka' ye, a saa ŋguu.  E ka' saa ŋguu, a saa yi cɛ'.

G5

## TĂTA Ă M Dù NTAA

Tàta à m yúu mbàŋ, á kôo ŋkunyăm yì tâ té é bó dù ntaa àwo.

é m lòr kwâa á lê njép bàa.  É ká' lè njo, á lór băa  kwâa  á kɛti mbé tu bkuu, á noŋ.

Tù'  à  ká'  raa,  é nati, á lor mbàŋ á bɛ'  , á túr ŋkunyàm à kʉʉ, á cé dù ntaa.

É ká' bà', á yɛ́ énɛ bèe mò' á ce kapni ntáa buu, bèe mò' á cé gèe yap kìnfɛr.

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Tàta à suusî mbàŋ émbe tù. Ŋwê mò' à vʉ á kăpní ŋkunyàm, ntaa à téɛ ka'. Mákʉ yì Nfò à vʉ á yúu á du rkwe àwo.

Tàta à fyèni yi mbàŋ cé é ba tʉ́r à gee ŋkunyàm. É ká' fyèni, á lor mbãa mbàŋ á kyèsé à mʉ̀ mbãa ŋkunyàm. É m yúu buu gòr sê. É m yúu ŋgar, bá ŋgo', bá mláa mbaa, bá mbú', bá ŋkaa, bá bkãa, bá shà'tu, ba sap, ker bá mbãabʉʉ. É ká' yuu á kʉtí à là'.

Ŋgwa yì à ká' yɛ́ ye, á cãŋ á kóní ye.

É m láa baa, ǎ láa énɛ Tàta su'si mbo, ye. Tàta à sù'sì mbo, á yě, á yû' rbòŋ.

É ká' ye, á sáa ŋguu. É ká' saa ŋguu, á saa yi cè'.

During the reading test, the students were first given the familiar text so as to prepare them for the text that they had not seen, which was more difficult and longer. Even though the students had seen the text before and had even read or, at least, heard it read, they still did not read as well as expected. This was perhaps because of examination conditions. However, this first text helped to make them settle for the second and more important one.

Each reading was recorded so that it would be possible to correctly evaluate it afterwards. The tape recorder added to the stress and nervousness of the student but he became more used to the situation as he read further. The student was urged to pass on when he came to a word or a phrase that he could not read.

In evaluating the reading, each misread word was counted as a mistake. Each backtracking was also counted as a mistake.

Some students took longer than others to read. The time factor was not taken into consideration since we tried to urge the student to continue so as not to get stuck on a word or phrase that he could not read. Just as for the Bafut experiment, we found that normally the student who knew how to read would read fast and finish in a shorter time and the student who could not read the language well would not improve his reading much, even if he spent a much longer time in trying to do so.

## 27.4.3 Results

We present below a summary of the results of the experiment. In the following tables, L stands for Lesson, while * stands for exercise. Thus, L4 *2 stands for Lesson 4, exercise 2. Mean as

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used here is the class average mark of the exercise in question and % is the percentage for the class score.

### Results Table 1

#### Writing Exercises

|    | L4 *2 | | L5 *3 | | L6 *5 | |
|----|------|------|------|------|------|------|
|    | mean | % | mean | % | mean | % |
| G2 | 8 | 80 | 20.25 | 96.42 | 9.13 | 57.06 |
| G3 | 5.88 | 58.88 | 16 | 66.67 | 7.30 | 45.63 |
| G4 | 8.75 | 87.50 | 18 | 75 | 10.75 | 67.18 |
| G5 | 8 | 80 | 11.67 | 48.62 | 3.75 | 23.43 |

### Results Table 2

|    | L8 *1 | | L11 *1 | | L11 *2 | |
|----|------|------|------|------|------|------|
|    | mean | % | mean | % | mean | % |
| G2 | 4.83 | 80.50 | 17 | 85 | 8 | 80 |
| G3 | 3 | 50 | 12.25 | 61.25 | 5.5 | 55 |
| G4 | 4.33 | 72.17 | 12.25 | 61.25 | 5.75 | 57.50 |
| G5 | 2.66 | 44.33 | 11.50 | 57.50 | 3.83 | 38.30 |

### Results Table 3

|    | L12 *1 | | L12 *2 | | L15 *3 | |
|----|------|------|------|------|------|------|
|    | mean | % | mean | % | mean | % |
| G2 | 11.17 | 93.08 | 8.5 | 85 | 5.33 | 88.83 |
| G3 | 8.5 | 70.83 | 8 | 80 | 4.63 | 77.27 |
| G4 | 10.13 | 84.41 | 8.75 | 87.50 | 5.25 | 87.50 |
| G5 | 7.5 | 62.50 | 6.33 | 63.30 | 2.67 | 44.50 |

## Results Table 4

### Writing Mean

|     | points | %     |
|-----|--------|-------|
| G2  | 92.21  | 80.89 |
| G3  | 71.31  | 62.55 |
| G4  | 83.96  | 73.65 |
| G5  | 57.91  | 50.80 |

## Results Table 5

### Reading Tests

|     | L15 *4 mean | % | L17 *2 mean | % | Final text mean | % |
|-----|-------------|-------|-------------|-------|------------------|-------|
| G2  | 40     | 80    | 96.33 | 96.33 | 190    | 95    |
| G3  | 35.63  | 71.25 | 96    | 96    | 179.75 | 89.88 |
| G4  | 35.63  | 71.25 | 94.75 | 94.75 | 174.50 | 87.25 |
| G5  | 33.33  | 66.67 | 91.67 | 91.67 | 167.67 | 83.84 |

## Results Table 6

### Reading

|     | Mean   | %     |
|-----|--------|-------|
| G2  | 326.33 | 92.95 |
| G3  | 311.38 | 88.81 |
| G4  | 304.88 | 87.o9 |
| G5  | 292.67 | 83.59 |

Results Table 7

Overall Results

|     | points | %     |
|-----|--------|-------|
| G2  | 418.54 | 86.92 |
| G3  | 373.93 | 75.68 |
| G4  | 388.84 | 80.37 |
| G5  | 350.58 | 67.20 |

## 27.5 Discussion

Considering the overall results, we find that G2, which is the class in which System 2 was tested, made the highest score. G4, where System 4 was tested, came second. G5 which marked more tones than any of the four classes had the lowest score.

The scores of the different classes are indicative of the relative ease or difficulty of the system of tone marking being tested. The scores of G5 in general show that tone marking System 5 is the most difficult way of representing tone in Limbum. The scores of G2 show that System 2 is relatively the easiest and probably the most efficient way of marking tone in Limbum.

Comparing the scores of the different groups in the tone reading and writing exercises, we can notice differences. In general, all the groups do better in the reading exercises than in the writing exercises. This indicates that it is easier to read than to write tones. Another observation is that G3 scores higher than G4 in the reading exercise. This may indicate that writing only L tone in Limbum creates difficulties in reading due to underdifferentiation of tonemes. G4 scores more than G3 in the writing exercises for the obvious reason that it is easier to mark only L tone, as in the case of G4 than to mark H, HL, and LH, as in the case of G3. Given that G2 does relatively better than all the other classes, it is plausible to conclude that System 2 is relatively the best or most efficient way of representing tone in the orthography of Limbum.

Comparing G2 and G3 we find that in both the reading and writing exercises, G2 has higher scores than G3. This is an indication that it is more efficient to mark L tone than H tone. The only variable in each system is either the H tone or the L tone. In each of these two systems both HL and LH contour tones are marked. If the difference between System 2 and System 3 is that L tone is marked in the former while H tone is marked in the latter, then it would be plausible to say that in this case it is easier and thus most efficient to mark L tone than to mark H tone. The scores of G4, the group which marked only L tone also support the fact that it seems easier or more efficient to mark L tone than H tone.

Thus when faced with the choice of marking L tone or H tone, it would be advisable to mark L tone rather than H tone.

Considering the tone orthography used in both G2 and G3, it will be obvious that G3 is not a mirror image of G2. They are using the same number of tone marks, i.e., three, however the tones that they mark are different. The system that G3 is using has disadvantages in that both L tone and M tone are not marked in this system, thus making it possible for the reader to confuse the two. A mirror image of G2 would have required G3 to mark H,. M and HM as /´/. As it can be imagined, this would make this system too difficult for the students. They would be marking the same number of tones as G5, with the additional disadvantage that, whereas G5 distinguishes H from M and HM, G3 does not. As we have said in the discussion given in 32.5, a frequency count of tones in Limbum indicates that G3 would be marking at least two times the number of tones that G2 is marking. This would already disqualify this system since it would have too many tone marks. From the results of the Bafut tone experiment we saw that any tone orthography that marks a large of tones should be avoided.

The Wimbum Literacy Association decided to start using tone marking System 2 after the fundamental research and following our recommendations. Following impressionistic comments, it seems to be working well. People find it easier to read or write tone in Limbum using the new system than any other system that had been

used before. The linguist in charge of the Limbum language project (who is not a native speaker) reports that the system is working well.

## 27.6 Problem Areas of System 2

Although System 2 turned out to be the best way of marking tone in Limbum, it has a number of weaknesses.

At the lexical level, System 2 is less efficient than System 5, which marks many more tones than the rest of the systems that were tested. Tone is very important in making lexical meaning distinctions. This is illustrated in the following example where the lexical set given is distinguishable solely on the basis of tone:

| S1 | G2 | G3 | G4 | G5 | |
|----|----|----|----|----|----|
| báa | baa | báa | baa | báa | "madness" |
| bãa | baa | baa | baa | bãa | "two" |
| bãa | baa | baa | baa | baa | "corn fufu" |
| bãa | bǎa | bãa | bàa | bǎa | "father" |
| bàa (L°) | bàa | baa | bàa | bàa | "hate!" |
| bàa (L) | bàa | baa | bàa | bàa | "bag" |

In the above example, S1 is the tone marking system that formed the basis of the rest of the systems. As can be noticed, it marks tone in such a way as to make almost all the phonemic tone distinctions in order to reduce lexical ambiguity to a minimum. Thus in the above example it makes most of the distinctions except in the case of the last two words. Only System 5 out of the four systems tested is capable of sufficiently making the necessary distinctions at the lexical level. We notice that System 2, as well as the other two (3 and 4) fail to make the necessary distinctions at the lexical level. We thus see that System 2 is weak at the lexical level.

We will also notice even at the level of syntax or grammar that System 2 (just as the other systems except 5) fails to make some meaning distinctions. This is illustrated in the following example:

S1     É bé lò cē fā bāa [É bé lò cē fā bāa] "he will be giving corn fufu (tomorrow)"

G2    E be lò ce fa baa

G3    É bê lo ce fa baa

G4    E be lò ce fa baa

G5    É bé lò cē fā bāa

Looking at the above example we see that System 2 does not make the distinction between H and M tones, neither does System 4. System 3 does not make the distinction between L and M tones. Here again we notice that System 5 makes the necessary distinctions.

Although System 2 reveals these weaknesses, it is still to be the most efficient orthography because it strikes a balance between too many tone marks or no tone marks at all, which makes reading and writing the language difficult. Even if this system does not make all the necessary distinctions, we count on context (linguistic and non-linguistic) to clear some of the potential ambiguities in the language. It is obvious that words, and even constructions, are not used in isolation but within a given context.

Another problem area concerns the LM contour tone, which is marked as LH (˜). This tone occurs mostly in the associative noun construction (cf. 26.5.2) and in compound nouns or in a few nouns like /mbāabɛ̀ɛ/ "cowries". This tone is not realized in a number of dialects of Limbum, e.g. in the one spoken around Ngarum. This tone was however marked in the textbook and in the final reading text since it is realized in the dialect area of my informant. In the reading text it was therefore marked in G2, G3, and G5. Even though it was marked, it was not read by a good number of the

students because they read following their dialect (they read it as L tone). This might indicate that the marking of this tone is probably redundant.

The results of the Limbum experiment and the discussion above have shown us that the conclusions of the Bafut experiment, given in 20.8 have also proved true for the Limbum experiment. The hypotheses that were proved true by the Bafut experiment have also been shown to be true by the Limbum experiment.

# PART V

# TONE SYSTEMS OF SELECTED BANTU LANGUAGES

# Chapter Twenty-eight

## BASAA TONE

### 28.1 Introduction

Basaa is a Bantu language, classified as A43 by Guthrie (1967:71). The Atlas Linguistique du Cameroun classifies it as a Northern Equatorial Bantu language under the code number 401. Basaa is spoken in the Littoral, Centre and South provinces by about half a million people.[1]

A number of studies done on Basaa discuss tone to some extent. One of the most important studies on Basaa tone system has been done by Bot Ba Njock (1984). Bot Ba Njock analyses Basaa as having two underlying tones, H and L. Phonetically he recognizes a M tone and six contour tones, HL, LH, MH, ML, HM, and LM. As will be seen in our analysis, what Bot Ba Njock analyses as M tone is a downstepped H tone ('H). If his M tone is actually a 'H, then his MH contour tone is a suspicious tone since it is unlikely to have a normal H tone immediately after a 'H. In his description of tone processes he says, for example, that H tone can lower another H tone. This is very unlikely at face value since H tones in Basaa do not downdrift automatically. At the surface level one might be tempted to say that one H tone can cause a following one to be lowered but, as we shall notice below, the cause of the downstep is an intervening floating L tone or the simplification of a contour tone. In both cases, the L tone is not realized on the surface as such.

Bot Ba Njock and Bitjaa are currently carrying out more studies on the Basaa tone system.

## 28.2 Lexical tones

Basaa is basically a two tone system, H and L. There is downstep in Basaa but no downdrift.

### 28.2.1 Tone patterns of nouns

Basaa is a noun class language and so the structure of the noun usually consists of a prefix and stem. The noun prefix can have any of the following forms:

(1) a. CV-'    lì-kòndò      "pantain"
    b. N-      m̀-ɓòŋ         "cassava"
    c. C-      j-àm          "matter"
    d. Ø-      Ø-kààt        "book"

The tone of the of the prefix is underlyingly low. Although we see that the CV- and N- prefixes have a surface low tone, this may change in context.

The following tone patterns are found on monosyllabic noun stems:

(2)   a.   H    kóp      "fowl"

      b.   L    mùt      "person"

      c.   HL   fâm      "plantation"

      d.   LH   jǒmb     "packet"

The following tone patterns were found on disyllabic nouns:

(3)   a.   H H    ɓébá      "sin"

      b.   H HL   jómbê     "shirt"

      c.   H L    wíndà     "window"

      d.   L H    nùgá      "animal/meat"

      e.   L L    màlò      "return"

Most loan noun words have the H L tone pattern. The falling contour tone is found mostly in loan words also .

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## 2.2 Tone patterns of verbs

In some Bantu languages, the imperative form, is more helpful in determining the tone classes of the verbs. But in Basaa, both the imperative and the infinitive forms are useful in determining the verb classes. There are two main verb classes in Basaa, the H tone and L tone verbs.

The following tone patterns are found on monosyllabic verb stems in the imperative form:

(4)    a.     H     jέ    "eat!"

        b.     LH    yɔ̃ŋ   "take!"

Still in the imperative mood, the following patterns are found on disyllabic verb stems:

(5)    a.     H H    téhé    "see!"

        b.     L H    lɔ̀ná    "bring!"

A falling tone is found on most of the H tone verbs in the infinitive form, such that we may have a HL or H HL tone pattern on the verb stem. Some of the monosyllabic H tone verbs for example, /jέ/ "to eat", do not have the falling tone. But all the disyllabic H tone verbs have a falling tone on the second syllable. Examples of H tone verbs with the tone patterns HL and H HL are given below:

(6)    a.    HL    lâl     "to stay the night"
                   yɔ̂ŋ    "to be full"

        b.    H HL  téhê    "to see!"
                       ɓéhê    "to warn!"
                       kɔ̂ŋɔ̀p  "to lie sideways"
                       kɔ́ŋî   "to lay sth. sideways"

The following tone patterns are found on monosyllabic and disyllabic low tone verb stems in the infinitive form:

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(7)      a.     L      yɔ̀ŋ      "to take"

         b.     L L    lɔ̀nà    "to bring"

In the examples in (7) above we notice that the LH and L H tone patterns in the imperative form become respectively L and L L tone patterns in the infinitive. In this respect, the infinitive verb form is more useful in defining the low tone verb class than the imperative form.

## 28.3 Tone Processes

As in most Bantu languages, lexical tones change when Basaa words are used in grammatical constructions. The following examples show us how the lexical tones of words may change when they are used in constructions:

(8)      a.  à  ˙  ǹ-jɛ́  mbôndó → [à ń'jɛ́ mbón'dó]  "he is eating
             he imp.  eat c.nut                        a coconut"

         b.  à  ǹ-jɛ́  mbôndó   → [à ɲ̀jɛ́ mbón'dó]  "he has eaten
             he per eat c.nut                         a coconut"

In the above examples the tones of the verb and the noun in their citation forms are /jɛ́/ "to eat" and /mbɔ̀ndó/ "coconut. We can notice the changes the lexical tones of these words have undergone as they are used in the above constructions. These tone changes are caused by both phonetic and morphophonemic tone rules. In order to explain these changes, we have posited underlying tones for the words and morphemes in the constructions. The underlying forms of the constructions are given to the left of the arrow. These examples also serve to show us the effect of downstep in Basaa. Downstep, as we have seen earlier, is caused by floating tones or the simplification of contour tones. The floating H tone in front of the verb prefix is the tone of the imperfective aspect marker.

The following example futher illustrates the effect of downstep in Basaa and thus, the extent of tone changes.

(9)        [à  ŋkwô í 'sɔ́'sɔ́ 'lép]      "he fell in a big river"

         L  L HL H  'H  'H  'H

                              —              1
                         —                   2
                    —                        3
                —                            4
         —    —    —                         5


    In order to show the nature and the cause of the tone changes
in the above example, we shall give the derivation of its tones in
(10) below:


(10)        a. à ŋ´-kwò  í˜ sɔ̃˜ sɔ́˜ lép   underlying
            b. à ŋ´-kwò  í˜ sɔ̃˜ sɔ́˜ lép   P1 tone
            c. à ŋ-kwô   í˜ sɔ́˜ sɔ́˜ lép   tone grounding
            d. à ŋ-kwô   î  sɔ́˜ sɔ́˜ lép   tone grounding
            e. à ŋ-kwô   í 'sɔ́˜ sɔ́˜ lép   simplification and downstep
            f. à ŋ-kwô   í 'sô  sɔ́˜ lép   tone grounding
            g. à ŋ-kwô   í 'sɔ́ 'sɔ́˜ lép  simplification and downstep
            h. à ŋ-kwô   í 'sɔ́ 'sô  lép   tone grounding
            i. à ŋ-kwô   í 'sɔ́ 'sɔ́ 'lép  simplification and downstep

    In (10a) the underlying tones of the words and  morphemes  of
the  construction  are  given.  In  b.  the P1 tone is introduced
before the verb stem.  The P1 is marked by a H tone.  In c. the  H
tone  of  the  P1 tense shifts and grounds on the tone of the verb
stem where it creates a HL tone.  In d. the floating  tone  of  the
preposition /í/  "in", grounds and creates the contour tone which
then simplifies in e.  and  causes  the  following  H  tones  to
downstep.   The   adjective,  /sɔ́sɔ́/ "big",  is  made  up  of  a
reduplicated word, whose underlying tones  have  been  posited  as
/sɔ́˜/.  The floating tones of this reduplicated word ground on the
stem in f. and h. respectively, forming the  contour  tones  which
subsequently simplify in g. and i.  where, in each case, the
following H tones are downstepped.  We thus see to what extent the
tones  of words in Basaa may change when these words come together
in a construction.

    Tone changes in verb forms  are  the  most  significant  tone
changes  in  Basaa.   The  following are some of the verb forms in
Basaa where tone changes make meaning distinctions:


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(11) a. à  ń´-jέ        →  [à ńjέ]    "he ate"
        he P1 eat

     b. à    ´ń-jέ      →  [à ń'jέ]   "he is eating"
        he IMPF eat

     c. à  ń´-jέ  V̀     →  [à ńjέὲ]   "has he eaten?"
        he P1 eat Q

(12) a. à  ń´-lɔ̀        →  [à ńlɔ̂]    "he has come"
        he P1 come

     b. à    ´ń-lɔ̀      →  [à ńlɔ̂]    "he is coming"
        he IMPF come

     c. à  ń´-lɔ̀   V̀    →  [à ńlɔ̂ɔ̀]   "has he come?"
        he P1 come Q

(13) a. yɔ̀ŋ              →  [yɔ̀ŋ]     "to take"
        INF

     b. yɔ̀ŋ ´            →  [yɔ̃ŋ]     "take!"
              IMP

(14) a. à.    ´ yɔ̀ŋ      →  [à yɔ̂ŋ]   "he took"
        he  NARR P take

     b. à  yɔ̀ŋ  ´         →  [à yɔ̃ŋ]   "he took"
        he take P3

     c. ´à      yɔ̀ŋ´      →  [á yɔ́'´ŋ] "that he take"
        SUBJ he take

(15) a. à  ŋ´-yɔ̀ŋ        →  [à ŋyɔ̀ŋ]  "he took"
        he P1 take

     b. à  ´ŋ-yɔ̀ŋ        →  [à ŋyɔ̀ŋ]  "he is taking"
        he IMPF take

In the above examples the underlying tones of each string are
given to the left of the arrow. In these examples we find that in
most cases, the difference in verb forms, and therefore, the
difference in meaning is made solely by tone. The tone of the
pronoun /à/, "he", is low but it may become H in some verb forms,
as in (14c), because, in this case, the marker of the verb form is
a tonal morpheme. The verbs used in the above examples are: (11)
/jέ/ "to eat", (12) /lɔ̀/ "to come" and (14) /yɔ̀ŋ/ "to take".
Tense, aspect or mood are marked tonally or by both tone and
affixes.   The nasal affix (which is prefixed to the verb stem) is

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a tense (or mood) marker. We thus see that the changes in the tones of the verbs and pronoun are conditioned by the verb form.

## 28.4 Tone Orthograhy

Given the importance of tone in Basaa, it is evident that tone needs to be marked in this language. Surface tones rather than underlying tones should be marked. This is because the underlying tones of words change in context. In most cases it is not obvious which the underlying tones of words are. As we have seen above in examples (11) to (15), the underlying tones of the strings (to the left of the arrow) come out different on the surface most of the time, as can be seen in the strings to the right of the arrow.

In view of the above analysis of the Basaa tone system, the following tone orthography is recommended: low, marked /ˋ/, falling (HL) tone, marked /ˆ/ and rising (LH) tone, marked /ˇ/.

It is advisable to mark low tone rather than high tone in Basaa because low tone is relatively more stable than H tone. We have seen the effect of downstep on H tones in (9) above. As a result of the downstep in (9) there are as many as four different levels of H tone in the string. This shows the degree of H tone instability relative to L tone. Since there is no downdrift in Basaa, low tone does not driftdown. Low tone does not downstep in Basaa either. This is why low tone is more stable.

The contour tones, HL and LH, should be marked because they are needed to make grammatical distinctions. This could be seen in the verb forms given in the examples above. If these contour tones are not marked, it would be difficult to make the meaning distinctions that are given in the pairs: (12a) and (12b), (13a) and (14b), and (15a) and (15b).

High tone should not be marked because, as we have already said above, it is relatively less stable. This is because there is downstep in Basaa. We have seen the effect of downstep in (8), (9) and (10) above.

Comparing H tone and L tone, it would appear that marking low tone would be more economical than marking H tone. The analysis that we have done so far seems to indicate that H tone is more frequent than low tone. We have seen that surface low tones may become H in grammatical constructions in order to make grammatical distinctions. We have noticed that the low tone of both prefixes and word stems can be replaced eventually by grammatical H tones. In (8a), for example, we notice that the surface low tone of the nasal prefix (/ǹ-/) of the verb becomes a high tone while the surface low tone of the word, /mbòndó/ "coconut", becomes high when put in a construction, as in (8) above. In (14c) above we find that the surface low tones of both the pronoun and the verb stem become H tones:

(16)  /à yòŋ/ → [á yɔ'˧ŋ]  "that he take"

   L  L  → [H  H'H]

We thus see from the above example that the occurrence of H tone is likely to be more frequent than that of the low tone. Emmanuel Njock (PC.) reports that following a frequency count done on a good number of Basaa texts. he found that H tone was more frequent than L tone. Bot Ba Njock and Bitjaa Kody (P.C.) carried out a survey of spoken and written Basaa in 1987, as part of the research project, "Description Systematique du Basaa." The results of the research showed that H tone is more frequent than L tone in Basaa.

Downstepped high should not be marked. Given the fact that there can be a series of downsteps in a single construction, it would be difficult and burdensome to represent orthographically each downstep in the series. If, for example, the downsteps in (9) above were to be marked orthographically, it would not be practical to do so. Even though downstep is phonemic in Basaa, the native speaker would in most cases know how to make the distinction between H and 'H. In the example given in (9) it is presumed that the native speaker would be able to read or say the utterance naturally even though the proposed tone orthography does not make any distinction between H and 'H.

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The following chart shows the tones that we have in Basaa and how they are marked in the orthography:

(17)    Tones       L    H    'H    HL    LH    H'H    'HL

        Ortho.       ˋ          ˆ     ˇ            ˇ

The tones of the constructions in examples in (8), (9) and (14) would be marked orthographically as shown below in (18), (19) and (20) respectively:

(18) a.   à njɛ mbondo        "he is eating a coconut"

     b.   à ñjɛ mbondo        "he has eaten a coconut"

(19)     à ŋkwô i soso lep    "he fell in a big river"

(20) a.   à yɔ̂ŋ              "he took"

     b.   à yɔ̌ŋ              "he took (long ago)"

     c.   à yɔŋ               "that he take"

It can be seen that by marking only the three tones, /ˋ/, /ˆ/ and /ˇ/, it is possible to make all the distinctions in the examples above. Marking these three tones would possibly make most of the tonal distinctions in the Basaa language and thus reduce ambiguity to a minimum.

It is crucial to note here that a tone orthography, and all orthographies, should be designed for the native speaker. The native speaker is the one who uses the language most and so his interests should be taken into consideration first before those of the foreign learner. If the needs of the native speaker are taken care of, the needs of the foreign learner would be taken care of by the time he gets the grammar and thus starts functioning according to the system of the language as a whole.

The orthography that we have proposed for Basaa will obviously not make all the distinctions that one may want to make in the language. We said above that H and 'H are not

distinguished by this system of tone marking, since neither H nor 'H is marked. However, comparing this tone orthography and one which marks all the tones, it will be obvious that the latter would be much more difficult and less efficient for the native speaker learning to read and write Basaa.

## Notes to Chapter Twenty-eight

Chapter Twenty-nine

YEMBA TONE

## 29.1 Introduction

Yemba (formerly called Dschang) is an Eastern Grassfields Bantu language of the Bamilike subgroup. Yemba is spoken in the Western Province of Cameroon. Yemba is a noun class language.

