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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 the 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.
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, Bambul 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

I am thankful to God for all the wisdom and help provided for this work. The richness of the grammar of each language and the rules governing the tone processes reveal the beauty of His creation and thus proclaim His glory. I am grateful for all the people He brought to provide consultant and practical help, prayer and financial support.

I am grateful to Prof. Beban Sammy Chumbow for the supervision he has given me in this work. I appreciated his concern for quality work and his demand that we be thorough in the study.

Prof. Dr. Ursula Wiesemann initiated me into the study of tone and tone orthography. I was greatly encouraged by her guidance and devotion to the study. Dr. Olive Shell supervised the production of the Bafut pedagogical material. She gave the advice and practical help needed for writing A Practical Guide to Bafut Tone Orthography.

Prof. Kay Williamson gave me the initial help I needed to figure out the underlying tones of the Bafut nouns. I am thankful for the encouragement she has been to me in this work. I am also thankful to Mr. Nicholas Faraclas for his input during the work sessions that we had together at Port Harcourt.

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### ABBREVIATIONS AND SYMBOLS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Adj.</td>
<td>Adjective</td>
</tr>
<tr>
<td>AM</td>
<td>Associative marker</td>
</tr>
<tr>
<td>AP</td>
<td>Adjective prefix</td>
</tr>
<tr>
<td>C</td>
<td>Consonant</td>
</tr>
<tr>
<td>CC</td>
<td>Concord consonant</td>
</tr>
<tr>
<td>cf.</td>
<td>See</td>
</tr>
<tr>
<td>Cl.</td>
<td>Class</td>
</tr>
<tr>
<td>CNS</td>
<td>Consecutive</td>
</tr>
<tr>
<td>Dem.</td>
<td>Demonstrative</td>
</tr>
<tr>
<td>desyllab.</td>
<td>Desyllabification</td>
</tr>
<tr>
<td>ds</td>
<td>Downstep</td>
</tr>
<tr>
<td>DS</td>
<td>Different Subject marker</td>
</tr>
<tr>
<td>FO</td>
<td>Immediate future</td>
</tr>
<tr>
<td>FSH</td>
<td>Far from speaker and hearer demostrative</td>
</tr>
<tr>
<td>F1</td>
<td>Today future</td>
</tr>
<tr>
<td>F2</td>
<td>Tomorrow future</td>
</tr>
<tr>
<td>F3</td>
<td>Remote future</td>
</tr>
<tr>
<td>G.</td>
<td>Group</td>
</tr>
<tr>
<td>HAB</td>
<td>habitual</td>
</tr>
<tr>
<td>H</td>
<td>High tone</td>
</tr>
<tr>
<td>Η</td>
<td>Floating High tone</td>
</tr>
<tr>
<td>Ibid.</td>
<td>Ibidem</td>
</tr>
<tr>
<td>IMP</td>
<td>Imperative</td>
</tr>
<tr>
<td>IMPF</td>
<td>Imperfective</td>
</tr>
<tr>
<td>INF</td>
<td>Infinitive</td>
</tr>
<tr>
<td>Ipn.</td>
<td>Interrogative pronoun</td>
</tr>
<tr>
<td>L</td>
<td>Low tone</td>
</tr>
<tr>
<td>Λ</td>
<td>Floating Low tone</td>
</tr>
<tr>
<td>Logo</td>
<td>Logophoric</td>
</tr>
<tr>
<td>M</td>
<td>Mid tone</td>
</tr>
<tr>
<td>n.</td>
<td>Noun</td>
</tr>
<tr>
<td>-N</td>
<td>Nasal(morph)</td>
</tr>
<tr>
<td>Narr. P.</td>
<td>Narrative Past</td>
</tr>
</tbody>
</table>
NEG   Negation/Negative
N.S.  Near Hearer demonstrative
NP   Noun Phrase
NPfx. Noun prefix
PI   Immediate Past
P1   Today Past
P2   Yesterday Past
P3   Remote Past
P.C. Personal Communication
PERF Perfect
PER  Person
PRFX Prefix
PL   Plural
PRN  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
TC   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
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 (1975) 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 reducible 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, Bambul, Mkwem, Mankon and Bafut as languages each with a three-tone system.
The fact that loan words are assigned the M tone, for example, /ćér/ "church" (in Limbum), and /trēn/ "train" (in Bafut), shows that M tone has a strong psychological reality for the speakers of these languages. The M 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, [yō] + [njān], is realized tonally as [H 'H], which gives support to the underlying representation, /yō njān/ "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 phonemic 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 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 '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
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 representation 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
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 IL 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,
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 (IL) 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:
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 all tones whereas the taxonomic phonemic representation represents phonemes or tonemes.
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)  

\[ \text{Underlying forms: } H \quad L. \]

Generative Phonology

\[ \text{System of rules: } \downarrow \]

Surface forms: H 'H M I L H'H HL 'HL ML LM LMM

Phonemics

\[ \text{Orthography: } \downarrow \]

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
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 Yamba 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 practical 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 viewpoints 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 systematic orthographic level without having to start with the systematic phonemic level and passing through the system of rules.
and the systematic phonetic level? Indeed it is possible to ignore the generative component. This is what the traditional phonemic phonologists have done ever since. 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 systematic phonetic level goes directly to the systematic 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 systematic 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 [niyé zé] that we have chosen to represent the complex contour tone LML orthographically as /~/ rather than as /~//. 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.
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 analysis. 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
orthography. 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
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
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
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 $6^\circ05'$ and $6^\circ10'$ north of the equator and longitude $10^\circ00'$ and $10^\circ13'$ 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. 8 Sketch Map of Grassfields Bantu Languages
( West and Northwest Provinces of Cameroon)

Nigeria

Adapted from:
Lavry and Voorhoeve 1976
Voorhoeve (1976)

KEY

+-- National boundary
- - Provincial boundary
- - Language group boundary

Sub-groups

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

B - Mbam - NKam
I NKamba
II Num
III Ngemba
IV Bamileke
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:

<table>
<thead>
<tr>
<th>TIKAR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tumu</td>
<td></td>
</tr>
<tr>
<td>Babanki</td>
<td>A 1</td>
</tr>
<tr>
<td>Limbum</td>
<td>B 1</td>
</tr>
<tr>
<td>Bamoun</td>
<td>B 11</td>
</tr>
<tr>
<td>Bafut</td>
<td>B 11</td>
</tr>
</tbody>
</table>

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 326D248 Benue, Bantoid, Bane Grasslands group... Ngemba subgroup." Tesaman (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 DJKOM 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:
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
   11. MANKON
   111. AWING (Bambulewe)
   b.  BAFUT (Bufo)
   c. 1. NKWEN (Bafreng)
   11. MANDANKWE
   111. MBILI (Mbele, Bambili)
   1111. MBUI (Bambui)
   u. RAMUNKUM
   "  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)
2.2.2 Linguistic Studies Already Done on Bafut

Crozier (1980b) reports that the first reference to the Bafut language is found in Koelle (1864). 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.
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, Manka, 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 pronunciation.

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.
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 formal 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:

<table>
<thead>
<tr>
<th>stops</th>
<th>labial</th>
<th>alveolar</th>
<th>post-alveolar</th>
<th>palatal</th>
<th>velar</th>
<th>glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>vl</td>
<td>t</td>
<td>k</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vd</td>
<td>d</td>
<td>g</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fricatives

<table>
<thead>
<tr>
<th>stops</th>
<th>labial</th>
<th>alveolar</th>
<th>post-alveolar</th>
<th>palatal</th>
<th>velar</th>
<th>glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>vl</td>
<td>f</td>
<td>s</td>
<td>ts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vd</td>
<td>z</td>
<td>dz</td>
<td>y</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Nasals

<table>
<thead>
<tr>
<th>stops</th>
<th>labial</th>
<th>alveolar</th>
<th>post-alveolar</th>
<th>palatal</th>
<th>velar</th>
<th>glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>v</td>
<td>m</td>
<td>n</td>
<td>n</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Vibrant

<table>
<thead>
<tr>
<th>stops</th>
<th>labial</th>
<th>alveolar</th>
<th>post-alveolar</th>
<th>palatal</th>
<th>velar</th>
<th>glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>v</td>
<td>(r)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Liquids and Glides

<table>
<thead>
<tr>
<th>stops</th>
<th>labial</th>
<th>alveolar</th>
<th>post-alveolar</th>
<th>palatal</th>
<th>velar</th>
<th>glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>v</td>
<td>w</td>
<td>l</td>
<td>j</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following consonants are found in syllable final position:

<table>
<thead>
<tr>
<th>stops</th>
<th>labial</th>
<th>alveolar</th>
<th>velar</th>
<th>glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>v</td>
<td>m</td>
<td>n</td>
<td>n</td>
<td></td>
</tr>
</tbody>
</table>

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 ḏūbū'ū "slave" ḏūtā'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 intervocally as in the following example:

(3) ṭān "plate, pan"
   bī'ā "treat (a wound)!

The vibrant [r] has a very restricted distribution. It occurs intervocally and only before the central vowel /a/. It is in free variation in this context with the lateral /l/. Some speakers would say either /akora/ or /akola/ "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) ḏ-dōd/bī-ōdō "husband / husbands"
   ḏ-dī/k/bī-ōk "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:
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.

<table>
<thead>
<tr>
<th>Vowel</th>
<th>Example 1</th>
<th>Example 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>/b/</td>
<td>bā'ā &quot;two&quot;</td>
<td>bēē &quot;nail!&quot;</td>
</tr>
<tr>
<td>/f/</td>
<td>fāa &quot;here&quot;</td>
<td>ŋēē &quot;slap!&quot;</td>
</tr>
<tr>
<td>/m/</td>
<td>māā &quot;grandmother&quot;</td>
<td>mēē &quot;bleat!&quot;</td>
</tr>
<tr>
<td>/w/</td>
<td>wāā &quot;that&quot;</td>
<td>wēē &quot;wear!&quot;</td>
</tr>
</tbody>
</table>

3.4 Evidence for Phonemic Contrasts

In the following charts we present evidence for phonemic contrasts.

### 3.4.1 Consonant Contrastive Chart

(8) Labials

<table>
<thead>
<tr>
<th>Consonant</th>
<th>Example 1</th>
<th>Example 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>/b/</td>
<td>bā'ā &quot;two&quot;</td>
<td>bēē &quot;nail!&quot;</td>
</tr>
<tr>
<td>/f/</td>
<td>fāa &quot;here&quot;</td>
<td>ŋēē &quot;slap!&quot;</td>
</tr>
<tr>
<td>/m/</td>
<td>māā &quot;grandmother&quot;</td>
<td>mēē &quot;bleat!&quot;</td>
</tr>
<tr>
<td>/w/</td>
<td>wāā &quot;that&quot;</td>
<td>wēē &quot;wear!&quot;</td>
</tr>
</tbody>
</table>

(9) Alveolars

<table>
<thead>
<tr>
<th>Consonant</th>
<th>Example 1</th>
<th>Example 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>/t/</td>
<td>tāā &quot;father&quot;</td>
<td>ŋīī &quot;half&quot;</td>
</tr>
<tr>
<td>/d/</td>
<td>dāā &quot;wine calabash&quot;</td>
<td>nīī &quot;uproot&quot;</td>
</tr>
<tr>
<td>/n/</td>
<td>nāā &quot;animal&quot;</td>
<td>ŋū &quot;honey&quot;</td>
</tr>
<tr>
<td>/l/</td>
<td>lāā &quot;tree sap&quot;</td>
<td>lū &quot;tree rat&quot;</td>
</tr>
</tbody>
</table>
### (10) Alveolars and Palatals

<table>
<thead>
<tr>
<th>/ts/</th>
<th>/dz/</th>
<th>/s/</th>
<th>/z/</th>
<th>/y/</th>
</tr>
</thead>
<tbody>
<tr>
<td>ts'á</td>
<td>dzYá</td>
<td>sYá</td>
<td>zYá</td>
<td>yá</td>
</tr>
<tr>
<td>&quot;pass!&quot;</td>
<td>&quot;that&quot;</td>
<td>&quot;over-&quot;</td>
<td>&quot;roof-&quot;</td>
<td>&quot;that&quot;</td>
</tr>
<tr>
<td>(cl. 10, 8)</td>
<td>&quot;ripen&quot;</td>
<td>&quot;rafter&quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| ņtsč | ņdzí | ņsí | ņzí | y1'í |
| "father-in-law" | "hunger" | "face" | "to come" | "our" |

| ņtsáá | ņdzáá | ņsáá | nyyáá | ŋyáá |
| "to chew" | "axe" | "to split" | "to throw" |         |

### (11) Velars

<table>
<thead>
<tr>
<th>/k/</th>
<th>/g/</th>
<th>/γ/</th>
<th>/ŋ/</th>
</tr>
</thead>
<tbody>
<tr>
<td>káá</td>
<td>gáá</td>
<td>γáá</td>
<td>ŋáá</td>
</tr>
<tr>
<td>&quot;crab&quot;</td>
<td>&quot;coerce!&quot;</td>
<td>&quot;speak!&quot;</td>
<td>&quot;acquire by chance!&quot;</td>
</tr>
</tbody>
</table>

| kčč     | ŋčč     | γčč     | ŋčč    |
| "sift"  | "grass" | "go."  | "carry." |

| dáb'á     | ágb'á     | áγb'á     | áŋb'á       |
| "latrine" | "stone"   | "nice soup" | "worm" |

### (12) Nasals

<table>
<thead>
<tr>
<th>/m/</th>
<th>/n/</th>
<th>/ŋ/</th>
</tr>
</thead>
<tbody>
<tr>
<td>má'á</td>
<td>ná'á</td>
<td>ná'á</td>
</tr>
<tr>
<td>&quot;throw!&quot;</td>
<td>&quot;refuse to answer!&quot;</td>
<td>&quot;open!&quot;</td>
</tr>
</tbody>
</table>

| m1'í     | n1'í     | nŋ     |
| "eyes"   | "ours"   | "defecate!" |
| mʊ       | nʊ       | nʊ      |
| "child"  | "body"   | "person" |
3.4.2 Vowel Contrastive Charts

a. Front Vowels

<table>
<thead>
<tr>
<th>/i/</th>
<th>/e/</th>
<th>/ɛ/</th>
</tr>
</thead>
<tbody>
<tr>
<td>mbI</td>
<td>&quot;goat&quot;</td>
<td>nibè</td>
</tr>
<tr>
<td>III</td>
<td>&quot;look for&quot;</td>
<td>---</td>
</tr>
<tr>
<td>mì</td>
<td>&quot;swallow!&quot;</td>
<td>---</td>
</tr>
<tr>
<td>nì</td>
<td>&quot;his&quot;</td>
<td>---</td>
</tr>
<tr>
<td>ñiddi</td>
<td>&quot;kind of moss&quot;</td>
<td>ñè</td>
</tr>
<tr>
<td>fìI</td>
<td>&quot;there&quot;</td>
<td>fëë</td>
</tr>
<tr>
<td>yìI</td>
<td>&quot;that one&quot;</td>
<td>---</td>
</tr>
</tbody>
</table>

b. Central vowels

<table>
<thead>
<tr>
<th>/i/</th>
<th>/a/</th>
<th>/a/</th>
</tr>
</thead>
<tbody>
<tr>
<td>mbiÍ</td>
<td>&quot;breasts&quot;</td>
<td>bè</td>
</tr>
<tr>
<td>ñÍÍ</td>
<td>&quot;ant&quot;</td>
<td>lëë</td>
</tr>
<tr>
<td>mì</td>
<td>&quot;tell!&quot;</td>
<td>mā</td>
</tr>
<tr>
<td>nì</td>
<td>&quot;you pl.&quot;</td>
<td>nāā</td>
</tr>
<tr>
<td>átìI</td>
<td>&quot;half&quot;</td>
<td>átëë</td>
</tr>
<tr>
<td>ñííÍ</td>
<td>&quot;witch&quot;</td>
<td>ñèë</td>
</tr>
<tr>
<td>fìÍÍ</td>
<td>&quot;lock!&quot;</td>
<td>fèë</td>
</tr>
<tr>
<td>yìgëÍ</td>
<td>&quot;cover!&quot;</td>
<td>yàëë</td>
</tr>
</tbody>
</table>

c. Back vowels

<table>
<thead>
<tr>
<th>/u/</th>
<th>/o/</th>
<th>/ɔ/</th>
</tr>
</thead>
<tbody>
<tr>
<td>mbuÍ</td>
<td>&quot;dog&quot;</td>
<td>bòò</td>
</tr>
<tr>
<td>lùuÍ</td>
<td>&quot;be full!&quot;</td>
<td>lòò</td>
</tr>
<tr>
<td>mòu</td>
<td>&quot;child&quot;</td>
<td>mòò</td>
</tr>
<tr>
<td>nóu</td>
<td>&quot;body&quot;</td>
<td>nòò</td>
</tr>
<tr>
<td>átöÍ</td>
<td>&quot;head&quot;</td>
<td>tòò</td>
</tr>
<tr>
<td>ñduuÍ</td>
<td>&quot;price&quot;</td>
<td>ñdòò</td>
</tr>
<tr>
<td>fòuÍ</td>
<td>&quot;hit!&quot;</td>
<td>fòò</td>
</tr>
<tr>
<td>yòuÍ</td>
<td>&quot;buy!&quot;</td>
<td>yòò</td>
</tr>
</tbody>
</table>

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
short counterparts, but rather as representing two syllable nuclei.

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

(14) ṣbʊ "wood ash" ṣbā "blemish"
       ṣbʊʊ "rib" ṣbāā "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. [nwi] is interpreted as /nwi/ "cutlass"
     b. [fɪbwe] as /fɪbwɛ/ "fish"
     c. [fyə] as /fyə/ "demonstrative"
     d. [tsyə] as /tsyə/ "pass!"

The example in (15a), for example, could be interpreted in two other ways: /nwi/ or /nuwi/. 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) [gywɛ] /gwyɛ/ "jester"
     [kwyɛ] /kwyɛ/ "cut!"

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

\[(17) \quad \hat{h}\ddot{d}\ddot{a} \quad "house" \quad \hat{m}\ddot{b}\ddot{a} \quad "hands"
\]
\[\quad \hat{m}\ddot{f}\ddot{b} \quad "chief" \quad \hat{h}\ddot{g}\ddot{3} \quad "stone"
\]
\[\quad \hat{n}\ddot{n}\ddot{a}\ddot{a} \quad "to speak in proverbs" \quad \hat{n}\ddot{n}\ddot{a}\ddot{a} \quad "to acquire by chance"
\]

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 homorganic 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 /a/- 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:

\[(18) \quad (C) \ V \ (C)
\]

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

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

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. tüm nāā "shoot an animal!"
b. tüm nībūŋ "shoot a pumpkin!"
c. tüm-tā "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: /fūm/ in isolation a second V element is introduced in a construction such as /a nī fūmā/ "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-

lōō "bite!" lōōn-tā "bite several times!"
yēē "sing!" yēēn-tā "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
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., /nwl/ and /gwyɛ/, is as follows: CWV and CWYV 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 structure 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:

\[ (24) \quad - \left\{ \begin{array}{c} (C) \ V \ (C) \\ N \end{array} \right\} - \]
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:

\[(25) \quad \text{a. V} \quad \text{ã-} \quad \text{N.cl. 7 prefix, as in ã-ɓàà "bag"} \]
\[\text{i-} \quad \text{N.cl. 3, 8 prefix, as in i-ɓàà "bags"} \]
\[\text{à} \quad \text{3rd. pers. sg. pronoun} \]
\[\text{b. N} \quad \text{ñ-} \quad \text{as in ñ-ɓò "hands"} \]
\[\text{ñ-} \quad \text{as in ñ-dòò "husband"} \]
\[\text{ñ-} \quad \text{as in ñ-nò "to drink"} \]

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.

\[\text{c. CV ñ- as in ñibá "wing"} \]
\[\text{bò "they"} \]
\[\text{to verb suffix as in} \]
\[\text{nã'ã-tà "squeeze a little"} \]
\[\text{d. CVC as in NíN P1 tense marker:} \]
\[\text{nín /á nín lò/ "he left"} \]
\[\text{nīm /á nīm fà/ "he gave"} \]
\[\text{nīn /á nīn kò/ "he caught"} \]
\[\text{e. CV.VC as in lèēN perf. of experience marker:} \]
\[\text{lèēn /á lèēn jwI/ "she gave birth"} \]
\[\text{lèēm /á lèēm fà/ "he gave"} \]
\[\text{lèēn /á lèēn kò ñsà/ "he once caught an elephant"} \]

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):
The notation \([\alpha\text{ Place}]\) stands for the place of articulation. The rule then means that the homorganic nasal assimilates to the place of articulation 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:

\begin{align*}
\text{Rdil} & \rightarrow \text{Eiba} \\
\text{I}' & \rightarrow \text{"hands"} \\
\text{I} & \rightarrow \text{"fence"} \\
\text{I} & \rightarrow \text{"to fight"} \\
\text{I} & \rightarrow \text{"meat"} \\
\text{I} & \rightarrow \text{"to take"} \\
\text{I} & \rightarrow \text{"war"} \\
\text{I} & \rightarrow \text{"to give"} \\
\text{I} & \rightarrow \text{"stone"} \\
\text{I} & \rightarrow \text{"axe"} \\
\text{I} & \rightarrow \text{"to throw"} \\
\text{I} & \rightarrow \text{"to speak"} \\
\text{I} & \rightarrow \text{"to leave"} \\
\text{I} & \rightarrow \text{"to pierce"} \\
\end{align*}

3.1 Vowel Deletion

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

\begin{align*}
\text{á nín sò} & \rightarrow \text{"he pierced"} \\
\text{á ním fá} & \rightarrow \text{"he gave"} \\
\text{á nín kwērē} & \rightarrow \text{"he took"} \\
\text{á léén sò} & \rightarrow \text{"he once took"} \\
\text{á léén fá} & \rightarrow \text{"he once gave"} \\
\text{á léén kwērē} & \rightarrow \text{"he once took"} \\
\end{align*}

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

(29) P-Rule 2: \( V \rightarrow \emptyset / \_ V \)

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: \( V \rightarrow \emptyset / V \left\{ \begin{array}{c} + \\ \# \end{array} \right\} \)

This rule is illustrated in the following examples:

(31) a. átú ābāā \( \rightarrow \) [átú' bāā]
    "head of bag/big full bag"

    b. kō ābāā yā \( \rightarrow \) [kō bāā yā]
    "take the bag"

    c. a gheē ā mitāā \( \rightarrow \) [ā gheē mitāā]
    "he is going to market"

    d. a zī ā ńkwērē nǐngōō \( \rightarrow \) [ā zī'ńkwērē nǐngōō]
    "he has come to take a plantain"

    e. ňdā įbārē \( \rightarrow \) [ńdā' bārē]
    "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
sometimes done to avoid ambiguity as can be seen in the following examples:

(32) a. kāa ə ni wā'á yē'ē → [kāa ni wā'ā yē'ē]
   "he did not cry (today)"

b. kāa ə ni wā'á yē'ē → [kāo ni wā'ā yē'ō]
   "you did not cry (today)"

c. kāa ə ni wā'á yē'ē → [kāa ni wā'ā yē'ē]
   "he was not crying (today)"

d. kāa ə ni wā'á yē'ē → [kāa ni wā'α yē'ē]
   "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) /twōn m'bū yā/ "call the dog!"
/sān n'gū jā/ "count the fowls!"

Basically these verb stems have two syllables thus /twōnā/ and /sānā/. 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 nominal prefix or grammatical affix such as the gerund marker on the coreference pronoun. This process is represented by the following N-desyllabification rule.
The following examples serve to illustrate the rule.

(35) a. /ätik nděnH/ → [ätik nděnH] "half of bamboo"

     b. /fá nděnH/ → [fá nděnH] "give a bamboo!"

c. /sáŋ mba yá/ → /sáŋ mba yá/ "dry the meat!"

d. /túm ñsá yá/ → /túm n'ssá yá/ "he went and carried water"

e. /ā nín tsō ntu'g nki/ → [ā nín tsō ntu'g nki] "he went and carried water"

     f. /ā nín yī ā ntu'g nki/ → [ā nín yī ntu'g nki] "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 → 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
(36) the end strings of (35c) and (35d) are as presented in (37) here below:

(37) a. /sâŋ mba/ → [sâŋ b̪a] "dry meat!"
b. /tûm n'sâõ yâ/ → [tûm 'sâõ yâ] "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 /庵mû/ 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, they actually appear as presented below:

(38) a. [äti'în dûmû] V.CV.VC CVC.CV
b. [fûn dûmû] 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) /mûbã/ N.CV to /mûbã/ CCV.
/nsõõ/ N.CV.V to /nsõõ/ CCV.V

The solution adopted in (38) cannot work for these examples because the preceding words /sâŋ/ and /tûm/ 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.
Thus the end strings of (37a) and (37b) present the following syllable structure:

\[40\]  
\[a. \quad [s\bar{a}\bar{a} \text{ m}\bar{a}] \\ b. \quad [t\bar{u}\bar{a} \text{ } 's\bar{a}\bar{a} \text{ y}\bar{a}]\]

CVC # CV
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.

\[41\]  
\[a. \quad /s\bar{a}\bar{a} \text{ m}\bar{a}/ \quad \text{"dry meat!"} \\ b. \quad /t\bar{u}\bar{a} \text{ } 's\bar{a}\bar{a}/ \quad \text{"shoot an elephant!"} \]

So we see that the output 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, g, s, f, g, gh, i, j, k, l, m, n, o, p, r, s, t, ts, u, w, y, and z. For the pronunciation or sounds of these
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) /kō abāä/ instead of [kō bāä] "take a bag!"
/sānā mbā/ instead of [sān bā] "dry meat!"
/fā ndēnā/ instead of [fān dēnā] "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 pronoun /ā/ and /ō/ 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 nī wā'ā zī/ or /kāā nī wā'ā zī/  
"he did not come"

/ā nī nghēc ā mī'tāā/ or /ā nī nghēc mītāā/  
"he went to market"

/ā nī nži ā n'kwērē mbā/ or /ā nī nži n'kwērē 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 orthography will be treated in the appropriate sections of the work (cf. 20.6).
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

káa "crab" káa "negative marker" ákáa "agreement or oath"

bú'ú "chimpanzee" ábú'ú "slave"

báa "additional measure of palm oil" ábáa "corn fufu" ábáa "bag"
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. fā äkikúng → [fā kikúŋ] "give an owl!"
b. fā níngg3 → [fā níngɡ3] "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 domain 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 ò-dó "hand"

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

(3) a. H'H àtû mţà "head of chief"
    b. LM zì nyš "come and see!"
    c. LML sò "pierce!"
    d. 'HL âtû 'mânjì "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'H  HM  HL  
   'H 'H'H 'H'H 'H'M  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.
4.3 Tone Contrasts

The three phonemic tones contrast in the following lexical set:

(4)  

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>H H</td>
<td>M M</td>
<td>L L</td>
</tr>
<tr>
<td>bää</td>
<td>bää</td>
<td>bää</td>
</tr>
<tr>
<td>&quot;additional measure of oil&quot;</td>
<td>&quot;focus marker&quot;</td>
<td>&quot;a kind of tree&quot;</td>
</tr>
</tbody>
</table>

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

(5)  

a. bää tää wā a nīn lō āā fō? "where did father's measure of oil come from?"

b. bää tää wā a nīn lō āā fō? "where did the father come from?"

c. bää tää wā a nīn lō āā fō? "where did father's (kind of) tree come from?"

The constructions in example (5) above are distinguished solely 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. ā nī māā gḥā "it is my grandmother"

e. ā nī tāā gḥā "it is my father"

f. ā nī bāā gḥā "it is my bāā tree"

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

(6) ā mī mā' mī mī ntōō sīl

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: /mī/, "swallowed", /mī/ "his" and /mī/ "number concord", are distinguished by the tones: L, M and H.
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 zi ɲ'kwërë tịtị
   "they have come and taken pepper"

b. bó zi' ɲ'kwërë tịtị
   "they have come to take pepper"

M and H'H contrast in the following context:

(8) a. káa bó sf mbá kwërë
   "they have not taken meat"

b. káa bó sf' mbá kwërë
   "they are not taking meat"

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

(9) a. átụ  yā  "the head"

b. átụ  yā  "my head"

c. fiiwê  fâl  "my fish"

d. sō  mbá  "pierce meat!"

There is a phonetic raised low tone (IL) 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 IL:

(10) a. L  njibɔ'ɔ  "pumpkin"  ábāa  "bag"

b. IL njiibɔ'ɔ  "fear"  ʃâbāa  "corn fufu"

In the above example we notice that the IL 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 Akkese (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 (Ik om) (Armstrong 1968, 1972), Ebolowa-Bulu (Wilkinson, 1975), and Supyire (Carlson, 1982).

It has also been argued that all downstep and phonemic mid 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 mid 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 mid 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 (Ik om) "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 Ngemboon (Anderson, 1982) that has downstep without downdrift. Despite this common characteristic, Bafut again differs from Dschang and Ngemboon in that, in addition to downstep, it has a phonemic M tone some 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 contrastive 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. á nǐŋ kwērō títá       "he took pepper (today)"
    L, M H H H H
    he P1 take pepper

    b. bó nǐŋ 'kwērō títá      "they took pepper"
    H H 'H H H H
    they P1 take pepper

    c. á nǐŋ kwērō títá       "he was taking pepper"
    H L M M H H
    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). /kwērō/ is basically a H
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 nị̀ ng kwẹrọ̄  underlying
      b. bó nị̀ ng 'kwẹrọ̄  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 /nị̀ ng/. In (13b) this contour tone is simplified. The simplification of the falling contour tone causes the following H
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 nĩŋ kwërē underlying
b. ā nĩŋ kwërē imperfective replacive tone
c. ā nĩŋ kwërē simplification
d. ā nĩŋ kwërē tone grounding to the right
e. ā nĩŋ kwërē 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 /nĩŋ/ 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 nĩŋ kwërē underlying
b. ā nĩŋ kwërē lowering
c. ā nĩŋ kwërē 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 Ngyemboon (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. ṃā tā mú wā "he is the father of the child"
   he's fath. ch. the

   b. ṃā tā mú wā "he will kick the child"
   he'll kick ch. the

   c. kāa tāa wā a sǐ ȵkǐ tswā "the father is not
      NEG. fath. the he NEG. str. be in the stream"

   d. kāa tāa wā a sǐ ȵkǐ tswā "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 /kāa/ "negative marker" and
/kāa/ "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 tāa "father"
   b. L M H ǟkìkʊŋ "owl"
   c. H M L tākùmbɛŋ "a type of juju"
   d. L M M bìfrōsi "mice"
   e. ’H M ǟti’i ndăŋŋɛ "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
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 tonal 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 3). 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. HH  d. MH  g. LH  
    b. HM  e. MM  h. LM  
    c. HL  f. ML  i. LL

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 LH 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:
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.
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 beginning 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 /mʊ/ "child" is same as on the second irrespective of the fact that there are downstepped high tones on the word /fɔrɔ/ "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 viewpoint 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 domain 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:
Example (23a) is an application of rule (21) while (23b(ii)) is an application of rule (22a). The examples in (23b(iii)) 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 determining 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 practical writing system of the language.

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

(24)  

<table>
<thead>
<tr>
<th>Tone Pattern</th>
<th>-CV</th>
<th>-CVV</th>
<th>-CVCV</th>
<th>-CVCCV</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-HH</td>
<td>&quot;nwf&quot;</td>
<td></td>
<td>&quot;mô'ô&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;cutlass&quot;</td>
<td></td>
<td>&quot;gun&quot;</td>
<td></td>
</tr>
<tr>
<td>H-HH</td>
<td></td>
<td>&quot;káá&quot;</td>
<td>&quot;fôrá&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;crab&quot;</td>
<td></td>
<td>&quot;mouse&quot;</td>
<td></td>
</tr>
<tr>
<td>L-HL</td>
<td>&quot;dá&quot;</td>
<td>&quot;têá&quot;</td>
<td>&quot;kâńą́&quot;</td>
<td>&quot;dáńńá&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;house&quot;</td>
<td>&quot;w. calab.&quot;</td>
<td>&quot;pan&quot;</td>
<td>&quot;bamboo&quot;</td>
</tr>
<tr>
<td>H-HL</td>
<td>&quot;mú&quot;</td>
<td>&quot;máá&quot;</td>
<td>&quot;sấrá&quot;</td>
<td>&quot;lấmśá</td>
</tr>
<tr>
<td></td>
<td>&quot;child&quot;</td>
<td>&quot;g. mother&quot;</td>
<td>&quot;w. bird&quot;</td>
<td>&quot;orange&quot;</td>
</tr>
<tr>
<td>L-LH</td>
<td>&quot;tîí&quot;</td>
<td>&quot;sôò&quot;</td>
<td>&quot;gồó&quot;</td>
<td>&quot;báńńá &quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;tree&quot;</td>
<td>&quot;farm&quot;</td>
<td>&quot;termite&quot;</td>
<td>&quot;h. bell&quot;</td>
</tr>
<tr>
<td>H-LH</td>
<td></td>
<td>&quot;títá&quot;</td>
<td>&quot;tú́mńá &quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;pepper&quot;</td>
<td></td>
<td>&quot;k. of hat&quot;</td>
<td></td>
</tr>
<tr>
<td>L-LH</td>
<td>&quot;báá&quot;</td>
<td>&quot;báá&quot;</td>
<td>&quot;gîgî́&quot;</td>
<td>&quot;wèntá</td>
</tr>
<tr>
<td></td>
<td>&quot;wing&quot;</td>
<td>&quot;bag&quot;</td>
<td>&quot;egusi&quot;</td>
<td>&quot;goose pimples&quot;</td>
</tr>
<tr>
<td>H-LH</td>
<td>&quot;nya&quot;</td>
<td>&quot;náá&quot;</td>
<td>&quot;sốrấ&quot;</td>
<td>&quot;nốnśá</td>
</tr>
<tr>
<td></td>
<td>&quot;mosquito&quot;</td>
<td>&quot;anim.&quot;</td>
<td>&quot;witch&quot;</td>
<td>&quot;law&quot;</td>
</tr>
</tbody>
</table>

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 -Hâ 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:
<table>
<thead>
<tr>
<th>n.cl.</th>
<th>Citation</th>
<th>Demons.</th>
<th>Poss.</th>
<th>Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-HH 3</td>
<td>-mō'ō</td>
<td>mō'ō wā</td>
<td>mō'ō għa</td>
<td>'mō'ō</td>
</tr>
<tr>
<td>Ḥ-ḤH 1</td>
<td>-fōrā</td>
<td>fōrā wā</td>
<td>fōrā għa</td>
<td>fōrā</td>
</tr>
<tr>
<td>L-ḤL 3</td>
<td>ū-tā'ā</td>
<td>ūtā'ā wā</td>
<td>ūtā'ā għa</td>
<td>ūtā'ā</td>
</tr>
<tr>
<td>Ḥ-ḤL 1</td>
<td>-sārā</td>
<td>sārā wā</td>
<td>sārā għa</td>
<td>sārā</td>
</tr>
<tr>
<td>L-ḤH 9</td>
<td>ū-gō'ō</td>
<td>ūgō'ō yā</td>
<td>ūgō'ō għa</td>
<td>ū'gō'ō</td>
</tr>
<tr>
<td>Ḥ-ḤL 1</td>
<td>-tītā</td>
<td>tītā wā</td>
<td>tītā għa</td>
<td>tītā</td>
</tr>
<tr>
<td>L-ḤL 9</td>
<td>ū-gigī</td>
<td>ūgigī yā</td>
<td>ūgigī għa</td>
<td>ūgigī</td>
</tr>
<tr>
<td>Ḥ-ḤL 1</td>
<td>-sōrā</td>
<td>sōrā wā</td>
<td>sōrā għa</td>
<td>sōrā</td>
</tr>
</tbody>
</table>
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 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. fā 'm5'5 → [fā 'm5'5] "give a gun!"
   H L-H H → [H 'H H]

b. fā förē → [fā förē] "give a mouse"
   H H-H H → [H H H]
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.