Quite an amount of work has been done on Yemba. Some of the important studies done on Yemba tone are by Tadadjeu (1974:283-290) and by Hyman and Tadadjeu (1976:90-106). Since the basic analysis has been done and work on the language is being continued by a team of linguists of the Société Internationale de Linguistique, we shall draw on what is available and relevant for our purpose.[1] In our treatment of Yemba tone we are going to limit ourselves mainly to those areas that are relevant to tone orthography.

## 29.2 Lexical Tones

From an underlying two tone system of H and L, Yemba has derived a four way contrast that includes a phonemic downstepped H and a phonemic falling L tone. The tone rules operating in the noun phrase are the same as those in the verb phrase.

The examples used to illustrate the phonemic tone contrasts in Yemba are given here below:

(1) a.  L-H        lětɔ́ŋ     "feather"

    b.  L-'H       lè'tɔ́ŋ     "to read"

    c.  L-L°       lètɔ̀ŋ     "navel"

    d.  L-L        lètɔ̀ŋ     "to pay"

Tadadjeu (1974:285) gives the derivation of the above tones from their underlying forms. The surface tones of these words are

derived from underlying tones as indicated in the input strings below:

(2) a. lètɔ́ŋˆ → [lètɔ́ŋ]   "feather"
     L H H     L H

    b. lètɔ́ŋˆ → [lè'tɔ́ŋ]   "to read"
      L H L     L 'H

    c. lètɔ́ŋˆ → [lètɔ̀ŋ]   "navel"
      L L H     L L°

    d. lètɔ́ŋˆ → [lètɔ̀ŋ]   "to pay"
      L L L     L L

We thus notice that the four tone levels are derived from a sequence of the two underlying tones, H and L. Before going to see how tone functions in the grammar of Yemba, we want to discuss the phenomenon of downstep in the language.

## 29.3 Downstep

Downstep is one of the most important tone processes in Yemba. There is both downstepped H and downstepped L in Yemba. Tadadjeu (1974) and Hyman and Tadadjeu (1976) have fully described these tone processes. Most of our discussion will be based on these two studies.

### 29.3.1 Downstepped H Tone

In Yemba there are two types of downstepped H that correspond to the environments in which they are realized: 'H that occurs after a H tone and another 'H that occurs after a L tone. The first case of 'H is the one that is common in most languages and it is the type of downstep that we have seen so far in the previous chapters of this study. The second case of downstep is not a normal case since this is not common in the phonological processes of tonal languages.

We present here below examples of the normal cases of downstepped H tone attested in Yemba:

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(3) a. á ŋkɔ'ɔ    →    [á ŋ'kɔ'ɔ]    "near"

    b. á àpá    →    [á'pá]    "on the lid"

    c. ŋ-kɔŋ-⁻    →    [ŋ'kɔŋ]    "to like"

We notice that in the above examples the downstep is regularly caused by an intervening L tone between two H tones, just as we have seen in the other languages studied so far. The derivation of the tones in (3a) and (3b) is straightforward. The derivation of the surface tones of (3c) is as follows:

(4) a. ŋ-kɔŋ-⁻    underlying
    b. ŋ-kɔŋ    tone grounding
    c. ŋ-'kɔŋ    tone simplification and ds

In (4a) the underlying tones are given; these include the tones of the marker of the consecutive construction, which is a H tone homorganic nasal and a floating H tone suffix. In b. the floating H tone of the suffix grounds on the verb stem. In c. the contour tone simplifies to 'H.

We shall now look at the other case of 'H, which occurs after a L tone. The following examples illustrate the point:

(5) a. lètɔŋ`    →    [lè'tɔŋ]    "to read"

    b. ŋgyá`    →    [ŋ'gyá]    "house"

    c. ñdó`    →    [ñ'dó]    "husband"

    d. àtə̃`    →    [à'té]    "heart"

In the above examples we notice that an underlying L-HL comes out on the surface as L-'H. To explain the derivation of the four contrasting tones given in (1) above, Hyman and Tadadjeu (1976:92) give context sensitive rules, one of which is their rule (31), that relates to the 'H which is realized in (5) above. This rule is presented as follows:

(6)    L-HL    →    L-'H /    __ {H,∥}

The above rule states that a HL (falling) tone is simplified to a 'H when preceded by L and followed by a H tone or a pause.

Talking about "the status of downstepped high" Tadadjeu (1974:284) stresses that the 'H in Yemba is not a M tone. The 'H in the examples in (3) and the 'H in the examples in (5), that results from the rule in (6) above, should be given the same phonological status. After both cases of 'H, it is not possible to go to a pitch that is higher than it.

The 'H that is generated by rule (6) above is quite different from the tone (pattern) that results from the same underlying tones in the Ngemba languages that we have studied. In Ngemba languages the underlying tones L-HL do not result in 'H. This sequence would result in one of three surface tones: L-M, L-ML or M-H.[2]

### 29.3.2 Downstepped L Tone

In addition to the downstepped H tone that we have seen above there is a downstepped L tone in Yemba. This downstepped L is different from the L falling tone that we have seen in (1) above. This phenomenon is described by Tadadjeu (1974:287-288) and Hyman and Tadadjeu (1976). Tadadjeu says that the downstepped L tone is encountered often in the associative construction. In Hyman and Tadadjeu (1976), we find that it occurs also on nouns used as objects of verbs in the verb phrase. We give examples of this in (7) below:

(7) a. m̀bhù᷄ ˋ sə́ŋ᷄ → [m̀'bù sə́ŋ]     "the dog of bird"

    b. à ˙˙ kɔ̀ŋ ˋ → [àà 'kɔ̀ŋ° ][3]  "he is about to like"

The example in (7a) is the associative construction while the example in (7b) is the immediate future tense. Hyman and Tadadjeu say that this verb form is characterized by a HL floating tone prefix and a H floating tone suffix on the verb. Using a number of rules Hyman and Tadadjeu show how the downstepped L tone in the above examples (and in other cases) is derived.

Reference should be made to Hyman and Tadadjeu (1976:90-106) for a description of the processes of downstepped H and L tones in Yemba. What we want to dwell on is the problem of representing these complex phenomena in the orthography of Yemba. In order to show the extent of the problem when it comes to the question of a practical orthography of Yemba and related languages, we shall present some of the examples from Hyman and Tadadjeu.

(8) a.  à  kè  tɔ́ŋɔ́  'séŋ    "he called a bird"
        he  P2  call    bird

    b.  à  kè  tɔ́ŋɔ́  ''mɔ́    "he called a child"

    c.  à  kè  tɔ́ŋɔ́  'kàŋ°   "he called a squirrel"

    d.  à  kè  tɔ́ŋɔ́  'nà    "he called an animal"


(9) a.  à  kè  tɔ́ŋɔ́  séŋ     "if he called a bird"

    b.  à  kè  tɔ́ŋɔ́  'mɔ́     "if he called a child"

    c.  à  kè  tɔ́ŋɔ́  kàŋ°    "if he called a squirrel"

    d.  à  kè  tɔ́ŋɔ́  nà     "if he called an animal"

The above examples show the tonal differences betweeen the indicative and conditional verb forms, where the nouns /séŋ´/ "bird", /ˉmɔ́ˋ/ "child", /kàŋ´/ "squirrel", and /nàˋ/ "animal" are used. The underlying tones of the nouns are those indicated here. The examples in (8) are in the indicative mood while those in (9) are in the conditional. We see the difference that downstepping can make in grammatical meaning. We notice in these examples the contrasts not only between H and 'H, and L° and L, but also the contrast between 'H and ''H (downstepped H and double downstepped H) and L and 'L.


29.4 Contour Tones

There are contour tones in Yemba as illustrated in the following examples:

(10) a. [mèsə̂ŋ pã̄]                          "my birds"
         birds my

     b. [zuɛ́   sə̂ŋ   yî'ˊ  ŋkɔ́'ɔ́ ŋ'gyá mɔ̀''ɔ́]   "kill the bird near
         kill   bird this near . house father     the house of
                                                 father"

     c. [à   kê  tɔ̄ŋɔ́'ɔ́ sə̂ŋ]                 "he called (only)
         he P2 call    bird                    a bird"

In (10a) we have the contour tones HL and LH; in b. we notice the contour tone L'H on the morpheme /yi/ "this" and in c. we find the contour tone H'H.


29.5 Yemba Tone Orthography

We have seen from the above discussion of Yemba tone system that tone is important in the language. It is therefore obvious that tone has to be marked in the writing system of Yemba. The question that we have to answer is which tones should be marked.

It is obvious from the discussions concerning the orthography of the other languages which we have studied that it is not practical to mark all the tones that we have described for Yemba. Given that both H tone and L tone are downstepped, which one of the two should we mark? Since both H and L tones change that much, would it not be more reasonable to mark 'H? These are some of the questions that we shall attempt to answer.

The important criterion for deciding which tone to mark is that of stability. This means that the tone whose pitch does not change much is said to be fairly stable. In the Ngemba languages we saw that one of the deciding factors for marking L tone was the fact that it is more stable than H tone. H tone is downstepped such that one could have a series of three or four downsteps in a string while L tone would remain relatively unchanged. However in Yemba, as we have seen, L tone also undergoes the process of lowering. In view of this, is it not practical to consider marking H tone?

Even in this situation, it is not quite certain that marking H tone would work better than marking L tone. If we consider the degree of stability of both L and H, we would see that even though

L tone is downstepped, it is relatively more stable than  H  tone. There  are  relatively  fewer  contexts  in  which  L  tone  is downstepped.  This happens in the associative construction and  in a  few  other  contexts,  which  can  be  defined.  Considering the distinction between L° and L, we notice that this  distinction  is important only utterance finally.  We notice that in (8b) the word /''mɔ/ has a double downstep, which means that the H tone has been stepped  two  times.   In  (10b) we see that there are a series of three downstepped H tones in the  string.   This  means  that  the level  of  the  third  'H  in  the  string has dropped three steps compared to the normal or original pitch of  the  H  tone  at  the beginning of the utterance.  Comparing the frequency of 'H and 'L, we will find that 'H is more frequent.  All this goes to  maintain that  L tone is still relatively more stable than H tone.  This is supported by the following quote:

> "In any case, it  is  clear  that  the  high  tones
> generally  vary over a greater pitch range than the
> low tones, so that if low tones are  also  drifting
> down  they are doing so at much less of an interval
> than high tones." (Hyman and Schuh, 1974:85)

The above arguments suggest that it  is  more  reasonable  to consider marking L than H.

Although the changes in the pitch of H tone are both phonetic and morphotonemic, what counts here is the pitch variation,  i.e., how  the speaker perceives the pitch.  This variation is indicated by the various instances of H tone as realizable in  terms  of  'H tones.   Even  if  'H  in  Yemba  is  phonemic it is mostly in the citation  forms  of  words  that  the  crucial  distinctions  are relavant.  The  native speaker is not normally very analytical in his use of language, especially as it is not easy for the beginner (who  has just started to read and write his language) to perceive the subtle distinctions involved in a series of 'H  tones.   As  a result, it is realistic to think or argue in terms of two poles, H and L.  This is crucial  because  the  experiments  that  we  have conducted  and  experience  in the teaching of tone have indicated

that it is difficult for the native speaker who is learning to read and write tone to distinguish between H and 'H.

Some people have wondered whether 'H should not be marked rather than H or L tone. It is thought that since a 'H signals other downstepped H tones, (given that after a 'H it is not possible to have a pitch that is higher than it in an utterance) it is better to mark 'H. The arguments that we have given above against marking H tone also hold against marking 'H tone.

What we have said so far favours the fact that L tone should be marked rather than H or 'H. When it comes to marking L tone, we are still faced with the question as to which of the three L tones to mark. We have seen that there are three types of L tone in Yemba: L° , L and 'L. How are these L tones to be marked orthographically? We propose that all these instances of L tone be marked the same way, i.e., /`/. The fact that the occurrence of each type of L tone can, to some degree, be predicted gives support to this proposal. We have seen that L occurs only in an utterance final position. Therefore the contrast between L° and L exists only in utterance-final position. In the following example, Tadadjeu (1974:285) shows that the phonemic downglide is lost when it is not in utterance-final position:

(11) [làtɔ̀ŋ] + [ñjú] → [làtɔ̀ŋ ñjú] "to pay back a debt"
    L° L      L°      L° L° L°

We notice in the above example that the falling L tone in the second syllable of the first word in the construction becomes a level L tone, i.e., L°.

Concerning the downstepped L tone, its realization is also predictable in Yemba. This fact is supported by the following quote:

> "The occurrence of a L vs. a 'L can be predicted on the basis of the underlying tones of individual morphemes." (Tadadjeu 1974:288)

It is understood that the kind of prediction that Tadadjeu is talking about here is not easy for the ordinary speaker. However, given the fact that the occurrence of this tone is limited to a

few constructions, like the associative phrase, it might not really be necessary to mark it.

Marking the three instances of L tone the same way fails to make the contrast that they show. This is true especially when we think of the potential ambiguities that this can cause in utterance-final position and when words occur in isolation. However, if we remember that words, or even sentences, are normally not uttered in isolation, we will see that a lot of potential ambiguities could be taken care of by context. When we think of the problems that we might have, if we were to mark all three types of L tone, we would be willing to accept a few ambiguities instead of the problems involved.

In view of the foregoing arguments, we now propose the following tone orthography for Yemba: /ˋ/ (L), /ˇ/ (LH), and /ˆ/ (HL). The L'H contour tone as seen in (10b) above should be marked as LH, i.e., /ˇ/. This means that in this system of marking tone, H, 'H, and H'H are not marked. The following table shows the tones in Yemba and how they would be represented in orthography:

(12) Tones    L      L°     'L     H      'H     LH     L'H    HL     H'H
     Orth.    ˋ      ˋ      ˋ                    ˇ      ˇ      ˆ

The tones in the examples in (10) will be marked orthographically as indicated bellow:

(13) a. mèsə̂ŋ pã                          "my birds"

     b. zuɛ səŋ yĭ ŋkɔˈɔ ŋgya mɔ̂ˈɔ        "kill the bird near the house
                                           of father"

     c. à kè tɔŋɔɔ səŋ                     "he called (only) abird"

We thus see that this way of marking tone in Yemba greatly reduces the amount of tone marks to be written.

We have already seen some of the weaknesses of this tone marking system. We see that it does not make all the distinctions

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that can be made in the language. It thus leaves some contrasts unmarked. We notice that in the examples in (9) and (10) above the grammatical distinction between the indicative mood and the conditional will not be made since in our proposed orthography downstep is not marked. The examples in (14) and (15) below show how (9c-d) and (10c-d) will be marked orthographically:

(14) a.  à kè tɔnɔ mɔ    "he called a child"

     b.  à kè tɔnɔ kàŋ   "he called a squirrel"

     c.  à kè tɔnɔ nà    "he called an animal"

(15) a.  à kè tɔnɔ mɔ    "if he called a child"

     c.  à kè tɔnɔ kàŋ   "if he called a squirrel"

     c.  à kè tɔnɔ nà    "if he called an animal"

Since these grammatical distinctions are not made by our proposed tone orthography, it could be concluded that this system will not work. However, we have said above that we could count on context to make distinctions like these. We can also hope that since all languages are very rich in expressions, potential ambiguities could be cleared by the choice of alternative ways of expression.

If we were to mark H tone in addition to what we have proposed, it would greatly increase the number of tones to be marked. In order to aim at greater efficiency in the orthography, one of our important goals is to reduce the number of tone marks to a strict minimum.

In a frequency count of a Yemba text the occurrence of the different tones was as follows:

(16) H :      88

  'H:     167

  L :     111

 LH:     7

 HL:     7

Although the frequency count was done only on a single text, it serves wroughly as a pointer to some of the facts that we have argued for above. It shows that H tone together with 'H is more frequent than L tone (which here includes the three instances L° , L, and 'L). This means that if we were to mark H tone, (i.e., H and ') instead of L tone, we would have a heavier load of tone marks. So we see that it is more practical to mark L tone than to mark H tone.

## Notes to Chapter Twenty-nine

[1] I am very grateful to Nancy Haynes and Gretchen Harro for the time they took to discuss the question of Yemba tone orthography with me. Some of the data used in the study came from Nancy. I am also thankful to their language informants, Mr. Gabriel Tsague and Mr. Jean-Claude Gnintedem with whom we worked for many hours. I am also very thankful to Dr. Maurice Tadadjeu for reading the first draft of this chapter and for all his comments and encouragements.

[2] The underlying L-HL tone pattern comes out on the surface as follows in the Ngemba languages that we have studied:

Bafut      L-HL → L-M, or L-ML

Mankon              L-M, or L-ML

Nkwen               L-M, or L-ML

Bambui              L-M

Bambili             M-H

[3] The tone on ['kɔŋ°] is L°, i.e., a level L tone.

Chapter Thirty

## BAGYELI TONE

### 30.1 Introduction

Bagyeli is a Bantu language which is spoken by about 2,200 Pygmies[1] in the Ocean Division of Cameroon. The Atlas linguistique du Cameroon (1983) classifies it as a Northern Equatorial Bantu language under the code number [422]. The work already done on the Bagyeli language includes a phonology and noun morphology by Renaud (1976), a Primer by Nguni and the Fraternité des Petites Soeurs de Jésus (1986).

### 30.2 Lexical Tones

There are two level tones, H and L, and two contour tones, HL and LH, in Bagyeli.[2] Renaud (1976) treats the lexical tones of Bagyeli on pages 109 - 113.

### 30.2.1 Tone Patterns of Nouns

The following tone patterns taken from Renaud (1976:109) are attested on monosyllabic noun stems:

(1)  H     -dó      "a lie"

     L     -dò      "thigh"

     HL    dô       "nouse"

     LH    -kŏ      "leg"

As in the other studies that we have done, we have chosen to analyse the contour tones in Bagyeli as a sequence of the two level tones, L and H.

Renaud does not analyse the contour tones HL and LH as sequences of two level tones but rather he treats each contour tone as a unit. He gives two reasons against analysing these contour tones as a sequence of H and L tones.

He says that this would create a graphic confusion when it comes to representing two types of syllables, the one made of one vowel and the other of two vowels, both of which bear the same tone pattern, L followed by H. This is illustrated by the following example:

(2)  a. kŏ       "leg"

     b. kòó      "maternal uncle"

Renaud has problems with the above exampes because he has analysed both words in (2a) and (2b) as one-syllable words. In our analysis we have analysed each vowel as a syllable nucleus and thus /kŏ/ is a one-syllable word while /kòó/ is a two-syllable word. As a result our analysis of the contour tone LH as a sequence of level L and H tones, low-high, does not raise any problems.

The other reason that Renaud gives for not analysing the contour tones in Bagyeli as a sequence of H and L is that a sequence of two tones on one vowel (which is actually a contour tone by our interpretation) can result in a level tone. He gives the following examples to illustrate the point:

(3) a.  á dè            [á dè]               "he is eating"

    b.  á dé títé  /á dè˙ títé/  [á dé tsíti]  "he is eating
                                               meat"

What Renaud shows in (3b) is not uncommon in the languages that we have studied so far. We have seen that as a result of the tone processes of spreading and simplification, contour tones have been created and simplified. In the intermediate stage in (3b) we find that the H tone of the following noun spreads leftwards to the L tone of the verb /dè/ and creates a LH contour tone, which eventually simplifies to H. We do not see why a normal

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phonological process like this should prevent us from analysing contour tones as a sequence of two level tones. Instead a process like this gives us support for analysing contour tones as a sequence of level tones. Indeed this is one of the reasons that motivate us to treat contour tones as a sequence of L and H tones (cf. 4.2) The derivation of 24.1.3 (18b) given in 24.1.3 (20) is a convincing argument for our analysis.

The following tone patterns are attested on disyllabic nouns:

(4) a. H H    kûmâ    "chief"

   b. H L    mwánò    "child"

   c. L L    kàlà    "mat"

   d. L H    nòní    "bird"

The H H nous come out as H L in the citation form. This means that the H tone of the second syllable becomes L before pause. But in context they are realized as H H, thus distinct from the H L nouns.

## 30.2.2 Tone Patterns of Verbs

The following tone patterns are attested on monosyllabic verbs:

(5) a. gyú    "to kill"

   b. nòn    "to take"

The following tone patterns were found on disyllabic verbs:

(6) a. H H    díké    "to look"

   b. L L    vùsò    "to throw"

The H tone of the monosyllabic verbs becomes a HL falling tone in the infinitive while the H H pattern of the disyllabic verbs becomes H L.

## 30.3 Tone Processes

There are fewer tone processes in Bagyeli than we find in the Grassfields languages that we have studied. We are going to discuss the few tone changes that are relevant to tone orthography.

There is downstepped H tone in Bagyeli. This is illustrated by the following example:

(7) a. kàlà yâán → [kàlà yá'án] "my mat"
       mat  my

    b. kálá yâán → [kálá yá'án] "my pepper"
       pepper my

    c. kàlà yêé → [kàlà yé'é] "his mat"
       mat  his

(8) a. kálá ˊǹgá kúmá → [kálá 'ngá kúmá] "pepper of
      pepper of    chief                 chief"

    b. kàlà ˊǹgá kúmá → [kàlà ngá kúmá] "mat of chief"
      mat    of   chief

The floating H tones in (8) are the tones of the associative marker. We notice that the downstepped H tones in the above examples result from intervening L tones or the simplification of contour tones. The 'H tone in (7a) to (7c) results from the simplification of the HL contour tone on the first vowel of the possessive pronoun. The derivation of (8a) is as follows:

(9) a. kálá ˊǹgá kúmá    underlying
   b. kálá    ǹgá kúmá    tone grounding to the left
   c. kálâ    ngá kúmá    nasal desyll. and tone grounding
   d. kálâ    'ngá kúmá    simplification and ds

In (9a) the underlying tones are given. In b. the floating H tone grounds to the left where it is absorbed by the H tone of N1. In c. the syllabic nasal of the associative marker desyllabifies and its L tone is assigned to the left where it grounds on the H tone of N1 and creates a HL contour tone. In d. the HL contour tone simplifies to H causing the following H tones to downstep.

The derivation of (8b) is the same as that of (8a) except for the fact that the floating H tone is deleted instead of being grounded to the left as seen in (9b).

Renaud (1976:111) reports the presence of a supper H tone in Bagyeli.[3] He says that a H tone is realized phonetically as a super H in monosyllabic words with nasalized vowels. The example he gives is the word /ma/ "jaw" whose vowel is nasalized.

Tone also plays an important role in distinguishing verb forms in Bagyeli. This can be seen in the following examples:

(10) a. [á nŏn kàlà]    "he is taking a mat"

    b. [à nŏn kàlà]    "he has taken a mat"

    c. [á'á nŏn kàlà    "he took a mat"

We notice that in the above examples the difference between (10a) and (10b) is made solely by tone.

In the imperative mood the L tone verbs end in a LH rising tone. The L L pattern becomes L LH while the L tone of the monosyllabic verbs becomes LH. This is illustrated in the following examples:

(11) a. bè kálá    →  [bĕ kálá]     "plant pepper!"

    b. nòn kàlà  →  [nŏn kàlà]    "take a mat!"

    c. vùsò kàlà  →  [vùsŏ kàlà]   "fetch a mat!"

    d. kàbò kálá  →  [kàbŏ kálá]   "divide the pepper!"

The above examples show us how important tone is in distinguishing verb forms. We see that tone plays an important role in the grammar of Bagyeli since it marks tense, aspect and mood.

## 30.4 Tone Orthography

We see from the above study that tone is important in Bagyeli and therefore should be taken care of in the orthography of the language. We thus have to choose between the two level phonemic

tones.   Which of the tones that we have seen to  be  pertinent  in
the language should be marked?

The  first  edition of the Bagyeli primer marked H tone only.
L tone was not marked.  Contour tones  were  not  marked  as  such
since the vowel was doubled and the H member of a HL or LH contour
was marked.

Following a frequency count of 8  texts  in  the  primer  of
Bagyeli,  the  frequency of both H and L tones is about equal.  In
the eight texts the number of H tones was 395 while that of L tone
was 394.  If the frequency of the tones were the only factor to be
considered in the choice of the tones to mark, we could  say  that
it  does  not matter which of these two tones is marked in Bagyeli
since their occurrence is about the same.  But  there  are  other
factors that will have to be taken into consideration.

Considering the stability of both H and L tones, we find that
L tone is more stable than H tone.  We have seen from the analysis
of  the tone system that there is downstep in Bagyeli.  This means
that H tone can be lowered.  Renaud reports that there is a  super
H  tone  (↑H) in the language.  This means that H tone can also be
raised.  H tone can thus be lowered or raised  in  Bagyeli.  This
therefore  indicates that H tone is less stable than L tone.  As a
result of this, it is advisable to mark L tone instead of H tone.

The contour tones HL and LH should  be  marked.  As  we  saw
above, the infinitive forms of H tone monosyllabic verbs carry the
HL contour tone, and so this is one of the reasons why  this  tone
should  be  marked.  We  have seen that in the imperative form, L
tone verbs end in a rising LH contour tone.  This is a reason  why
this contour tone should be marked in the orthography.  If it were
in a language where vowel  length  is  not  contrastive,  marking
contour  tones could be avoided since in this case the vowel which
bears the contour tone would be doubled and only the L part of the
contour  would  be  marked.  For  example,  [kŏ] would be written
/kòo/.  However, we have seen in the example given  in  (2)  above
that  there  is  a  contrast  between  short  and  long  vowels in
Bagyeli.[4] This means that we have to mark contour tones in Bagyeli
as such in order to avoid ambiguity.

The tone orthography of Bagyeli would be as follows: /ˋ/ (L), /ˆ/ (HL), and /ˇ/ (LH). This means that in this system of tone marking, H, 'H and ꜛH are not marked. The following table presents the tones in Bagyeli and how they would be marked:

(12) Tones    L      H      ꜛH      'H      HL      LH

     marks    ˋ                           ˆ      ˇ

The examples given in (2), (7a-b), and (10) above would be marked as shown in (13), (14) and (15) respectively.

(13) a. kŏ                "leg"

     b. kòo              "maternal uncle"

(14) a. kàlà yaan      "my mat"

     b. kala yaan      "my pepper"

(15) a. a nŏn kàlà      "he is taking a mat"

     b. à nŏn kàlà      "he has taken a mat"

     c. aa nŏn kàlà      "he took a mat"

Although this orthography is likely to work, it has to be tested for quite some time in the field.

After the analysis of the tone system was done, we recommended that L tone instead of H should be marked in the primer. So the new edition of the Bagyeli primer is marking L tone. They are marking contour tones on two vowels. This means that the **vowel** that is bearing a contour tone is lengthened and the L member of the contour tone marked. However, as we saw above (cf. (13a) and (13b)), this might be a problem given that there are both long and short vowels in Bagyeli. The new edition of the Bagyeli first Primer is being tested. We hope that this will also be an opportunity for the proposed tone orthography to be tested.

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## Notes to Chapter Thirty

[1] This figure is taken from Renaud (1976:27).

[2] I am very thankful to Petite Soeur Maguérite Renée de Jésus for all the time she took to discuss problems of Bagyeli tone and orthography with me. We spent many long hours working together on Bagyeli data. We are very grateful to all the following native speakers of the language who worked with us: Zaaki Nguni, Jean Tchakadiq, Denis Wune, Paul Mabundwo, and Angéline Massila. We appreciate their patience and interest a lot.

[3] We have not been able to verify the fact of the super H tone. This question has to be studied and the status of this tone fully established in the light of what we know about the other languages that we have described.

[4] For a detailed discussion of long and short vowels in Bagyeli, reference should be made to Renaud (1976:82-84).

Chapter Thirty-one

RELEVANCE OF FINDINGS TO TONE ORTHOGRAPHY

31.1 Introduction

After studying the tone systems of Limbum, Basaa, Yemba and
Bagyeli, we have proposed a tone orthography for each of these
languages. We chose these languages to represent the other Bantu
languages that are outside the Ngemba sub-group of languages that
we have studied more in detail. Limbum and Yemba fall within the
larger group of Eastern Grassfields language while Basaa and
Bagyeli are Northern Equatorial Bantu languages.

31.2 Limbum and Yemba

Comparing the four languages above we find that the tone
systems of Limbum and Yemba are similar and have more in common
together than they have with either Basaa or Bagyeli. The
underlying tones and the surface tones of the two languages are
similar. For comparative purposes we present here below the
derivation of surface tones from the underlying tones of each
language.

In (1) we show how the underlying tones of Yemba come out on
the surface.

(1) a. làtɔ́ŋ´  →  [làtɔ́ŋ]     "feather"
       L H H        L H

    b. làtɔ́ŋ⁻  →  [là'tɔ́ŋ]   "to read"
       L H L        L 'H

    c. làtɔ̀ŋ´  →  [làtɔ̀ŋ]     "navel"
       L L H        L L°

    d. làtɔ̀ŋ⁻  →  [làtɔ̀ŋ]     "to pay"
       L L L        L L

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From the above examples we see how the surface tones in Yemba are derived.  The four tone levels are derived as follows:

(2) a.  H H  →  H

   b.  H L  →  'H

   c.  L H  →  L°

   d.  L L  →  L (falling L)

We  show here below how Limbum surface tones are derived from underlying ones.

(3)
                  H-H  →  H

                  H-L  →  M

                  L-H  →  L°

                  L-L  →  L  (extra L)

From (3) above we see the derivation of  surface  tones  from their underlying tones.

The  following table shows how the same underlying tones come out on the surface in the two languages:

(4)
| underlying tones | Yemba | Limbum |
|---|---|---|
| -H H | H | H |
| -H L | 'H | M |
| -L H | 'H | M |
| -L H | L° | L° |
| -L L | L (falling L) | L (extra L) |

We present in (5) and (6) the tones found in Yemba and Limbum respectively and how they are marked in orthography.

(5) Yemba

| Tones | L | L° | 'L | H | 'H | LH | L'H | HL | H'H |
|-------|---|----|----|---|----|----|-----|----|-----|
| Orth. | ˇ | ˆ | ˉ | | | ˘ | ˘ | ˆ | |


(6) Limbum

| Tones | L | L° | H | M | LM | HL | HM | ML |
|-------|---|----|---|---|----|----|----|----|
| Orth. | ˇ | ˆ | | | ˘ | ˆ | ˆ | ˉ |


Looking at (5) and (6) we can see the different tones in each language and how the tones are marked in each case. Where there is no tone mark, it means the tone in question is not marked orthographically. We thus see from the above tables that Yemba and Limbum have the same tone orthography: /ˇ/, /ˆ/ and /ˉ/ are the tone marks used in both languages. For a discussion of the tone orthography of each language, reference should be made to the relevant section in each case, i.e., 27.5 and 29.5.

In view of the fact that the Limbum Tone orthography has been tested in the field, and in view of the conclusive nature of the results of the experiment, it is very likely that the same orthography would work for Yemba. We also think that if the proposed orthography works for both Limbum and Yemba, it will likely work for the rest of the Grassfields languages. We therefore recommend that this orthography be adopted and tried for the Grassfields Bantu languages.

## 31.3 Basaa and Bagyeli

As we have said above, Basaa and Bagyeli belong to the Northern group of Equatorial Bantu languages. Their tone systems are very similar. Their tone systems are simpler than the tone system of any of the Grassfields languages that we have studied. They undergo few tone changes and thus we need relatively few tone rules to describe them. Downstep, one of the few tone processes that operate in both languages, is the most common rule in each language. Reference should be made to chapters twenty-eight and thirty, where the tone systems of these languages are described so

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as to see those tone processes that are involved in each system. We present below the tones in each language and the proposed tone orthography in each case.


(7) Bagyeli
    Tones       L        H        ↑H        'H        HL        LH

    Orth.       ˇ                             ^         ˜


(8) Basaa
    Tones       L        H        H'H        'H        HL        LH

    Orth.       ˇ                             ^         ˜


In (7) and (8) we see the tones in each language and how they are marked orthographically. We notice that the same orthography has been proposed for both languages. The tone marks used in each case are /ˇ/, /^/ and /˜/. No tone mark indicates that the tone in question is not marked orthographically.

Since the same tone orthography is proposed for Basaa and Bagyeli on the basis of the analysis of their tone systems, and if the same orthography works in each case, it would therefore follow that this same tone orthography might work for other languages within the same group of languages. In that event, it is proposed that this orthography be adopted and tried for the Equatorial Bantu languages.

We notice that the orthography proposed for both the Grassfields and Equatorial Bantu languages is the same. This means that we expect that even though there are differences in the tone systems of the individual languages concerned, they have more in common as a group. It is therefore on the basis of this that we hope that the proposed tone orthography would work for these Bantu languages.

# PART VII

## TONE ORTHOGRAPHY

# Chapter Thirty-two

## PROPOSED SYSTEM OF TONE ORTHOGRAPHY

### 32.1 Introduction

Our ultimate aim in this study has been to find ways of determining a workable tone orthography for Bantu tone languages. We have therefore set out to discover which is the best way of representing tone in orthography. Our search started with the Bafut tone analysis and experiment. After the Bafut case study we analysed the tone systems of other Ngemba languages and proposed a tone orthography for this language group. In order to verify the results of the Bafut tone experiment, we undertook the Limbum tone analysis and experiment. After the results of the Limbum experiment we undertook the analysis of the tone systems of other Bantu languages, still with a view to establishing a workable tone orthography for each language. After proposing a tone orthography for each of these languages, we also proposed a common tone orthography for the wider group.

In the light of the studies and experiments that we have done and in view of the conclusive results relating to the various language groups that we have studied, we are going to propose a tone orthography, not only for the individual languages studied and their sub-group, but also for the rest of the languages within the wider group of Bantu languages.

### 32.2 Tone Orthography for Ngemba Languages

We present in (1) the tones that are found in the Ngemba languages which we have studied and the tone orthographies proposed for each language.

(1)

| | Tones | L | ꜜL | M | H | ꜝH | LM | HL | ꜝHL | ML | HꜝH | LML |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bafut | ˋ | ˋ | | | | ˇ | ˆ | ˆ | ˆ | | ˇ |
| | Mankon | ˋ | | | | | ˇ | ˆ | ˆ | ˆ | | ˇ |
| | Nkwen | ˋ | | | | | ˇ | ˆ | ˆ | ˆ | | ˇ |
| | Bambui | ˋ | | | | | ˇ | ˆ | ˆ | ˆ | | |
| | Bambili | ˋ | | | | | ˇ | ˆ | ˆ | ˆ | | |

We notice that the tone orthography proposed for each of the Ngemba languages is basically the same. In each language the tone marks proposed are /ˋ/, /ˇ/ and /ˆ/.

## 32.3 Tone Orthography of other Bantu Languages

We present below the tones found in other Bantu languages and the tone orthography that we proposed for each language. Yemba and Limbum are Eastern Grassfields languages while Basaa and Bagyeli are Northern Equatorial Bantu languages.

(2) Yemba

| Tones | L | L° | ꜝL | ꜝL° | H | ꜝH | ꜝꜝH | HꜝH | LH | LꜝH | HL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Orth. | ˋ | ˋ | ˋ | ˋ | | | | ˇ | ˇ | ˇ | |

(3) Limbum

| Tones | L | L° | H | ꜝH | M | LM | HL | HM | ML |
|---|---|---|---|---|---|---|---|---|---|
| Orth. | ˋ | ˋ | | | | ˇ | ˆ | | ˆ |

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We see above also that the tone orthography proposed for all these other Bantu languages is very much the same. In each of the languages above the tone marks proposed for the tone orthography are /ˋ/, /ˉ/ and /ˆ/.

## 32.4 Tone Orthography for Bantu Languages

We find that the orthography proposed for the languages above is the same. The orthography proposed for each language is based on a careful study of the tone system of the language in question. We saw in the various sections where the orthography of each was proposed that there were reasons that determined the choice of the tones to be marked in the orthography. We see that even though the number of tones found in each language differs, the factors that determined the choice of the tone orthography for these languages were similar.

In view of the fact that an analysis of the tone systems of the above languages and the results of the Bafut and Limbum experiments independently favoured the tone orthography which marks L tone and a combination of L and other tones, we consequently think that such a tone orthography would possibly work for the rest of the Bantu languages. We therefore propose that this tone orthography, /ˇ/, /ˆ/ and /ˉ/, be adopted for Bantu languages.

## 32.5 Justification of Proposed System of Tone Orthography

We have already given the reasons that made us choose the above tone orthography for each of the languages that we have studied. Some of the reasons that led to this choice were language specific. Reference should therefore be made to those chapters where we have treated the tone orthography of each language. However, we are going to summarize here in this section the reasons that have led us to propose the above tone orthography.

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In general the tone marking system that we have proposed Bantu languages is fairly simple. This means that it reduces the tone marks to a bare minimum. We saw that some of the languages studied have up to eleven different tones and that the least number of tones (including contour tones) in any of these languages is six. Our proposed tone orthography has only three tone marks. This tone marking system therefore greatly reduces the number of tone marks and also the number of tones to be marked.

The system of tone marking in this orthography is systematic and therefore consistent. This means that it will be easy to teach since tone is not marked at random or in selected areas of potential ambiguity.

This system marks L tone, which is more stable than H tone. As we have seen in the previous chapters where we have proposed tone orthographies for the different languages studied, an important criterion for deciding which tone to mark is that of stability. This means that the tone whose pitch does not change much is said to be fairly stable. In our study of the tone systems of the various languages, we saw that H tone can be downstepped such that one could have a series of three or four downsteps in a row while L tone would remain relatively stable, with little or no change. We saw that even though L tone could be downstepped in Yemba, this phenomenon was not as widespread or as common as downstepped H tones. We will say more about our decision to mark L tone later on in this chapter.

The experiment that we did in Bafut guided us in our choice of this system for the Ngemba languages and it was also an indication to us that the proposed orthography might work for this group of languages. The results of the Limbum tone experiment gave additional evidence that this system would work, not only for Bafut and the other Ngemba languages, but that it can possibly work for other Bantu languages. In order to show how superior and thus how efficient this orthography is, compared to the other options, we present in summary form the results of the Bafut and Limbum tone experiments.

(6) Bafut

<div align="center">Results Table 1</div>

| | Reading Test | | Written Text | | Class Exercises | | Overall |
|---|---|---|---|---|---|---|---|
| | mean | per-cent | mean | per-cent | mean | per-cent | per-cent |
| Group 1 | 146 | 89.8 | 19 | 63.3 | 35.34 | 72.31 | 73.16 |
| Group 2 | 101 | 61.5 | 19 | 63.3 | 25.56 | 51.81 | 53.88 |
| Group 3 | 97 | 59.5 | – | – | 18.87 | 55.9 | 56.64 |
| Group 4 | 93 | 57.1 | 10.5 | 35 | 21.14 | 41.7 | 42.57 |

The above table shows the average scores and percentages of each of the groups or classes where the four tone marking systems were tested. The first column shows the results of the final reading test, the second column shows the average scores and percentages of the final written text, the third column shows the results of the exercises done in class and the last column shows the overall percentages of the scores of the various groups in both the final tests and the exercises done in class.

Following an evaluation of the students in written exercises and reading tests in class, and comparing the results presented above, Group 1, which used our proposed orthography, had the highest scores in almost all the exercises except in the written text where it had the same scores as Group 2. The overall percentages as given in the last column in the table above are as follows:

(7)

Group 1. 73.16 percent

Group 2. 53.88 percent

Group 3. 56.64 percent

Group 4. 42.57 percent

It can be seen that Group 1 is remarkably ahead of the other Groups. Its scores are more than: Group 3 by 16.52 percent; Group

2 by 19.28 percent; Group 4 by 30.59 percent. Groups 3 and 2 come next in their scores. As we saw in chapter twenty, each group represents a different tone orthography. Reference should be made to section 20.5 for a discussion of the results of this experiment.

(8) Limbum

### Results Table 2

| | Written Tests | | Reading Tests | | Overall results | |
|---|---|---|---|---|---|---|
| | points | % | points | % | points | % |
| Group 2 | 92.21 | 80.89 | 326.33 | 92.95 | 418.54 | 86.92 |
| Group 3 | 71.31 | 62.55 | 311.38 | 88.81 | 373.93 | 75.68 |
| Group 4 | 83.96 | 73.65 | 304.88 | 87.09 | 388.84 | 80.37 |
| Group 5 | 57.91 | 50.80 | 292.67 | 83.59 | 350.58 | 67.20 |

In the above table Group 2 is the group where our proposed tone orthography was tested.

Considering the overall results, we find that Group 2, which is the class in which System 2 was tested, made the highest score. Group 4, where System 4 was tested, came second. Group 5, which marked more tones than any of the classes, had the lowest score.

Comparing Group 2 and Group 3 we find that in both the writing and reading exercises, Group 2 has higher scores than Group 3. This is an indication that it is more efficient to mark L tone than H tone. The only variable in each system is either the H tone or the L tone. In each of these two systems both HL and LH contour tones are marked. If the difference between System 2 and System 3 is that L tone is marked in the former while H tone is marked in the latter, then it would be plausible to say that in this case it is easier and thus more efficient to mark L tone than to mark H tone. The scores of Group 4, the group which marked only L tone also support the fact that it seems easier or more efficient to mark L tone than H tone.

in the learning process than the rest of the tones. This fact is illustrated by the following incident.

The team of linguists working on the Yemba language asked their language assistant, during one of their work sessions, to indicate the highest pitch in a given utterance. Instead of showing the highest tone pitch, he chose rather to indicate the lowest tone pitch in the utterance in question. This native speaker had not misunderstood the question, he had deliberately wanted to handle the situation in a way that revealed his control over the facts. To him it was easier and more natural to perceive L tone and so he pointed to what he could more easily handle. By saying "This is the lowest tone", he was saying that his perception of L tone at that point was better than that of H tone.

The fact that L tone is more easily perceived or heard by the ear of the native speaker of African languages is confirmed by studies done by Tomatis (1977) on frequency and perception by speakers of a number of languages. Tomatis (a medical doctor) was interested in foreign language acquisition and the adaptation of one's hearing so as to help the learner to perceive in the same way as the native speaker hears. He succeeded in doing this with the help of the "electronic ear" which he developed. His studies led to the discovery that each language has a specific frequency range. Thus the ear of the native speaker is tuned to select naturally from a frequency range which he calls "bande passante" or "bande de sélectivité". The following quote addresses the point:

> "A chaque région correspondait non seulement un dialecte (une façon de parler) mais encore une oreille (une façon d'entendre, caractérisée par sa bande passante, c'est-à-dire sa bande de sélectivité)...Et en effet, je pus démontrer qu'il existait différents types d'auditions liés à différentes implantations géographiques. En gros, on est en droit de dire qu'à toute langue est associée une oreille; toute "audition ethnique", par ailleurs, peut être définie par une bande de sélectivité." (Tomatis 1977:115,116)

M nor L was marked in G3. We thus see from these arguments that the tone orthography used in G2, which marks L, LH, and HL, is a more efficient system than that used in G3, which marks H, LH, and HL.

Considering the overall results of both the Bafut and Limbum experiments as given in (6) and (8) above, we see that the groups where our proposed orthography was tested (Group 1 and Group 2 respectively) had the best results in both experiments. This is evidence to us that this system of tone orthography will possibly work for the other Bantu languages.

Another crucial point revealed by the results of both experiments is the fact that the system which marked many more tones turned out to be the most difficult and thus least efficient. In the Bafut experiment, Group 1 had an average score of 73.16% while Group 5 had a score of only 42.57%. In the Limbum experiment, G2 made a score of 86.92% while G5 had a score of 67.20%. In both experiments, G5 marked many more tones than the rest of the systems tested. This shows us that one of the reasons why the tone marking system tested in Group 1 (in Bafut) and Group 2 (in Limbum) worked best, and thus proved superior to the rest of the tone systems tested, is that the number of tones used in this system was not too many. So we see that the tone orthography that is likely to work best is one that strikes a balance between too many tone marks and too few tone marks. We think that the tone orthography that we have proposed for Bantu languages marks just the right number of tones.

The results of the experiments show that marking L tone is more efficient than marking H tone. As we saw above, the efficiency of this system is related to the stability factor of L tone. We have said above that L tone is relatively more stable than H tone. It is obviously more difficult to learn something whose value changes. This factor also explains why it is easier to perceive L tone than H tone. Following field and classroom experience, we found that native speakers who were learning to read and write tone perceived L tone more easily and much earlier

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in the learning process than the rest of the tones. This fact is illustrated by the following incident.

The team of linguists working on the Yemba language asked their language assistant, during one of their work sessions, to indicate the highest pitch in a given utterance. Instead of showing the highest tone pitch, he chose rather to indicate the lowest tone pitch in the utterance in question. This native speaker had not misunderstood the question, he had deliberatedly wanted to handle the situation in a way that revealed his control over the facts. To him it was easier and more natural to perceive L tone and so he pointed to what he could more easily handle. By saying "This is the lowest tone", he was saying that his perception of L tone at that point was better than that of H tone.

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> "A chaque région correspondait non seulement un dialecte (un façon de parler) mais encore une oreille (une façon d'entendre, caractérisée par sa bande passante, c'est-à-dire sa bande de sélectivité)...Et en effet, je pus démontrer qu'il existait différents types d'auditions liés à différentes implantations géographiques. En gros, on est en droit de dire qu'à toute langue est associée une oreille; toute "audition ethnique", par ailleurs, peut être définie par une bande de sélectivité." (Tomatis 1977:115,116)

M nor L was marked in G3. We thus see from these arguments that the tone orthography used in G2, which marks L, LH, and HL, is a more efficient system than that used in G3, which marks H, LH, and HL.

Considering the overall results of both the Bafut and Limbum experiments as given in (6) and (8) above, we see that the groups where our proposed orthography was tested (Group 1 and Group 2 respectively) had the best results in both experiments. This is evidence to us that this system of tone orthography will possibly work for the other Bantu languages.

Another crucial point revealed by the results of both experiments is the fact that the system which marked many more tones turned out to be the most difficult and thus least efficient. In the Bafut experiment, Group 1 had an average score of 73.16% while Group 5 had a score of only 42.57%. In the Limbum experiment, G2 made a score of 86.92% while G5 had a score of 67.20%. In both experiments, G5 marked many more tones than the rest of the systems tested. This shows us that one of the reasons why the tone marking system tested in Group 1 (in Bafut) and Group 2 (in Limbum) worked best, and thus proved superior to the rest of the tone systems tested, is that the number of tones used in this system was not too many. So we see that the tone orthography that is likely to work best is one that strikes a balance between too many tone marks and too few tone marks. We think that the tone orthography that we have proposed for Bantu languages marks just the right number of tones.

The results of the experiments show that marking L tone is more efficient than marking H tone. As we saw above, the efficiency of this system is related to the stability factor of L tone. We have said above that L tone is relatively more stable than H tone. It is obviously more difficult to learn something whose value changes. This factor also explains why it is easier to perceive L tone than H tone. Following field and classroom experience, we found that native speakers who were learning to read and write tone perceived L tone more easily and much earlier

confirm and strengthen our recommendation concerning tone pedagogy that L tone be taught before the other tones.

Some more evidence in support of our hypotheses that L tone should be written in orthography and that it should be taught first, comes from the experience of other linguists in other African languages. In Liberia, for example, linguists have found that it is more efficient to mark L tone. Duitsman (p.c.) says that in Krahn, low tone seems the easiest tone to teach. He thinks that this might be so because low tone has a stronger psychological reality than the other tones. This evidence from African languages which are not in the Bantu group comes to strengthen our proposed orthography and give us an indication that this orthography might even work for the other African languages outside the Bantu group.

In the foregoing arguments we have given reasons and corroborating evidence in support of the proposed tone orthography for Bantu languages. Of all the arguments in support of any writing system, the results of tests and experience from the field concerning actual usage are most important because they are indicative of the realities of language usage. Since our proposed orthography is supported by both the experiments and usage, we are confident that it will be worth the while to try it out in African tone languages.

## 32.6 Questions Concerning the Proposed Tone Orthography

Despite all the arguments that we have given above in support of the proposed tone orthography, there are still questions that can be raised.

The first question concerns the marking of L tone. We have argued that it is more efficient to mark L tone than H tone because L tone is easier to perceive and more natural or basic to the native speaker's ear. The question to be asked is this: why should L tone be marked, if it is the more "natural", and thus the "unmarked" reality, compared to H tone, which in this sense is the "marked" reality, and thus more difficult to perceive. Before

conducting the Bafut experiment, I presumed that L tone should not be marked. But the results of this experiment indicated the opposite direction. In view of the fact that language reality and, therefore, its meaning is determined to a large extent by practice and usage, and that usage determines norm, I had to change my thinking. It is important that our theories and thinking about language be subject to verification and approval by actual usage, if we want these to be applied meaningfully in the field.

Another important consideration about marking L tone is the fact that there is a psychological factor involved in the way a native speaker perceives and uses his language. This psychological element has to be recognized and made use of. Since we realized that L tone was the tone that the learner first perceived and which was thus more identifiable to him, we thought that to give him more confidence in the learning process, it was helpful to mark it "concretely" to show that he has a "hold" on it. So it is psychologically and pedagogically helpful to mark this tone in order to give the learner confidence that he has it under control and also to give him a frame of reference as such. Since it was more difficult to identify or distinguish between H tone and M tone or 'H, it was helpful, and thus important, to mark what the learner had acquired. If he took care of the L tones and marked (or read) them correctly, the rest of the tones would be taken care of. It is also this principle that led us to see that it was helpful to pick key words for each tone and put them on the top corner of the blackboard to serve as tone reference words. These words stayed on the board the whole time that a course lasted, thus giving the learners terms of reference.

Another question that people have often asked is why we did not consider marking M tone in the two experiments that we conducted. There is a M tone both in Bafut and Limbum and in the other Ngemba languages that we have studied. We did not think it necessary to mark M tone.

In general we would recommend that M tone should not be marked in a language where there is a three-way contrast. It is

advisable to leave out M and mark H and L tones (where it has been decided to mark two out of the three tones). Normally, M tone is a derived tone and thus, it is difficult to perceive even by native speakers. H and L tones are more basic than the M tone in most languages and so these are relatively easier for the untrained ear of the native speaker learning to read his own language to perceive. In the Bafut and Limbum tone experiments, it was difficult for subjects to identify the M tone, especially when it had to be distinguished from the H tone. Even when the frequency (occurrance) of M tone is about equal to that of either H or L tones and even when it is slightly less frequent than the rest of the tones, it is advisable not to mark it.

Both in Bafut and Limbum, the frequency of M tone is fairly high. The following tables in (10) and (11) show the frequency count of tones in the texts that were used as final tests in the experiments.

(10)   Frequency Count of Tones in Bafut

| L | 82 | HL | 10 |
|---|----|----|----|
| M | 77 | LH | 2 |
| H | 76 | H'H | 7 |

(11)   Frequency Count of Tones in Limbum

| L | 65 | HL | 6 |
|---|----|----|----|
| M | 68 | LH | 5 |
| H | 76 | HM | 1 |

We find that, in the above tables, the frequency of M tone is about the same as that of H tone. In Limbum it is more than that of L tone. Since, in our estimation, it is better to mark one out the three tones: H, M and L, it will not be convenient to mark M tone. If we mark M tone it means that both H and L will not be marked. This kind of choice would obviously create problems in that H and L will not be distinguished.

Another question that might be asked is related to the frequency range of African languages. If it is true that African languages have a low frequency range and, if the fact that L tone is easily perceived by the native speaker is related to this, why is it that the occurrence of H tone is numerically higher than that of L tone? If we consider the frequency (occurrance) of H and M tones together as shown in (10) and (11) above, we find that it is very high relative to that of L tone. If we consider the fact that M is more related to H than to L, does this not mean that H tone, and thus high frequency, is more general than L tone or low frequency?

The first thing to say about the above questions is that both the notions of tone and frequency are relative concepts. There are no absolute values attached to H or L tone. In terms of instrumental measurements, we can see that comparing English and Spanish, it is logical to say that English has a high frequency since 2000-12000 Hertz is high compared to the Spanish frequency range of 100-500. However, in Spanish we can still talk in terms of high and low frequency when we are comparing, say, 150 Hertz with 400 Hertz. In the same way, if in African languages the range of L tone is, say, between 150 and 300 Hertz, a frequency range of 400-600 would then be high. Considering men and women, we would also find that in general men function phonetically within a lower frequency range.

Concerning the more frequent occurrence of H and M tones, we would say that this is due partly to historical development and morphophonemic changes. We know that in general, Bantu tone systems had basically L and H tones. However with time some of the languages within this group have developed a third tone, M. This is the case with Limbum and the Ngemba languages that we have studied. In our study of tone process we found that, as a result of assimillatory rules, L tone was raised to M (cf. 21.3.2). We also saw that underlying HL and LH often results in M tone (cf. 26.2.2.3 and note [2] to chapter twenty-nine). From our analysis of Ngemba tone systems we have the impression that there is a general trend for tonal languages to go from L to H. This is

why a phonemic M tone is a recent development in some languages while in others the M tone is fully developed. In this situation we begin to see why it is more reasonable to mark L tone instead of H or M. Here it must be noted that this kind of change concerns that of a tone level which involves a change in the phonemic status of the tone in question, which is a different matter from the purely phonetic changes that characterize the instability of H tone. This is essentially a trend towards linguistic change in general.

We have raised some of the questions that people have asked and tried to give answers to them in relation to the tone orthography that we have proposed. We know that there may still be many more questions that might be asked. However we feel that whatever the situation there will always be questions since no one solution is absolutely satisfactory.