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Citation</th>
<th>Associative</th>
<th>Tone Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-HH</td>
<td>m5'5</td>
<td>m5'5</td>
<td>-HH</td>
</tr>
<tr>
<td>H-HH</td>
<td>fôrô</td>
<td>fôrô</td>
<td>-HH</td>
</tr>
<tr>
<td>L-LL</td>
<td>n-tā'ā</td>
<td>n-tā'ā</td>
<td>L-H'H</td>
</tr>
<tr>
<td>H-LL</td>
<td>sārā</td>
<td>sārā</td>
<td>-HL</td>
</tr>
<tr>
<td>L-LH</td>
<td>ŋ-gô'5</td>
<td>ŋgô'52</td>
<td>L-MM</td>
</tr>
<tr>
<td>H-LH</td>
<td>tîtâ</td>
<td>tîtâ</td>
<td>-HH</td>
</tr>
<tr>
<td>L-LL</td>
<td>ŋ-gîglî</td>
<td>ŋgîglî</td>
<td>L-LL</td>
</tr>
<tr>
<td>H-LL</td>
<td>sôrâ</td>
<td>sôrâ</td>
<td>-LL</td>
</tr>
</tbody>
</table>

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:
The underlying tones of the word /tāā/ "father" and a few nouns like /mānjī/ "name of a place", /rōdyō/ "radio" and /tōn/ "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 /rōdyō/ with the rest of the patterns that we have seen in the different frames.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>L-H H</td>
<td>-H H</td>
<td>L-M M</td>
<td>-H H</td>
<td>-H HL</td>
<td>-'H H</td>
<td>-H H</td>
</tr>
<tr>
<td>L-H L</td>
<td>L-M L</td>
<td>L-M L</td>
<td>L-M M</td>
<td>L-M L</td>
<td>-'H L</td>
<td>L-H 'H</td>
</tr>
<tr>
<td>H-H L</td>
<td>-H L</td>
<td>L-M L</td>
<td>-H L</td>
<td>-H L</td>
<td>-H L</td>
<td>-H L</td>
</tr>
<tr>
<td>L-L H</td>
<td>L-L L</td>
<td>L-L L</td>
<td>L-L L</td>
<td>L-L M</td>
<td>-'H H</td>
<td>L-M M</td>
</tr>
<tr>
<td>L-L L</td>
<td>L-L L</td>
<td>L-L L</td>
<td>L-L L</td>
<td>L-L L</td>
<td>-L L</td>
<td>L-L L</td>
</tr>
<tr>
<td>H-L L</td>
<td>-L L</td>
<td>-L L</td>
<td>-L L</td>
<td>-L L</td>
<td>-H L</td>
<td>-L L</td>
</tr>
</tbody>
</table>

(29)
Looking at the above frames we can see how different the nouns /tāā/ and /rēdyō/ 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, /ā-tā'ā/ "hill". The difference in their various surface realizations, could possibly be explained by the floating L (L) prefix as opposed to the L tone prefix on the surface segment of the other nouns: /tāā/ (L-HL) and /ā-tā'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: /māntā'ā/ "hills" and /bītāā/ "fathers".

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:

70
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 three morphemes:

(31) e. yi’li + ni + bo → yi’li f bo → [yi’Ibo] "ours" ours and they

In (31e) the plus sign (+) indicates the morpheme boundaries. We see that the L tone in the first morpheme acts across 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: $H \downarrow L \ H \rightarrow H \ 'H$

This is illustrated by the following examples:

(33) a. fâ 'm5'5 → [fâ 'm5'5] "give gun!"
    b. fâ n'sôô → [fâ n'sôô] "give a farm!"
    c. bó nîn kwërâ → [bô nîn 'kwërâ]
      "they took (it today)"

The derivation of (33a) is as follows:

(34) a. fâ 'm5'5 underlying
    b. fâ m5'5 tone grounding to the left
    c. fâ 'm5'5 simplification and ds

In (34a) an underlying L is posited before the noun /m5'5/. 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. fâ n'sôô underlying
    b. fâ n'sôô tone spreading
    c. fâ n'sôô simplification (by absorption)
    d. fâ nsôô nasal desyllabification and
       tone grounding to the left
    e. fâ n'sôô 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. fá mō'5 → fá mō'5 → [fá 'mō'5]
b. fá n'sōō → fá n'sōō → [fá n'sōō]

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 Baru (cf. 4.8.6). The following example illustrates the point.

(37) a. ŋdā 'lānā → [ŋdā lānā] "house of horse"
b. kō 'lānā → [kō lānā] "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. ŋdā 'lānā underlying
b. ŋdā 'lānā tone grounding to the left
c. ŋdā lānā tone grounding to the right
d. ŋdā lānā tone lowering
e. ŋdā lānā 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. fā 'm5'5 underlying
    b. fā 'm5'5 ds
    c. fā 'm5'5 loss of L tone

It is thus generally taken that in (39) the H tones of the noun, /-m5'5/ 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) fā 'yI'Ibō → [fā yI'Ibō] "give ours and theirs (ours)"
give ours + they

As we shall see in 11.4, /yI'Ibō/ 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. fā 'yI'Ibō underlying
    b. fā 'yI'Ibō tone lowering
    c. fā yI'Ibō 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 L tone is lost or deleted.

We thus see from the above examples that the downstep in a H L H is not effected by the mere presence of the intervening L. 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 L tone per se but by the disappearing of this L 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 L H → H 'H, describes the general environment that favours downstep. This rule can be expanded as follows:

a. b. c.
(42) H L H → HL H → H 'H

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

a. b. c.
(43) H L H → HL H → H 'H

It is important to note in (42) and (43) that the L 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 simplification 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. "nāː bītāː → [nāː bītāː] "animal of fathers"
    b. "nāː bītāː → [īnāː bītāː] "animals of fathers"

The LL of N1 in (44a) is realized as a normal L while the ILL 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
shall see in 21.3.2, the L tone raising rule has been phonologized in Bambili.

4.6.4 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 \( L (\sim) \) and \( H (\sim) \).

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. "nāa" bitāā underlying tones
    b. nāā" bitāā tone deletion
    c. nāā bitāā tone grounding to the right
    d. ināā bitāā tone raising
    e. ināā bitāā tone lowering

In the above example the 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 \( H \) is grounded to the right. At the same time it causes the preceding \( L \) tones to be raised. In e. the \( L \) tone part of the falling tone lowers the \( H \) tone on the \( N_2 \) stem to \( M \). It is worth noting that a raised \( L \) tone does not lower a following \( H \) to \( M \).
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. kõ äbāā → [kõ bāā] "take a bag!"
    b. fā ndēnnā → [fā ndēnnā] "give a bamboo!"

The derivation of (46a) is as follows:

(47) a. kõ abāā underlying tones
    b. kõ abāā H tone lowering
    c. kõ bāā V-deletion
    d. kõ bāā 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. fā ndēnnē underlying tones
    b. fā ndēnnē H tone lowering
    c. fā ndēnnē nasal desyllabification
    d. fā ndēnnē 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. This process is illustrated by the following examples:

(49) a. fā bilū'ū → [fā bilū'ū] "give spoons!"
b. kó bifóré  →  [kó bifóré]  
"catch mice!"

c. só nínɡɔɔ  →  [só nínɡɔɔ]  
"pierce plantain!"

d. lóɡá bìlù’ú  →  [lóɡá bìlù’ú]  
"fetch spoons!"

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

(50)  
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>fá bìlù’ú</td>
<td>underlying</td>
</tr>
<tr>
<td>b.</td>
<td>fá bìlù’ú</td>
<td>tone lowering</td>
</tr>
<tr>
<td>c.</td>
<td>fá bìlù’ú</td>
<td>tone spreading</td>
</tr>
</tbody>
</table>

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)  
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>lóɡá bìlù’ú</td>
<td>underlying</td>
</tr>
<tr>
<td>b.</td>
<td>lóɡá bìlù’ú</td>
<td>tone spreading</td>
</tr>
<tr>
<td>c.</td>
<td>lóɡá bìlù’ú</td>
<td>tone dissimilation</td>
</tr>
<tr>
<td>d.</td>
<td>lóɡá bìlù’ú</td>
<td>tone lowering</td>
</tr>
<tr>
<td>e.</td>
<td>lóɡá bìlù’ú</td>
<td>tone lowering</td>
</tr>
</tbody>
</table>

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

\[\text{\textit{51bis}}} \]
\begin{align*}
\text{a. } &= \text{fá mřľů'ů} \rightarrow \text{[fá mřľů'ů]} \quad \text{"give wine!"} \\
\text{b. } &= \text{lógů nǐbō'ů } \rightarrow \text{[lógů nřbō'ů]} \quad \text{"fetch pumpkin!"} \\
\text{c. } &= \text{fá nǐké } \rightarrow \text{[fá nř'kě]} \quad \text{"give soap!"}
\end{align*}

The derivation of (51a) is as follows:

\[\text{(52)}\]
\begin{align*}
\text{a. } &= \text{fá mřľů'ů } \quad \text{underlying} \\
\text{b. } &= \text{fá mřľů'ů } \quad \text{tone spreading} \\
\text{c. } &= \text{fá mřľů'ů } \quad \text{simplification (absorption)}
\end{align*}

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:

\[\text{(53)}\]
\begin{align*}
\text{a. } &= \text{fá nřké } \quad \text{underlying} \\
\text{b. } &= \text{fá nřké } \quad \text{tone simplification (by absorption)} \\
\text{c. } &= \text{fá nřké } \quad \text{tone spreading} \\
\text{d. } &= \text{fá nř'kě } \quad \text{simplification and ds}
\end{align*}

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 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.
(54) 'tăắ åtsắ → [tắ tsắ] "lineage head"

The derivation of this string is given here below:

(55) a. 'tăắ åtsắ underlying tones
b. 'tăắ åtsắ tone lowering
c. tăắ åtsắ tone deletion
d. tăắ `t sắ V-deletion
e. tăắ tsắ tone coalescence
f. tăắ tsắ tone grounding
g. tắ tsắ v-deletion
h. tắ tsắ tone grounding
i. tắ tsắ tone lowering

In (55a) the basic tones are given. The ¹ is the tone of the
N1 prefix (cf. 4.7) while the 1 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 1 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, /kăn/, the imperfect marker (cf. 17.6.4).
This process is illustrated by the following examples:

(56) a. sănắ 'tītā́ → [sănắ tītā́] "dry pepper!"
b. lăgắ nĭbō'ā́ → [lăgắ nĭbō'ā́] "fetch pumpkin!"
c. sō lănšē → [sō lănšē] "pierce a horse!"

The derivation of (56a) is given here below:
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. ó ghēz fā "where are you going?"
b. ó ghēz fā "where are you going?"
c. ã nī wō "who is it?"
d. ã nī yā 'wō "whom did he see?"
Looking at the tones of the interrogative pronouns /fa/ "where?" and /wo/ "who?" in the above examples, we can notice that they copy the tone of the preceding syllable. In (59a) /fa/ copies the L part of the ML on the preceding verb; in (59b) /fa/ 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 /yá/. 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. á kwěrē mē → [á kwěrē mē] "he has taken"  
b. bó lōgē mē → [bō lōgē mē] "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: B, L, 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: \[L - L (L) \rightarrow L - H (H) / H \#\#\]

Cl. B

The following examples illustrate this rule.

(62) a. /fâ ñsîn/ \rightarrow [fâ n'sîn] "give a farm!"
b. /nîbâ nî ñgî'sî/ \rightarrow [nîbâ nî ñgî'sî] "wing of termite"

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

(63) a. fâ ñsîn underlying tones
b. fâ ñsîn citation tones of noun
c. fâ ñsîn B tone raising
d. fâ nsîn desyllabification and tone grounding
e. fâ n'sîn simplification 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).
a. nǐbā nǐ ãgò'5  
underlying tones

b. nǐbā nǐ ãgò'5  
citation tones of N2

c. nǐbā nǐ ãgò'5  
B tone raising

d. nǐbā nǐ ãgò'5  
tone lowering (T-rule 1)
e. nǐbā nǐ ãgò'5  
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 C L(L)] \rightarrow H/HL / H # #

This rule is illustrated by the following examples:

(66) a. kó náa → [kó náá] "catch an animal!"
b. fá bátá → [fá bátá] "give wine calabash!"
c. bìlêñò bì nǔ → [bìlêñò bì nǔ] "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. bìlêñò bì nǔ  
underlying
b. bìlêñò bì nũ  
citation tones of N2
c. bìlêñò bì nǔ  
C L tone raising
d. bìlêñò bì nǔ  
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 L tone 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. áti'i 'náñna' → [átó'i ndónná] "half of bamboo"
b. á níŋ kwéré → [á níŋ kwéré] "he took"

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

(69) a. áti'i 'náñna' underlying
b. áti'i 'náñna' tone grounding
c. átó'i 'náñna' simplification and ds
d. átó'i 'náñna' tone lowering and tone level resetting
e. átó'i ndónná nasal desyllabification and tone deletion
f. átó'i ndónná tone grounding

In a. the underlying tones are given. In b. the H 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:

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(70) a. á nín kwéré underlying tones
b. á nín 'kwéré simplification and ds
c. á nín kwéré 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. 'kaa á sí mbá kwéré →
   NEG he NEG meat take T
   [káa sí' mbá kwéró]
   "he is not taking meat"

b. 'kaa á sí mbá sáñé →
   NEG he NEG meat dry T
   [káa sí' mbá sáñé ]
   "he is not drying meat"

c. á nín zí n-lógá ' lánè →
   he P1 come CNS-fetch T horse
   [á nín zí nlo'gá 'lánè]
   "he came and took a horse"

d. á len zí n-sáñé mbá →
   he P3 come CNS-dry T meat
   [á len zí nsáñé mbá]
   "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 /kwéré/ 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. ŋ-sâhâ mābā underlying
b. ŋ-sâhâ mābā tone superimposition
c. ŋ-sâ'ŋə mābā simplification and ds
d. ŋ-sâ'ŋə mābā nasal disyllabification and tone deletion

In (72a) the underlying tones of the string are given. In (72b) the CNS P3 tone Ḥ Ḥ pattern is superimposed on the underlying L Ḥ tone pattern of the verb stem. The application of the tone superimposition rule results in HL Ḥ tone pattern on the verb stem. In (72c) the contour HL tone on the verb stem simplifies and causes the following Ḥ 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 Ḥ Ḥ tone pattern is assigned in a given order. The first Ḥ 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 Ḥ, superimposition results in tone absorption, i.e., the superimposed Ḥ tone is absorbed by the underlying Ḥ 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 (\(\ddagger\)) 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 a unit, 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.

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
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 simplification (T-rule 7).
(73) a. fá ˈm5'5 
     underlying
b. fá m5'5 
     tone grounding (T-rule 4)
c. fá 'm5'5 
     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 bêlú'û 
     underlying
b. fá bêlú'û 
     tone spreading (T-rule 6)
c. fá bêlú'û 
     tone lowering (T-rule 1)

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

(75) a. fá fêtšā  fyā 
     underlying
b. fá fêtšā  fyā 
     tone spreading (T-rule 6)
c. fá fêtšā  fyā 
     simplification and ds (T-rule 2)
d. fá fêtšā  fyā 
     tone spreading (T-rule 6)
e. fá fêtšō  'fyā 
     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:

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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

(76) a. fá bǐlū'ū underlying
b. fá bǐlū'ū tone lowering (T-rule 2)
c. fá bǐlū'ū tone spreading (T-rule 6)
apply systematically, beginning with the 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. 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. [bô] [[[kâ] [lô]] [zî]] [[[n][lôgô]] [mâbë]

"they will come and fetch meat"

b. [â] [[[zî] [` `] [mâ]] [â] [[[ŋ][kô] [` `]] [` fôrô]

"they have come to catch a mouse"

c. [ê] [[[` bâ] [` cê] [fâ]] [fûg]

"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. bô kâ lô zî n-lôgô mbâ  underlying
b. bô kâ lô zî n-lôgô mbâ  simplification
c. bô kâ lô zî n-lôgô mbâ  simplification
d. bô kâ lô zî n-lôgô mbâ  tone lowering
e. bô kâ lô zî n-lôgô mbâ  nasal desyllabification
f. bô kâ lô zî lôgô mbâ  nasal and tone deletion
g. bô kâ lô zî lôgô mbâ  tone lowering
h. bô kâ lô zî lôgô mbâ  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.
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:

(79) a. äzi mā ą ńkó foré underlying
b. äzi mā ą ńkó foré PO replacive tone
c. äzi mā ą ńkó foré subord. clause verb tone
d. äzi mā ą ńkó foré tone grounding to the right
e. äzi mā ą ńkó foré V-deletion
f. äzi mā ą ńkó foré tone grounding to the left
g. äzi mā ą ńkó foré simplification and ds
h. äzi mā ą ńkó foré nasal desyllabification and tone grounding to the left
i. äzi mā ą ńkó foré simplification and ds
j. äzi mā ą ńkó foré simplification and ds

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 /fù/ 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. ā kwētsē `mū` wā underlying
b. ā kwētsē `mū` wā T0 replacive tone
c. ā kwētsē mū wā tone grounding to the left and absorption
d. ā kwētsē mū wā tone spreading to the left
e. ā kwēτēs' mū wā simplification and ds
f. ā kwētēs' 'mū' wā tone grounding
g. ā kwētēs' 'mū' wā simplification and ds

In the above derivation we notice that the rules apply cyclically 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. ā kwēsā `mō` wē underlying tones
b. ā kwēsā `mō` wē T0 replacive tones
c. ā kwēsā mō wē tone grounding to the left and absorption
d. ā kwēsā mō wē simplification
e. ā kwēsā mō wē simplification
f. ā kwēsā mō wē 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 /fɪbwɛ fɑ/ actually comes out phonetically as [fɪbwɛ fɑ], thus yielding a contour tone of the form LML. The LM tones on monosyllabic verbs like /sɔ/ "pierce!" /wɛ́/ "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 /ŋgɔ́ ɔ tɔä/ and others say /ŋgɔ́ ɔ tɔä/ "termite of father."

3 The difference between /mɪntá'â/ and /bɪtãä/ comes out when both words are used in the associative construction:

mɪntá'â mí bɔɔ → [mɪntá'â mí bɔɔ] "hills of children"

bɪtãä bɪ bɔɔ → [bɪtã bɪ bɔɔ] "fathers of children"

4 /mo'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 Konzime (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) n̂ĝ "honey"
    m̂Q "child"
    āmb̂n̂Q "bee"
    ṅd̂ŋn̂ "bamboo"
    ṃb̂n̂ "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.
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 disyllabic 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) ābō "hand"
    ndā "house"
    ābāa "corn fufu"
    fītīs "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 yā "the hand"
    fītīs fyā "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. átū' ndā "head of house (roof)"
b. átū' n'dā yā "the head of house (roof)"
c. átū' 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. ūbī ji bāā "two goats"
b. ūbī ji tārā "three goats"
c. mō'5, bā'ā, tā'rā,... "one, two, three..."d. ābō, ūtāā, bó nīlī'I "hand, leg, and eye"

In (7a,b) the words/bā'ā/"two" and/tā'rā/"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/ūtāā/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'I/"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.
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. kwërö mbâ yâ "take the meat!"
    b. fâ mbâ yâ "give the meat!"
    c. logâ mbâ yâ "fetch the meat!"
    d. sô mbâ yâ "pierce the meat!"