## 32.7 Field Evaluation of the Proposed Tone Orthography

As we said above, it is important to test orthographies in the field in order to see how they work. The success of any system of marking tone can only be verified in the field as people use it not only in the classroom, but also as they use it in such everyday situations as letter writing, writing stories, preaching sermons, pronouncing discourses, etc. Although the proposed orthography has been in use only for a short time in the languages that have adopted it, it is possible to see whether it is a success or a failure.

In the Limbum situation the proposed orthography was adopted immediately after our recommendations. The second edition of the Primer I (printed in 1985) uses this tone orthography. In general people find it easy to use. The main users of the orthography are the few who have been trained to teach others and those who are translating the Bible into the Limbum language. It is too early to make any judgements as to the success of the orthography now since it has not been used for a long time and it is not being widely used due to the fact that not many people can read and

write the language yet. However, the linguist working in the Limbum language project has said (P.C.) that this orthography works well in the language.

The linguists working on Mundani have adopted this orthography. Mundani is a Grassfields language of the Momo sub-group. It is spoken by about 35,000 people. The tones found in Mundani are H, 'H, M, L°, L, LH, and HL.

The proposed system has been in use in Mundani since 1985. The linguists working on this project set out to test two orthographies. One of them marked /ˉ/, /ˇ/, and /ˆ/, where M tone was also marked as H tone. As we mentioned above, this system is a mirror image of our proposed orthography. The other system that they also set out to test in a group of native speakers of Mundani is the proposed tone orthography, i.e., one that marks /ˇ/, /ˇ/ and /ˆ/. In order to evaluate the orthography, a questionnaire was sent out to Elizabeth Parker, one of the linguists working on the language. In answer to two of the questions in the questionnaire Parker writes the following:

> "A previous system of marking mid and high tones (as high) had not worked well in practice. We tried to test the two systems of marking high versus marking low tone in a systematic way, in groups specially set up for the purpose, but it was impossible to get reliable results (because of irregular attendance in groups etc.). We went ahead anyway to try marking low, rising and falling tones. On the whole people seem to find this system easier to learn. It also enables us to make most of the necessary lexical and grammatical distinctions."

We can see why the other system, where H tone was marked, could not work. In reality it was marking too many tones even though it was writing only three tone marks. Marking H tone meant that it was in reality marking: H, 'H and M. As we saw above, this was too much of a load for the learner, because, in addition, he finds it difficult to hear and distinguish these tones. This means that this system marked two times the number of tones marked by the other system that was chosen. In (10) and (11) above we saw that in Bafut and Limbum, which are also Grassfields Bantu

languages, the frequency of H and M tone put together was at least two times that of L tone. So in this case, the reasons why this other tone orthography failed to work also suggest why the proposed orthography worked.

Questioned about the weaknesses of the adopted orthography, Parker says:

> "There are certain lexical distinctions that it
> fails to make, but normally the lexical items
> concerned can be distinguished by class-markers on
> related words, and/or by the semantic context.
> There is a heavy load of tone-marking. Hence it is
> difficult to write.
> When learning to write tone, many people (including
> me!) are confused because the markings on a given
> lexical item vary accoring to context. (There
> seems to be no problem when reading these words.)"

The first point underscores the fact that we need to mark tone minimally and count on context and on such syntactic elements as concordial morphemes (where these exist) to clear potential ambiguities.

Even though the second point says that the tone load is heavy, it is not that heavy when compared to the other system that could not work. If we were to reduce the number of tones to be marked, we might run the risk of underdifferentiation or else fall into the error of marking tones at random or in selected areas thus adopting an unsystematic orthography, which would make things worse. We think that this system marks the right number of tones.

The last point that Parker makes raises questions about marking lexical tones versus tone changes. We have discussed this issue in 20.5 so reference should be made to that section. We are however happy to know that marking tone changes does not pose problems to the reader. When we mark tone we think more especially of the reader because it is primarily his problems that we want to solve. The writer always knows what he wants to say so tone marking is less important to him at this point until he decides to read what he has written.

Another question concerns the use of the orthography by non-native speakers. Does the non-native speaker find it difficult to use this orthography? Following is an answer given by Parker.

> "It makes most of the necessary lexical and grammatical distinctions, but if followed systematically, creates rather a heavy load of tone marking. I find it easy (and helpful) to read; much less easy to write. I suspect that other non-native speakers might feel the same."

We see from the above observation that the proposed tone orthography might work even for non-native speakers.

The above points give us an impression of how the proposed tone orthography is working out in the field. There is a literacy programme going on in Mundani and a Bible translation project in the language. This shows that the language is being used in literacy.

The Bafut experiment was done in 1982 and the proposed system of tone orthography has been in use ever since. We have used it to teach people how to read and write the language. We have been using it in the Bible translation project and also in literacy.

After the results of the experiment I presented the proposed orthography to the Bafut Language Committee and they all appreciated it. After teaching the members of the Committee how to read the language using the new tone orthography just for a few hours, one of the members exclaimed with satisfaction:

> "At last! I now understand. It is now that I can really say that I know how to write the language!"

We have received reactions like this from people to whom we have given introductory lessons in the reading and writing of tone in Bafut. Normally we have seen that using this orthography makes it easy to teach people how to read tone. People have understood the principles behind the system after just a few hours of instruction. Even semi-literates have not found it hard to understand these principles. We have not tested it long or widely

enough with illiterates and so we can not really say how easy or difficult it will be for them to use it in writing the language.

All the literature that we have in the language now is written in the new tone orthography. We have printed two editions of the Primer, the school edition and another edition for informal instruction. We have also produced a First Arithmetic Book in the language. A translation of portions of the Bible, for example, the Gospel of John, the Epistle to the Philippians, some chapters of Matthew, etc., has been done into Bafut. In all this literature we have been able to make all the necessary distinctions. It has not been difficult to use the orthography in writing.

In general we have seen that it is more difficult to write tone than to read it in this system. Of course, this is what we have already seen in the results of the experiment .

Although the orthography is designed with the native speaker in mind, we have found that even foreigners have found it easy to learn and to use it. I have been using the Primer to teach a European missionary how to read and write the language. When I taught her the basic principles involved, she was able to read and write the language. Using these principles she could read a given text such as to be understood by the native speaker even though she did not understand what she was reading. We have only gone half-way through the Primer (which has fifty-five lessons) but this experiment has given me the impression that our tone orthography can be used conveniently also by non-native speakers of Bafut.

In the above paragraphs we have been evaluating the proposed orthography in order to see how it actually works in the field. Although we have not yet developed objective methods and principles of evaluation, the information that we have presented above gives us indications about the prospects of the orthography. The above evaluation gives additional and important evidence that the proposed orthography has the potential of succeeding in the field.

[1] Tomatis does not say in his book whether it is all or a number of the African languages that have a low frequency range.

# APPENDIX I

## BAFUT PEDAGOGICAL MATERIAL

## TONE MARKING SYSTEM 1

Ntwòŋə nɨ ŋwà'ànə Njì

.nɨ Nɨghàà nɨ Bɨfɨɨ

Reading and Writing Tone

in the Bafut Language.

A PRACTICAL GUIDE TO BAFUT

TONE ORTHOGRAPHY

by

Joseph Ngwa Mfonyam

Société Internationale de Linguistique

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# CONTENTS

Introduction

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## INTRODUCTION

This book is written for Bafut people who can read and write the English language. The purpose of the book is to teach people how to read and write tone in the Bafut language. It is a supplement to the book, How to read and write the Bafut language by Dr. David Crozier. The alphabet used here is based on the one worked out by him and approved by the Bafut Language Committee, and conforms with the Alphabet Général des Langues Camerounaises.

The system of marking tones used here is one out of several others being tested in order to determine the best way of writing tone in Bafut.

Although this book is meant to teach tone, it can also serve as an elementary hand book portraying the Grammar of Bafut.

This book is written with the help of Dr. Olive Shell who gave the pedagogical and practical advice necessary and Professor Dr. Ursula Wiesemann, who supervised the linguistic analysis and description.

# P A R T   I

## LETTERS OF THE BAFUT ALPHABET

In this section of the book we shall con-
centrate mainly on the letters of the Bafut
alphabet.  We shall study in some detail only
those letters of the alphabet that are unfamiliar,
that is, those letters that are not found in the
English alphabet.

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## Lesson 1:   Introduction to the Bafut Alphabet

The following letters of the Bafut alphabet are pronounced almost the same as in English.

| | | | | |
|---|---|---|---|---|
| A | a | as in | àbàà | "bag" |
| B | b | as in | àbaà | "corn fufu" |
| D | d | as in | dàà | "wine calabash" |
| E | e | as in | nɨbè | "cola nut" |
| F | f | as in | àfù | "leaf" |
| G | g | as in | ǹdùgà | "compound" |
| I | i | as in | àtì | "tree" |
| J | j | as in | ju'ù | "yams" |
| K | k | as in | kò | "take" |
| L | l | as in | làà | "gum" |
| M | m | as in | mâtaà | "trap" |
| N | n | as in | nô | "snake" |
| O | o | as in | àkò | "bush" |
| R | r | as in | àkòrà | "foot" |
| S | s | as in | sǒ | "pierce" |
| T | t | as in | taà | "father" |
| Ts | ts | as in | tsàà | "reception house" |
| U | u | as in | lu | "tree rat" |
| W | w | as in | wǎ | "cut down" |
| Y | y | as in | yâ | "see!" |
| Z | z | as in | zǐ | "come" |

You will notice that even though the letters are almost the same as in English, there are sometimes extra marks over the vowel letters. These marks help you to know the melody of the

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words. For example, the words for "corn fufu" and
"bag" are exactly the same except for the dif-
ference in the way they are marked tonally. The
different tone marks you find on the vowels of
the words will be explained later on in the book.

The following words contain letters which do
not occur in the English alphabet:

| | | | | | |
|---|---|---|---|---|---|
| Ɛ | ɛ | as in | kwɛrɘ̂ | "take" |
| ə | ə | as in | àtəɘ̀ | "calabash" |
| Ɨ | ɨ | as in | àtɨɨ̀ | "half" |
| Ɔ | ɔ | as in | bɔɘ̂ | "build!" |
| Gh | gh | as in | ghɛ̀ɛ̂ | "go" |
| Ŋ | ŋ | as in | ŋiŋiŋ | "night mosquito" |
| ' | ' | as in | àbà'à | "door" |

Lesson 2:   Unfamiliar vowel letters

### Letter ɨ

The vowel ɨ is different from the vowel u.
Read these pairs of words and notice the dif-
ference in the way you pronounce ɨ and u:

| | |
|---|---|
| àkû | "raffia seed case" |
| àkɨ̀ | "bowl" |
| ǹdùù | "colocashia seed" |
| ǹdɨɨ̀ | "witch" |

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*1)  Write these words, putting in the correct
vowel, ɨ or u:

1.  nj__m        "back"

2.  L__m         "girl's name"

3.  n__ba        "wing"

4.  f__m         "carpenter bee"

5.  m__yaa       "river"

6.  n__be        "cola nut"


## Letter ə

The vowel ə is different from the vowel ɨ.
Read these pairs of words and notice the diffe-
rence in the way you pronounce ə and ɨ:

bɨ̀lɨ̀            "witches"

bɨ̀nə̀ə̀           "ground squirrels"

kghɨ̂            "burn!"

kghə̆            "run"

àtɨɨ            "part, half"

àtə̀ə̀           "calabash"

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*2)  Write these words, putting in the correct
vowel, ə or ɨ:

nt·__      "heart"         nd__r__  "to be heavy"

nt__       "to stand"      nd__g__  "creeper, rope"

f__r__  "window"           am__g__  "dew"

## Letter ɛ

The vowel ɛ is different from the vowel e.
Read these pairs of words and notice the diffe-
rence in the way you pronounce ɛ and e:

       nɨbè        "cola nut"
       nɨbê        "spring, water source"

       fɨkweè      "firewood"
       nɨkwɛè      "arm"

*3)  Write these words, putting in the correct
vowel e or ɛ:

t__tə        "select!"          l__        "hang bag on
                                             shoulder"
nɨk__        "soap"
                                k__        "mend!"
nd__         "mother"

## Letter ɔ

The vowel ɔ is different from the vowel o.
Read these pairs of words and notice the diffe-
rence· in the way you pronounce ɔ and o:

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boô   "hunt!"        loô   "bite!"

bɔ̂   "build!"        lɔ̂   "beg (for something)!"


*4)  Write these words, putting in the correct
vowel, ɔ or o:

   t___    "fight!"              as__    "hoe"

   b___    "they"                ab__    "hand"

   y___    "big basket"          s__rə   "witch"


## Lesson 3:   Unfamiliar consonant letters

### Letter ŋ

     The letter ŋ is pronounced like the ng in
the English word "sing".  Read these pairs of
words and notice the difference in the way you
pronounce ŋ and n.

ŋù      "person"              ŋaâ   "acquire as
                                    a result of
nû      "body"                      good luck!"

nə̀ə̂    "ground squirrel"     naà   "animal"

ŋìŋsə̂  "tickle!"


*1)  Write these words putting in the correct
letter, n or ŋ:

aka__    "pan"                 lɨ__ə  "lick!"

a__u     "thing, matter"       __aa   "animal"

__a__ə   "jump down!"          sa__ə  "dry!"

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## Letter '

The letter ' is written when there is a quick stop between two vowels. Read these pairs of words and notice the difference in the way you pronounce two vowels with the quick stop between them, and two vowels where there is no stop. Two vowels without any mark between them are simply pronounced longer than when only one vowel is written.

| | | | |
|---|---|---|---|
| àbà'à | "door" | àbù'ù | "slave" |
| àbàà | "bag" | àbùù | "ridge" |
| mà'â | "throw!" | | |
| maà | "grandmother" | | |

*2) Write these words, putting in the letter ' where necessary:

| | | | |
|---|---|---|---|
| alaa | "country" | abaatə | "flaming stick" |
| alaa | "forge" | ataa | "snail" |
| akuutə | "knee" | ataa | "pit" |

## Letter gh

The letter combination gh is pronounced a little different from g. Read these pairs of words and notice the difference in the way you pronounce gh and g:

| | | | |
|---|---|---|---|
| nìgò | "chest" | ŋghèê | "to go" |
| nìghò | "oil pit" | ŋgèè | "grass" |

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*3) Write these words, putting gh or g where necessary:

a__ɨɨ  "part of   alu___ə "oil beater"
     calabash"
           ___ɔɔ   "beat!"

a___o   "fool"
          nɨ___ɔɔ "illness"

nɨ___aa  "language"


## Combination of consonants letters

In many words, the nasal letters m, n, and ŋ are followed by other consonants, before a vowel. Read these words and notice how you pronounce the first two letters:

m̀bɨɨ   "trunk of   ǹtàŋ  "hut"
     tree"
           ǹtsì  "father-in-
m̀fɛ̀'ənə̀ "blindman"     law"

ǹdə̀   "thing"    ǹzî  "to know"

ǹjàà  "axe"     ŋ̀kû  "ghost"

ǹlɔ̂ɔ̂  "to look for" ŋ̀gû  "fowl"

ǹsù   "friend"   ŋ̀ghɛ̀ɛ̂ "to go"


*4) Write these words, filling in the blank spaces at the beginning of the words with two letters (or three, in the case of ts and gh):

____so  "war"      ____i  "to come"

____a'a "garbage"    ____i  "face"

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| | | | |
|---|---|---|---|
| ____a'a | "coal tongs" | ____uu | "tail" |
| ____i | "goat" | ____aa | "to speak" |
| ____am | "shoe" | ____uu | "skin" |
| ____lo | "to leave" | ____a | "to give" |

Sometimes consonant letters are followed by w or y. Read these words and notice how you pronounce the combination of letters when they are w or y:

| | | | |
|---|---|---|---|
| kwô | "die!" | ǹ̩ŋwà'àkə̂ | "lightning" |
| dwèn̂ə | "weed!" | ǹtwî | "to crack kernels" |
| fwamə | "eight" | ǹjyà | "soup" |
| m̀fweè | "bangle" | ŋyǎ | "pinch!" |
| tswè | "antelope" | tsyǎ | "pass!" |
| nwi | "cutlass" | | |

*5) Write these words which should each contain consonant combinations with w or y:

| | | | |
|---|---|---|---|
| __a | "bitter cola" | __ala'a | "story" |
| __oŋə | "call" | ŋ__ɛ | "charcoal" |
| __i | "god" | a__ee | "cone of palm nuts" |
| __ii | "roof!" | | |
| __a'a | "blade, scisors" | __a | "pick fruits!" |
| | | __a | "fence" |
| __a | "hold!" | | |

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# P A R T   II


## NOUN AND NOUN PREFIXES


In this section we are going to treat the
tones on the noun and noun prefixes.

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## Lesson 4:   High and Low Tones

### High Tone

When reading or writing Bafut, it is impor-
tant to keep in mind the melody or music of the
words; for example, if we say nwí "cutlass", we
mean something different from nwì "god".  The
tone of the first word is high and this is indi-
cated by the mark, ´ over the vowel.  We are not
going to mark high tone.

The following words are all on the same tone
level, that is, they all have the same music or
melody.  They are all words with high tone.
Read them and note the melody as you pronounce
them:

| | | | |
|---|---|---|---|
| forə | "mouse" | kaa | "crab" |
| tita | "pepper" | yɔɔ | "big basket" |
| ba'a | "calabash dish" | | |

*1)  Read these words and say whether they have
the same tone as the examples above:

| | | | |
|---|---|---|---|
| ləŋə | "horse" | ŋiɲiŋ | "mosquito" |
| bu'u | "chimpanzee" | nɔŋə | "tumbu fly" |
| mɔ'ɔ | "fire" | siŋə | "bird" |

### Low Tone

The tone level of the following words is
different from the tone level of the words you
have just read.  Try to whistle the melody of

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the word fə̀rə̀ "window" and compare it with that
of forə "mouse" which has high tone. The word
fə̀rə̀ is a low tone word. Notice how low tone is
marked, ` . As you must have noticed already, in
this book we are going to mark only low tone and
a combination of low and another tone on a single
vowel.

Read these words and notice the low tone and
how the melody is marked.

| | | | |
|---|---|---|---|
| nàà | "animal" | ŋ̀gɔ̀'ɔ́ | "termite" |
| bàtə̀ | "wine calabash" | ɨ̀bɔ̀'ɔ́ | "mushroom" |
| nɨ̀bà | "wing" | làà | "gum" |
| m̀bà'à | "button" | ǹjàà | "axe" |

*2)   Now show the difference between the words
with low tone and those with high tone by marking
those that have low tone:

| | | | |
|---|---|---|---|
| fə̀rə̀ | "window" | kaa | "crab" |
| forə | "mouse" | abaa | "bag" |
| nwi | "cutlass | mbəə | "chalk" |
| nwì | "god" | mfɔ | "chief" |
| dàà | "wine calabash" | ŋ̀gɔ̀'ɔ̀ | "termite" |
| ba'a | "calabash dish" | tsɔ'ɔ | "patridge" |

When the low tone words which we have seen
follow other words e.g. verbs, the tone patterns
may change.

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Words like m̀fɔ̀ "chief" and m̀bà'à "button"
ǹjàà etc; maintain the low tone (of the stem) in
phrases like these examples:

      fa mfɔ̀       "give the chief"

      fa njàà      "give the axe"

With words like ǹgɔ̀'ɔ̀ "termite" and m̀bə̀ə̀
"chalk", the low tones (of the noun stem) become
high as in the following examples:

    kurə ŋgɔ'ɔ yâ     "eat the termite"

    kǒ mbəə yâ      "take the chalk"

With other words with basic low tone, the
pattern of Low-low changes to high-low after verb
words e.g.

    kò naà      "take an animal"

    fa batə̀     "give a wine calabash"

* 3)   Now read and write the following, marking
the tones:

    ko njaa      "take an axe"

    ko laa       "take gum"

    yə sɔrə      "see a witch!"

    bu'u nsoo    "clear a farm"

    ko naa      "catch an animal"

    lɔgə nɨke    "take soup"

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Lesson 5:   Mid and High-Low Tones

## Mid Tone

Different from both high and low tones is a
third tone which is heard in the noun ju'u "yams".
The tone level in ju'u is not as high as the one
in kaa "crab" and not as low as the one in làà
"gum".  Whistle them in this order: kaa, ju'u,
làà.  You can notice that the tone level in ju'u
is mid way between high and low.  Mid tone is
marked with the sign ⁻; but in this book we are
not going to mark it, just as we are leaving high
tone unmarked.  In many cases the mid tone in
Bafut comes from high tone.  We shall illustrate
this later on in the lesson.

Now read these noun phrases and notice that
the noun prefix has low tone followed by a mid
tone stem.  There is a small word after each noun
which has a different tone level.  We shall
study the tone of these small words later on.

| | | | |
|---|---|---|---|
| àtəə yâ | "the calabash" | ǹtaa wâ | "the leg" |
| àbaa yâ | "the corn fufu" | ǹsəə wâ | "the ele-phant" |
| fìtəə fyâ | "the wine calabash" | ŋgarə wâ | "the gun" |
| m̀bɛɛ yâ | "the nail" | m̀borə wâ | "the hole" |

If we did not add the small word at the end
of these phrases, the tone of the last syllable
would drop to low.  When you pronounce ju'u all
alone you will notice this.  Now go back to the
nouns above and read them alone and notice how
the last mid tone lowers to low.

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The same thing happens with mid tone words
of one syllable. If they are followed by the
small word, the tone remains mid, but if not fol-
lowed by it, the tone glides downwards to low e.g.
notice the melody of abo "hand" here below:

àbo yâ        "the hand"

àbô            "a hand"

Now read these items:

ǹgû        "a fowl"        m̀bî        "a goat"

ǹgu yâ    "the fowl"      m̀bi yâ    "the goat"

*1)  Read the following and indicate where you
hear a level mid tone:

nsi          "a face"        mbu ya     "the dog"

nsi wa     "the face"       ŋkya        "a fence"

mbu         "a dog"         ŋkya wa    "the fence"

Just as there are changes in the basic tone
when some low tone words follow verb words so
there are changes in the basic tone when mid tone
words follow verb words, e.g.

kò fɨtəə fyâ "take the wine calabash" we
notice that the basic mid tone level of the noun
stem is raised to the level of high tone.

Now read the following and notice how the
level of the basic mid tone is raised:

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kɔ̀ abaa yâ          "take the corn fufu!"

kɔ̀ mbɛɛ yâ          "take the nail!"

wùrə nda yâ          "build the house!"


*2)  Read the following phrases taking particular
note of the mid tones that are raised to the
level of high.

kɔ̌ njoo jyâ          "take the things!"

kɔ̌ ŋkabə yâ          "take the money!"

fa nsa'a yâ          "give the niddle!"

yə nsəə yâ           "see the elephant"


It should be noticed that if we put a prefix
or word with a low tone before most high tone
words, the level of tone with which we pronounce
them is exactly like the level of mid tone words.
This is why we said earlier that many mid tones
in Bafut come from high tones.  Read the follow-
ing phrases and notice how the level of the high
tones drops to mid tone:

bìfɔrə          "mice"

ko kaa          "take a crab!"


*3)  Now make the following high tone nouns
plural by adding the prefix bì- at the beginning
of each word and notice how the level of the
high tone goes down to mid:

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| | | | |
|---|---|---|---|
| kaa | "crab" | ləŋə | " horse" |
| bu'u | "chimpanzee" | yɔɔ | "big basket" |
| ba'a | "calabash dish" | tsɔ'ɔ | "patridge" |

There are a few high tone words which do not change to two mid tones but rather to only one mid tone, and the second tone remains high. However, this difference in tone levels is not marked since we do not mark either high or mid tones. e.g. read the following word and notice how the first high tone of the word ŋiŋiŋ "night mosquito" becomes mid:

biŋiŋiŋ

*4) Read the words below and mark the low tone at the beginning of each word. Notice how in each case the melody of the word rises in regular steps made up of the three tone levels: low, mid, high:

| | | | |
|---|---|---|---|
| bɨtɨta | "peppers" | asɨsaŋ | "sugar cane" |
| bɨtumnə | "hats" | akoti | "forest" |
| akɨkuŋ | "owl" | afuti | "leaf of tree" |

### High-Low Tone

The fourth basic tone is like a combination of high and low tones which is marked like this: ˆ as in mâtaà. Read the following words and notice the tone where there is the mark: ˆ

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| | |
|---|---|
| mâghum | "baobab tree" |
| mûŋgèn | "bride" |
| lâm | "lamp" |

*5)  Read the following words and mark the tones
where necessary:

| | | | |
|---|---|---|---|
| lamsi | "orange" | manji | "road" |
| mujɔŋ | "young-man" | maŋgyɛ | "mother of twins" |
| manjɔŋ | "Bafut cultural association" | bɨlam | "lamps" |

Now go back and read the list of items on
page 14 and notice especially how you read the
small words at the end of the phrase which have
been marked as high-low tone, ^.  However, these
same short words have  high mid  tone when there
is another word following them.  Read the fol-
lowing and notice how you pronounce these small
words and also notice that their tone is now
high mid:

| | |
|---|---|
| àtəə ya mə | "the calabash which..." |
| àbaa ya mə | "the corn fufu which..." |
| fɨtəə fya mə | "the wine calabash which..." |
| m̀bɛɛ ya mə | "the nail which..." |

By now you must have noticed that what we
call the basic tone of the word is not always the
tone the word has when you pronounce that word
alone.  You get the basic tone of a noun word by
putting one of the small words we saw earlier
after the noun word e.g.

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fìtəə fyâ      "the wine calabash"

As we have seen already, if we did not put the
small word after this noun word, we would notice
that the last mid tone would drop to the level of
low tone.

Now read these words and notice their last
tones:

| | | | |
|---|---|---|---|
| atəə | "calabash" | no | "snake" |
| nda | "house" | mu | "child" |
| abo | "hand" | lu | "tree rat" |

Now read these same words with the small words
after them and notice how the last tones stay
level mid in the first column and level high in
the second column:

| | |
|---|---|
| àtəə yâ | no yâ |
| ǹda yâ | mu wâ |
| àbo yâ | lu wâ |

Many words have a combination of tone levels.
Read the following words and notice their melody
and see how the tones are written:

| | |
|---|---|
| àlələə | "bat" |
| bìmâtaà | "traps" |
| mûŋgèn | "bride" |
| àtsətsa'a | "mud" |
| takumbèŋ | "type of juju" |
| bìmâŋgyɛ | "mothers of twins" |

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*6)  Now pronounce each of these words and write
the melody over them:

akwɛ'ɛ    "cough"          taŋgyɛ    "father of
                                        twins"
taa       "father"
                           bɨforə    "mice"
atəə      "calabash"
                           manjii    "manji"
maa       "grandmother"

akɨkuŋ    "owl"


Lesson 6:   Noun Prefixes

     All noun words have a prefix which normally
has low tone.  Read the following words and
notice the low tone of the noun prefix:

nɨbà      "wing"           m̀fɔ́       "chief"
bɨforə    "mice"           ǹdâ       "house"
àbaà      "fufu"           ŋgɨgɨ     "egusi"
ɨbɔ'ɔ     "mushroom"

You will notice that the prefix may be composed
of two letters as "nɨ" and "bɨ" or of one letter
as "a" and "ɨ" or as "n", "m" or "ŋ".