5.5.2 Statement

In statements the effect of intonation is sentence finally.

(10) a. mâ ki kûrâ nô "I ate a snake"
    b. mû ki yùu âbâa "I bought corn fufu"
    c. à ni fitêsà "it is a wine calabash"
    d. à ni mû "it is a child"
    e. à mânse "he has finished"
    f. à nîn kûrâ mbâ yâ "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. mâ ki kûrâ nô "did I eat a snake?"
    b. mû ki yùu âbâa "did I buy corn fufu?"
    c. à ni fitêsà "is it a wine calabash?"
    d. à ni mû "is it a child?"
    e. à mânse "has he finished?"
    f. à nîn kûrâ mbâ yâ "did he eat the meat?"
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. ã ghëê mbà (the statement has raised L tones)  
    "he has gone/has he gone?"
   b. ã ëjí  
   "he is eating/is he eating?"
   c. ã kĩ kùrë nînggê  
   "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. ã nîn lànë mbà  
    "he fetched meat"
   b. ã nîn làgë  
    "he fetched (it)"
   c. ã kà lë fëë mbà  
    "he will sell meat (tomorrow)"
   d. ã kà lë fëë  
    "he will sell (it)"
   e. bô kã yî sàñë mbà  
    "they will dry meat (in the distant part)"
   f. bô kã yî sàñë  
    "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. ő 18 fő “where are you from?”
b. ő 18a fő “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. à nĩ nĩbɔ’ɔ “it is a pumpkin”
b. à nĩ nĩbɔ’ɔ “is it a pumpkin?”
c. à nĩ nĩbɔ’ɔ “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 “coco yams”.

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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 : ni-bâ "wing"
b. L-M : â-tû "head"
c. Ø-H : Ø-nwì "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:
The pattern -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 /á-tú/ "head" or /fi-tá/ "calabash" which occur finally (cf. 5.3.2(3a,b)).

Very few nouns were found with the pattern (L)-LM such as /á-kwé'ė/ /-ánsá/, etc.

6.2.3 Trisyllabic Noun Stems

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

(3) a. L-LLL ni-dó "boundary"  
b. L-LML á-kíkí "cough"  
c. L-MLI ni-ghóghó "praying mantis"  
d. L-MMI bi-káa "crabs"  
e. L-MHI á-kíkúrú "owl"  
f. 0-MLI Ò-táa "father"  
g. Ò-HLI Ò-máa "grandmother"  
h. 0-HHI Ò-fóó "mouse"

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

6.2.4 Quadrisyllabic Noun Stems.

The following are examples of the patterns found on four-syllable noun stems:
6.2.5 Five Syllabic Noun Stems

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

(5) a. L-LLMML : ŋ-dàrētākūmbēn "house of juju"
b. Ò-LLMHLL : Ò-miṭānibā̀ ā "5th day of the week"
c. L-LMLLLL : ŋ-kṑ āfikōu "6th day of the Bafut week"
d. L-MLLLLL : ŋ-tōōbā̀ ālā "7th day of the Bafut week"
e. L-MMMLLM : ŋ-tā̀ ābiwēē "Ntabuweh"
f. Ò-HHLLL : Ò-kwāmāŋkṑ ā "tortoise"
g. Ò-HHHLH : Ò-tsēētākōrā "kind of cricket"
i. Ò-HHHHHH : Ò-nǐghānhīghoò "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.
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 application of T-rule 1 is felt as far as two immediately following syllables. These nouns have the underlying tone pattern \( H-H \). Following are examples of A H tone nouns:

(6) a. sǐŋ̂a "bird"
    b. fōr̡a "mouse"
    c. kō'5s̡a "type of"
    d. nǐgĥnǐgĥōō "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-sǐŋ̂a \( \rightarrow [bɨ-sǐŋ̂a] \) "birds"
    b. bɨ-fōr̡a \( \rightarrow [bɨ-fōr̡a] \) "mice"
    c. bɨ-kō'5s̡a \( \rightarrow [bɨ-kō'5s̡a] \) "type of yams" (pl.)
    d. bɨ-nǐgĥnǐgĥōō \( \rightarrow [bɨ-nǐgĥnǐgĥōō] \) "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.
(8) a. títá "pepper"
b. ñìñìŋ "night mosquito"
c. tûmñë "hat"
d. ñìñsâ "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. bì-ìtítá → [bì-títá] "peppers"
b. bì-ìñìñìŋ → [bì-ìñìñìŋ] "night mosquitoes"
c. bì-tûmñë → [bì-tûmñë] "hats"
d. würë ñìñsâ → [würë ñìñsâ] "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. lû [1û] → [lû wâ] "tree rat" "the tree rat"
b. mù [mû] → [mû wâ] "child" "the child"
c. nó [nî] → [nî 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 adjectival or numeral prefix as follows:

(11) a. lû yîm fîì → [lû yîm fîì] "black tree rat"
b. mù yîn sîgënà → [mû yîn sîgënà] "nice child"
The above nouns cause following H tones to downstep as in the following examples:

\[(12)\]
\[
a. \text{ nó mù jyà } \rightarrow \text{ [nò 'mù jyà]} \\
    \text{ "the snakes of the child"}
\]
\[
b. \text{ nú mù wà } \rightarrow \text{ [nú 'mù wà]} \\
    \text{ "honey of child"}
\]

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:

\[(13)\]
\[
a. \text{ fá fit̩à fỳà } \rightarrow \text{ [fá fí't̩à fỳà]} \\
    \text{ "give the wine calabash!"}
\]
\[
b. \text{ ṭ̩ıkir̩à fit̩à wà } \rightarrow \text{ [ṭ̩ıkir̩à fí't̩à wà]} \\
    \text{ "rope of the wine calabash"}
\]

In the above examples we note that the M tone of the noun, /fit̩à/ 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:

\[(14)\]
\[
a. \text{ fit̩à fí fíl } \rightarrow \text{ [fit̩à fí fíl]} \\
    \text{ "black wine calabash"}
\]
\[
b. \text{ ńdà yílm fíl } \rightarrow \text{ [ńdà yílm fíl]} \\
    \text{ "new house"}
\]

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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. kô lôŋô yIm fill "take a black horse!"
b. lôŋô lôŋô yIm fůrâ "take one horse!"
c. bîfôrâ bî fîl "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. kô ṅgīgī → [kô ṅgīgī] "take egusi!"
b. bweē ṅgō'ō → [bweē ṅgō'ō] "pick up stones"
c. âtû 'åbåå → [âtû'åbåå] "head of bag/big bag"

The tone changes in the associative construction of (16c) are described in chapter eight (cf. 6.4). 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.
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. kó ṃsē → [kó n'sē] "start a new farm!"
b. nítōn ǹf ǹgō'ō → [nítō'ō ǹf ǹgō'ō] "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. tsētē fērē wā → [tsētē fērē wā] "shut the window!"
b. mānkirē mī dāā → [mānkirē mī dāā] "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.
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. 1.a e.g.

(1) ø-fôrē "mouse"
ø-kâá "crab"
ø-ânsâŋ "corn"
lâmsi "orange"
kâá "car"

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

(2) m-û "child"
m-ângyê "woman"
ñ-döö "husband"
ñ-dîmâ "kinsman/brother"
mâ-fô "chief"
ñ-û "person"

The prefixes of the nouns: mû, mângyê and ñû, have lost their tone and have become fused with the stem.

7.3.2 Noun Class 2

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

(3) bî-fôrâ "mice"  b-û "children"
bî-kâá "crabs"  b-ô "people"
b-ânsâŋ "corn"  bî-ðöö "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 /i-/: 

(4) a. i-sə'ɔ "case"  
i-li "ant"  
i-bo'ɔ "mushroom"

N.cl. 3b takes a nasal prefix /n-/: 

(4) b. ṉ-bən "kernel"  
ṉ-tɛɛ "heart"  
ṉ-ɡən "root"

7.3.4 **Noun Class 5**

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

(5) ṉi-ngɔɔ "plantain"  
ṉi-biʃ "breast"  
ṉi-kwɛɛ "arm"  

7.3.5 **Noun Class 6**

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

(6) mɬi-ngɔɔ "plantains"  
mɬi-ngən "roots"  
mɬi-njɔn "thornes"

7.3.6 **Noun Class 7**

The prefix of n.cl. 7 is /a-/.
7.3.7 Noun Class 8

The prefix for N.cl. 8 is /€-/:  

(7) €-bêa "bags"  €-tëa "calabashes"  €-jëa "yams"  €-së "hoes"  €-kêa "pans"  €-lëo "years"

7.3.8 Noun Class 9

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

(9) Ă-dâ "house"  Ă-bê "meat"  Ă-gû "fowl"  Ă-âa "animal"  Ă-jë "thorn"  Ă-ô "snake"

7.3.9 Noun Class 10

The prefix for N.cl. 10 is also a nasal /Ă-/; 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) Ă-dâ "houses"  Ă-dûnê "bamboos"  Ă-gû "fowls"  Ă-âa "animals"  Ă-bû "dogs"  Ă-ô "snakes"

The prefix of Ăâ "animal(s)"  mô "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.
7.3.10 Noun Class 19

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

(11) fi-ŋwãŋ "salt" fi-njɔŋ "star"
fi-nsãŋ "broom" fi-tã "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. Head
1. sîŋ g hã yîm fi "my black bird"
2. ɓiŋ g b bî fi "my black birds"
3. fi g hã yi fi "my black ant"
5. nîŋgã nã nî fi "my black plantain"
6. mîngã'ɔ mã mî fi "my black plantains"
7. ɗabã yã yi fi "my black bag"
8. ɗbã jã ji fi "my black bags"
9. mî yã yîm fi "my black goat"
10. mî jã ji fi "my black goats"
11. fi-tãã fã fi fi "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
morphemes given.
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.

(3) Table of Conords

<table>
<thead>
<tr>
<th>N.</th>
<th>Member</th>
<th>NPfx</th>
<th>SM</th>
<th>CC</th>
<th>AP</th>
<th>IP</th>
<th>Poss</th>
<th>Dem</th>
<th>AM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>sîñ</td>
<td>a</td>
<td>gñ</td>
<td>yl</td>
<td>ghûû</td>
<td>gñâ</td>
<td>wå</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>bîññî</td>
<td>bî</td>
<td>bî</td>
<td>bî</td>
<td>bûû</td>
<td>bñ</td>
<td>byñ</td>
<td>bñ</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>lîñ</td>
<td>îñ</td>
<td>gñ</td>
<td>yl</td>
<td>ghûû</td>
<td>gñâ</td>
<td>wå</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>nîñññ</td>
<td>nî</td>
<td>nî</td>
<td>nî</td>
<td>nûû</td>
<td>nñ</td>
<td>nññ</td>
<td>nññ</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>nîñññ</td>
<td>mî</td>
<td>mî</td>
<td>mî</td>
<td>mûû</td>
<td>mñ</td>
<td>mññ</td>
<td>mññ</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>ñbññ</td>
<td>ññ</td>
<td>ññ</td>
<td>ññ</td>
<td>ñûû</td>
<td>ññ</td>
<td>ñññ</td>
<td>ñññ</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>ñbññ</td>
<td>ññ</td>
<td>ññ</td>
<td>ññ</td>
<td>ñûû</td>
<td>ññ</td>
<td>ñññ</td>
<td>ñññ</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>ññññ</td>
<td>ññ</td>
<td>ññ</td>
<td>ññ</td>
<td>ñûû</td>
<td>ññ</td>
<td>ñññ</td>
<td>ñññ</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>ññññ</td>
<td>ññ</td>
<td>ññ</td>
<td>ññ</td>
<td>ñûû</td>
<td>ññ</td>
<td>ñññ</td>
<td>ñññ</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>ññññ</td>
<td>ññ</td>
<td>ññ</td>
<td>ññ</td>
<td>ñûû</td>
<td>ññ</td>
<td>ñññ</td>
<td>ñññ</td>
<td></td>
</tr>
</tbody>
</table>

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 noun classes into genders.

(15) | Singular | Plural |
-----|---------|--------|
| N.Cl. NPx CC | N.Cl. NPx CC |
| a) ø- | gh~ | 2 | bi | b~ |
| b) n- | gh~ | 3 | gh~ | gh~ |
| a) i- | gh~ | 5 | ni | n~ |
| b) n̄- | gh~ | 7 | ā̄- | ̄y~ |
| 9 | ̄n̄- | ̄y~ | 10 | ̄n̄ | ̄y~ |
| 19 | fī- | f̄- | 2 | bi | b̄ |

In the above table, the noun 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

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)

- nāā/bī-  "ground squirrel"  - rēdyō/bī-  "radio"
- ū-dē/bī-lē  "mother"  - kāā/bī-  "car"
- tsāā/bī-  "reception house"  - kāū/bī-  "cow"
- bōō/bī-  "boring ant"  - wïndō/bī-  "window"
- ãfweē/bī-  "roofer"  - sīn/bī-  "bird"
- ū-dīī/bī-li̊ś  "witch"  - lū/bī-  "tree rat"
- yēkā/bī  "the day before market day"  "chimpanzee"
- yējōn/bī  "Bafut market day"  "mouse"
- ū-dōō/bī-lōō  "husband"  "crab"
- trēn/bī-  "train"  - ts̆ō̊ō/bī-  "partridge"

7.5.2.2.2 Gender 3/6 (assorted nouns)

- ūtō/mī-  "new leaf, bud"  ñgōō/mī-  "gutter"
7.5.2.2.3 Gender 5/6 (assorted nouns)

| Ndēn/mi-  | Ṣəkəni/mi- |
| "metal ring" | "rope"  |
| Ṣoqō/mi-  | Ṣəqəg/mi- |
| "farm" | "climber stem" |
| Ṣkōq/mi-  | Ṣ-bō’/mī- |
| "tail" | "mushroom" |
| Ṣkī/mi-  | Ṣ-kə/mi- |
| "river" | "cane" |
| Ṣ-kō/mi-  | Ṣ-kūm/mi- |
| "song" | "name" |
| Ṣ-kū/mi-  | Ṣ-tūg/mi- |
| "bed" | "ladder" |
| Ṣ-lī/mi-  | Ṣ-sā’/mī- |
| "ant" | "night" |
| Ṣ-lān/mi- | "tapping shoot of palm" |
| | "case" |

7.5.2.2.4 Gender 7/8 (assorted nouns)

| ɓe’/i-  | ɓe’/i- |
| "shoulder" | "shoe" |
| ɗiɡi/i-  | ɗiɡi/i- |
| "place" | "tongue" |
| ɗū/i-  | ɗū/i- |
| "leaf" | "calabash" |
| ɗkən/i-  | ɗkən/i- |
| "pan" | "head" |
| ɗqən/i-  | ɗqən/i- |
| "pan" | "yam" |
| ɓaən/i- | ɓən/i- |
| "mortar" | "bag" |
7.5.2.2.5 Gender 9/10 (animals)

nó/lá
"snake"

ó/lá
"honey"

ná/lá
"axe"

ná/lá
"soup"

ná/lá
"back"

má/tamí/má
"bangle"

má/bá/má
"meat"

ná/dá/ná
"cup"

ná/tá/a/ná
"palace"

ná/tá/a/ná
"mountain/hill"

7.5.2.2.6 Gender 19/6 (diminutives)

fí-kúu/mí-
"small bed"

fí-ngáa/mí-
"star"

fí-ntá/mí-
"fruit"

fí-nee/ná/mí-
"broom"

fí-linjwóó/mí-
"kind of mushroom"

fí-njóó/mí-
"toad"

fí-táa/mí-
"small wine fish"

fí-ntsúu/mí-
"small drum"

fí-ngée/mí-
"small cane"

fí-ngwa/ná/mí-
"salt"

fí-nkáa/mí-
"statue"

fí-línjá/mí-
"fly"

fí-línjáa/mí-
"small biting fly"

fí-bwé/má-
"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)**

- m-ban/m- "kernel"
- n-don/ñ- "bamboo"

7.5.2.3.2 **Gender 7/6 (body parts)**

- a-fa'am/m- "job, work"
- a-kore/m- "foot"
- a-k'o/ut/m- "knee"

7.5.2.3.3 **Gender 7/10 (assorted nouns)**

- a-yoo/ñ-joo "thing"

7.5.2.3.4 **Gender 9/6 (assorted nouns)**

- n-jon/m- "thorn"

7.5.2.3.5 **Gender 19/10 (assorted nouns)**

- fi-kweë/ñ- "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)**

- mi-waŋ "porridge"
- mi-kaa "gun powder"
- mi-koro "juju"
- mi-lu'u "wine"
- mi-tso "intestines"
- mi-went "goose pimples"
- mi-wu're "oil"
- mi-tsyë "intelligence, wisdom"
- mi-ti "power, strength"

7.5.2.4.2 **Gender 9 (Gerunds)**

All gerunds are in this gender.
ñ-tōō "standing"
ñ-yī "knowing"
ñ-īlī "coming out"
ñ-īmī "giving"
ñ-īrē "slapping"
ñ-kwērē "taking"

7.5.2.4.3 Gender 5 (Gerundials)

ñi-tōō "walk"
ñi-wyē "laugh"
ñi-ghāā "manner of talking"
ñi-tsō'ō "wildness"
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.C1. AM and Tone

<table>
<thead>
<tr>
<th>N.C1</th>
<th>AM and Tone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>L</td>
</tr>
<tr>
<td>2</td>
<td>bǐ</td>
</tr>
<tr>
<td>3</td>
<td>ŋ</td>
</tr>
<tr>
<td>5</td>
<td>mǐ</td>
</tr>
<tr>
<td>6</td>
<td>H</td>
</tr>
<tr>
<td>7</td>
<td>ŋ</td>
</tr>
<tr>
<td>8</td>
<td>L</td>
</tr>
<tr>
<td>9</td>
<td>fì</td>
</tr>
</tbody>
</table>

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
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 $\uparrow$ (2) Noun classes 2, 5, 6, 19: with $\uparrow \uparrow$ (3) Noun classes 3, 7, 8, 10: with $\uparrow$

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. $\uparrow$, 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,
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'á 'förä → [bá'á 'förä]
   "calabash dish of mouse"

   b. má'ghōō 'förä → [má'ghōō 'förä]
   "hawk of mouse"

   c. ŋōō 'förä → [ŋōō förä]
   "husband of mouse"

   d. ánšăn 'förä → [ánšăn förä]
   "maize of mouse"

   e. kwíinyám 'förä → [kwíinyám förä]
   "pig of mouse"

   f. rëdyō 'förä → [rëdyō förä]
   "radio of mouse"

   g. tsáá 'förä → [tsáá förä]
   "reception house of mouse"