     When a word with a prefix follows a verb
word, the tone of the prefix changes according to
the tone of the verb.  For example, when following
fa "give" which has a high tone, the low tone of
the two-letter prefix becomes high or high-low.


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Read these phrases and notice how you raise the tone of the prefix to high or high-low, and note how we have marked the tones.

fa nɨbɔ'ɔ          "give the pumpkin"

fa fɨtəə fyâ       "give the wine calabash"

fa bɨforə byâ      "give the mice"

*1)   Now write tones on the following phrases:

kwɛrə nɨŋgɔɔ nyȧ    "take the plantain"

kwɛrə fɨkwee fya    "take the firewood"

kwɛrə nɨke nya      "take the soap"

kwɛrə bɨba'a bya    "take the wine calabash"

When following verbs like lɔgê "fetch" the low tone of the two-letter prefixes becomes mid tone (which is not marked) or mid-low (which we mark as high-low). Read the following phrases and notice how the tones (including the changes in the tone of the prefixes) are marked:

Lɔgȇ nɨbɔ'ɔ        "fetch the pumpkin"

Lɔgȇ fɨtəə fyâ     "fetch the wine calabash"

Lɔgȇ bɨforə byâ    "fetch the mice"

*2).  Now write the tones on the following phrases:

Lɔgə nɨboo nya     "take the eggs"

Lɔgə fɨŋgwaŋ fya    "take the  salt"

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Lɔgə bɨləŋə bya          "take the horses"

Lɔgə mɨlu'u mya          "take the wine"


When the prefix is m, n or ŋ, we pronounce
that letter as part of the preceding syllable and
the low tone on this prefix is not pronounced or
marked.  Read the following and notice how you
pronounce the nasal prefix and also how the tones
of the phrases are marked:

    lɔgə mfɔ̀                "fetch the chief"

    fa ndeŋnə wâ            "give the bamboo"


*3)  Now read the following phrases and mark the
tones:

    ko nsoo wa               "start a new farm"

    twoŋə mfwee wa           "call the roofer"

    wǎ ndeŋnə wa             "cut the bamboo"

    kwě ŋgaŋ wa              "cut the root"


If the prefix is a vowel "a" or "ɨ", the
vowel and its tone is not pronounced when the
word follows another word (ending in a vowel).
We however maintain the vowel in writing.  Read
these examples and notice how you do not pro-
nounce the vowel and its low tone.  We do not
also mark the low tone of the vowel prefix.

        fa ɨkɔ̀ɔ̀     "give a song"
        fa abaa yâ   "give the fufu"


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*4)  Now read and write the tones on the following
phrases:

     fa abaa ya       "give the bag"

     fa atsugə ya     "give the achu"

     ko ɨlɨ wa       "catch the ant"

     bi'i atəə ya    "carry the calabash"

With a few words, although the vowel is not
pronounced, its tone is preserved on the last
tone of the preceding word which becomes a fall-
ing tone (if it is not a low tone).  Read the
following and notice how you pronounce the words
and how the tones are marked.

     fa àlələə yâ    "give the bat"
     fa àkɨkuŋ yâ    "give the owl"
     Lɔ̀gə àlələə yâ  "take the bat"
     lɔ̀gə àkɨkuŋ yâ  "take the owl"

*5)  Now read and write tone on the following
phrases:

     ko fɨŋjɔɔ fya      "take the frog!"
     yə bɨsɔrə bya     "see the witches!"
     fa atsətsa'a ya    "give the mud!"
     ko mba ya        "take the meat!"
     tsetə aba'a ya    "close the door!"

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# P A R T   III

## NOUN AND VERB RELATED WORDS

In Section III of this book which includes
lessons 7 to 10.  We shall study small words that
are related to the noun and verb.  These are in
a class known generally as grammatical words.  We
are going to study particularly words that link
two nouns, (7), Pronouns (8), Demonstratives,
adjectives (9), Prepositions and adverbs (10).

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## Lesson 7:  Noun Combinations

1.  Some nouns are linked together into phrases
by small words between them.  In most cases, the
tones of some of the words change according to
the tones of the adjacent words.

a)  Read these examples and notice that the tone
of the small joining word is mid when the first
noun ends in low tone.

 nɨbɔ'ɔ nɨ maà        "the pumpkin of grand-
                       mother"

 bɨdàà bɨ maà         "wine calabashes of grand-
                       mother"

*1)  Now read and write the following phrases
with their tones:

 bɨtsaa bɨ maa        "reception houses of
                       grandmother"

 nɨŋgɔɔ nɨ forə       "plantain of mouse"

b)  Read these phrases and notice that the tone
of the first noun changes and that the tone of
the small joining word is high here.

 bɨloo bɨ fórə           "husbands of mouse"

 nɨli'i nɨ forə          "eye of mouse"

*2)  Now read and write the tones on the fol-
lowing phrases:

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fɨtəə fɨ maa     "wine calabashes of grand-
                    mother"

nɨbəə nɨ maa     "breast of grandmother"

c)   Read these phrases and notice that the tones
of the second noun and also of the small words
change:

   nɨbòò nɨ taà     "the egg of father"
   mɨŋgɔ̀ɔ̀ mɨ nsoo     "plantains of the farm"

*3)   Read and write the tones on the following:

   bɨtsaa bɨ sɔrə     "reception houses of witch"

   nɨsɔŋ nɨ nsəə     "tooth of elephant"

2.   Other phrases have no small linking words
between the nouns. When two nouns come together
without the linking word, the tone of the first
noun or of the second, or of both may change
according to the tones of the adjacent words.

a)   Read this example and notice that the tone of
the second word changes.

     ba'a forə     "calabash dish of mouse"

    Read this example and notice that the tones
of the first and of the second words change:

     ŋgû maà     "fowl of grandmother"

*4)   Now read and write the following phrases
with tone marks:

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ba'a ləŋə      "calabash dish of horse"

                mbəə maa       "chalk of grandmother"


b)   Read these examples and notice that the tone
of the second word changes in the first example,
and that the tones of both words change in the
second example:

                ŋ̀kùù forə      "tail of mouse"

                ǹtaa taà       "leg of father"


     Read these examples also and notice that, in
the first example, the tone of only the first
noun changes, while in the second example, the
tone of only the second noun changes.

                àtəə maà       "calabash of grandmother"

                àbàà sɔrə̀      "bag of witch"


     Read these examples and notice that in the
first phrase, the tone of the first word changes
but in the second phrase, the tone of both words
change.

                ŋ̀gu maà        "fowls of grandmother"

                m̀bɛɛ taà       "nails of father"


*5)   Now read and write the following phrases
with tone marks:

     ŋgarə taa       "gun of father"

     abaa maa        "corn fufu of grandmother"

     aləə naa        "tongue/blood of animal"


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ntɔ'ɔ mfɔ      "palace of chief"

nsa'a mfwèè     "needle of roofer"

3. When a noun word follows another noun in a
phrase, the prefix of the second noun changes in
a way similar to the way it changes following a
verb (as in lesson 6). In the preceding exercises
of this lesson we considered the changes in the
tone of the first or second nouns in phrases
where noun follows noun; but we did not consider
the changes of the tones of the prefixes of the
second noun. We shall now consider these changes.

Basically all noun prefixes are spoken with
low tone, but in phrases where noun follows noun,
the tone of the prefix of the second noun changes
most of the time.

a) First we give some examples where the tone
of the prefix does not change.

Read the following examples and notice how
the tone of the prefix remains low:

ba'a bɨforə      "calabash dish of mice"

ba'a nɨŋgɔ̀ɔ̀      "calabash dish of plantains"

dàà mɨlù'ù      "calabash of wine"

b) Now read the following and notice the changes
in the tone of the prefix of the second noun.
The changes depend on the groups or class of
nouns that the first noun belongs to, and the
tone of the small joining word.

bɨba'a bɨ nɨŋgɔ̀ɔ̀     "calabash dishes of
                      plantains"

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ìkòò bítaà            "song of fathers"

ŋkɨ̀rə̀ fítəə̀         "rope of wine calabash"

fìtəə fɨ mɨlù'ù       "calabash of wine"

*6)   Read the following and write the tones:

bɔɔ bɨ nɨŋgɔɔ         "plantain suckers"

njoo bɨ maa           "things of grandmothers"

mɨtəə mɨ mɨlu'u       "calabashes of wine"

bɨywi'i bɨ mɨwurə     "calabashes of oil"

ɨbɔ'ɔ bɨmaa           "mushrooms of grandmothers"

c)   When the prefix of the second noun is a nasal,
m, n, or ŋ, we pronounce that letter as part of
the preceding word.   It may be part of the small
connecting word, or if there is no connecting
word, it will form part of the preceding noun
word.   The nasal prefix in this construction
loses its low tone as we have seen in lesson 6.

     Read these examples and notice how you com-
bine the nasal with the preceding word:

 forə mfɔ̀            "chief's mouse"

 àtɨɨ ndəŋnə̂         "half or piece of bamboo"

 ǹɨbuu nɨ nsoo       "corner of farm"

 àtəə ŋgɨgɨ          "a calabash full of egusi"

*7)   Now read the following phrases and write the
tones correctly:

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| | |
|---|---|
| bɨforə bɨ mfɔ | "chief's mice" |
| abaa mfɔ | "chief's bag" |
| nɨsɔŋ nɨ nsəə | "elephant's tooth" |
| ndɔŋ ŋgɨgɨ | "cup of egusi" |

d) When the prefix of the second noun is a vowel "a" or "ɨ", the vowel is not pronounced, though we continue to write it.

Read these examples, and notice that you do not pronounce the vowel prefix of the second noun and its tone.

| | |
|---|---|
| àfu atɨ | "leaf of tree" |
| nɨŋgɔɔ́ nɨ abù'ù | "slave's plantain" |
| ba'à abù'ù | "slave's calabash dish" |

In the following phrases, even though the vowel prefix is not pronounced, its tone is preserved on the preceding word, whether it is the noun word or the small joining word. However, in writing, we still mark the tone on the vowel prefix.

| | |
|---|---|
| ba'a àkɨkuŋ | "calabash dish of owl" |
| nɨli'i nɨ àlələ | "the bat's eye" |

*8) Now read the following and write the tones:

| | |
|---|---|
| ŋkɨrə abaa | "robe of a bag" |
| abo ɨlarə | "hand-rail of a bridge" |
| bɨba'a bɨ abu'u | "calabash dishes of slave" |
| atu ɨkuu | "head place of a bed" |
| nɨli'i nɨ akɨkuŋ | "the eye of an owl" |

*9) Read the following and mark the tones where necessary:

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| | |
|---|---|
| atəə maa | "calabash of grandmother" |
| ŋgu maa | "fowl of grandmother" |
| ŋgu taa | "fowls of father" |
| abaa forə | "bag of mouse" |

Lesson 8:   Pronouns

The pronouns (which stand for nouns) also
have basic tones.  For the person or persons
talking, the pronouns mə̀ and bì'ì may be used;
both have low tone.  For the person or persons
to whom someone else is talking, the pronoun wò[1]
and bù or nì which all have low tone are used.
However, as you will see in later lessons, the
tones of these pronoun words may change in com-
bination with other words.

When the pronoun refers to another person or
an object, there are different forms according to
what is referred to.  Since the tones of the pro-
nouns may change according to the meaning of the
sentence, it is very important to read or write
them correctly.

The first words in the following sentences
are pronouns.  Read the sentences paying  atten-
tion to the tone marks of the pronouns.

| | |
|---|---|
| à sàŋê mba | "he has dried meat" |
| a sàgə mba | "he is drying meat" |

---

NOTE:  (1) Wò most of the time occurs as ò, especially at
the beginning of sentences or clauses, while the form
wò occurs after other words ending with a vowel sound.

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bo nɨŋ kwɛrə abaà          "they took corn fufu (today)"

bô nɨ̂ŋ kwɛrə abaà          "they have taken corn fufu (today)"

bɨ̂ nɨ̂ŋ kurə njɨ̀'ɨ          "they (the rats) have eaten groundnuts (today)"

yì ŋì mɔ̂ nɨbòò          "it (fowl) has laid an egg"

ji ŋì mɔ̂ mbòò          "they (fowls) have laid eggs"

ɨ bὲ mɔ̂          "it (mushroom) is cooked enough"

nɨ bὲ mɔ̂          "it (plantain) is cooked enough"

a bὲ mɔ̂          "it (corn fufu) is cooked enough"

fɨ bὲ mɔ̂          "it (fish) is cooked enough"

à nɨn yə Ngwà a kwɛtὲ yi          "he saw Ngwa who helped helped him"

There are three pronouns in the above sentence: à, a and yi

à kɨ tumə naàŋgwὲ yi kghɔ̂          "he shot a lion (yesterday) but it ran away"

The pronouns here are à and yi.

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*1) Underline the pronouns in these sentences
and note their tones:

a nɨm bu'u ŋgɔ̀ɔ̀ bo benə          "he was drumming and
                                    they were dancing"

bo kɨ̀ sɨ yəə ɨ kɔ̀ɔ̀ mbenə        "they were singing
                                    and dancing"

nɨ̀ŋgɔ̀ɔ́ nya nɨ w�ò mə̂            "the plantain (it)
                                    has fallen"

mə̀ nɨn yə yi siɩ̀                 "I saw him today"

fɨ̀bwɛ̀ fya fɨ́ be mə̂             "the fish is cooked
                                    enough"

    Pronouns sometimes show ownership.  We call
the pronouns which show ownership possessive pro-
nouns.  There are many forms of possessive pro-
nouns according to the nouns they modify.  The
tones of the nouns sometimes change because of
the tones of the possessive pronouns.  The fol-
lowing are the different forms of the possessive
pronoun "my" which depend on the class of the
noun that is possessed:

1.  forə ghà          "my mouse"
2.  bɨ̀forə bâ        "my mice"
3.  ŋ̀garə ghâ        "my gun"
4.  nɨ̀ŋgɔ́ nâ        "my plantain"
5.  mɨ̀ŋgɔ́ mâ        "my plantains"
6.  àtəɛ̀ yâ          "my calabash"
7.  ɨ̀təɛ̀ jâ          "my calabashes"

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| 8. | ŋgɔ'ɔ yà | "my stone" |
| 9. | ŋgɔ'ɔ jâ | "my stones" |
| 10. | fɨbwɛ̂ fâ | "my fish" |

*2) Now write each of these nouns above with the possessive pronoun that means "your".

## Lesson 9: Demonstratives and Adjectives

### Demonstratives

Some noun words are followed by small words which help us know which person or thing we are referring to. We call these small words demonstratives. The form of the demonstrative changes according to the meaning we want to give, for example, forə wâ "the mouse" forə wiì "that mouse", forə ghuà "this mouse". We shall give examples of the forms which have the first meaning. Read the following and note the tones of the nouns and demonstratives. The tone of the demonstrative here changes according to the tone of the preceding noun and because it comes at the end of the phrase. However, we continue to represent it as High-low tone glide.

| 1. | forə wâ | "the mouse" |
| 2. | bɨforə byâ | "the mice" |
| 3. | ŋgarə wâ | "the gun" |
| 4. | nɨŋgɔ̀ɔ̀ nyâ | "the plantain" |
| 5. | mɨŋgɔ̀ɔ̀ myâ | "the plantains" |
| 6. | àtəə yâ | "the calabash" |
| 7. | ɨtəə jyâ | "the calabashes" |

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| 8. | ŋ̀gɔ̀'ɔ̀ yâ | "the stone" |
| 9. | ŋ̀gɔ̀'ɔ̀ jyâ | "the stones" |
| 10. | fɨ̀bwɛ̀ fyâ | "the fish" |

*1) Make a list of the above ten nouns and write with each one the appropriate form of the demonstrative which means "that" and also the demonstrative that means "this" e.g.

<div align="center">forə wiɨ̀       forə waà</div>

## Adjectives

Describing words need to have a small word before them. These may be called adjective markers. Just as there are different forms of the demonstratives according to the class of the preceding noun, so there are different forms of the adjective markers according to the class of the preceding noun. Read the following nouns with the adjective marker and the adjective base:

| forə yîm fɨ̀ɨ̀ | "black mouse" |
| bɨ̀forə bî fɨ̀ɨ̀ | "black mice" |
| nɨ̀ŋgɔ̀ɔ̀ nî fèè | "plantain for sale" |
| m̀bàŋ jî twɨ̀ | "cracked kernels" |
| fɨ̀bwɛ̀ fî fàŋtɜ̀ | "big fish" |
| fɨ̀təə fɨ̀ fàŋtɜ̀ | "big wine calabash" |

Number words are also adjectives. An adjective marker precedes them, as for other adjectives. Read the following examples, noting especially the marker and number:

<div align="center">35</div>

| | |
|---|---|
| mɨŋgɔ̀ɔ̀ mim baà | "two plantains" |
| bɨforə bi nto'o | "six mice" |
| mu yɨm fùùrə̀ | "one child" |

Sometimes noun words are used as adjectives. These are placed before the noun they describe. Read the following phrases and notice the nouns that are used as adjectives:

| | |
|---|---|
| ǹlwèn màngyɛ̀ | "old lady" |
| mûŋkghə̂ màngyɛ̀ | "young lady" |
| ǹdɨ̵ɨ̵ ŋ̀ù | "elderly man" |

*2) Write each of the following nouns, placing with each one, an adjective, a numeral, or a noun used as an adjective.

| | | | | | |
|---|---|---|---|---|---|
| 1. bu'u | "chimpanzee" | 5. m̀bà | "meat" |
| 2. bɨləŋə | "horse" | 6. lâmsɨ̀ | "orange" |
| 3. àtə̀ə̀ | "calabash" | 7. fɨ̀ŋgwân | "salt" |
| 4. ǹdâ | "house" | 8. mɨ̀bɔ̀'ɔ̀ | "pumpkins" |

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## Prepositions

There are small words which may come before
a noun or two nouns to state the position of
something or somebody or to show where somebody
or something comes from etc.

In the following pairs of phrases, the tone
of what you say makes a difference in the meaning.
It is the small word at the front of the first
phrase which makes the pattern of this phrase
different from the second one.   Read the phrases
naturally and notice the difference.

a atu ndâ       "on the roof (of the house)"

àtu ndâ          "roof of house"

The preposition "a" has other meanings.  Read the
following phrases and note how it is used and
also take note of the tones of the other words:

a mbô Ngwà         "for, to, from Ngwa"

a nsî Ngwà         "infront of Ngwa"

a mûm ndâ          "in the house"

Other words preceding nouns have almost the
same form as subject pronouns and indicate that
the person or thing which the pronoun represents
is accompanied by what the pronoun represents.
Read the following phrases and notice the tone of
the prepositions:

bô mbû          "he/they with a dog"

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bì'î mbû          " I with a dog"

bû mbû          "you (sing.) with a dog"

Another small word, nɨ, indicates accompani-
ment, generally by something being carried, or
instrument involved in some action (i.e. what it
was done with):

nɨ̂ mbî          "with a goat"

nɨ mɨlù'ù          "with wine"

nɨ nwi          "with a cutlass
                  (instrument)

*1)  Using the above as examples, write how you
would say the following phrases in Bafut:

1.  "in front of me"          4.  "from me"

2.  "on Ngwa's back"          5.  "to the house"

3.  "in the pot"

## Adverbs

Some expressions tell you when, where or how
an action takes place.  These are called adverbs.

The prepositions a and nɨ can be used with
noun words to make adverbs; we shall call them
adverb phrases because they are composed of two
words.  Read these phrases and notice their tones
and how they are written:

a yɔɔ          "yesterday (or tomorrow)"

a yîjòŋè̀          "on market day"

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| | |
|---|---|
| a mɨtaa | "at the market" |
| nɨ mɨtɨ̀ɨ̀ | "fast, quickly or with force" |
| nɨ bɨnòò bintaà | "at 5 o'clock" |

When an adverb and a verb come together, there is no joining word between them. The adverb comes immediately after the verb. Read these examples and notice the adverbs and their tones:

| | |
|---|---|
| a yaŋə si'i | "it hurts much" |
| a bwii tsêtsɔ̀ŋə̀ | "he is sleeping now" |
| à fɛ̀'ɛ̀ mə̂ tsi'ì tsə̀tsɔ̀ŋə̀ | "he has gone out just now" |

Some adjectives are used as adverbs without joining words. e.g.

| | |
|---|---|
| a fà'à sɨgə̀nə̀ | "he works well" |
| à kɨ fà'a tsi'ì sɨgə̀nə̀ | "he worked very well" |

Sometimes two verb words come together, the first of which is used as an adverb. Here there is no joining word. Read these examples and notice the two verbs coming together:

| | |
|---|---|
| à nɨ wàŋsə̀ nzi | "he came early" |
| à ghɛ̀sə̀ mə̂ nzi | "he has just come" |

The following construction is a little different, in that there is a joining word between the two verbs. Read this example and notice the two verbs with the joining word between:

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à nɨn tɨgə a ǹzî    "he came late (today)"

*2)  Using the above examples, write how you
would say the following phrases in Bafut:

1. "at two o'clock"     4. "in the morning"

2. "in church"          5. "he has just left"

3. "slowly"             6. "he eats well"

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P A R T    IV


VERB PHRASE


In this section of the book we are going to
concentrate mainly on the verb phrase.  We shall
study the tone patterns of verbs in isolation
and in their various tenses and aspects.


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## Lesson 11: Tone Patterns of verbs

All verb words fall into two types according to their tone patterns. Read these rows of words and notice that it is only by paying attention to their tones that you are able to make the difference in meaning between any pair in both columns

| | | | |
|---|---|---|---|
| ba'â | "weave" | bà'â | "treat (a wound)" |
| bɔɗ | "build" | bɔ̂ɗ | "cover" |
| fi'î | "take out of" | fì'î | "be goiling" |
| lɔɗ | "beg (for something" | lɔ̂ɗ | "look for" |

These verbs are marked as they are said in isolation, i.e. the class of verbs in the left column starts with high and ends with a falling tone while the class of verbs in the right column starts with a low and also ends with a falling tone glide. Basically the verbs in the first column are high tone verbs while those in the second row have a low-mid pattern (i.e. low on the first syllable and mid on the second). These basic tones change in combination with other words. So in order to know what the basic tones are, we can always think of the command form because in the command form the tone of the verb is always the basic tone. However, we should always remember to put another word after the verb so as to have its right tone level. Read these command sentences and notice the tones of the verb words:

| | |
|---|---|
| ba'a abàà | "weave a bag" |
| bà'a ala'a | "treat a wound" |

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| | |
|---|---|
| bɔɔ ndâ | "build a house" |
| bɔ̀ɔ àntɔ̀ɔ́ | "cover the pot" |
| lɔɔ ŋkabə̀ | "beg for money" |
| lɔ̀ɔ ́cɔ̀ ŋkabə̀ | "look for money" |

In the above examples you must have noticed that the first verb in each pair of the verbs given has a level high-high tone pattern while the second has a low-mid tone pattern as said above. Since we do not mark both high and mid tone levels, you can not see the difference in writing.

*1) Read, and then write the following phrases, and add the correct tone marks:

| | |
|---|---|
| bwi'i njɨ'ɨ jya | "plant groundnuts" |
| bi'i nɨkoo nya | "carry the head-basket (kenja)" |
| sa'a ɨsa'a wa | "judge the case" |
| sa'a mba ya | "tear the meat" |

2. So far we have studied four different tones: high, mid, low and high-low. There is a fifth tone which is like the combination of low and mid tones, which we shall mark like this ˇ. Its melody is like the tone pattern of bɔ̀ɔ "cover!" but it occurs on words of only one syllable.

Read these sentences and notice how you say the tones of the verb.

| | |
|---|---|
| sɔ̀ naà | "pierce an animal" |
| lɔ̌ ŋghèɛ | "go away!" |

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lĕ abàà            "hang (a bag) on the shoulder"

*2)  Now read and write the tones on the follow-
ing command sentences:

     zi faà                "come here!"

     ko mba yu             "take this meat"

     wa ati yu             "cut down this tree"

     wyɛ nɨkaŋ             "make announcement (of
                            town/village crier)"

     tsya faà              "pass this way"

     jɨ atsugə yâ          "eat the achu"

     ko ləŋə              "catch a horse"

     The basic tones of the verb words change
depending on the tense of the verb and the tone
of the subject word that precedes it.  Read the
following sentences and note the tones of the
pronoun, tense marker "mə" and of the verb:

     à kwɛrà mə̂ mbà      "he has taken meat"

     à sàŋ mə̂ mbà        "he has dried meat"

     à sò mə̂ mbà         "he has pierced meat"

     In two situations, there is no tense marker,
and so we must pay special attention to the tone
of the pronoun.  Notice these examples, where
the meaning of the verb depends mainly on the
tone of the pronoun (subject):

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à sàŋê mbà      "he has dried meat."

a sàŋə mbà      "he is drying meat."

If the pronoun is plural and already has a high tone, and if there is no tense marker, we must pay more attention to the tones of the verb.

Read the following paying attention to the way you say the tones of the verbs:

1. bo saŋə tɨta      "they have dried pepper"

2. bo sàŋê tɨta      "they are drying pepper"

3. bo kwɛrê tɨta      "they have taken pepper"

4. bo kwɛrə tɨta      "they are taking pepper"

You may have noticed that although the verb kwɛrə is written the same in (3) and (4) they are pronounced differently in each sentence. In sentence (3) kwɛrə is said with a mid tone on the second syllable. So to show the difference in meaning, we have to mark the mid tone.

*3) Write two sentences about shooting a leopard (naaŋgwe), using subjects "he" and "they":

1. "he has shot ..."

2. "he is shooting ..."

3. "they have shot ..."

4. "they are shooting ..."

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## Lesson 12:  Past Tenses

There are different small words in Bafut which show whether the action took place today, yesterday, or a long time ago.  These small words are called tense markers.  In each of the tenses pay particular attention to the tones of the pronoun and the tense marker.

If the action were done today we might have phrases like these:

à nɨŋ kwɛrɛ abaà        "he took corn fufu (today)

à nɨ̂ŋ kwɛrə abaà        "he has taken corn fufu (today)"

a nɨŋ kwɛrə abaà        "he was taking corn fufu (today)"

bo nɨŋ kwɛrə abaà        "they took corn fufu (today)"

bô nɨ̂ŋ kwɛrə abaà        "they have taken corn fufu (today)"

bo nɨ̀ŋ kwɛrə abaà        "they were taking corn fufu (today)"

*1)  For each of the numbers below, write a sentence beginning with the pronoun and tense marker indicated.  Use any verb and noun combination you wish.  If the word after nɨŋ starts with b or f, the ŋ will change to m; if the following word starts with k or g, nɨŋ will always end with ŋ; if the following word starts with any other letter, the tense marker will end with n, giving nɨn.