(5) a. bá'á 'k̕kkūn → [bá'á k̕kkūn]
   "calabash dish of owl"

   b. ŋōō 'k̕kkūn → [ŋōō k̕kkūn]
   "husband of owl"

   c. tāā 'atsā → [tā tsā]
   "lineage head"

   d. mángyè̂ 'ntō'ō → [mángyè̂ ntō'ō]
   "chief's wife"

   e. mítáā 'bifii → [mítáā bifii]
   "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
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. "tāā mū → [tā mū]  
"father of child"

b. "tāā ikōō → [tā kōō]  
"song leader"

c. "tāā förā → [tā förā]  
"father of rat"

The deletion of the second syllable of /tāā/ distinguishes the above constructions semantically from the following appositional constructions:

(7) a. "tāā ātsā → [tāā tsā]  
"Father ātsā"

b. "tāā ikōō → [tāā kōō]  
"Father Ikōō"

c. "tāā förā → [tāā förā]  
"Father Förā or Papa Förā"

In (5d) we notice that the tone of the last syllable of /māngyē/ (citation tone) is raised. This raising effect is also seen in (5e). The derivation of (5d) is given here below:

(8) a. māngyē ̲̲ ̲̲ ñt5'5  
underlying
b. māngyē ̲̲ ̲̲ ñt5'5  
tone grounding
c. māngyē ̲̲ ̲̲ ñt5'5  
tone lowering
d. māngyē ̲̲ ̲̲ ñt5'5  
desyllabification
e. māngyē ̲̲ ̲̲ nt5'5  
tone coalescence
f. māngyē ̲̲ ̲̲ nt5'5  
tone grounding
g. māngyē ̲̲ ̲̲ nt5'5  
tone lowering
In (8a) the underlying tones of /mängyeʔ/ 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. mitää Bĩĩĩĩ citation tones
b. mitää Bĩĩĩĩ 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 Tone of Prefix of N2

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.
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:

1. `bā’ō - mēŋg - calabash dish of plantains`
2. Ńdōō - ākīkūŋ → [ńdōō kīkūŋ] - husband of owl`
3. `fōrō - Ńdā - [fōrō ndā] - mouse of house (house mouse)`

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 coalesce 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 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:

1. `fōrō - Ńdā - underlying`
2. fōrō - Ńdā - tone grounding to the right
3. fōrō - Ńdā - desyllabification
4. fōrō - Ńdā - tone coalescence
5. fōrō - Ńdā - tone grounding
6. fōrō - Ńdā - 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
left where it coalesces with the \textsc{\textit{L}} marker as in (14d); in (14e) the floating \textsc{\textit{L}} tone is grounded to the left on the adjacent syllable of \textit{N1} where it creates a HL contour tone. In (14f) the HL tone of \textit{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 \textit{V}-prefixes of \textit{N2} are generally grounded to the left. The floating \textsc{H} tones of noun prefixes are grounded to the right on the noun stem (when not deleted).

8.2.1.3 Tone of \textit{N2} Stem

The examples in tables (15-18) below show the tone patterns of \textit{N2} stems after the most common tone patterns found on \textit{N1}.

(15) a. \textit{bá'á} \textit{fôrë} $\rightarrow$ [bá'á 'fôrë]  
"calabash dish of mouse"

b. \textit{má'ghôô} \textit{fôrë} $\rightarrow$ [má'ghôô 'fôrë]  
"hawk of mouse"

c. \textit{ndôô} \textit{fôrë} $\rightarrow$ [ndôô förë]  
"husband of mouse"

d. \textit{âsâñ} \textit{fôrë} $\rightarrow$ [âsâñ förë]  
"maize of mouse"

(16) a. \textit{lû'û} \textit{má'ghôô} $\rightarrow$ [lû'û 'má'ghôô]  
"spoon of hawk"

b. \textit{lû'û} \textit{mââ} $\rightarrow$ [lû'û 'mââ]  
"spoon of grandmother"

c. \textit{lû'û} \textit{kîkûn} $\rightarrow$ [lû'û kîkûn]  
"spoon of owl"

d. \textit{lû'û} \textit{ju'û} $\rightarrow$ [lû'û ju'û]  
"spoon of yams"

e. \textit{lû'û} \textit{tââ} $\rightarrow$ [lû'û tââ]  
"spoon of father"
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 H of the marker. The derivation of (15a) is as follows:

(19) a. 'bá'á 'fórê underlying tones
b. bá'á 'fórê tone grounding to the right
c. bá'á 'fórê tone grounding to the right
d. bá'á 'fórê tone grounding to the left
e. bá'á 'fórê tone simplification and ds

In (19a) the underlying 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 tone of the marker is grounded to the left. In (19e) the contour tone simplifies causing the following H tone of N2 stem to downstep.

The derivation of (15b) is as follows:

(20) a. 'má' ghôô 'fôrê underlying
b. má'ghôô 'fôrê tone grounding to the right
c. mághôô 'fôrê tone grounding
d. má'ghôô 'fôrê tone simplification and ds
e. má'ghôô 'fôrê tone grounding
f. má'ghôô 'fôrê 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'ghôô/ is a compound noun resulting from the associative construction. In (20c) the tone between /má-/ and /-ghôô/ is grounded to the left on /má-/ forming a HL contour tone which simplifies in (20d) causing the following H tone of /-ghôô/ 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.
In (16a-h) the ι marker is deleted. In (18a-h) the ι 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. -nwI ~ mfs → [nwI mfs]
     "cutlass of chief"
 b. ŋdāŋnā ~ mfs → [ŋdāŋnā mfs]
     "bamboo of chief"
 c. ńtš'5 ~ fōrē → [ńtš'5 fōrē]
     "palace of mouse"
 d. ńmbē'è ~ mfs → [ńmbē'è mfs]
     "Bambui of chief"
 e. ŋjāā ~ mfs → [ńjāā mfs]
     "axe of chief"
 f. ŋgš'5 ~ mfs → [ńgš'5 mfs]
     "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 ι 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:
We notice that in (22a) 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:

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.
In the above example, the 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. `nwi `fôrê → [nwi 'fôrê]  
   "cutlass of mouse"
b. `nwi `mââ → [nwi 'mââ]  
   "cutlass of grandmother"
c. `nwi `ntôs → [nwi ntôs]  
   "cutlass of Palace"
d. `nwi `tââ → [nwi tââ]  
   "cutlass of father"
e. `nwi `kôfî → [nwi kôfî]  
   "cutlass of coffee"
f. `nwi `mfwêô → [nwi mfwêô]  
   "cutlass of roofer"

(26)  
a. `nijâa `fôrê → [nijâa förê]  
   "axe of mouse"
b. `nijâa `mââ → [nijâa mââ]  
   "axe of grandmother"
c. `nijâa `ntôs → [nijâa ntôs]  
   "axe of Palace"
d. `nijâa `tââ → [nijâa tââ]  
   "axe of father"
e. `nijâa `kôfî → [nijâa kôfî]  
   "axe of coffee"
f. `nijâa `mfwêô → [nijâa mfwêô]  
   "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. Moreover 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 CV:

(27) N.Cl. AM and Tone

<table>
<thead>
<tr>
<th>N.Cl.</th>
<th>AM</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>bɨ</td>
</tr>
<tr>
<td>5</td>
<td>nɨ</td>
</tr>
<tr>
<td>6</td>
<td>mɨ</td>
</tr>
<tr>
<td>19</td>
<td>fɨ</td>
</tr>
</tbody>
</table>

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 the prefix.

(28) a. nibäsä' ni mf₅ → [nibäsä' 'ni mf₅]
    "kind of insect of chief."

b. mĩngØ mf₅ → [mĩngØ mf₅]
    "plantains of chief."

c. bikōbō bì mĩlǖ'ū → [bikōbō bì mĩlǖ'ū]
    "cups of wine"

d. bikōbō bì mĩlIALIZ → [bikōbō bì mĩlǖ'ū]
    "calabash dishes of owl"

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. bìfōrē bì mf₅ → [bìfōrē bì mf₅]
    "mice of chief"

b. nibäsä' ni mf₅ → [nibäsä' 'ni mf₅]
    "type of insect of chief"

c. fītēś ff mf₅ → [fītēś 'ff mf₅]
    "wine calabash of chief"

d. bikōfī bì mf₅ → [bikōfī bì mf₅]
    "coffee of chief"

e. mĩghāghē mf₅ → [mĩghāghē mf₅]
    "praying mantises of chief"

f. mĩngØ mf₅ → [mĩngØ mf₅]
    "plantains of chief"

In (29a) the H tone of the stem of N₁ is lowered by the L
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 an 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 an 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 an HL contour on its stem.

The derivation of (36f) is as follows:

(38) a. bìlànə bì tāa underlying tones
    b. bìlànə bì tāa tone deletion
    c. bìlànə bì tāa 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. fìntā fī kōfī underlying
    b. fìntā fī kōfī tone grounding
    c. fìntā fī kōfī tone lowering
    d. fìntā fī kōfī tone lowering

In (39a) the underlying tones are given. We have posited an underlying H as the prefix tone of the noun /kōfī/ 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 an HL contour tone on the N2 stem. In (39c) the H tone of the
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. mikörê mî `fôrê → [mikörê mî fôrê] "legs of mouse"
b. nibûrê nî `fôrê → [nibûrê 'nî fôrê] "faeces of mouse"
c. mînôî mî bîfôrê → [mînôî mî bîfôrê] "hairs of mice"
d. ningôô nî `mâá → [ningôô nî mâá] "plantain of grandmother"
e. bibá̃'a bî mikûû myá̃ → [bibá̃'a bî mîkûû myá̃] "calabash dishes of the beans"
f. bilôngô bî `tâá → [bilôngô bî tâá] "horses of father"
g. fintâ fî `kôô → [fintâ fî kôô] "fruit of coffee"
h. mîngôô mî ñsôô → [mîngôô mî ñsôô] "plantains of farm"
i. fitââ fî `sôô → [fitââ fî sôô] "huckleberry seed of witch"

In (36a) the H tone of N2 does not change. In (36b) the L 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. mīk33 mî mî

c. bībā'â bī mî

d. fitēē ff mîf5 — [fitē'â 'ff mîf5]  
"wine calabash of chief"

e. bībā'â bī âkîkûn — [bībā'â bī kîkûn]  
"calabash dishes of owl"

The derivation of (32a) is as follows:

(33) a. nîng33 nî bîtāâa underlying tones
b. nîng33 nî bîtāâa tone spreading
c. nîng33 nî bîtāâa tone lowering
d. nîng33 nî bîtāâa 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. bîkôbâ bî mîlû'û underlying
b. bîkôbâ bî mîlû'û tone lowering
c. bîkôbâ bî mîlû'û tone spreading
d. bîkôbâ bî mîlû'û 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. bībā'â bī âkîkûn underlying
b. bībā'â bī âkîkûn tone lowering
c. bībā'â bī âkîkûn V - deletion
d. bībā'â bī kîkûn tone grounding
e. bībā'â bī kîkûn tone lowering
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. fîtāā fi -mf5 underlying
b. fîtēs ff -mf5 tone spreading to the left
c. fîtē's 'ff mf5 simplification and ds
d. fîtē's 'ff mf5 desyllabification
e. fîtē's 'ff mf5 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.l., 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. nîng35 ni bîtǎa → [nîng35 nǐ bîtǎa]
    "plantain of fathers"

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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) \( \text{mìng\textsuperscript{33} mì \text{\textsuperscript{\texttimes} sóòò}} \) citation tone of N2  
(b) \( \text{mìng\textsuperscript{33} mì \text{\textsuperscript{\texttimes} sóòò}} \) B tone raising by T-rule 14  
(c) \( \text{mìng\textsuperscript{33} mì \text{\textsuperscript{\texttimes} sóòò}} \) tone lowering  
(d) \( \text{mìng\textsuperscript{33} mì \text{\textsuperscript{\texttimes} sóòò}} \) desyllabification  
(e) \( \text{mìng\textsuperscript{33} mì \text{\textsuperscript{\texttimes} sóòò}} \) 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) \( \text{fìt\textsuperscript{\texttimes} fì \text{sò\texttimes rà}} \) citation tones of N2  
(b) \( \text{fìt\textsuperscript{\texttimes} fì \text{sò\texttimes rà}} \) tone lowering  
(c) \( \text{fìt\textsuperscript{\texttimes} fì \text{sò\texttimes rà}} \) 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 \(-\text{LL}\) 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:
A sample derivation of (42a) is as follows:

(43) a. ⁿnā ʰ bitāa  underlying tones
    b. nā ʰ bitāa  tone deletion
    c. īnā ʰ bitāa  tone raising
    d. īnā ʰ bitāa  tone grounding to the right
    e. īnā ʰ bitāa  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. ᵐm5'5 ʰ mf5  →  [ᵐm5'5 mf5]
      "gun of chief"
    b. ᵐmbēē ʰ mf5  →  [ᵐmbēē mf5]
      "nails of chief"
    c. ībētā ʰ mf5  →  [ībētā mf5]
      "questions of chief"
    d. ābāā ʰ mf5  →  [ābāā mf5]
      "bag of chief"
    e. ṅkūū ʰ fōrā  →  [ṅkūū fōrā]
      "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. ṭbētā - mf5 underlying
b. ṭbētā mf5 tone grounding by T-rule 4
c. ṭbētē' mf5 tone simplification and ds T-rules 7 and 2
d. ṭbētē' mf5 desyllabification by P-rule 4
e. ṭbētē' mf5 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. ṭbētā - mf5 underlying
b. ṭbētā mf5 tone grounding

The derivation of (46e) further simplifies to M.

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. ṭkūū - fórē underlying
b. ṭkūū fórē tone coalescence
c. ṭkūū fórē tone grounding to the right
d. ṭkūū fórē tone lowering

In the above derivation, the H tone of the marker and the H tone of the N1 prefix coalesce in b. In c. the H 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 behaviour of the nasal prefix of N2 has 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. 'mɔ\'ɔ' bitàà → [mɔ\'ɔ bitàà]  
   "gun of fathers"

b. ŋdɔŋ'ē miłu'ū → [ŋdɔŋ'ē miłu'ū]  
   "calabashes of wine"

c. ŋbā'ā abākòŋ → [abā'ā kòŋ]  
   "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. ŋdɔŋ'ē miłu'ū underlying
b. ŋdɔŋ miłu'ū tone grounding to the left
c. ŋdɔŋ miłu'ū tone grounding to the right
d. ŋdɔŋ miłu'ū tone absorption
e. ŋdɔŋ miłu'ū tone spreading to the left
f. ŋdɔŋ'ē miłu'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.
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. ˈmōʃə ˈbuŋ → [mōšə buŋ]  
     "gun of chimpanzee"

b. ˈabá ˈbuŋ → [abá buŋ]  
     "corn fufu of chimpanzee"

c. ˈabá ˈbuŋ → [abá buŋ]  
     "bag of chimpanzee"

d. ˈná ˈmá → [ná má]  
     "animals of grandmother"

e. ˈililá ˈtā → [ililá tā]  
     "bats of father"

f. ˈakiká ˈkóf → [akiká kóf]  
     "basket of coffee"

g. ˈndó ˈngí → [ndó ngí]  
     "cups of egusi"

h. ˈátu ˈnsó → [átu nsó]  
     "head of farm"

i. ˈnwí ˈsó → [nwí só]  
     "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 H tone marker and that of the N2 prefix coalesce and the resultant H 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.
In a. the citation tones of N2 are given. In b. the L tone of N1 grounds to the left and in c. the H 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.

<table>
<thead>
<tr>
<th>Person</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>mä</td>
<td>bi'I</td>
</tr>
<tr>
<td>2</td>
<td>ô</td>
<td>nǐ</td>
</tr>
<tr>
<td>3</td>
<td>à</td>
<td>bó</td>
</tr>
</tbody>
</table>

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.
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. á kwérá mbá → [á kwérá mbá] "he has taken meat"
b. bó sānā mbá → [bó sānā mbá] "they have dried meat"
c. á nín wō → [á nín wō] "it fell (today)"
d. bī nín wō → [bī nín wō] "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   sī   bī’Inā
1+3   bī’Iyū   bī’Ibō
2+3   bū’yū   bū’bō

The underlying tones of the pronouns are as indicated. T-rule 1
The following examples illustrate the use of these pronouns:

(5) a. sǐ kā kwêrë mbâ "you and I shall take meat"
    b. bûyû kā 'kwêrë mbâ "you and he will take meat"
    c. bl'Ibô kā 'kwêrë mbâ "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 compound forms.

9.2.1.1 Simple Object Pronouns of Verbs

The following table shows the simple pronouns that are used as verb objects.

<table>
<thead>
<tr>
<th>Person</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ghâ-</td>
<td>ýI'I</td>
</tr>
<tr>
<td>2</td>
<td>ghô-</td>
<td>ghGû</td>
</tr>
<tr>
<td>3</td>
<td>ýI</td>
<td>wââ</td>
</tr>
</tbody>
</table>

The underlying tones of the above pronouns can be affected as follows:

(7) a. à yô mâ̂ ghâ → [ã yô mâ̂ ghã] "they have seen me"
    b. bó yô mâ̂ ýI'I → [bó yô mâ̂ ýI'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

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1+2</td>
<td>yi'I'y</td>
<td>yi'I'ñá</td>
</tr>
<tr>
<td>1+3</td>
<td>yi'I'yú</td>
<td>yi'I'bo</td>
</tr>
<tr>
<td>2+3</td>
<td>ghii'ýú</td>
<td>ghii'bo</td>
</tr>
<tr>
<td>3+3</td>
<td>wáá'yú</td>
<td>wáá'bo</td>
</tr>
</tbody>
</table>

The tones marked on the above pronouns are their underlying tones. These tones are affected in context as follows:

(9) a. á yá mś yí'I'yú → [á yá mś yí'I'yú]  "he has seen him and me"
    b. á yá mś yí'I'ñá → [á yá mś yí'I'ñá]  "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 /yí'I/, /ghii'ü/ and /wáá/ have a downstepping effect on the following H so we have posited an underlying L after them. Their underlying forms would be /yí'I'/, /ghii'ü'/, /wáá'/ so that:

(10) a. á nín' yá ghii'ü 'yú → [á nín' yá ghii'ü 'yú]  "he saw you and him (today)"
    b. á nín' yá wáá' bo → [á nín' yá wáá' bo]  "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),

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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 \[\begin{array}{c|c|c}
1 & mā & bā'\\
2 & wō & bū\\n3 & yō & bō
\end{array}\]

The tone of the 1st and 2nd 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. fa a bō mā → [fā m'bō mā] "give it to me"
give to me
give to them

b. fa a bō bō → [fā m'bō bō] "give it 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 \[\begin{array}{c|c|c}
1+2 & bā'ō & bā'īnā\\n1+3 & bā'iyū & bā'ībō\\n2+3 & bū'yū & bū'bō
\end{array}\]

The following examples illustrate the use of the above pronouns:
a. l'ëb ñëbø bi ìo "keep it for you and me"

b. fā á ñëbø bi'ëbø → [fā m’bó bi’ibó]
"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."