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| 1. à nɨŋ | 5. bô nɨ̂ŋ |
|---|---|
| 2. a nɨ̀ŋ | 6. bo nɨ̀ŋ |
| 3. à nɨ̂ŋ | 7. bo ... mə̂ |
| 4. bo nɨ̀ŋ | 8. à ... mə̂ |

*2) Read this short letter with the correct tones:

    Taà,

      Mumaà ghà, Lùm à nɨn jwi

    mûmbâŋnə̀ sìl, ɨkum mu wâ ɨ nɨ Nɨba'a.

    A nɨn yə'ə si'i, si'i, la à kɛ̀ntə̀ mə̂

    a nyə̀'ə.

      À nɨ mə̀ ˙ Yàkɔbə̀ Sùù.


If the action were done yesterday we would have phrases like these. Remember to observe carefully the tones of the pronoun, the tense marker and of the noun object of the verb.

| à kɨ kwɛ̀rə̂ mbà | "he took meat" |
|---|---|
| à kɨ kwɛ̀rə tɨta | "he took pepper" |
| bo kɨ sàŋə̂ mbà | "they dried meat" |
| à kɨ so tɨta | "he pierced pepper" |
| bo kɨ sɨ sàŋə̀ tɨta | "they were drying pepper" |
| bo kɨ sɨ sàŋə mbà | "they were drying meat" |

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à kì sɨ kwɛrə mbà     "he was taking meat"

bo kì sɨ kwɛrə tɨta    "they were taking pepper"

*3) For each of the numbers below, write two sentences, beginning with the pronoun and tense marker indicated. Use any verb and noun combination you wish and remember to mark the tones.

1. à kɨ ...          3. à kɨ sɨ ...

2. bo kɨ ...        4. bo kɨ sɨ ...

If the action were done many days ago or a long time ago, we would have sentences like these:

à lɛ̄ŋ kwɛrə mbà      "he took meat"

à lɛn sàŋə mbà       "he dried meat"

à lɛn sàŋə̀ tɨta       "he dried pepper"

bo lɛŋ kwɛrə mbà     "they took meat"

bo lɛn sò ləŋə      "they pierced a horse"

à lɛ sɨ kwɛrə mbà    "he was taking meat"

à lɛ sɨ sàŋə mbà     "he was drying meat"

à lɛ sɨ sàŋə̀ tɨta     "he was drying pepper"

bo lɛ sɨ sò ləŋə     "they were piercing a horse"

*4) For each of the numbers below, write two sentences beginning with the pronoun and the tense markers given:

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1. à lɛn ...          3.  à lɛ sɨ ...

2. bo lɛn ...         4. bo lɛ sɨ ...


   If the action has once taken place a long
time ago, a different marker is used.  Read the
following phrases, again noticing the tones of
the pronoun subject, the tense marker and of the
object.

à lɛɛ̀ŋ kurə nsəə̀        "he once ate elephant
                          meat"

à lɛɛ̀ŋ ghɛɛ a Yàoundè    "he has once been to
                          Yaoundé"

bo lɛɛ̀ŋ kurə nsəə̀       "they once ate ele-
                          phant meat"

bo lɛɛ̀ŋ ghɛɛ a Yàoundè  "they once have been
                          to Yaoundé"

bo lɛɛ̀n so naàŋgwὲ       "they once pierced a
                          leopard"


*5)  For each of the numbers below, write three
sentences beginning with the pronoun and tense
marker given.

1.  à lɛɛ̀ŋ ...          2.  bo lɛɛ̀ŋ ...


   If the action were done once not long ago,
we would use a different tense marker.  Read
these examples:

à kɨɨn jwi mûmbâ̰ŋnə̀      "she gave birth to a
                          male child"

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bo kɨɨn fɛ'ɛ wa ndâ    "they moved out of the
house"

*6)   For each of the numbers below, write two
sentences beginning with the pronouns and tense
markers given:

1. à kɨɨn ...         2.   bo kɨɨŋ ...

## Lesson 13:   Future Tenses of Verbs

If the action is to take place in the future
different tense markers are used depending on
the future time.   Read the following.   You will
notice most of the time that the verb retains
its basic tone.   Also take note of the tone of
the noun following the verb.   It may change, as
explained in a previous section.

| | |
|---|---|
| à ka kwɛrə mbà | "he will take meat" |
| à ka lɔ̀gə mbà | "he will fetch meat" |
| à ka lɔ̀gɛ̀ ləŋə | "he will take a horse" |
| bo ka kwɛrə mbà | "they will take meat" |
| bo ka sɔ̀ ləŋə | "they will pierce a horse" |
| à ka kɨ kwɛrə mbà | "he will be taking meat" |
| bo ka kɨ sàŋə mbà | "they will be drying meat" |
| bo ka kɨ sàŋɛ̀ tɨta | "they will be drying pepper" |

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*1) For each of the numbers below, write two
sentences beginning with the pronoun and the
tense marker(s) indicated:

1. à ka            3. à ka kɨ

2. bo ka           4. bo ka kɨ


    If the action is to take place today, an-
other marker is used.  Read the following:

à ka lɜ̆ kwɛrə mbà        "he will take meat
                          (today)"

à ka lɜ̆ sàŋə mbà         "he will dry meat
                          (today)"

à ka lɜ̆ sàŋə̀ tɨta        "he will dry pepper
                          (today)"

bo ka lə kwɛrə mbà       "they will take meat
                          (today)"

bo ka lə sò ləŋə         "they will pierce a
                          horse today"

à ka lɜ̆ kɨ kwɛrə mbà     "he will be taking meat
                          today"

à ka lɜ̆ kɨ sàŋə mbà      "he will be drying meat
                          today"

à ka lɜ̆ kɨ sò ləŋə       "he will be piercing a
                          horse today"

bo ka lə kɨ kwɛrə mbà    "they will be taking
                          meat today"

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bo ka lə kɨ sàŋə̀ tɨta     "they will be drying
                                pepper today"

*2)  For each of the numbers below, write two
sentences beginning with each of the pronouns
and tense markers below.

1.  a ka lɜ̌ ...           3.  a ka lɜ̌ kɨ ...

2.  bo ka lə ...          4.  bo ka lə kɨ ...


      If the action is to take place tomorrow,
the markers are again different.  Read the fol-
lowing:

    à ka lɜ̌ kwɛrə mbà̀      "he will take meat
                               tomorrow"

    bo ka lo sàŋə̀ tɨta     "they will dry pepper
                               tomorrow"

    a ka lɜ̌ kɨ nɨ̀ŋə mbàŋ  "he will be crushing
                               palm nuts tomorrow"

    bo ka lo kɨ bɔɔ ndâ    "they will be building
                               a house tomorrow"


*3)  For each of the numbers below, write two
sentences beginning with each of the pronouns
and tense markers below.

1.  à ka lɜ̌ ...           3.  à ka lɜ̌ kɨ ...

2.  bo ka lo ...          4.  bo ka lo kɨ ...



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If the action is to take place in the distant future, there is another marker. Read the following:

à ka yĭ kwɛrə mbà        "he will take meat in the distant future"

bo ka yi sàŋə̀ tɨta        "they will dry peppers in the distant future"

à ka yĭ kɨ nɨŋə mbàŋ    "he will be crushing palm nuts in the distant future"

bo ka yi kɨ fèe mbà      "they will be selling meat in the distant future"

*4)  For each of the numbers below, write two sentences beginning with each of the pronouns and tense markers below:

1.  à ka yĭ ...            3.  a ka yi kɨ ...

2.  bo ka yi ...          4.  bo ka yi kɨ ...

Lesson 14:  Consecutive Actions

When there are two verbs in a sentence, and they both have the same subject, the second one begins with m, n or ŋ except in the future.  The letter m, n or ŋ is written according to the first letter of the verb which follows it.  The second verb has tones which may not be the same as the basic tones.

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So in general we need to pay attention to the tones as we read or write in order to avoid confusion of meaning. Read, for example, the following pairs of sentences and notice how the tones have to be marked to bring out a difference in meaning.

1. a) à lɛn zi ŋkwɛrə ləŋə     "he came to take a horse"

    b) à lɛn zì ŋkwɛrə ləŋə     "he came and took a horse"

2. a) à zì mə ŋkwɛrə mbà     "he has come to take meat"

    b) à zì mê ŋkwɛrə mbà     "he has come and taken meat"

3. a) à zì mə nsàŋə mbà     "he has come to dry meat"

    b) à zì mê nsaŋə mbà     "he has come and dried meat"

4. a) à zì mə nsǒ ləŋə     "he has come to pierce a horse"

    b) à zi mê nso ləŋə     "he has come and pierced a horse"

Read the following examples and notice how differently we have to mark the difference in meaning:

1. a) à zi ŋkwɛrə mbà     "he has come to take meat"

    b) à zī ŋkwɛrə mba     "he has come and taken meat"

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2. a) à ghɛ̀ɛ nlɔ̀gə mbà      "he has gone to
                                   take meat"

  b) à ghɛɛ nlɔ̀gə mbà      "he has gone and
                                   taken meat"

In (1a) here above, the first zi is said with
high-mid tone while in (1b) it is said with mid
tone.  If we leave the difference between Mid and
High-mid tones unmarked it will be difficult to
read the right meaning.  So in cases like these,
to give the desired meaning, we have to mark mid
tone.

*1)  Now using the examples we have seen so far,
write the following sentences in Bafut and mark
the necessary tones:

1.  "He has come to eat meat"

2.  "He has come and eaten meat"

3.  "He has gone to catch a goat"

4.  "He has gone and caught a goat"

5.  "They came (many days ago) to give a horse"

6.  "They came (many days ago) and gave a horse"

Write the necessary tones in the following sen-
tences:

7. a ghɛɛ mfa nɨbɔ'ɔ nya     "he has gone to
                                    give the pumpkin"

8. a ghɛɛ mfa nɨbɔ'ɔ nya     "he has gone and
                                    given the pumpkin"

9. a ghɛɛ mfa nɨbɔ'ɔ nya     "he is (in the
                                    process of) going
                                     to give the pumpkin"

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However, to keep the first meaning distinct from the second, in verb forms like "he came to eat" especially in writing, the small word "á" may be put before the second verb, to mark the infinitive. Read these two pairs of sentences and note the difference in their structure.

1. a) à nɨn zì a jî          "he came to eat"

   b) à nɨn zì ji          "he came and ate"

2. a) à nɨn laa mbà a ŋkurə̂  "he cooked meat to eat"

   b) à nɨn laa mbà ŋkurə   "he cooked meat and ate it"

Read the following examples and note how they are constructed and pay special attention to the tones and meanings of the second verb in each sentence.

à kɨ laa mbà nləə          "he cooked meat and kept it"

bo lɛn sɨ laa mbà ŋkurə    "they were cooking meat and eating it (long ago)"

bo lɛn sɨ sàŋə mbà nləə    "they were drying meat and keeping it (long ago)"

à lɛŋ ghɛ̀ɛ̀ ŋkwɛrə ləŋə    "he went (long ago) and took a horse"

bo lɛŋ kghə̀ ntsya ghâ     "they ran faster than I (they ran, they over-came me, long ago)"

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à ka lŏ zǐ ghὲὲ mɨtaa     "he will come and
                              (he will) go to the
                              market (tomorrow)"

bo ka lə ghὲὲ kurə ŋgû     "they will go (today)
                              and eat a chicken
                              (today)"

à ka lŏ ghὲɛ kɨ kuu a     "he will go to attend
ndâŋwà'nə̀ a Kùmbà         school in Kumba"

à lɛɛ̀ŋ ghɛɛ ntɨgə nyə'ə     "he went (long ago)
                              and was crying"

bo kɨ tso a ŋkɨ ŋka ndorə    "they went to the
                              stream and were
                              playing"

*2)  Using the above as examples write sentences
containing two verbs coming together, for each
of the numbers below, beginning with the pronoun
and the tense marker indicated:

1.  à nɨn ...          4.  à ka lŏ ...

2.  à lɛn sɨ ...       5.  bo ka yi kɨ

3.  bo kɨ si


    Sometimes there are sentences which have
three or more verbs, which all have the same
subject.  Here are some examples with three
verbs.

à nɨn yì ntso ntu'u ŋkì     "he came, went and
                              carried water today"

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bo lɛŋ yì ŋghɛɛ mbì'ì nɨ̀ŋgɔ̀ɔ̀          "they came, went
                                         and carried plan-
                                         tains long ago"

à kɨ̀ jɨ mfɛ̀'ɛ̀ ŋghɛɛ ŋko lə̀ŋə          "he ate, went out
                                         went and caught
                                         a horse yester-
                                         day"


*3)   Write three sentences in Bafut which contain
three or more verbs.


    Sometimes there are two or more verbs in
a sentence, which have different subjects.  The
pronoun preceding the second verb must be read
carefully, because that is the word that indi-
cates the different subject.

    Notice the difference in these two senten-
ces, indicated only by the second pronoun.

  à kɨ̀ tumə nàaŋgwɛ̀ ŋkghə

  "he shot a leopard (yesterday) and (he) ran away."

  à kɨ̀ tumə nàaŋgwɛ̀ yi kghə̂

  "he shot a leopard (yesterday) and it ran away"

    Notice the difference in these two senten-
ces, indicated only by the pronouns:

  à nɨn yì nyə Ngwà a kwɛtə̀ yi

  "he came and saw Ngwa (today) and he (Ngwa)
   helped him"


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à nɨn zì nyə Ngwà ŋkwetə yi

"he came, saw him (Ngwa and helped him (Ngwa)"

Read these also, noticing the pronouns:

mə̀ lɛn laa mbà bo kurə̀

"I cooked meat (many days ago) and they ate
(it)"

à nɨn zì mə̀ bà'a alà'a yì

"he came (today) and I treated his wound"

mə̀ kɨ zi bo ba'à alà'a yâ

"I came (yesterday) and they treated my
wound"


*4)   Using the above as examples, write three
sentences with at least two verbs each, in which
the pronoun subject of the second verb is diffe-
rent from the pronoun subject of the first.


*5)   Read the following passage paying particu-
lar attention to the tones.

   Mə̀ kɨ fu a afɔ a yɔɔ a ntsà'a mâtaà.  Mə̀
ghɛ̀ɛ̀ mə̂ ŋka nzwi'i a mbɛ̀ɛ mâtaa wa, nyu'u naà yi
kâ ŋkoo ghu.  Mə̀ kghə̂ tsi'ì nɨtɨ̀ɨ̀ ŋghɛɛ nyə, yi
bə njɨ̀ɨrə̀!  Mə̀ fi'i nzwitə nnɨŋə a mûm àbàa mə̀;
ǹtɨgə ŋkwɛɛ; ǹtɨ̀ɨ gha nluu nɨ nɨdorə nì we.  Mə̀
nɨn lò ŋghɛɛ mfɛ̀ɛ̀ a mɨtaa sii nɨ bɨfrâŋ ŋkghɨ
jinɨfwaà.  Mə̀ ka lŏ kɔ'ɔ a awusaa fi'i ŋkghɨ
jintaà ghu yuu aŋwà'ànə̀ ya yì twɔ̀ŋə̀ ghu.

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# P A R T   V

## SENTENCE

In the last section of this book we shall
look mainly at the sentence.  We shall study
some of the important types of sentences and how
clauses and shorter sentences can be joined
together by conjunctions to form longer and com-
plex sentences.

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## Lesson 15: Negative Sentences

Some sentences express negative ideas. The first part of the negative expression "kaa" comes at the beginning of the clause; then comes the pronoun and the tense marker, and then the second part of the negative expression. (If the subject is a noun, it comes in the place of the pronoun). If the pronoun subject is "a" it is absorbed by the negative "kaa", and so is not pronounced (or written) separately.

Read the following sentences noting how they are constructed and pay attention to the tones of the words.

kaà nɨ wa'à tɨta kurɘ̀

"he did not eat pepper (today)"

kaa bo kɨ wa'ǎ tɨta saŋɘ̀

"they did not dry pepper (yesterday)"

kaa bo lɛ sɨ wa'ǎ mbà saŋɘ̀

"they were not drying meat (long ago)"

kaa bo ka wa'ǎ abaa kwɛrɘ̀

"they will not take corn fufu"

kaà ka lŏ wa'ǎ nɨŋgɔ̀ɔ̀ kurɘ̀

"he will not eat plantains (tomorrow)"

kaa bo sɨ afù lɔgɘ̀

"they have not taken medicine"

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kaa mə̀ lɛ̀ɛ wa'ǎ nsəə yê

"I have never seen an elepnant"

kaa bo burətš afù ya nô

"they have not yet taken the medicine"

*2)  Complete the following to make negative sentences:

1.  kaa ka lə̌ wa'ǎ .....

2.  kaa bo ka yi wa'ǎ .....

3.  kaa kɨ sɨ wa'ǎ .....

4.  kaa bo sɨ .....

5.  kaa bo lɛ̀ɛ wa'ǎ .....

There is sometimes a further change in word order when there are two verbs of which at least one is negative.  Read theses sentences and notice the difference in word order:

mə̀ nɨ ghɛ̀ɛ nlɔ̀gə léŋé

"I went to take a horse"

kaa mə̀ nɨ wa'a nlɔ̀gə ləŋə ghɛ̀ɛ

"I did not go to take a horse"

mə̀ nɨn ghɛ̀ɛ nlɔgə ləŋə

"I went and took a horse (today)"

mə̀ nɨn ghɛ̀ɛ kaa wa'à ləŋə lɔgə̀

"I went but I did not take a horse (today)"

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à nɨn sì'i ɨkaŋ bo si'ì bɨlu'u

"he washed dishes and they washed spoons"

kaa nɨ wa'à ɨkaŋ sì'ì kaa bo wa'à bɨlu'u kɨn

si'i

"he didn't wash dishes and they also didn't
wash spoons"


*2)  Using the above as examples, write three
sentences each containing two verbs of which at
least one is negative.


Lesson 16:  Questions

    There are also sentences which ask questions.
The question is indicated by the small word at
the end of the sentence.  The question markers
are the following:

| fə | "where?" | a ya | | "why?" |
| kə̀ | "what?" | a ... kə̀ | | "what?" |
| wò | "who?" | à | wò | "who?" |

Their tones may change according to the words
which precede them.  Read the following, noticing
the small question words:

| o ghɛ̀ɛ à fə̀ | "where are you (sing.) going?" |
| ò kɨ sɨ ghɛ̀ɛ a fə | "where were you going yesterday?" |


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à nî̂ kə     "what is it?"

ò kɨ kùrə nɨŋɔ̀ɔ̀ nya a ya

"why did you eat the plantain?"

   Sometimes there is no question marker to
indicate that a sentence is a question.  In some
cases the tone of the last word lets us know
when it is a question.  Read these examples and
notice how the tone of the statement is different
from the tone of the question, the latter being
indicated by a question mark.

 à nɨ fɨtəə̀.    "it is a wine calabash"

 à nɨ fɨtəə?    "is it a wine calabash"

 à nî̂n lɔgə mbà yâ  "he has taken the meat
            today"

 à nî̂n lɔgə mbà ya? "did he take the meat
            today?"

   When the last word of the sentence ends with
low tone, only the context lets you know if it
is meant to be a question.  For example:

bo kɨ kùrə nɨŋɔ̀ɔ̀

may mean eigher "they ate plantains (yesterday)'
      or
      "did they eat plantains yes-
      terday?"

*1)  Write one sentence with each of the follow-
ing question words:

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1. wǒ "who?"   4. a ya   "why?"

2. kə̀ "what?"   5. a ... kə̀ "what?"

3. fə "where?"   6. à ... wǒ "who?"

*2) Read the following dialogue;

- Àbὲὲ fù'ù mə̂ Àmbɛ?

- Ŋŋə. Ò bɨ̀ɨ̀nə̀ mə̂ Tsə?

- O ghὲὲ â fə̀?

- Mə ghὲɛ nta bɔrə̀. Ŏ yĭ bì'inə̀ ghɛɛ nta?

- Ŋ̀gaŋə ghâ. Kaa mbə mə̀ yĭ wa'à bɔrə̀ bû nta.

- A ya?

- Mə̀ lɛn fὲ'ὲ a ndâŋwà'ànə̀ a njwi yìmɔ̀'ɔ nta
  bɔrə̀ ntɨgə a mbɨ̀ɨ̀. Mə̀ lɛn mbɨ̀ɨ̀ ŋkuu a nda
  nɨ nòò ŋkwɛɛ àfɔ̀; taà ghà a ghɔɔ̀ gha, nswɔŋə
  mə tâ mə̀ yi mə̀ tsuù bɔrə̀ bu nta.

## Lesson 17: Joining words (conjunctions)

Clauses or sentences can be joined by small
joining words which are called conjunctions.

1. A verb that expresses saying or thinking is
followed by mə and then another clause. Read
these examples:

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à kɨ swòŋə mə yu ghɛ̀ɛ̀ mɨtaa

"he said that he was going to market"

mə̀ mɔ̀ɔ̀ntə mə bô nɨ̂n jɨ

"I think that they have eaten"

2.  Sometimes the second clause describes some-
thing in the first clause, and again the joining
word is mə.  Read these examples:

mə̀ nɨ yə mu wa mə à kɨ zɨ́ faà

"I saw the child who came here"

à kɨ kùrə nɨŋgɔ̀ɔ̀ nyə mə bo kɨ bɨ̀'i à

"He ate (yesterday) the plantain which they
had carried"

3.  Sometimes two clauses are joined together by
kɨ.  Read these examples:

à nɨŋ jɨ atsugə kɨ no mɨlù'ù

"he ate achu and drank wine"

à lɛŋ kurə ànsaŋ kɨŋ kurə àmbɔ̀rə̀

"he ate corn and also ate vegetables long ago"

4.  Sometimes two clauses are joined so that one
expresses a condition for the other.  The words
that indicate that there are two clauses with
some kind of condition expressed we call "joining'
words, even though they don't necessarily come
exactly between the two clauses.  In the follow-
ing sentences, in (i) the joining word is bɛɛ,
in (ii) there are two small joining words, bə
and boŋ, in (iii) and (iv) the joining words are

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baa and boŋ.  Read these sentences:

(i) bɛɛ bo nɨn zì ò jɛ'ɛ̀ waa

"If they come today (you) feed them"

(ii) ò bə zì boŋ ò yə ghâ

"If you come you will see me"

(iii) ò kɨ bàa zì boŋ ò kurə nɨŋgɔ̀ɔ

"If you had come (yesterday) you would
have eaten plantains"

(iv) bo lɛm baa kurə nɨ̂ŋgɔ̀ɔ nya boŋ bo kwô

"If they had eaten the plantains, they
would have died"

5.   Sometimes two clauses are joined together
by other joining words (mbɔŋ tâ), to show that
one action takes place before another.  Read the
following sentences and notice the joining word.

à nɨn zì mbɔŋ tâ bo ghɛɛ

"he had come before they went"

bo kɨ kwɛɛ ŋkuu mbɔŋ tâ mbə̀ŋ ya wo

"they had come home before it began to rain"

The joining word tâ is also used with mə.
Read these sentences and notice the joining words
mə tâ:

mə lɔ̀ɔ mə tâ nɨ zi nyə ghâ

"I want that you should come to see me"

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bo kɨ sɨ lɔɔ mə tâ nɨ zi ŋka mfa'a a mbo bo

"they wanted that you should come and be working
for them"

6.   Two clauses may be joined by nloŋ mə, so that
the second clause gives a reason for the action
in the first one.  Read the sentences below and
take note of the joining words.

   à nɨn zì a nloŋ mə bɨ kɨ twòŋə yi à

   "he came because he had been invited"

   mu wa a yə̀'ə̀ a nloŋ mə kaà burətə̀ jɨ à

   "the child is crying because he has not yet
    eaten"

      Sometimes a sentence can have two subject
nouns or pronouns joined by the small words bo
and nɨ.  Read the following sentences and notice
how the joining words are used.


   Ŋgwà bo Sùù kɨ fu aboò

   "Ngwa and Shu went hunting"

   mə̀ nɨ nɨbà'à bì'ì nɨn tso ŋkì

   "Nèba and I went to the stream"

*1)  Using the above sentences as examples, make
a sentence with each of the following joining
words:

1.  mə̀              3.  kɨ

2.  mə              4.  bɛɛ


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5. bə ... boŋ          9. mə tâ

6. baa ... boŋ         10. bȯ

7. mbɔŋ               11. nɨ

8. nloŋ mə

*2) Read the following passage taking note of
changes in the basic tones of the words.

Àso bo Nɨbà'à lɛn tso a ntu'ù ŋkɨ nɨ̂ ɨtəə̀.
Bo tsò mə̂ ntu'u ŋkɨ wa ŋka ŋkwɛɛ, àso swɔŋ mə tâ
bo Nɨbà'à ka ndorə. Bo kà mə̂ ndorə, Nɨbà'à
ti'ɨnə̀ ŋwo nzwi atəə̀ yi. Bo kwɛ̀ɛ̀ mə̂ ŋkuu a
ndùgə̀, kaa Nɨbà'à wa'à yi a nda kuù. Àso kuu a
ntɛ'ɛ ylɨ atəə ya, ǹdè wàà a betə̀ mə Nɨbà'à fə̀
lɛ. Aso swɔŋ ghu mbo mə à tə̀ə a bɛɛ. Ǹdè wàà a
fɛ'ɛ̀ nyə Nɨbà'à, kaa wa'ǎ atəə ghu atu yə̂, m̀burə
nyi mə Nɨbà'à à tsò mə̂ ŋka ndorə nzwi atəə yâ.
Ǹdè wa a ghɛɛ̀ nlɔgə ati, nzi naŋsə ŋghɔɔ Nɨbà'à
ghu nɨ̂ nlwîntɔ̀ŋə̀; nswoŋ ghu mbo mə, m̀bə a yi
mbù ǹzwi atəə yɨ̌ mɔ'ɔ bɔŋ à ka lɛ tɨ jɨ̂. Ǹtɔ̀ŋ
Nɨbà'à yi lwî a nu Àso si'i nloŋ mə a lɛŋ ghə̀rə̀
yu mə tâ à ti'ɨnə wȯ nzwi atəə yâ. Ǹlɔŋənə maa
njwi bɛɛ Àso yi mbù nswoŋə a mbo Nɨbà'à mə bo
yu ka ndorə a mânjɨ ŋkɨ, kaa wa'à yi bû mbii.