Wiasemann (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. [a nìm swōn 'mò yù yùù mbà]
he P1 say that he buy meat
"he said that he (himself) had bought meat"
The logophoric pronoun in (15a,b) is /yű/. /yű/ is coreferential with the 3rd person singular pronoun /a/ 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 (15a-f) the absence of subject marking 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. [ä nín swōn 'mō ā yūù âbâ]
   "he said that he (DS.) had bought meat"

b. [ŋgwā nín wā'átō 'mō ë kā lē afā]
   "Ngwa thought that he (DS.) would stay the night in the farm"

c. [ä kī tūm nâāngwē yī kghē]
   "he shot a leopard and it ran away"

d. [ä nín yē Ngwa ā kwētā yī]
   "he saw Ngwa (today) and he (Ngwa, DS) helped him"

e. [ä kā lō ghēē tā kō5 atū yī]
   "he will go so that he (DS) should shave his head"

f. [ä nín 5ā mbō' a n tā ë'ë]
   "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 /yū/ and the SS marker /n/ respectively while in (16a,b,d) switch of subject (DS) is indicated by the 3rd person pronoun /ā/. 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 /nāāngwē/ to which it refers.

In (16e,f) the change of subject (DS) is signalled by the morpheme /tā/.

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

<table>
<thead>
<tr>
<th>Person</th>
<th>Subject</th>
<th>Object (verb)</th>
<th>Object (prep.)</th>
<th>Logos</th>
<th>Coreference SS marker</th>
</tr>
</thead>
<tbody>
<tr>
<td>sg mā</td>
<td>ghā-</td>
<td>mē</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>pl bl'I</td>
<td>yłat'I</td>
<td>bl'I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sg ḍo</td>
<td>ghō-</td>
<td>wō</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>pl nǐ</td>
<td>ghGu'-</td>
<td>bō</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sg ā</td>
<td>yI</td>
<td>yū</td>
<td>yū</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>pl bō</td>
<td>wāś'-</td>
<td>bō</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sg sī</td>
<td>yI'a</td>
<td>bl'o'-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1+2</td>
<td>pl bl'I'Inā</td>
<td>yI'I-nā</td>
<td>bl'I'Inā</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sg bl'Iyū</td>
<td>yI'I-yū</td>
<td>bl'Iyū</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1+3</td>
<td>pl bl'Ibō</td>
<td>yI'I-bō</td>
<td>bl'Ibō</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sg bō'yū</td>
<td>ghGu'-yū</td>
<td>bō'yū</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2+3</td>
<td>pl bō'bō</td>
<td>ghGu'-bō</td>
<td>bō'bō</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sg wāś'yū</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3+3</td>
<td>pl wāś'bō</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Non-human Pronouns

<table>
<thead>
<tr>
<th>N.Cl.</th>
<th>Singular</th>
<th>N.Cl.</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>å</td>
<td>2</td>
<td>bå</td>
</tr>
<tr>
<td>3</td>
<td>f</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>nif</td>
<td>6</td>
<td>mf</td>
</tr>
<tr>
<td>7</td>
<td>å</td>
<td>8</td>
<td>jf</td>
</tr>
<tr>
<td>9</td>
<td>yf</td>
<td>10</td>
<td>jf</td>
</tr>
<tr>
<td>19</td>
<td>ff</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Notes to Chapter Nine

1 The third person subject pronoun /ā/ in (16e,f) basically would come immediately after the morpheme /tā/ but in this context it is deleted by P-rule 3.
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.  
     -ə       -ā       -I

We see in the above table the stems of the three demonstratives: the near speaker (N.S.) /-ə/ "this/these"; near hearer (N.H.), /-ā/ "that/those;" and far from both speaker and hearer (F.S.H.), /-I/ "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., $H\hat{l}$, but, for practical purposes, we have chosen to write this underlying sequence directly as a $H\hat{l}$ 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 demonstratives 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       -I      1
     -lā      -lā      -II     2
     -Cū      -Cā      -CI     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)

<table>
<thead>
<tr>
<th>N.C.</th>
<th>Nouns</th>
<th>N.S.</th>
<th>N.H</th>
<th>Far from S.H.</th>
<th>Emphatic degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>före &quot;mouse&quot;</td>
<td>ghū</td>
<td>wā</td>
<td>wi</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>sörə &quot;witch&quot;</td>
<td>ghūlā</td>
<td>wā'ā</td>
<td>wi</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ghūaghū</td>
<td>wā'āwā</td>
<td>wiiwi</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>biföre &quot;mice&quot;</td>
<td>bū</td>
<td>byā</td>
<td>bi</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>biddàa &quot;wine calabashes&quot;</td>
<td>būbū</td>
<td>byā'lā</td>
<td>bi</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>būbū</td>
<td>byā'abyā</td>
<td>biibf</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>mōşö &quot;gun&quot;</td>
<td>ghū</td>
<td>wā</td>
<td>wi</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>ilī &quot;ant&quot;</td>
<td>ghūā</td>
<td>wā'ā</td>
<td>wi</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>šbōö &quot;mushroom&quot;</td>
<td>ghūlā</td>
<td>wā'lā</td>
<td>wii</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ghūaghū</td>
<td>wā'āwā</td>
<td>wiiwi</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>nīkwee &quot;arm&quot;</td>
<td>nū</td>
<td>nyā</td>
<td>ni</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>nībōö &quot;pumpkin&quot;</td>
<td>nūlā</td>
<td>nyā'lā</td>
<td>ni</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>nū难得</td>
<td>nyā'anyā</td>
<td>niIni</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>mikūō &quot;beans&quot;</td>
<td>mū</td>
<td>myā</td>
<td>mi</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>mīngōō &quot;plant- tains&quot;</td>
<td>mūlā</td>
<td>myā'lā</td>
<td>mii</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mūmū</td>
<td>myā'amyā</td>
<td>mǐmī</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>ātōš &quot;calabash&quot;</td>
<td>yō</td>
<td>yā</td>
<td>yi</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>akīkūn &quot;owl&quot;</td>
<td>yūā</td>
<td>yā'ā</td>
<td>yii</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>ābabā &quot;bag&quot;</td>
<td>yūlā</td>
<td>yā'lā</td>
<td>yiii</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>yūyū</td>
<td>yā'ayā</td>
<td>yiii</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>ātōš &quot;calabashes&quot;</td>
<td>jō</td>
<td>jyā</td>
<td>ji</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>ikīkūn &quot;owls&quot;</td>
<td>jūā</td>
<td>jyā'ā</td>
<td>jii</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>ābabā &quot;bags&quot;</td>
<td>jūlā</td>
<td>jyā'lā</td>
<td>jill</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>jūjū</td>
<td>jyā'ajyā</td>
<td>jiiji</td>
<td>3</td>
</tr>
</tbody>
</table>

166
We present here below the concord consonants of the demonstratives according to noun classes.

<table>
<thead>
<tr>
<th>N.Cl.</th>
<th>Concord Consonant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>gh-</td>
</tr>
<tr>
<td>2</td>
<td>b-</td>
</tr>
<tr>
<td>3</td>
<td>gh-</td>
</tr>
<tr>
<td>5</td>
<td>n-</td>
</tr>
<tr>
<td>6</td>
<td>m-</td>
</tr>
<tr>
<td>7</td>
<td>y-</td>
</tr>
<tr>
<td>8</td>
<td>j-</td>
</tr>
<tr>
<td>9</td>
<td>y-</td>
</tr>
<tr>
<td>10</td>
<td>j-</td>
</tr>
<tr>
<td>19</td>
<td>f-</td>
</tr>
</tbody>
</table>

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 demonstratives are given in tables (1) and (2). The tone of the simple demonstratives is H İ. 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)

<table>
<thead>
<tr>
<th>N.Cl.</th>
<th>N.S.</th>
<th>N.H.</th>
<th>Far from S.H.</th>
<th>Empathic degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ghū</td>
<td>wā</td>
<td>wī</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>ghūā</td>
<td>wāā</td>
<td>wĪl</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>ghūlā</td>
<td>wēlā</td>
<td>wĪlĪ</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>ghūāghū</td>
<td>wēāwā</td>
<td>wĪlWI</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>būh</td>
<td>byā</td>
<td>bī</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>būhā</td>
<td>byāā</td>
<td>bĪl</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>būlā</td>
<td>byālā</td>
<td>bĪlĪ</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>būābd</td>
<td>byāābyā</td>
<td>bĪlībī</td>
<td>3</td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>N.Cl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.Cl.</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>No. of syllables</th>
<th>HL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ghū</td>
</tr>
<tr>
<td>2</td>
<td>ghūā</td>
</tr>
<tr>
<td>3</td>
<td>ghūāghū</td>
</tr>
</tbody>
</table>

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. nīng35 nū → [nīng35 nū] "this plantain"
    b. nīng35 nūānū → [nīng35 nūānū] "this plantain"
    c. nīng35 nūā → [nīng35 nūā] "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:

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The surface H tone nouns that are affected by intonation (cf. 6.3.1.3) also affect the tone of the N.S. and F.S.H. in the same way as in (11) above. e.g.

(12) më ghû → [më ghû] "this child"
nû yû → [nû yû] "this body"
nô yî → [nô yî] "that snake"
ñdûnhê wi → [ñdûnhê wi] "that bamboo"

0.3 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 | nîng35 nî | "that plantain!"
| 1 | 5 | nîng35 nill | "that plantain!!"
| 2 | 5 | nîng35 nilll | "that plantain!!!"
| 3 | 5 | nîng35 nînl | "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 /î/; 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
some speakers the form in 3, /nIlIl/ varies with /nIllnIll/ 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
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 núá "this one" nyăä mìi "that one"
5 múa "these ones" myăä mìi "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. ákiteyá "that/the owl"
b. ákitey "an owl"

In (15a) /ákiteyá yá/ 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) /ákitey/ would mean "an owl."

10.6 Interrogative Pronoun

The interrogative pronoun in Bafut is /-GG/ "which". It has underlying H tones. The interrogative pronoun is derived from the N.H. demonstrative. The following are the interrogative pronouns in Bafut:

(13) N.Cl. Interrogative

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ghūū</td>
</tr>
<tr>
<td>2</td>
<td>lūū</td>
</tr>
<tr>
<td>3</td>
<td>ghūū</td>
</tr>
<tr>
<td>5</td>
<td>nūū</td>
</tr>
<tr>
<td>6</td>
<td>mūū</td>
</tr>
<tr>
<td>7</td>
<td>yūū</td>
</tr>
<tr>
<td>8</td>
<td>jūū</td>
</tr>
<tr>
<td>9</td>
<td>yūū</td>
</tr>
<tr>
<td>10</td>
<td>jūū</td>
</tr>
<tr>
<td>19</td>
<td>fūū</td>
</tr>
</tbody>
</table>
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. níngǒ ñū → [níngǒ ñū] "which plantain?"
b. "mú" ghūū → [mú 'ghūū] "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. "mú" ghūū underlying 
b. mú ghūū tone grounding to the right 
c. mú ghūū tone grounding to the left 
d. mú 'ghūū tone simplification and ds

10.7 Relative Demonstrative

The relative demonstrative pronoun in Bafut is "-I", "which", that". It has a LHLH tone pattern. Table (19) shows the relative demonstratives in Bafut.

1 yII-
2 biI-
3 yII-
5 nII-
6 mII-
7 yII-
8 jII-
9 yII-
10 jII-
19 fII-

As can be seen in table (3) the relative demonstrative is derived from the F.S.H. demonstrative. In n.c1. 1 and 3 we notice that the concord consonant gh- becomes y-. The relative demonstrative can be used together with the relative clause marker /*mē*/ (cf.19.3.2).

The N.H. demonstrative, /*-ā/ "that" and a H tone marker is also used with /*mē/ 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 /-mā/ 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          wā'
    2          byā'
    3          wā'
    5          nyā'
    6          myā'
    7          yā'
    8          jā'
    9          yā'
   10         jā'
   19         fyā'

The following examples illustrate the use of these relative forms of the demonstrative.

(21) a. "mū" yīf' ő 135 ā → [mū yīf' ő 135 ā]
     "the child that you want"
 b. "mū" yīf'  mê ő 135 ā → [mū yīf'  mê ő 135 ā]
     "the child that you want"
 c. nǐŋgā  nyā'  mê ńf  wō ā → [nǐŋgā  nyā'  mê ńf  wō ā]
     "the plantain that has fallen"
 d. bā byā'  mê ńf fā ā → [bā byā'  mê ńf fā 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 R tones are caused by intervening low tones.

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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'1 |
2nd person | -o | -uu |
3rd person | -i | -aa |
1+2 persons | -u'0 | -i'ine |
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.

<table>
<thead>
<tr>
<th>N.Cl.</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>sg.</td>
<td>pl.</td>
<td>sg.</td>
</tr>
<tr>
<td>1</td>
<td>ghâ</td>
<td>yi'I</td>
<td>ghô</td>
</tr>
<tr>
<td>2</td>
<td>bâ</td>
<td>bi'I</td>
<td>bô</td>
</tr>
<tr>
<td>3</td>
<td>ghâ</td>
<td>yi'I</td>
<td>ghô</td>
</tr>
<tr>
<td>5</td>
<td>nâ</td>
<td>ni'I</td>
<td>nô</td>
</tr>
<tr>
<td>6</td>
<td>mâ</td>
<td>mi'I</td>
<td>mô</td>
</tr>
<tr>
<td>7</td>
<td>yâ</td>
<td>yi'I</td>
<td>yô</td>
</tr>
<tr>
<td>8</td>
<td>jâ</td>
<td>ji'I</td>
<td>jô</td>
</tr>
<tr>
<td>9</td>
<td>yâ</td>
<td>yi'I</td>
<td>yô</td>
</tr>
<tr>
<td>10</td>
<td>jâ</td>
<td>ji'I</td>
<td>jô</td>
</tr>
<tr>
<td>19</td>
<td>fâ</td>
<td>fi'I</td>
<td>fô</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1 + 2</th>
<th>1 + 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>sg.</td>
<td>pl.</td>
</tr>
<tr>
<td>1</td>
<td>yû'ô</td>
<td>yi'Inè</td>
</tr>
<tr>
<td>2</td>
<td>bû'ô</td>
<td>bi'Inè</td>
</tr>
<tr>
<td>3</td>
<td>yû'ô</td>
<td>yi'Inè</td>
</tr>
<tr>
<td>5</td>
<td>nû'ô</td>
<td>ni'Inè</td>
</tr>
<tr>
<td>6</td>
<td>mû'ô</td>
<td>mi'Inè</td>
</tr>
<tr>
<td>7</td>
<td>yû'ô</td>
<td>yi'Inè</td>
</tr>
<tr>
<td>8</td>
<td>jû'ô</td>
<td>ji'Inè</td>
</tr>
<tr>
<td>9</td>
<td>yû'ô</td>
<td>yi'Inè</td>
</tr>
<tr>
<td>10</td>
<td>jû'ô</td>
<td>ji'Inè</td>
</tr>
<tr>
<td>19</td>
<td>fû'ô</td>
<td>fi'Inè</td>
</tr>
</tbody>
</table>
The possessive, just like other modifiers in Bafut, follows the noun it determines. This is demonstrated in table 4 below.

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

<table>
<thead>
<tr>
<th>n.c.l.</th>
<th>noun</th>
<th>possessive + tone</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>fǝrǝ</td>
<td>ghǝ</td>
<td>&quot;my mouse&quot;</td>
</tr>
<tr>
<td>2</td>
<td>bǝfǝrǝ</td>
<td>bǝ</td>
<td>&quot;my mice&quot;</td>
</tr>
<tr>
<td>3</td>
<td>ǝl</td>
<td>ghǝ</td>
<td>&quot;my ant&quot;</td>
</tr>
<tr>
<td>5</td>
<td>nǝngǝ3</td>
<td>nǝ</td>
<td>&quot;my plantain&quot;</td>
</tr>
<tr>
<td>6</td>
<td>mǝngǝ3</td>
<td>mǝ</td>
<td>&quot;my plantains&quot;</td>
</tr>
<tr>
<td>7</td>
<td>ǝtǝ</td>
<td>yǝ</td>
<td>&quot;my calabash&quot;</td>
</tr>
<tr>
<td>8</td>
<td>ǝtǝ</td>
<td>jǝ</td>
<td>&quot;my calabashes&quot;</td>
</tr>
<tr>
<td>9</td>
<td>ǝngǝ3'5</td>
<td>yǝ</td>
<td>&quot;my stone&quot;</td>
</tr>
<tr>
<td>10</td>
<td>ǝngǝ3'5</td>
<td>jǝ</td>
<td>&quot;my stones&quot;</td>
</tr>
<tr>
<td>19</td>
<td>fǝbwǝ</td>
<td>fǝ</td>
<td>&quot;my fish&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>sg.</th>
<th>pl.</th>
<th>sg.</th>
<th>pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 gǝuuyǝ</td>
<td>gǝuubǝ</td>
<td>wǝaǝyǝ</td>
<td>wǝaǝbǝ</td>
</tr>
<tr>
<td>2 bǝuuyǝ</td>
<td>bǝuubǝ</td>
<td>byaǝyǝ</td>
<td>byaǝbǝ</td>
</tr>
<tr>
<td>3 gǝuuyǝ</td>
<td>gǝuubǝ</td>
<td>wǝaǝyǝ</td>
<td>wǝaǝbǝ</td>
</tr>
<tr>
<td>5 nǝuuyǝ</td>
<td>nǝuubǝ</td>
<td>nyǝaǝyǝ</td>
<td>nyǝaǝbǝ</td>
</tr>
<tr>
<td>6 mǝuuyǝ</td>
<td>mǝuubǝ</td>
<td>myǝaǝyǝ</td>
<td>myǝaǝbǝ</td>
</tr>
<tr>
<td>7 yǝuuyǝ</td>
<td>yǝuubǝ</td>
<td>yǝaǝyǝ</td>
<td>yǝaǝbǝ</td>
</tr>
<tr>
<td>8 jǝuuyǝ</td>
<td>jǝuubǝ</td>
<td>jyǝaǝyǝ</td>
<td>jyǝaǝbǝ</td>
</tr>
<tr>
<td>9 yǝuuyǝ</td>
<td>yǝuubǝ</td>
<td>yǝaǝyǝ</td>
<td>yǝaǝbǝ</td>
</tr>
<tr>
<td>10 jǝuuyǝ</td>
<td>jǝuubǝ</td>
<td>jyǝaǝyǝ</td>
<td>jyǝaǝbǝ</td>
</tr>
<tr>
<td>19 fǝuuyǝ</td>
<td>fǝuubǝ</td>
<td>fǝaǝyǝ</td>
<td>fǝaǝbǝ</td>
</tr>
</tbody>
</table>
(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.