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Ǹsəŋ Njoð

| | | | |
|---|---|---|---|
| 1 | mò'ɔ | 6 | ǹtɔ'ɔ |
| 2 | baa | 7 | sàmbà |
| 3 | tarə | 8 | fwamə |
| 4 | kwà | 9 | kwalè'ɛ |
| 5 | ntaà | 10 | tàghûm |

11    nɨwûm ǹtsòmò'ɔ

14    nɨwûm ǹtsònɨkwà

19    nɨwûm ǹtsòbù'u

20    mɨwum mimbaa

21    mɨwum mimbaa ǹtsòmò'ɔ

34    mɨwum mintarə ǹtsònɨkwà

58    mɨwum mintaà ǹtsònɨfwaa

100    ŋkghɨ yîfùùrə̀

300    ŋkghɨ jitarə̀

525    ŋkghɨ jintaà ni mɨwum mimbaa ǹtsòntaà

1000    ǹtsù'ù yîfùùrə̀

2525    ǹtsù'ù jibaa nɨ ŋkghɨ jintaà nɨ mɨwum
         mimbaa ntsòntaà

1000000    ŋkam yɨfùùrə̀

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Bè' Limbum Yêɛni

# Reading and Writing Tone
# in Limbum

## System 2

by

Joseph Mfonyam
and
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## INTRODUCTION

This book is written for the speakers of Limbum who can also read and write the English language. The purpose of this book is to teach people how to read and write tone in Limbum. The alphabet used here is approved by the Wimbum Literacy Association and it conforms with the General Alphabet for Cameroonian languages.

The tone marking system used here is one of several others being tested in order to determine the best way of writing tone in Limbum.

Although this book is meant to teach tone, it can also serve as an elementary hand book portraying the grammar of Limbum.

We are thankful to Professor Dr. Ursula Wiesemann, Dr. Robert Hedinger and Miss Ginny Bradley for their advice. We are particularly grateful to the Wimbum Literacy Association for organising the course in which this material was tested.

## Lesson 1

### Introduction to the Limbum Alphabet

The following letters of the Limbum alphabet are pronounced almost the same as in English:

| A  | a  | as in | baa    | "corn fufu"      |
|----|----|-------|--------|------------------|
| B  | b  | as in | bo     | "hand"           |
| D  | d  | as in | dù     | "go!"            |
| E  | e  | as in | bēe    | "people"         |
| F  | f  | as in | for    | "fo mix, stir!"  |
| G  | g  | as in | gõr    | "big"            |
| I  | i  | as in | bi     | "give birth!"    |
| J  | j  | as in | jã'    | "help!"          |
| K  | k  | as in | kar    | "travel!"        |
| L  | l  | as in | lĭp    | "beat!"          |
| M  | m  | as in | muu    | "child"          |
| N  | n  | as in | no     | "drink"          |
| O  | o  | as in | boo    | "children"       |
| P  | p  | as in | kep    | "break!"         |
| R  | r  | as in | raa    | "clean"          |
| S  | s  | as in | saa    | "split"          |
| Sh | sh | as in | sheshi | "chop"           |
| T  | t  | as in | to     | "hole"           |
| U  | u  | as in | buu    | "things"         |
| V  | v  | as in | vi     | "his"            |
| W  | w  | as in | wep    | "bitter leaves"  |
| Y  | y  | as in | yar    | "wear!"          |

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You must have noticed that even though the letters are almost the same as in English, there are sometimes extra marks over the vowel letters. These marks help us to know the tone of the word. The different tone marks will be explained later on in this book.

The following words contain letters which do not occur in the English alphabet:

| C  | c  | as in | cɛ    | "tree"   |
|----|----|-------|-------|----------|
| Ɛ  | ɛ  | as in | lɛɛlɛ | "zebra"  |
| Gh | gh | as in | ghõni | "bless!"  |
| Ŋ  | ŋ  | as in | shaŋ  | "prison"  |
| Ʉ  | ʉ  | as in | vʉ̈    | "come!"  |
| '  | '  | as in | bɛ̆'   | "count!"  |

The vowel letters can be pronounced long; for example,

| aa | as in | baa | "corn fufu" |
|----|-------|-----|-------------|
| ɛɛ | as in | lɛɛ | "bat"       |
| uu | as in | fuu | "mouse"     |
| ee | as in | tĕe | "hard"      |

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Lesson 2

## Unfamiliar vowel letters

### Letter i

Read the following words and notice how you pronounce the letter i:

| | |
|---|---|
| yi | "know!" |
| bip | "request!" |
| bii | "dance!" |

*1. Fill in the blank spaces in the following words using the letter i:

| | |
|---|---|
| s＿ | "black" |
| s＿ŋ | "bird" |
| s＿s＿' | "type of tree" |

### Letter e

The letter e is different from the letter i. Read the following words and notice how you pronounce the letter e:

| | |
|---|---|
| ye | "eat!" |
| bẽe | "people" |
| tee | "ring" |

*2. Fill in the blank spaces in the following words:

| | |
|---|---|
| tas＿ | "stir!" |
| b＿r | "to be red" |
| b＿' | "count!" |

*3. Fill in the blank spaces with either the letter i or e:

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```
E b__ k_p v_p   nã!   "he will break the
                          bone of a cow."
wow__   "they"
1_'   "set a trap!"
s_ŋs__   "wipe!"
nt__   "heart"
```

The Letter ε

The letter ε is different from the letter e.
Read the following words and see how you say them:

```
1. yε          "see!"
2. lεlε        "rain water"
3. bεp         "he-goat"
```

*4. Write these words putting in the correct
   letter ε or e:

```
1. t___        "stand!"
2. t___        "ring"
3. m__ s__ s__ "I am very tired."
```

The letter u

Read the following words and notice how you
pronounce the letter u:

```
tu          "head"
fũ          "leaf"
fuu         "mouse"
```

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*5. Write the following words putting in the
    letter u where necessary:

   b__   "things"
   t_'   "ear"
   m___   "child"

The letter ʉ
     The letter ʉ is different from the letter
u. Read the following words and notice how you
pronounce the letter ʉ:

   1. tʉ   "shoot!"
   2. vʉ̀   "come!"
   3. rfʉ̀ʉ   "feather"

*6. Write these words putting in the correct
    letter, u or ʉ:

   1. Nfõ t_r f__   "Nfo has a leaf."
   2. y___   "thing
   3. l_r   "fool"
   4. l___   "bite!"

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Lesson 3   Unfamiliar consonant letters

Letter ŋ

The letter ŋ is pronounced like the -ng in the English word "sing". Read these pairs of words and notice the difference in the way you pronounce ŋ and n:

ŋop	"pinch"	no	"drink!"
ŋãp	"crawl!"	nã'	"cow"

*1. Write these words putting in the correct letter ŋ or n.

1. __o__   "sleep, lie down!"
2. __a__   "animal or fish drap"
3. __do__   "neck"
4. __ta__   "suggestion"

The letter '

The letter ' is written when there is a quick stop after a vowel. Read these pairs of words and notice the difference in the way you pronounce a vowel followed by the quick stop, and a vowel where there is no stop.

fũ'	"wind"	fũ	"leaf"
fã'	"work"	fa	"give"
bẽ'	"count!"	be	"invite"

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*2. Write these words putting in the letter '
where necessary:

1. mbā   "cloud"
2. mbàa   "money"
3. ŋgo   "termite"
4. ŋkaa   "monkey"
5. ŋka   "fence"

The letter gh

The letter combination gh is different from the letter g. Read these pairs of words and notice the difference in the way you pronounce gh and g:

ghoo   "plane!"   goo   "bend (one's arm)"
ghee   "calabash"   gèe   "to make do"

*3. Write these words, putting in gh or g:

_op   "mend (a calabash)!"
_op   "bend, or bring down (using a hook)!"
_oni   "bless!"
_or   "big"

The letter c

The letter c is pronounced like the ch in the English word "cheese". Read the following words and notice how you pronounce the letter c:

cì'   "shake!"
cè'   "oil!"
ce'   "to be bitter."

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*4. Write down the following words or sentences
    in Limbum:
   1. run quickly!
   2. tree
   3. close the door!

Combination of consonants:
        In many words, the nasal letters m, n,   and ŋ
are followed by other consonants, before a vowel.
Read these words and notice how you prononce the
first two letters:

mbĕŋ	"rain"	ŋgʉp	"fowl"
mbʉ	"goat"	ngar	"gun"
mfar	"twins"	ŋkar	"friend"
mfoo	"(animal) fats"	ŋkàa	"basket"
ndap	"house"		
nta'	"chair/stool"		
ntubo	"finger"		

*5. Write these words filling in the blank spaces
    at the beginning of the words with two letters!

__aka	"big knife"	__oŋ	"cup"
__aa	"money"	__ukuu	"toe"
__a	"kind of bird		
	with long tail"	__ʉŋ	"large pot"
__a	"spear stick"		
__up	"animal skin"	__aa'	"monkey"
__ʉ	"seed"	__a'	"fence"

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Sometimes consonant letters are followed by w or y. Read these words and notice how you pronounce the combination of letters when they have w or y.

ŋwã'	"book"
ŋwɛ̃	"person"
kwâa	"corn"
kwàrakwarã	"bambo mat"
byɛ̃'	"carry"
kyĕe	"four"
nyo	"snake"
ryɛɛ	"rock"

*6. Write these words, putting in the right consonant combination with either w or y:

_ɛɛ	"moon"	_a	"garden eggs"
_er	"selfish person"	_or	"body"
_a	"wife"	_ɛr	"broom"
_e	"die!"	_ʉr	"good/bad luck"

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❋

Lesson 4   High and Low Tones

High Tone

When reading or writing Limbum, it is important to keep in mind the melody or music of the words; for example if we say báa "madness", we mean something different from bāa "bag". The tone of the first word is high and this is indicated by the mark, ⁻ over the vowel. In this book we are not going to mark high tone.

The following words are all on the same tone level, that is, they all have the same music. They are all words with high tone. Read them and note the melody as you pronounce them.

fuu	"mouse"	mbu'	"potatoes"
lɛlɛ	"rain water"	bu'	"chimpanzee"
shaŋ	"prison"		

*1. Read these words and say whether they have the same tone as the examples above:

lɛɛlɛ	"zebra"
buu	"land squirrel"
rluŋ	"harb"
mbu'	"sweet potatoes"
tee	"ring"
cece	"pieces of the hard outer covering of a bamboo"
ŋkuŋku	"fern"

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Low Tone

The tone level of the following words is different from the tone level of the words you have just read. Try to whistle the melody of the word rkõŋ "spear" and compare it with that of rkoŋ "water fall" which has high tone. Low tone is marked ⁻.

Read these words and notice how you say the low tone.

rfʉ̃ʉ	"feather."	bãa	"bag"
ŋgèrè	"dragon fly".	kãtẽ	"bush"
tãp	"hut"	rkãr	"scaby"
ŋgõ'	"grinding stone"	mbãa	"money."

In the following examples see how in each pair of words the meaning of one word is different from that of the other simply because its tone is high while the tone of the other is low:

baa	"madness"	tap	"goitre"
bãa	"bag"	tãp	"hut"
rɛp	"hard wood used for making		
	hoe or axe handles"		
rɛ̃p	"ganglion"		

*2. Indicate whether the following words are high or low. Mark only low tone and leave high tone unmarked.

ju'	"elephant"	ryɛr	"broom"
rkɛɛ	"razor blade"	toro	"cricket"
cece	"stick"	rwaa	"mat"
ŋkʉ	"bachelor"	makʉ	"grandmother"
tase	"junction"	ŋka'	"fence"

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*3. Give the meaning of each word in the following
    pairs depending upon the tone of the word.
    Remember that only low tone is marked while
    high tone is not marked.

1. buu _____   2. mbu' _____
   bǔu _____   mbǔ' _____

3. ŋka' _____   4. njaŋ _____
   ŋkǎ' _____   njǎŋ _____

5. baa _____
   bǎa _____

    There are two types of Low tone in Limbum. One
stays level while the other falls lower. Read the
following words and notice that the low tone of the
words in the first column stays level while the low
tone of the words in the second column falls lower.

1. mbaŋ   "kernel"   2. mbaŋ   "sceptre, stick"
   ŋgere   "dragon fly"   keŋ   "door"
   mbap   "rat"   ta'   "snail"
   tar   "father"   ŋwɛ   "person"
   tap   "hut"   kuu   "foot"
   mrɛ'   "yams"   cɛ'   "clothe, cloth"
   bʉ   "tadpole   kwaŋ   "bracelet"

*5. Write the following words in two groups
    differentiating the level low tone from the low
    falling tone:

    ntoŋ   "valley"   ŋwa'   "book"
    ŋkuŋ   "tail   njaa   "axe"
    ku'   "weavel"   na'   "animal"
    ŋkoŋ   "motar pistle" rbuu   "egg"
    saa   "millet"   rkoŋ   "spear
    cuu   "mouth"   ŋko'   "basket"

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Lesson 5   Mid Tone

Different from both high and low tones is a third tone, mid tone. The music of bāa "corn fufu" is not as high as the music of báa "madness" and not as low as the music of bàa "bag". Now say or whistle these words in this order: báa, bāa, bàa. The tone of bāa "corn fufu" is mid way between the high and low levels; it is called mid tone and is marked in this way: bāa. In this book we are not going to mark mid tone.

Read these words which all have mid tone and note their melody:

bʉ	"wood ash"	ŋwɛɛ	"moon"
nfur	"wound"	rwɛɛ	"cat"
mor	"fire"	nyʉ	"bees"
mgwaŋ	"salt"	nyo	"snake"

Now read the following pairs of words and notice the difference between mid tone and high tone. The first word in each pair has high tone while the second has mid tone.

buu	"things	baa	"corn fufu"
buu	"land squirrel"	baa	"madness"

ŋgo'	"termite"
ŋgo'	"a kind of bird"

*1. Give the meaning of each word in the following pairs depending upon the tone of the word. The first word of each pair has mid tone while the second has high tone.

1. bbuu _____   2. bɛɛ _____
   bbuu _____   bɛɛ _____

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3. lɛɛ   _____   4. bɛr   _____
    lɛɛ   _____   bɛr   _____

     Now read the following pairs of words and also notice the difference between mid tone and low tone:

1. baa   "corn fufu"   2. ŋkaa   "monkey"
    bãa   "bag"   ŋkãa   "basket"

3. ŋgo' "termite"   4. mba'   "rattle"
    ŋgõ' "grinding stone"   mbã'   "clouds"

*2. Each of the following pairs is made up of a mid tone word and a low tone word. Read them and give the meaning of each word depending upon the tone.

1. rkãr   _____   2. ŋgwã'   _____
    rkar   _____   ŋgwa   _____

3. mbaa   _____   4. ŋgwẽ   _____
    mbãa   _____   ŋgwe   _____

5. kãŋ   _____   6. rbee   _____
    kaŋ   _____   rbẽe   _____

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*3. Read the following words and note the tone of
each word. Rewrite the words in three groups
depending on their tones, high, mid or low.

ŋgup	"animal skin"	nca'	"mud"
toro'	"cricket"	yo'	"rubbing oil"
mba'	"thread"	ŋgap	"antelope"
nfyɛp	"cocroach"	ju'	"elephant"
rkwa'	"gravel"	rkup	"claw"
ncii	"beads	mcɛp	"medicine"
ruŋ	"a kind of yam"	fufu'	"mucus"
kuu	"funnel"	rtu'	"thigh"
ta'	"snail"	taar	"three"
fer	"plum"	rlir	"eye"
be'	"sparrow"	keŋ	"door"
rmaŋ	"palm front"	nto'	"palace"

Lesson 6:   Tone combinations

     In the last two lessons we have studied words
which have level tone and words which have the same
tone even if they have two syllables or   two
different vowels.   In this lesson we are going to
see that two different tones can combine on one
vowel or one syllable to form a rising or falling
tone. We shall also, see that one word with two or
more syllables can have two or more different tones.

High-mid tone
     Different from both high and mid and also from
low is a fourth tone, high-mid. It is a combination
of both high and mid tone to form a falling one.
Pronounce the word bãa "two" and notice how you
pronounce it and also how the High-Mid tone is
marked. Now pronounce the following words in this
order and note how the tone High-Mid is different
from the rest of the tones we have seen so far:
          bãa   "madness"
          bãa   "two"
          bāa   "corn fufu"
          bãa   "bag"

     Here is another word with high-mid tone;
pronounce it several times and note how you say it.

          rlãa   "passion fruit"

In this book we are not going to mark high-mid
tone.

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*1. Mark the right tone on the following words. After you have marked the tones correctly, rewrite these words into three groups according to their tones in this order – high tone words, high-mid tones words, mid tone words:

soo	"hoe"	ndur	"brother to a sister"
rlaa	"monkey fruit"	ce	"tree"
jaa	"hare"	kaa	"crab"
lɛ'	"calabash"	ngʉ	"bow"
ŋkaŋka	"butterfly"	ghee	"bowl"

Now compare the level of the high-mid tone words first with the level of the high tone words and then with that of the mid tone words.

High-Low Tone
The fifth tone we are going to study is a combination of high and low tones. Read the word lĩ "language" and notice how you say its tone and see how the high-low tone is marked. Now compare the high-low tone of lĩ "language" with the high tone of rluŋ "harp" and see how these two tones are different.
Read the following words taking note of how you say the high-low tone:

sãp	"file"	cẽ	"ladder"
rkĩr	"louse"	rsĩi	"small rat with squirrel-like tail"

*2. Read these words and mark their tones.

da	"cutlass"	lam	"lamp"
mbee	"bell"	mŋguu	"locust"
rsii	"grasshopper"	bi	"co-wife"
btoŋ	" a tree used for carving"		
beŋ	"an open mouthed calabash"		

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Low-Mid Tone

The sixth tone is a combination of low tone and mid tone. This is called low-mid tone and it is the tone we hear in the word ŋgǎr "ant". Notice how it is marked. Read the following words and notice how the low-mid tone is different from both low and mid tones:

ŋgǎa	"week"
ŋgǎr	"ant"
ŋgar	"gun"

*3. Now read the following words and mark the tone of each word. Mark only low-mid and low tones and leave the mid tone words unmarked.

rgur	"margot"	mbaŋ	"kernel"
ce	"tree"	mba'	"thread"
mbap	"rat"	mbur	"tad pole"

Mid-low Tone

Another tone which we may not hear often is a combination of mid tone and low tone. It is called mid-low tone. It occurs in grammatical constructions as the following:-

Yi tā "his father"

Tāta à dū, a kěr dū

  "Tata went, and again went."

Notice how you say the mid-low tone on tā and dū and see how it is marked. In this book we are going to mark it the same way as high-low tone, that is, ^.

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<u>Tone combination in words of more</u>
<u>than one syllable</u>

The tones which we have studied can combine
in words of more than one syllable in various
patterns.
Read the following words and notice that
each of the words carries high tone and low tone.

bʉrʉ'	"lion"	kosɪ	"cough"
malãr	"million"	nleeŋwɛ̃	"adult"
bɛɛrɛ̃'	"dove"	njeŋwɛ̃	"woman"

Mid tone and High tone can combine as
illustrated in the following words:

tarkʉ	"grandfather"
mbaabʉʉ	"cowries"
ŋkepkuu	"cross bar of bed"

The above words begin with mid tone and end
with high tone.
Low tone and Mid tone can also combine in
two-syllable words as follows:

kɪnta	"cross	wãawa	"hawk"
shã'tu	"comb"	mbũutu	"oxiford
ŋkɛ̃rsoo	"hoe handle"		
kɪntor	"bamboo stick used for		
	carrying things		
ŋkõni	"handle of bag or basket"		
ŋgãptʉ'	"day break, morning"		

You must have noticed that the above words begin
with low tone followed by mid tone.

*4. Read the following words and mark their tones:

fu'kibar	"duŋ beettle"	bko'ge'	"mumps"
njendoŋ	"voice"	waŋga	"rabit"
nciguu	"son-in-law"	ŋgombe	"plantain"
nyaanjip	"cutting grass"		

*5. Read the following words and mark their tones:

kaaŋko'	"crow"
mmɛ'	"dew"
bukubuku	"a type of brown beans."
Nyu	"God"
taace	"cricket"
laba'	"shoe"
nfunfu	"dust"
ta	"five"
bati	"wine calabash"
nfee	"leg"
fi	"viper"
baŋga	"swallow"
msur	"pepper"
njaŋ	"xylophone
rtu'	"thigh"
mbɛp	"air, cold"

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Lesson 7   Noun classes

In Limbum nouns are classified into four main groups. Nouns are grouped according to how they form their plurals.

group 1.

Most nouns in this group form their plurals by adding b- to the noun. Read these words and note how the plural is formed:

| siŋ | "bird" | bsiŋ | "birds" |
| kaa | "crab" | bkaa | "crabs" |

Some nouns in this group begin with m- or n- and form their plurals by adding m:

ndap	"house"	mndap	"houses"
ma	"mother"	mma	"mothers"
ndoŋ	"cup"	mndoŋ	"cups"

*1. Give the plural forms of the following nouns:

fuu	"mouse"	wāawa	"hawk"
lɛɛlɛ	"zebra"	cor	"church"
tarku	"grandfather"	bɛɛrɛ̃'	"dove"
njɪ̀kɪ̀	"fly"	ŋkõ'	"basket"
burũ'	"lion"	mbāŋ	"sceptre

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group 2

The second group of nouns begin with r-
in the singular while their plural forms begin
with m-. Read these words and note how the
singular and plural forms are written.

rwɛɛ	"cat"	mwɛɛ	"cats"
rkā̄r	"scaby"	mkā̄r	"scabies"
rluŋ	"harp"	mluŋ	"harps"

*2. Now give the plural forms of the following
    words:

rf̄ūu	"feather"	rkup	"finger"
rkar	"wheel"	rtaa	"cap"
rbee	"breast"	rdip	"river"

group 3

The nouns in the third group, like most nouns
of group 1, form their plural by adding b-. Read
the following nouns and notice how they form their
plurals:

baa	"corn fufu"	bbaa	"corn fufus"
soo	"hoe"	bsoo	"hoes"
kĪnta	"cross"	bkĪnta	"crosses"
bā̄a	"bag"	bbā̄a	"bags"

*3. Now give the plural forms of the following
    nouns:

yuu	"thing"	shā̃'tu	"comb"
kā̄tē	"bush"	tũ'	"ear"
tu	"head	kosĪ	"cough"

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group 4

In the fourth group of nouns the singular and plural forms are alike: Read the following words and notice that the singular and plural forms are the same.

ŋgwe	"dog"	ŋgwe	"dogs"
mbāp	"rat"	mbāp	"rats"
nca	"fish"	nca	"fishes"

*4. Give the plural forms of the following nouns:

ŋgʉp	"fowl"	ŋgwē	"carrot"
mbāŋ	"kernel"	ŋkuŋyām	"pig"
njĕe	"sheep"	nã'	"cow"
mbʉ	"goat"		

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Lesson 8   Noun combinations

In Limbum two nouns can be put together to show possession.   The phrase, ŋkɔ' ma "basket of mother" shows us that the basket belongs to mother, that is, it is mother's basket.   When two nouns are put together in this construction to show possession, the first noun belongs to the second noun.
Read these phrases and notice how the tones are written:

siŋ muu	"bird of child"
ndoŋ tãr	"cup of father"
muu mbãp	"child of rat"
ŋgᵿp ma	"fowl of mother"

*1. Read the following phrases and mark the tones:

njendoŋ ma	"voice of mother"
rluŋ tar	"harp of father"
mbaŋ ma	"walking stick of mother"
ŋgere muu	"dragon fly of child"
ŋkar ma	"friend of mother"
mbu' muu	"potatoes of child"

When two nouns come together in a construction like this the tone of the first word may change. Read the following phrases and notice how the tone of the first word changes:

rfᵿᵿ siŋ	"feather of bird"
mkãr muu	"scabies of child"
rkãr bãa	"rope of bag"
ŋkũnyãm tãr	"pig of father"

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*2. Now read the following phrases and mark the
     tones:

    ŋkuŋ mbap   "tail of rat"

    rfʉʉ ŋgʉp   "feather of fowl"

    mbaŋ tarkʉ   "kernels of grandfather"

    cuu fuu   "mouth of mouse"

    ŋgwe makʉ   "carrot of grandmother"

    Read the following phrases and again notice
how the tone of the first noun changes:

    baa makʉ   "corn fufu of grandmother"

    rwɛɛ ma   "cat of mother"

    ma fuu   "mother of mouse"

    tu ŋkar   "head of friend"

*3. Read the following phrases and mark the tones:

    baa ma   "corn fufu of mother"

    soo muunje   "hoe of girl"

    ghee ŋgaabaa   "bowl of mad man"

    vʉp ŋgwe   "bone of dog

    nfee muu   "leg of child"

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Lesson 9   <u>pronouns</u>

Pronouns are words that stand for nouns. In the sentence Nfò <u>à</u> dù "Nfor has gone" the underlined word, <u>à</u> stands for the noun <u>Nfor</u>.

Read the following sentences and take note of the pronouns and their tones.

1. mɛ̀ dù   "I have gone"
2. wɛ̀ dù   "you have gone"
3. E dù   "he has gone"

The pronouns in the above sentences are mɛ̀ "I", wɛ̀ "you" and E "he". Mɛ̀ and wɛ̀ have low tone while the tone of E is high.

Now read these other sentences taking note of the pronouns and their tones:

wĕr à dù   "we have gone"
wĕe à dù   "you have gone"
wowĕe à dù   "they have gone"

The pronouns in the above sentences are wĕr, wĕe and wowĕe. Wowĕe has mid and low tones as marked while the others have low tones. As you can see, they are the plural forms of mɛ̀, wɛ̀ and E.

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*1. Write the following sentences in Limbum and
    mark the tones.

1. He has eaten
2. You have eaten
3. We have eaten
4. I have eaten
5. They have eaten.

Read the following sentences and notice the
pronouns and their tones.

E yɛ mɛ̀	"he has seen me"
E yɛ wɛ̀	"he has seen you"
E yɛ wɛ̌r	"he has seen us"
E yɛ wɛ̌e	"he has seen you"
E yɛ wowɛ̌e	"he has seen them"

*2. Write the following sentences in Limbum:

1. He has helped me.
2. I have helped him.
3. They have helped him.
4. He has helped them.

Read these sentences and also note the
pronouns used.

sõ à dũ	"I and you have gone
sẽe à dũ	"we (and you) have gone"

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The pronouns used are sò and sěe.

The pronouns we have used so far are personal pronouns, that is, they stand for people (persons). Things and animals have their own pronouns i.e. these pronouns stand for things or animals. The pronouns are used depending upon the class of the nouns (i.e. things and animals) they stand for. Read the following sentences and note the pronouns and their tones.

1. siŋ ā ye kwāa   "the bird has eaten maize"
2. bsiŋ vi ye kwāa   "birds have eaten maize"
3. rwɛɛ li ye kwāa   "the cat has eaten maize
4. mwɛɛ mi ye kwāa   "cats have eaten maize"
5. soo yi gwě   "a hoe has fallen"
6. bsoo vi gwě   "hoes have fallen"
7. ŋgʉp ā ye kwāa   "the fowl has eaten maize"
8. ŋgʉp yi ye kwāa   "fowls have eaten maize"

The different pronouns used in the above sentences are, ā, vi, li mi and yi.

*3. Make sentences in Limbum using the pronouns ā, vi, li, mi, and yi.

possessive pronouns

Pronouns sometimes show ownership. We call these pronouns possessive pronouns. There are many forms of possessive pronouns according to the nouns which they modify.

Read these phrases and see how the form of the possessive pronoun changes according to the noun that is possessed:

yā siŋ	"my bird"	yěr siŋ	"our bird"
wa bsiŋ	"my birds"	wer bsiŋ	"our birds"
la rwɛɛ	"my cat"	lisěe rwɛɛ	"our cat"

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ma mwɛɛ	"my cats		misèe mwɛɛ	"our cats"
ya soo	"my hoe"		yer soo	"our hoe"
yõ siŋ	"your bird"		yèe siŋ	"your bird"
wo bsiŋ	"your birds		wee bsiŋ	"your birds"
lo rwɛɛ	"your cat"		le rwɛɛ	"your cat"
mo mwɛɛ	"your cats"		me mwɛɛ	"your cats"
yo soo	"your hoe"		yee soo	"your hoe"

*4. Write the following phrases in Limbum and take
note of the forms of the possessive pronouns
you use. Also write the tones of the words you
use.

his bird	their bird
his birds	their birds
his cat	their cat
his cats	their cats
his fowl	their fowl
his fowls	their fowls

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Lesson 10   Demonstratives and adjectives

Demonstratives

Sometimes nouns are followed by small words which help us to know which person or thing we are referring to. We call these small words demonstratives. The form of the demonstrative changes according to the meaning and the class of the word it refers to.

Read these phrases and note the demonstratives used.

siŋ ca	"this bird"	siŋ cã	"that bird"
bsiŋ bca	"these birds"	bsiŋ bcã	"those birds"
rwɛɛ ca	"this cat"	rwɛɛ cã	"that cat"
mwɛɛ mca	"these cats"	mwɛɛ mcã	"those cats"

*1. Write these phrases in Limbum and note the demonstratives and their tones:

this basket	that basket
these baskets	those baskets
this feather	that feather
these feathers	those feathers
this bag	that bag
these bags	those bags
this rat	that rat
these rats	those rats

Adjectives

Ajectives are describing words. There are different forms of an adjective according to the class of the noun it qualifies.

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Read these descriptive phrases and notice how the form of the adjective changes according to the class of the noun it qualifies:

siŋ nsii	"black bird"
bsiŋ bsii	"black birds"
rwɛɛ rsii	"black cat"
mwɛɛ msii	"black cats"
soo sii	"black hoe"
bsoo bsii	"black hoes"
ŋgʉp nsii	"black fowl"
ŋgʉp sii	"black fowls"
siŋ ŋkɛ	"small bird"
bsiŋ bkɛ'kɛ'	"small birds"
rkar rgõr	"big wheel"
mtaa mbõŋboŋ	"good caps"
mbãp ŋgõr	"big rat"
mbãp gõrgõr	"big rats"

*2. Write down the following descriptive phrases in Limbum and mark the tones:

white mouse	clean birds
big cat	white cats
good hoe	good ears
black dog	big dogs

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Number words are also adjectives. The form of a number changes according to the noun it qualifies. Read these phrases and notice how the form of the numeral changes:

bsiŋ bbaa	"two birds"
mwɛɛ mbaa	"two cats"
bsoo bbaa	"two hoes"
ŋgʉp baa	"two fowls"

*3. Write down these phrases in Limbum and mark the tones:

three baskets
three finger nails
three hoes
three goats
three dogs

Lesson 11   Prepositions and adverbs

prepositions

Prepositions are small words which may come before a noun or between two nous to state the position of something or somebody.

Read the following sentences and see how the preposition mbe is used:

E cu mbe nta'   "he is sitting on a chair"
E dŭ mbe ndap   "he has gone into the house"

The words tu and ndŭ can be added to mbe to give the meaning "on top"

siŋ cu mbe tu ce   "The bird is on top of the
                        tree"
fuu cu mbe ndu baa   "The mouse is on top of the
                        corn fufu"

Read the following sentences and see how the preposition njep (njer) is used:

E yu njep bě'tě   "he is in the pit"
mbap yu njer bãa   "the rat is in the bag"

Read these sentences and note the use of the prepositions, ã gee (gēŋ) and note the tones

E tɛɛ ã gee yĭ tâ   "he is beside his father"
E tɛɛ ã gee yĭ mâ   "he is standing besides his
                        mother"
E tɛɛ ã gee yĭ ndap   "he is standing beside his
                        house"

Now read the following sentences and see how

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the preposition nê is used.

E fa baa nê Nfo   "he has given corn fufu to Nfor"
E fa baa nê mê   "he has given corn fufu to me"
Nfõ a fa rkòŋ nê ye Nfor has given the spear
                         to him.

*1. Make sentences with the following prepositions
    and mark the tones:

    1. mbe
    2. njep (njer)
    3. ã gee
    4. nê

adverbs

    Some expressions tell us when, where or how
an action takes place. These are called adverbs.
    Read the following sentences and see how the
adverbs are used:

E vü sê'ni   "he has come now"
E mu vü nèŋkùr   "he came yesterday"
E mu vu neŋkür seŋ "he came last Ndu market day"
E ce fã' kŭna   "he is working up here"
E dü kŭna   "he has gone up here"

    The adverbs that we have used in the above
sentences are sê'ni, "now" nêŋkùr" "yesterday"
nêŋkŭr seŋ "last" seŋ (Ndu market day)"
kŭna "up here"

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Now read the following sentences and study the adverbs used:

vù cɛrcɛr	"come quickly!"
caŋ ghāghèr	"run quickly!"
lāa mʉfɛ̃	"talk softly!"
lāa mʉwɛ̃ɛ	"talk slowly!"
E ke fã' sê	"he works very hard"

The adverbs used in the above sentences are cɛrcɛr "quickly", ghāghèr "quickly, mʉfɛ̃ "softly", mʉwɛ̃ɛ "slowly" and sê "very hard, (very much)"

These adverbs tell us how an action takes place.

*2. Make five sentences in Limbum using adverbs that tell us how an action takes place.

Lesson 12   Tone patterns of verbs

Most verb words fall into two main groups depending on whether their tone is high or low. Read the following pairs of words. You will notice that you cannot know what the word means unless you look at its tone marks:

1.	kaŋ	"fry!"	2.	saa	"split!"
	kâŋ	"tremble!"		sãa	"tear!"
3.	ba'	"weave!"	4.	re	"jump!"
	bà'	"arrive, reach!"		rè	"fight!"

As you must have noticed, the first word in each pair is a high tone verb while the second is a low tone verb. As usual, only the low tone is marked.

*1. Mark the tones on the following pairs of verb words according to the meaning of each word:

la'	"to pay!"	laa	"cook!"
la'	"gum!"	laa	"say, talk!"
too	"support!"	tee	"to cut off"
too	"roast"	tee	"to be hard"
taŋ	"to be tough (of meat)"	yɛr	"warm oneself!"
taŋ	"fight for something"	yɛr	"sweep!"

Verb words with two syllables can have either the tone pattern high + high or low + mid. Read the following pairs of words and see how their meanings are different solely on the basis of their tone pattern:

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1. sa'si   "feel sharp pains"
   sā'si   "scatter!"

2. kani   "refuse!"
   kā'ni   "promise!"

3. bɛrsi   "light, kindle!"
   bɛ̌rsi   "spread out!"

*2. Read the following words and write the tones where necessary:

byɛ'	"carry!"	vu	"come!"
cete	"close, cover"	ja'	"help!"
ma'	"throw!"	ca'ni	"greet!"
bepsi	"spoil!"	lɛɛsi	"kiss!"
ca'	"shake!"	she	"refuse!"
nati	"stand!"	langer	"grumble!"

     Read the following command sentences and notice how the tones are written:

fa lɛlɛ	"give rain water!"
fa mɛ̌ baa	"give me corn fufu!"
fa ye bāa	"give him a bag!"
byɛ̌' lɛlɛ	"carry rain water!"
kɔ̌ ŋgup	"take the fowl!"
fa muu nɛ̌ yǐ mā	"give the child to its mother!"
fa dā nɛ̌ yǐ tā	"give the cutlass to his father!"

*3. Read the following command sentences and mark the tones:

koo ŋgup	"catch the fowl!"
kosi kosi	"cough (a cough)!"
fa mɛ kaa	"give me the crab!"
ca'ni tarku ne mɛ	"greet grandfather for me!"
byɛ' mbuu siŋ	"carry the bird's eggs!"

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Lesson 13   Present and Past Tenses

There are different small words in Limbum which show whether the action took place today, yesterday or a long time ago. These small words are called tense markers.

Present Tense

If an action is taking place now, we might have sentences like these:

E ce fa baa	"he is giving corn fufu".
E ce yɛɛ yɛɛ	"he is singing (a song)"
E ce yaati kwãa	"he is drying corn"
Nfõ ce vè	"Nfor is coming"

In the above sentences the small word ce shows that the action is taking place now. If the action has just taken place now, we would have sentences like the following:

E fa baa	"he has given corn fufu".
E yɛɛ yɛɛ	"he has sung (a song)"
E yaati kwãa	"he has dried corn"
Nfõ ã vè	"Nfor has coming"

Note that in the above sentences, there is no small word to mark the tense. However, pay attention to the tones of the verbs. You will notice that the original tones of some of the verbs change in this tense.

*1. Write the following sentences in Limbum and mark the tones:

1. I am eating groundnuts.
2. You have eaten kernels.
3. I am writing Limbum.

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4. I have seen him.

If the action is done regularly we would have sentences like these:

E ke fa mɛ mbaa	"he gives me money."
E ke fā' sē	"he works hard."
Nfō ke lāŋger	"Nfor always grumbles."
E ke dū ŋwā'	"he goes to school."

*2. Write the following sentences in Limbum.

1. Nfo goes to church.
2. My mother cooks corn fufu well.
3. My grandmother talks very slowly.
4. Nya' sells corn.

Past tense

If the action took place taday we would have sentences like these:

E ba fa baa	"he gave corn fufu (taday)."
E ba ce fyěni baa	"she was selling corn fufu"
E ba yaati kwāa	"he dried corn"
E ba ce yaati kwāa	"she was drying corn."

*3. Write the following sentences in Limbum and mark the tones:

1. She cooked beans (today)
2. She was selling kernels.
3. She worked hard.
4. The child was crying.

If the action took place yesterday we would have sentences like these:

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E mʉ fa baa   "he gave corn fufu (yesterday)"
Nfõ ā mʉ dū nèŋkùr   "Nfor went yesterday"
Nya' a mʉ vû nèŋkùr "Nya' came yesterday"
E mʉ ce fā' nèŋkūr   "he was working yesterday"

*4. Write the following sentences in Limbum and
    mark the tones:

  1. He carried rain water yesterday.
  2. He was working hard yesterday.
  3. He broke the calabash yesterday.
  4. She received her grandfather yesterday.

    If the action took place a long time ago we
would have sentences like these:

E m fa baa   "he gave corn fufu."
E m ce fyĕni kwâa   "she was selling corn"
Nfõ a m koo bʉrʉ'   "Nfor caught a lion"
Nya' a m ce fā' nsuu sê
                   "Nya' was farming hard"

*5. Write the following sentences in Limbum and
    mark the tones:

  1. He bought a goat (a long time ago)
  2. He was selling meat.
  3. He went to Kumba
  4. Nfo butchered a cow.

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*6. Read the following story and pay attention to
    the tense markers and the tones of the words.

  Ngã' à mʉ du ntaa nĕŋkʉ̀r. E mʉ du ntaa nè mbʉ.
E mʉ fyĕni mbʉ ana yɛɛni sê. E mʉ fyĕni wa'ã, a yuu
buu nè yɪ mã. E mʉ yuu kaŋ njãp, ba nyãa nã', kĕr
ba soo. E mʉ vʉ̀ nè buu ca a fa nè yɪ mã. Yɪ mã à
ka' koo buu ca, à lãa enɛ Ngã' yu muu mbõŋmbõŋ.

Lesson 14   Future Tenses

If the action is to take place in the future, different tense markers are used depending upon the future time.

If the action is to take place simply in the future and the time is not specified, we shall have sentences like these:

E be fa baa	"he will give corn fufu"
M be cã'ni tarku'	"I shall greet grandfather"
Nfõ be dü ŋwã'	"Nfor will go to school"
Nya' be byĕ kwãa	"Nya' will plant corn"

You must have noticed that the simple future tense is marked by the small word be. This word will occur in all the future tenses.

*1. Write the following sentences in Limbum and mark the tones.

1. I shall give him my bag.
2. He will eat chicken.
3. They will sing a song in Limbum.
4. Her mother will help her.

If the action were to take place today another marker would be added to "be":

E be lõ fa baa	"he will give corn fufu today"
Wĕr be lõ dü côr	"we shall go to church"
Nfõ be lõ lãŋger sê	"Nfor will grumble a lot"
Wowĕe a be lõ jã' mè	"they will help me"

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*2. Using the small words ... be lõ ... write
four sentences in Limbum. Remember to mark
the tones.

If the action were to take place tomorrow, we
would have sentences like these:

E be fʉ fa ye baa   "he will give him corn
          fufu (tomorrow)"

M be fʉ dù   "I shall go"

Tarkʉ be fʉ koni ye bõŋboŋ

         "grandfather will receive
         him well"

Tãnyʉ̀ be fʉ dù wɛɛ "Tanyu will go hunting"

Nya' be fʉ ce fã' nsuu "Nya' will be farming
         (tomorrow)"

*3. Using the words give, write sentences in
Limbum and mark the tones.

 1. Makʉ be fʉ ce...
 2. M be fʉ ...
 3. E be fʉ ...
 4. Wèr be fʉ ...

If the action were to take place in the distant
future we would have sentences like these:

E be kè fa baa   "he will give corn fufu"

E be kè ce fã' nsuu sè "she will be farming very
         hard"

Nfõ be kè dù nje Yawundɛ.

        "Nfor will go to Yaounde.

E be kè ce yuu mkuu "she will be buying beans."

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*4. Now write the following sentences in Limbum
   and mark the tones.

   1. I shall be going to college (in the distant

                                                   past)

   2. We shall sell a lot of coffee.
   3. She will be buying a lot of firewood.
   4. My father will slaughter the fat cow.

*5. Read the following story paying attention to
   the tones:

   Njū' ā dǔ ā rtu' mndip. E tur bblɛ' bbaa.   E
be dǔ tu' mndip tɛ Nya' bo laa baa āwo. Nya' be laa
baa fa ye.   E ka' vǔ ye baa yi mi, banɛ Nya' be kèr
lõ laa baa mo'.

   Njū' ā mʉ du mndip nēŋkǔr.   E mʉ ce dǔ mdip à
tur bblē' bkɛ'kɛ' bbaa.   E mʉ tu' mdip a fa nē Nya'.

   Nya' ā mʉ lāa enɛ Njū' e ke tu' mdip sê.   E m
tu' mdip nē yi makʉ.

   Njū' be fʉ tu' mdip.   E be fʉ tu' mdip fa nē
Nya'.   Nya' be fʉ laa baa nē mdip anā. Nya' be fʉ
ce laa baa, tɛ Njū' ce sǔ'si bkaŋ.

   Njū' be kè rĭŋ ā rlaa baa.   E be kè laa baa, fa
Nya' foŋ.

Lesson 15   Negative Sentences

Some sentences express negative ideas. In
Limbum sentences are negated by simply adding the
small word ka' at the end of the sentence.
Read the following pairs of sentences and
notice how command sentences are negated.

Fa baa	"give corn fufu!"
Fa fa baa ka'	"do not give corn fufu"
Fyĕni kwâa nĕ ye	"sell him corn"
Fa fyĕni kwâa nĕ ye ka'	
	"do not sell him corn!"
Jĕr mʉwĕɛ	"go slowly!"
Fa jĕr mʉwĕɛ ka'	"do not go slowly!"

You must have noticed that the command
sentence is negated by putting the small word fa
at the beginning of the sentence and by adding the
small word ka' at the end of the sentence.

*1. Write the following negative commands in
   Limbum and mark the tones:

1. Do not cry!
2. Do not beat the child!
3. Do not eat much meat!
4. Do not steal!

Read the following sentences and see how they
are constructed.

E ce nãti ka'	"he is not standing"
E dũ ka'	"he has not gone"
E ke fa mɛ baa ka'	"she does not give me corn fufu"

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E ke fa bèe buu sē ka'

> "he does not give generously
> to people"

*2. Write the following sentences in Limbum and
    mark the tones:

1. He is not coughing
2. He does not go to school
3. He has not bought firewood
4. Nya' does not talk

Now read the following negative sentences
and note how they are made.

Njū' ã ba fã' nsuu ka'
    "Nju' did not farm"
E mɯ ce sɛ' ŋguu nēŋkūr ka'
    "He was not fetching firewood yesterday
Nfõ ã m dũ kũ Garwa ka'
    "Nfor did not go to Garoua"
Nya' be lõ laa baa ka'
    "Nya' will not cook corn fufu (today)!"
E be fɯ tu' mdip ka'
    "She will not carry water (tomorrow)!"
M be ke fa muu wã ŋgar ka'
    "I shall never give my son a gun."

*3. Write the following negative sentences in
    Limbum and mark the tones:

1. My father has not gone to the market today.
2. He did not sell any corn last Ndu market day.
3. He will never tell his son a lie.

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*4. Read the following text paying attention to
     the tones:

    Nfɔ̃ e ke dù cor sɛ̃. E ba dù cor ntɪni.   E ba
tur ŋwã' Nyu. E m yuu ŋwã' Nyù ana ese ŋwɛ̃ Kɪmbãŋ.

    E mu dù cor ãwo nèŋkùr. E mu dù a bɛ̀' ŋwã' Nyù
anã mbe cor.

    E be fu dù cor ãwo ãyãŋsɛ̃. Nwɛ̃ ã ka' laa nè ye
enɛ e fa fu dù ãwo ka', e byemɪ ka'.

    E ke dù ŋguu, tur ŋwã' Nyù anã ka'.

<u>Lesson 16</u>   <u>Questions</u>

Questions are sentences that ask questions. A question is indicated by a small word at the end of the sentence. The question markers are the following:

fɛ	"where?"	nda	"who?"
kɛ	"what?"	njokɛ	"why?"
ā se'kɛ	"when?"		

Read the following question sentences and note how they are made.

E dù ba fɛ?	"where has he gone?"
E vũ fɛ?	"where is he from?"
yi yu ba fɛ?	"where is it?"
E ce ye ba kɛ?	"what is he eating?"
a kɛ?	"what is it?"
E ba vʉ a se'kɛ?	"when did he come?"
E be mĪsi ā se'kɛ?	"when will he finish?"
A nda?	"who is it?"
wɛ̃ yɛ ba ndaa?	"who have you seen?"
wɛ̃ lāa ba ɲē nda?	"to whom are you speaking?"
E lāa wa'na njokɛ?	"why has he said so?"
wɛ̃ lĪp ye njokɛ?	"why have you beaten him?

You must have noticed that the small word ba sometimes comes before the question word.

*1. Make question sentences in Limbum using the following question markers:

1. fɛ	"where"	2. kɛ	"what?"
3. ā se'kɛ	"when?"	4. nda	"who?"
5. njokɛ	"why?"		

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To turn a statement into a question the small word, "a" is added at the end of the sentence. Read the following pairs of sentences and notice how a statement is turned into a question.

E mʉ vʉ̀ nēŋkʉ̀r   "he came yesterday."
E mʉ vʉ̀ nēŋkʉ̀r a?   "did he come yesterday?"

E dʉ̀ shaŋ   "he has gone to prison"
E dʉ̀ shaŋ a?   "has he gone to prison?"

Nfõ ke ye mtu'   "Nfor eats potatoes"
Nfõ ke ye mtu a?   "does Nfor eat potatoes?"

*3. Write the following sentences in Limbum and mark the tones.

1. Does he go to church?
2. Does Nya' like to work?
3. Do you eat a lot of corn fufu?
4. Did he go to market yesterday?
5. Will he go to Yaounde?

Lesson 17   Joining words (conjunctions)

Clauses or sentences can be joined by small joining words which we call conjunctions.

1. Sometimes a sentence can have two subjects, nouns or pronouns joined by the small word ba:

  Nfō ba Nya' a mʉ vʉ
        "Nfor and Nya' came"
  Yā mā ba yā tā a vʉ
        "My mother and my father have come"

2. sometimes two verbs in the same sentence are joined by the word a:

  E dʉ a kʉti   "He has gone and come back"
  Nfō a ye baa a no mɑ̄ip
         "Nfor has eaten corn fufu
         and drank water"

3. Sometimes the small word a is also used to indicate that someone came with another person:

Nfō ā vʉ a Nya'   "Nfor has come with Nya'"

A verb that expresses saying, thinking or a desire is followed by enε and then by another clause.

    E lāa enε e be dʉ   "He has said that he
                  would go"
  Wěr ā mʉ lāa enε wowěe a be vʉ ka'.
        "We said that they would not come".
  M ce kwā' mεnε e be vʉ
        "I think that he will come'"
  M ce kōŋ mεnε e dʉ
        "I want that he should go"

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Ã ce kõŋ wɛne e war a?

      "Do you want that he should cry?"

4. Sometimes the second clause describes something
   in the first clause and the joining word is "ce".

  Ŋwɛ̃ ce e ce vɵ̈ na yu yā tā.

      "The person who is coming is my father."

  Njêŋwɛ ce e ba vɵ̈ na yu ba fɛ?

      "Where is the woman who came?

5. Two clauses may be joined by njobẽ' so that
   the second clause gives a reason' for the action
   in the first one.

  Nya' ã ba ce war njobẽ' Nfõ ã ba lip ye.

     "Nya' was crying because Nor had beaten her"

  Nje ce yaŋ ye njobē' e be ye yuu ka'.

     "He is hungry because he has not eaten
      anything"

6. Sometimes two clauses are joined by the word,
   ã, and the second clause also gives a reason for
   the action in the first clause. The second
   clause in this case is an infinitive clause.

  E dɵ̈ ã rkep ŋka' Nfõ.

     "He has gone to break Nfor's fence"

  E vɵ̈ ã rfa baa.

     "He has come to five corn fufu"

  E mɵ vɵ̈ a rbyɛ̃' mbu'

     He came to carry sweet potatoes".

7. Sometimes two clauses are joined together by
   tɛ to show that one action takes place before
   another.

  E be vɵ̈ tɛ m ka' dɵ̈.

     "He will come before I go."

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Wowee a ba ye baa tɛ m kâ' vʉ.
     "They had eaten corn fufu before I came."

8. Sometimes two clauses are joined so that one
   expresses a condition for the other.

   E ka' vʉ, m dʉ̄   "If he comes, I shall go."

   Njʉ̄' ka' lip ye, e ku wăr.
          "If Nju' beats him, he will cry"
   E ka' yɛ ye, e ku kɛ'.
          "If he sees him, he will call"
   E ka' ba vʉ, wĕr a ba lip ye.
          "If he had come we would have beaten him"
   E ka' mʉ ba laa wa'a, mɛ̃ ba mʉ̄ rɪŋ.
          "If he had said so, I should have known"

*1. Using sentences we have seen in this lesson
   as examples, make other sentences with each
   of the following joining words and mark the
   tones:

         1. ba   5. tɛ
         2. a   6. jobĕ'
         3. ce   7. ka'
         4. enɛ   8. ka' ba

*2. Read the following story while paying
    attention to the tones:

     Ngãla' ã m dʉ̄ ã rcʉʉ mbʉ a ka' bã', a yɛ yi too
mbʉ mo' ka'. E gwar too mbʉ mö' a jɪr. E ka' jɪr a
cʉʉ mbʉ mö' ãwo. Yi mbʉ̃ yi kɛ̃' a ce ye mjɛ̃ɛ. Yi
ka' ce ye mjɛɛ, Ngãla' ã lɛ̃ mgwaŋ mben lʉ̄ ryɛɛ, boo
mbʉ ã kaarɪ mbo a cɛ̃ bɛ̃ŋ. Boo mbʉ ã ka' ce bɛ̃ŋ, e
dʉ̄ nɛ̃ mgwaŋ mö a fa nɛ̃ mbʉ ndoŋ ba njɛ̃e.
     E ka' fa mgwaŋ nɛ̃ mbʉ wɛɛ, a ko' a tɛɛ mbendʉ̄

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ryɛɛ. E ka' tɛɛ mbo, a yɛ ãmbõ jaa ce ye mjɛɛ nje
rtũu.   E ka' ye mjɛɛ, a co mbe bʉ'.

    Ngãla' à sùu embendù ryɛɛ, a lor mi mkõŋ ce e
ba tur. Mi mkõŋ ana mi m ba mi mbaa. Yĭ tâ à rũŋ
mi mkõŋ anã bõŋboŋ sẽ. E ka' ce dũ, a co' rmo', a
kãŋsĭ, a mã' mbekĭ, a yã. E ka' yã a lãa enɛ, "Jaa
ã kwe ntĭni."

    E ka' dũ bã'a, a yɛ jaa ãmbõ e tɛɛ mbe bʉ. E
co' rkõŋ a naŋni jaa cã ãwo bõŋbõŋ. E ka naŋni a tʉ
jaa ãwo ã mŋgãŋ. E ka tʉ, jaa ã sã'ti mbekĭ, a gwẽ,
a ker gwẽ. E ka' kẽr lõ enɛ e sã'tĭ mbekĭ Ngãla' à
ba war mbe ndũ mu. E ba nẽ cʉʉ ma yĭ mbãka mõ' ã
gee nyor. E co' a sɛɛ ãwo.

    E ka' sɛɛ, a byɛ' yĭ jaa, a dʉ ãwo, a fa nẽ yĭ
tã.   Yĭ tâ ã ka' yɛ, a lãa enɛ Ngãla' yu muu mbaŋrũ.
E ka' lãa wã'ã, a gwar jaa ana, a lor rkoo mo' a
laa.

    E ka' laa, wowẽe a ye. A ka' ye wɛɛ yĭ tâ ã sõ
yɛ rfʉʉ kãaŋkõ', kũ tũ. E ka' sõ, Ngãla' à yu'
rbõŋ, a dũ, a suŋ bkar vi.

APPENDIX III

QUESTIONNAIRE

EVALUATION QUESTIONNAIRE

1. What is the name of your language

2. What is the classification of your language?

3. What is the structure of your noun prefixes?

4. How many tones do you have in your language?

5. What is the underlying tone of the noun prefix?

6. How many tones do you mark?

7. How many do you leave unmarked?

8. Why did you decide to mark the tones that you are writing?

9. Why do you not mark the other tones?

10. Do you think that your system is efficient? Why?

11. Do you as a non-native speaker find it easy to read or write your language using this system? Will it be a problem for a non-native speaker?

13. What are the weaknesses of your tone orthography?

14. How long have you been using this system.

15. Has it been easy to teach or learn tone using your system? What is the best way to teach it?

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