(½) N. Persons

<table>
<thead>
<tr>
<th>Cl.</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 1+2</td>
<td>nū'ō</td>
<td>nI'Inā</td>
</tr>
<tr>
<td>5 1+3</td>
<td>nI'Iyū</td>
<td>nI'Ibō</td>
</tr>
<tr>
<td>5 2+3</td>
<td>nūuyū</td>
<td>nūubō</td>
</tr>
<tr>
<td>5 3+3</td>
<td>nyaāyū</td>
<td>nyaābō</td>
</tr>
</tbody>
</table>

```
(5) N. Persons

<table>
<thead>
<tr>
<th>Cl.</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 1+2</td>
<td>nū'ō</td>
<td>nI'Inā</td>
</tr>
<tr>
<td>5 1+3</td>
<td>nI'Iyū</td>
<td>nI'Ibō</td>
</tr>
<tr>
<td>5 2+3</td>
<td>nūuyū</td>
<td>nūubō</td>
</tr>
<tr>
<td>5 3+3</td>
<td>nyaāyū</td>
<td>nyaābō</td>
</tr>
</tbody>
</table>
```

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The possessive forms can be used independently as possessive adjectives or as possessive pronouns, e.g.

(6) n.cl. 6 mā "mine"  
    mā""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

<table>
<thead>
<tr>
<th>N.Cl.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>19</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.
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: HHL in 1+2 dual
HHL in 1+2 plural
HHH in all others.

<table>
<thead>
<tr>
<th>Concord Pattern</th>
<th>Gender/Number</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>LL</td>
<td>L: 1, 2, 3 sg. in n.cl. 1 and 9</td>
<td></td>
</tr>
<tr>
<td>LLLL</td>
<td>L: 1, 2, 3 pl. in n.cl. 1 and 9</td>
<td></td>
</tr>
<tr>
<td>LH</td>
<td>LM → M: 1, 2, 3 sg. in other classes.</td>
<td></td>
</tr>
<tr>
<td>LHRH</td>
<td>LMM → MM: 1, 2, 3 pl. in other classes.</td>
<td></td>
</tr>
<tr>
<td>LHL</td>
<td>LML → ML: 1+2 dual</td>
<td></td>
</tr>
<tr>
<td>LHHL</td>
<td>LMMML → MML: 1+2 plural.</td>
<td></td>
</tr>
<tr>
<td>LHHRH</td>
<td>LMMMH → MMH: 1+3, 2+3, 3+3 dual and plural.</td>
<td></td>
</tr>
</tbody>
</table>

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 $\LHHH \rightarrow \LMMH \rightarrow -MMH^2$.

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 (6) 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 sərə sərə ghâ "my witch"
    b. n.cl. 1 mitəə mitəə ghâ "my market"
    c. n.cl. 9 ɨg3'5 ɨg3'5 ɣə "my stone"
    d. n.cl. 9 ɨg3'5 ɨg35 ɣə "my termite"

In (11a,c) the LL tone stays LL before the possessive because /sərə/ and /ɨg3'5/ 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 /mitəə/ "market" and /ɨg3'5/ "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. ɨg3'5 ɣə underlying tones
    b. ɨg3'5 ɣə tone grounding
    c. ɨg3'3 ɣə tone lowering
    d. ɨg3'5 ɣə 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 "T-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 bīsōrā bīsōrā bī "his witches"
b. n.cl. 3 ȵkūū ȵkūū yī "his tail"
c. n.cl. 5 ȵɪŋg5 ȵɪŋg5 nī "his plantain"
d. n.cl. 6 ȵīlū’ū ȵīlū’ū mī "his wine"
e. n.cl. 7 ąbāā ąbāā yī "his bag"
f. n.cl. 8 ıbāā ībāā jī "his bags"
g. n.cl. 10 ṣgı5’5 ṣgı5’5 jī "his stones"
h. n.cl. 19 ńkūū ńkūū fī "his small bed"

(14) a. n.cl. 2 bīfō bīfō bā "my chiefs"
b. n.cl. 3 ȵkī ȵkī gḥā "my water"
c. n.cl. 5 ȵībā ȵibā nā "my wing"
d. n.cl. 6 ȵībā ȵībā mā "my wings"
e. n.cl. 7 ątī atī yā "my tree"
f. n.cl. 8 ītī ītī jā "my trees"
g. n.cl. 10 ȵkyā ȵkyā jā "my combs"
h. n.cl. 19 ńfībwe ńfībwe 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. bīsōrā b- I underlying tones
b. bīsōrā b- I tone grounding
c. bīsōrā b- I tone lowering
d. bīsōrā b- I tone lowering
e. bīsōrā b- I 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 Ḥ-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 possessive stem).
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. 1 förē förā ghā "my mouse"
b. n.cl. 1 kāā kāā ghā "my crab"
c. n.cl. 1 tītā tītā ghā "my pepper"

d. n.cl. 2 bītā’G bītā’G bā "my chimpanzees"

b. n.cl. 2 bītā’G bītā’G bā "my crabs"
c. n.cl. 2 bītā’G bītā’G bā "my pepper"
d. n.cl. 2 bītā’G bītā’G bā "my tooth pains"
e. n.cl. 2 bītā’G bītā’G bā "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 /mīm5’5/ "fire arms" is lowered to form a ML tone glide as in (16e).

(17) a. n.cl. 3 m5’5 m5’5 ghā "my fire arm"
b. n.cl. 6 mīm5’5 mīm5’5 mā "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 ghā "my father"
b. n.cl. 2 bītā’tā bītā’tā bā "my fathers"
c. n.cl. 5 nīghāghā nīghāghā nā "my praying mantis"
d. n.cl. 6 nīghāghā mīghāghā mā "my praying mantis"
e. n.cl. 7 ābētē ābētē yā "my question"
f. n.cl. 8 ābētē ābētē yā "my questions"
g. n.cl. 9 hānwl hānwl yā "my church"
h. n.cl. 10 hānwl hānwl yā "my churches"
i. n.cl. 19 fīlīnjī fīlīnjī fā "my fly"
j. n.cl. 5 nībāsā nībāsā nā "my... insect"
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. bīfôrā bā → bīfôrā bā "my mice"
   b. bīfôrā bō → bīfôrā 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.
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

<table>
<thead>
<tr>
<th>n.cl</th>
<th>Adj. prefix and tone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>yi'</td>
</tr>
<tr>
<td>2</td>
<td>bi'</td>
</tr>
<tr>
<td>3</td>
<td>yi'</td>
</tr>
<tr>
<td>5</td>
<td>ni'</td>
</tr>
<tr>
<td>6</td>
<td>mi'</td>
</tr>
<tr>
<td>7</td>
<td>yi'</td>
</tr>
<tr>
<td>8</td>
<td>ji'</td>
</tr>
<tr>
<td>9</td>
<td>yi'</td>
</tr>
<tr>
<td>10</td>
<td>ji'</td>
</tr>
<tr>
<td>19</td>
<td>fi'</td>
</tr>
</tbody>
</table>

The tones marked are the underlying tones of the prefixes. The underlying tones of the adjective prefix are Hi. The floating tone normally grounds to the left on the prefix stem where it
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) nǐŋgɔɔ nɛ-fɛɛ "plantain for sale
lɔŋŋ ɣɪm-fɛɛ "horse for sale"
mbrowser yɪ-twɪ "cracked kernel"
mbrowser jɪ-twɪ "cracked kernels"
ätsɔɔ yɪ-ɛl "black dress"
ìkkìŋn jɪ-fɛɛ "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) móó yɪ-sā-ɛ-tɛ "tall gun"
gun pfx. big suff.
ābāɛ yɪ-fāŋ - tɛ "big corn fufu"
c.fufu pfx. big suff.
ânsān yɪn-ghâ-ɛ-tɛ "big quantity of corn"
corn pfx. big suff.
mū yɪ-sā-ɛ-tɛ "tall child"
child pfx. tall suff.

The above examples are actually comparative forms used attributively.

The adjective /-sīgəŋɛ/ "good, nice" is one of the few forms regarded as true adjectives, i.e. not derived forms. A form like /-bāɡətɛ/ "red" is also regarded as purely adjectival because of its tonal pattern. The stems of most derived adjectives have a regular L tone pattern.
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 /mû/ (cf. 6.3.1.3) lower the tone of the prefix from HL to L. This is seen in the following examples.

(4) a. åtšš yl-fântâ
   cal. big
   "big calabash"

   b. âsö yl-fîl
      hoe black
      "new hoe"

   c. fitšš fl-fîl
      w.cal. black
      "black wine calabash"

   d. mi bî yl-mêê
      goat sell
      "good for sale"

   e. mû yl-sîgânâ
      child good
      "a nice child"

   f. ndànnâ yl- ghû'ûtâ
      bamboo short
      "short bamboo"

   g. nó yl-m-fântâ
      snake big
      "big snake"

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. fitšš fl- fântâ underlying

   b. fitšš fl fântâ tone grounding

   c. fitšš fl fântâ tone lowering

   d. fitšš fl fântâ tone spreading to the left

   e. fitšš fl fântâ tone simplification by absorption

   f. fitšš fl fântâ 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) lâmsî yîn lêë  "sweet orange"
lâmsî yîn lêë lê'ë  "very sweet orange"
ïgû yîm- fii  "black fowl"
ïgû yîm-fii fii  "very black fowl"

Adjectives used attributively can stand alone in place of the noun.

(7) nîngôô nî- fântâ  "big plantain"
nî fântâ  "big one"
ëbâ yîm- bônâ  "tender meat"
yîm-bônâ  "tender one"
lôñô yîm fô'û  "white horse"
yîm- fô'û  "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) abâà yâ' fii  "the bag is black"
âtsâ'â yâ' fii  "the dress is black"
abâà yâ kî sî' fii  "the bag was black"
âtsâ'â yâ' kî sî' fii  "the dress was black"
lôñô wâ à kî fântâ  "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
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) ñìwèn màngyë
    old (one) woman
    "old lady"

mëŋkghë màngyë
child woman
"young lady"

ǹdëfi nù
elderly (one) person
"elderly man"

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 yì
     2 bì
     3 yì
     5 nì
     6 mì
     7 yì
     8 jì
     9 yì
    10 jì
    19 ri

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
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)  
<table>
<thead>
<tr>
<th>Numeral</th>
<th>Singular Prefixes</th>
<th>Plural Prefixes</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>yi-fūrā</td>
<td>mī-ntāā</td>
<td>&quot;one mouse&quot;</td>
</tr>
<tr>
<td>2</td>
<td>bī-bāā</td>
<td>mī-ntāā</td>
<td>&quot;two mice&quot;</td>
</tr>
<tr>
<td>3</td>
<td>mīmī mī-ntāā</td>
<td>mī-ntāā</td>
<td>&quot;one gun&quot;</td>
</tr>
<tr>
<td>4</td>
<td>mīmī mī-ntāā</td>
<td>mī-ntāā</td>
<td>&quot;six guns&quot;</td>
</tr>
<tr>
<td>5</td>
<td>mī-ntāā</td>
<td>mī-ntāā</td>
<td>&quot;one plantain&quot;</td>
</tr>
<tr>
<td>6</td>
<td>mī-ntāā</td>
<td>mī-ntāā</td>
<td>&quot;five plantains&quot;</td>
</tr>
<tr>
<td>10</td>
<td>bī-bāā</td>
<td>mī-ntāā</td>
<td>&quot;one bag&quot;</td>
</tr>
<tr>
<td>20</td>
<td>bī-bāā</td>
<td>mī-ntāā</td>
<td>&quot;20 mice&quot;</td>
</tr>
<tr>
<td>50</td>
<td>bī-bāā</td>
<td>mī-ntāā</td>
<td>&quot;50 mice&quot;</td>
</tr>
<tr>
<td>100</td>
<td>bī-bāā</td>
<td>mī-ntāā</td>
<td>&quot;100 mice&quot;</td>
</tr>
<tr>
<td>500</td>
<td>bī-bāā</td>
<td>mī-ntāā</td>
<td>&quot;500 mice&quot;</td>
</tr>
<tr>
<td>1000</td>
<td>bī-bāā</td>
<td>mī-ntāā</td>
<td>&quot;1000 mice&quot;</td>
</tr>
<tr>
<td>5000</td>
<td>bī-bāā</td>
<td>mī-ntāā</td>
<td>&quot;5000 mice&quot;</td>
</tr>
</tbody>
</table>

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.

(12)  
<table>
<thead>
<tr>
<th>Numeral</th>
<th>Singular Prefixes</th>
<th>Plural Prefixes</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>bī-bāā</td>
<td>mī-ntāā</td>
<td>&quot;20 mice&quot;</td>
</tr>
<tr>
<td>50</td>
<td>bī-bāā</td>
<td>mī-ntāā</td>
<td>&quot;50 mice&quot;</td>
</tr>
<tr>
<td>100</td>
<td>bī-bāā</td>
<td>mī-ntāā</td>
<td>&quot;100 mice&quot;</td>
</tr>
<tr>
<td>500</td>
<td>bī-bāā</td>
<td>mī-ntāā</td>
<td>&quot;500 mice&quot;</td>
</tr>
</tbody>
</table>

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 áti' ndá → [á 'ti' ndá] "on the roof"
b. á ñsi' mā → [á n'sī mā] "in front of me"
c. á ñjīm ābā'ā → [á njīm ābā'ā] "behind the door"
d. á ñjī'ī ãti → [á n'jī'ī ti] "under the tree"
e. á mbēcē mānjī → [á mbēcē mānjī] "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 áti' ndā underlying
b. á áti' ndā tone grounding
c. á áti' ndā simplification and ds
d. á- tū' ndā V-deletion
e. á- tū' ndā tone grounding to the left
f. á 'tū' ndā tone simplification and ds
g. á 'tū' ndā tone grounding
h. á 'tū' ndā nasal desyllabification
i. á 'tū' ndā 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
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 ñ'ëë "outside"
b. á ñdå "at home/from the house"
c. á mì'tåå "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 mòô- mà → [fá m'bô mà] "give it to me"
b. lëë á mòô- bì'ò- → [lëë mòô bì'ò] "keep it for us"
c. kwèrë á mòô- Sùù → [kwèrë m'bô Sùù] "take it from Shu"

The derivation of (16a) is as follows:

(17) a. fá á mòô- mà underlying
b. fá á mòô mà tone grounding
c. fá - mòô mà V-deletion
d. fá mòô mà tone grounding
e. fá mòô mà tone simplification
f. fá mòô mà desyllabification
g. fá mòô mà tone grounding
h. fá m'bô mà simplification and ds

In (17a) the underlying tones of the string are given In (17b) the floating tone of /mòô-/ 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 /mòô/ simplifies. In (17f) the nasal homorganic prefix desyllabifies by P-rule 4 and
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. lāō ā mbō mā underlying

  b. lāō ā mbō mā tone grounding

c. lāō mbō mā V- deletion

d. lāō mbō mā tone grounding

e. lāō mbō mā tone lowering

  f. lāō mbō mā tone simplification

g. lāō mbō mā nasal desyllabification

  h. lāō mbō mā 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 /mbō/
is simplified. In (18g and 18h) the nasal prefix of /mbō/
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 /ā/ 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. ā zī ā ṅkwērō mbā → [ā zī ṅ'kwērā mbā]

  "he has come to take meat"

  b. ā tsō ā ṅtū'ū ṅkī → [ā tsō' n'tū'ū ṅkī]

  "he has gone to the stream
to carry water"

The tonal derivation of (19a) is as follows:
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 /nl/

The underlying tone of the preposition /nl/ is HL given its downstepping effect on following H.

This preposition is used to portray the meaning of instrument or accompaniment in an adverbial phrase.

(21) a. nI- 'nwI → [nI 'nwI] "with a cutlass" (instrument)
    b. nI- mIlu'û → [nI mIlu'û] "with wine" (accompaniment)
    c. nI- fôrê → [nI 'fôrê] "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 L.

(22) a. nI- 'fôrê underlying tones
    b. nI 'fôrê tone grounding to the left
    c. nI fôrê tone grounding to the right
    d. nI 'fôrê 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 /bi'1/, /bû/, and /bô/ 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: /bô/.

(23) a. bô' lâŋâ → [bô' lâŋâ]
   "he together with a horse"

b. bi'I mûbô → [bi't mûbô]
   "I together with a dog"

c. bû' mûbô → [bû mûbô]
   "you together with a dog"

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. bi'I mûbô → [bi'I mûbô]
    underlying

b. bi'I mûbô → [bi'i mûbô]
   tone grounding

c. bi'I mûbô → [bi'i mûbô]
   tone lowering

d. bi'I mûbô → [bi'i mûbô]
   tone lowering

e. bi'I mûbô → [bi'i mûbô]
   desyllabification

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 /mûbô/ is lowered to ML. In e. the homorganic nasal prefix of the noun desyllabifies 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 'y55 "yesterday"
    b. á yi:jønø "on market day"
    c. nī mítîl "fast, quickly, or with force"
    d. nī bínôô bîntaa "at five o'clock"

The derivation of the tones in (25a) is as follows:

(26) a. á `y33 underlying
    b. á `y55 B tone raising
    c. á y55 tone grounding
    d. á 'y55 simplification and ds

The word /y33/ is a class BL 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 yi:jønø underlying tones
    b. á yi:jønø tone spreading.

We notice that the contour tone on the first syllable of /yi:jønø/ 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 'yānø sî'I "it hurts much"
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: /s'1'I/ "much" /t's'ats'3nâ/ "now", /t's'1'I/ "just". In (28a) the H tone of the adverb /s'1'I/ 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, /t's'ats'3nâ/, while in (28c) the L tone on the Po tense marker lowers the following H tone of the adverb /t's'1'I/ to /t's'1'I/.

Some adjectives are used as adverbs, for example:

(29) á fâ'â sîgâ'nâ "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. á nî wânsâ yî' "he came early (today)"
    he P1 be-quick come

b. á ghê'sâ mâ yî' "he has just come"
    he just P0 come

c. á nî tîgâ nzî yî' "he came late"
    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.
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: -ta, -na, -ka, and -sa. The first three of them, i.e. -ta, -na, and -ka, have aspectual meanings. These will be discussed in the section on aspect (cf.15.2.3). The suffix -sa is a transitiveiser, i.e., it converts basically intransitive verbs into transitive verbs. These suffixes are illustrated in the following examples:

(1) fā’ā  
    "work!"  
    fā’ā-ta  
    "work a bit!"

    kō  
    "catch!"  
    kō-ta  
    "catch one after the other!"

    só  
    "pierce!"  
    só-ta  
    "pierce several times!"

    ghēē  
    "go!"  
    ghēē-ta  
    "go a little distance!"

    lōō  
    "bite!"  
    lōō-nā  
    "bite a little piece off!"

    kwō  
    "die!"  
    kwō-kō  
    "die one after the other!"

    lā’ā  
    "to be slippery"  
    lā’ā-sē  
    "make slippery!"

    lwl’I  
    "to end"  
    lwl’I-sē  
    "end!"

    ghā’ā  
    "to be big, great"  
    ghā’ā-sē  
    "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. bâ'á "weave!" | bâ'á "treat a wound!" |
| b. bóó "build!"  | bóó "cover!"          |
| c. kwéřé "take!" | sâŋé "dry!"          |
| d. nó "drink!"   | só "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. This will further show the distinction between the H and L tone classes.

(3) a. á ní bâ'á "he was weaving" bóó
    he-IMPF. P1 weave

b. á ní bóó "he was building" bóó
    he-IMPF. P1 build

c. á ní kwéřé "he was taking" kwéřé
    he-IMPF. P1 take

d. á ní nó "he was drinking" nó
    he-IMPF. P1 drink

(4) a. á ní bá'á "he was treating" bá'á
    he-IMPF. P1 treat

b. á ní bóó "he was covering" bóó
    he-IMPF. P1 cover

c. á ní sâŋé "he was drying" sâŋé
    he-IMPF. P1 dry

d. á ní só "he was piercing" só
    he-IMPF. P1 pierce

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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 identifies 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. kwéřë "take!"  H HL
    b. sänë "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. kwéřë afū HH L "take medicine!"
    take medicine
    b. sänë afū LM L "dry medicine!"
    dry medicine

The prefix of the noun /afū/ 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 álēlḗ́́ → [fá lēlḗ́́] "give a bat!"
    b. ológica ākēkūn → [lógica kēkūn] "fetch an owl!"
    c. kūrē āsēsān → [kūrē sēsān] "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
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 LH2, characterizing thus the High and Low classes respectively. 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:

(3) Monosyllabic verb stems
   a. H: fá "give!"
   b. LH: sō "pierce!"
   c. L: kō "take!"

(9) Disyllabic verb stems
   a. HH: kwərə "take!"
   b. LH: səŋə "dry!"

(10) Trisyllabic verb stems
   a. HHH: bəgətə "break!"
   b. LLH: bəgətə "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.

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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) kó- mbà → [kɔ mbà] "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 definition 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 (T0) or the moment of speaking. Past and future time is divided up equally either way.

14.2 Present (T0) /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 T0.

(1)

a. à kwéřä mbä → [a kwéřä mbä]
   he ø take T meat       "he has taken meat"

b. à sāŋä mbä → [a sāŋä mbä]
   he ø dry T meat          "he has dried meat"

c. bō kwéřä mbä → [bō kwéřä mbä]
   they ø take T meat       "they have taken meat"

d. bō sāŋä mbä → [bō sāŋä mbä]
   they ø dry T meat         "they have dried meat"

e. à kwéřä förä → [a kwéřä 'förä]
   he ø take T mouse        "he has taken a mouse"

f. à sāŋä förä → [a sāŋä 'förä]
   he ø dry T mouse          "he has dried a mouse"

g. bō kwéřä förä → [bō kwéřä 'förä]
   they ø take T mouse       "they have taken a mouse"

h. bō sāŋä förä → [bō sāŋä 'förä]
   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 T0 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
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. á kwérá ` - mbà underlying
b. á kwérá mbà TO replacive tone
c. á kwérá mbá desyllabification and tone absorption
d. á kwérá mbá 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 sâŋá ` - mbà underlying
b. bó sâŋá mbà TO replacive tones
c. bó sâŋá mbà tone spreading
d. bó sâŋá mbá nasal desyllabification and
tone absorption
e. bó sâŋá mbá tone simplification
f. bó sâŋá mbá 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 simplifies 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. á kwérá ` - 'förá underlying
b. á kwérá 'förá TO replacive tone
c. á kwérá 'förá tone grounding
d. á kwérá ' 'förá 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
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 /förä/ to downstep.\(^2\)

The derivation of (1h) is the same as that of (1e) given above. The same T0 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:

\[(5)\]

\begin{align*}
\text{a. } & \text{a } ðō \text{ catch } T \text{ mbā } \rightarrow [\text{a } ðō \text{ mbā}] & \text{"he has caught meat"} \\
\text{b. } & \text{a } ðō \text{ catch } T \text{ förē } \rightarrow [\text{a } ðō' 'förē}] & \text{"he has caught a mouse"} \\
\text{c. } & \text{bō } sō \text{ pierce } T \text{ mbā } \rightarrow [\text{bō } sō \text{ mbā}] & \text{"they have pierced meat"} \\
\text{d. } & \text{bō } sō \text{ pierce } T \text{ förē } \rightarrow [\text{bō } sō' 'förē}] & \text{"they have pierced a mouse"}
\end{align*}

The derivation of (5a) is as follows:

\[(6)\]

\begin{align*}
\text{a. } & \text{a } ðō \text{ mbā } \text{ underlying} \\
\text{b. } & \text{a } ðō \text{ mbā } \text{ T0 replacive tone} \\
\text{c. } & \text{a } ðō \text{ mbā } \text{ tone absorption} \\
\text{d. } & \text{a } ðō \text{ mbā } \text{ nasal desyllabification and tone absorption} \\
\text{e. } & \text{a } ðō \text{ mbā } \text{ tone lowering}
\end{align*}

In (6a) the underlying tones are given. It should be noted that the whole L HL tone pattern of the T0 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:
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. bō sō ~ mbā underlying
b. bō sō ~ mbā TO replacive tones
c. bō sō ~ mbā tone spreading
d. bō sō mbā tone grounding
e. bō sō mbā nasal desyllabification and tone absorption

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. ā tsō'sē mbā → ā tsō'sē mbā
"he has borrowed meat"
b. bō mā'atā 'lānē → bō mā'atā 'lānē
"they have let go the horse"

The derivation of (9a) is as follows:
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:

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 (P0) /mā/

The immediate past tense (labelled P0) 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
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 /mâ/ which follows the verb. The tone of the marker is HL. The verb has a replaceable LL tone pattern. The following examples illustrate the use of the tense and the tonal behaviour involved.

(12) a. à kwêrâ `mâ lânhâ → [à kwêrâ mâ lânhâ]  
    he take T PO horse "he has taken a horse"

b. à lôgâ `mâ lânhâ → [à lôgâ mâ lânhâ]  
    he fetch T PO horse "he has fetched a horse"

c. bô kwêrâ `mâ lânhâ → [bô kwêrâ mâ lânhâ]  
    they take T PO horse "they have taken a horse"

d. bô lôgâ `mâ lânhâ → [bô lôgâ mâ lânhâ]  
    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.
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 /nɛn/, which precedes the verb. The underlying tone of the marker is HL as will be seen below.

(13) a. ɓın nɛn kwɛrɛ lɛnɛ → [ɓın nɛn kwɛrɛ lɛnɛ]  he P1 take horse "he took a horse (today)"
    b. ɓın nɛn lɔɡə mbə → [ɓın nɛn lɔɡə mbə]  he P1 fetch meat "he fetched meat (today)"
    c. bɔ nɛn kwɛrɛ fɔrɛ → [bɔ nɛn 'kwɛrɛ fɔrɛ]  they P1 fetch horse "they took a mouse (today)"
    d. bɔ nɛn lɔɡə mbə → [bɔ nɛn lɔɡə mbə]  they P1 fetch meat "they fetched meat (today)"
    e. ɓın nɛn lɔɡə lɛnɛ → [ɓın nɛn lɔɡə lɛnɛ]  he P1 fetch horse "he took a horse (today)"
    f. bɔ nɛn lɔɡə → [bɔ nɛn lɔɡə]  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 /nɛn/ 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 mbə is deleted by T-rule 5. The derivation of (13c) is given here below:

(14) a. bɔ nɛn kwɛrɛ 'fɔrɛ  underlying
    b. bɔ nɛn kwɛrɛ fɔrɛ  tone grounding to the right
    c. bɔ nɛn 'kwɛrɛ fɔrɛ  tone simplification and de
In (14a) the underlying tone of the string are given. In (14b), 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 simplifies to H causing the following H tones of the verb to downsteps.

The derivation of (14e) is as follows:

(15) a. à nín lôgâ lêŋê underlying
b. à nín lôgâ lêŋê simplification by absorption
c. à nín lôgâ lêŋê tone lowering
d. à nín lôgâ lêŋê dissimilation
e. à nín lôgâ lêŋê 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 syllable 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) /˘ nfn˘ /

There is an alternative form of the P1 tense which is marked by the morpheme /˘ nfn˘ / 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 actually carried out or completed.

(16) a. à ˘ nfn˘ kwërâ˘ lêŋê → [à nín kwërâ lêŋê] "he took a horse (today)"
    he P1b take horse
b. à ˘ nfn˘ lôgê˘ lêŋê → [à nín lô'gê 'lêŋê] "he fetched a horse (today)"
    he P1b fetch horse
c. bô ˘ nfn˘ kwërâ˘ lêŋê → [bô nín kwërâ lêŋê] "they took a horse (today)"
    they P1b take horse
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. á nín kwër lánhä underlying
b. á nín kwër lánhä tone grounding to the left
c. á nín kwër lánhä tone lowering
d. á nín kwër lánhä tone grounding to the right
e. á nín kwër lánhä tone lowering
f. á nín kwër lánhä 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. bó nín lāgā láŋhä underlying
b. bó nín lāgā láŋhä tone grounding to the left
c. bó nín lāgā láŋhä tone lowering
d. bó nín lāgā láŋhä tone grounding to the right
e. bó nín lāgā láŋhä tone grounding to the right
f. bó nín lāgā láŋhä 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.
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) /kI/

The P2 tense is marked by the morpheme /kI/ 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. á kí kwërâ (mbá → [á kí kwërâ mbá] he P2 take T meat "he took meat (yesterday)"
b. á kí lôgá ʼlânâ → [á kí lôgá ʼlânâ] he P2 fetch T horse "he fetched a horse (yesterday)"
c. bó kí kwërâ ʼlânâ → [bó kí kwërâ ʼlânâ] they P2 take T horse "they took a horse (yesterday)"
d. bó kí lôgá ʼlânâ → [bó kí lôgá ʼlânâ] 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 NL 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. á kí kwërâ  mbá  underlying
b. á kí kwërâ  mbá  P2 verb replacive tone pattern
c. á kí kwërâ  mbá  tone lowering
d. á kí kwërâ  mbá  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:

(21) a. å kǐ lògā ^ lòŋá underlying
b. å kǐ lògā lòŋá P2 replacive verb tone
c. å kǐ lògá lòŋá tone tone grounding
d. å kǐ lògá lòŋá simplification and ds

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 /-y55/ 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 Ngeymboon 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 /kə/ a relative meaning describing the unit of time immediately before the unit of reference: day, week, month, and year.

14.6 Remote Past (P3) /lën/

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 /lën/. 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.
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 /ká/. Three of these tenses are further marked and distinguished from the simple future tense.

14.8 Simple Future (FO) /ká + ø/

The simple future is the unmarked future tense despite the fact that it has the common future marker /ká−/. This tense is
used for future actions when the time of the action is not specified.

(23) a. ă kā ō kwērā `lānā → ă kā kwērā lānā → ă kā kwērā lānā → [ă kā kwērā lānā]
   he F ō take horse  "he will take a horse"

b. ă kā ō lōgā ōmbā → ă kā lōgā ōmbā → ă kā lōgā ōmbā → [ă kā lōgā ōmbā]
   he F ō fetch meat "he will fetch meat"

c. bó kā ō kwērā `fōrē → bó kā 'kwērā fōrē → [bō kā 'kwērā fōrē]
   they F ō take mouse "they will take a mouse"

d. bó kā ō lōgā ōmbā → [bō kā lōgā ōmbā]
   they F ō fetch meat "they will fetch meat"

e. ă kā ō lōgā `lānā → [ă kā lōgā lānā]
   he F ō fetch horse "he will fetch a horse"

f. bó kā ō lōgā → [bō kā lōgā]
   they F ō 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. bó kā kwērā `fōrē underlying
   bó kā kwērā fōrē
   tone grounding to the right
   bó kā ‘kwērā fōrē
   tone simplification and de

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. ă kā lōgā `lānā underlying
   ă kā lōgā lānā tone grounding to the right
   ă kā lōgā lānā simplification
   ă kā lōgā lānā tone lowering
   ă kā lōgā lānā tone dissimilation
   ă kā lōgā lānā 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 LL 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) /kä + lā/

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 /lā/ in addition to the common future marker /kä/. The F1 marker /lā/ is realized on the surface with a LM glide by T-rule 1.

(26) a. ä kā lā kwërā lānā → [ä kā lā kwërā lānā]  
   he F 1 take horse "he will take a horse (today)"

b. ä kā lā lāgô mbā → [ä kā lā lāgô mbā]  
   he F 1 fetch meat "he will fetch meat (today)"

c. bô kā lā kwërā lānā → [bô kā lā kwërā lānā]  
   they F 1 take horse "they will take a horse (today)"

d. bô kā lā lāgô mbā → [bô kā lā lāgô mbā]  
   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 /lā/ becomes M after an H tone and LM elsewhere.

14.10 Tomorrow Future (F2) /kä + lō/  

The F2 tense is used to describe actions that are expected to take place tomorrow.  

The tomorrow future (F2) is marked by /lō/ with a LH tone in addition to the common future marker /kä-/.
The following examples illustrate the use of this tense and its tonal behaviour.

(27) a. á kā lō kwērō ˈlāŋgə → [á kā lō kwērō ˈlāŋgə]
    he F 2 take horse "he will take a horse (tomorrow)"

b. á kā lō lāgə mbā → [á kā lō lāgə mbā]
    he F 2 fetch meat "he will fetch meat (tomorrow)"

c. bó kā lō kwērō ˈlāŋgə → [bō kā lō kwērō ˈlāŋgə]
    they F 2 take horse "they will take a horse (tomorrow)"

d. bó kā lō lāgə mbā → [bō kā lō lāgə mbā]
    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 /lā/ 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 + yI /

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 + yI /, i.e. by /yI/ with a LH tone in addition to the common future marker.

(28) a. á kā yI kwērō ˈlāŋgə → [á kā yI kwērō ˈlāŋgə]
    he F 3 take horse "he will take a horse (in the distant future)"

b. á kā yI lāgə mbā → [á kā yI lāgə mbā]
    he F 3 fetch meat "he will fetch meat (in the distant future)"

c. bó kā yI kwērō ˈlāŋgə → [bō kā yI kwērō ˈlāŋgə]
    they F 3 take horse "they will take a horse (in the distant future)"
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 LL 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

<table>
<thead>
<tr>
<th></th>
<th>High tone verbs</th>
<th>Low tone verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Underlying tones</td>
<td>HH</td>
<td>LH</td>
</tr>
<tr>
<td>b) Verb Forms</td>
<td>High tone verbs</td>
<td>Low tone verbs</td>
</tr>
<tr>
<td>Tense</td>
<td>Marker</td>
<td>Verb stem</td>
</tr>
<tr>
<td>P3</td>
<td>HL</td>
<td>H H</td>
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<tr>
<td>P2</td>
<td>L</td>
<td>L HL</td>
</tr>
<tr>
<td>P1</td>
<td>HL</td>
<td>H H</td>
</tr>
<tr>
<td>P1b</td>
<td>LHLH</td>
<td>H H</td>
</tr>
<tr>
<td>P0</td>
<td>HL</td>
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<td>L HL</td>
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<tr>
<td>P0</td>
<td>HL#LH</td>
<td>H H</td>
</tr>
<tr>
<td>F1</td>
<td>HL#LH</td>
<td>H H</td>
</tr>
<tr>
<td>F2</td>
<td>HL#LH</td>
<td>H H</td>
</tr>
</tbody>
</table>
In most of the verb forms we have seen that the tense morpheme comes immediately before the verb except in the P0 where the morpheme comes immediately after the verb.
Notes to Chapter Fourteen

1 This is realized phonetically as [bɔ səŋ bə]. (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 /'y55/.
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 category 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 perfective 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. â kî wâ "înââ → [â kî wâ nââ]  
"he slaughtered an animal (yesterday)"

b. â nîn kûrâ mbâ → [â nîn kûrâ mbâ]  
"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 kwërë mā mbā → [à kwërë mā mbā] “he has taken meat”

b. à nī nj kwërë mbā → [à nī nj kwërë mbā] “he has taken meat (today)”

c. bō ’nī nj kwërë mbā → [bō nī nj kwërë 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 /-ka/

The iterative meaning is expressed by the verb suffix /-ka/. 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.
15.2.3.2 Distributive /-ta/

The distributive has the same meaning as the iterative with the sole difference that the suffix /-ta/ is used with transitive verbs.

(4) verb  

iterative

(3) verb  

a. kwó "die!"  

kwóká "die one after another!"

b. wó "fall!"  

wóká "fall several times!"

c. jče "urinate!"  

jčěká "urinate several times!"

15.2.3.3 Attenuative /-ta/

The attenuative is expressed by the verb suffix /-ta/. 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  

a. n3'5 "squeeze!"  
n3't5t5 "squeeze a little!"

b. yę'ę "sweep!"  
yę'ęt5 "sweep a little portion!"

c. tsű "wet!"  

tsűt5 "wet a bit!"

d. féę "slap!"  
fěnt5 "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:

<table>
<thead>
<tr>
<th>H tone</th>
<th>Low tone</th>
</tr>
</thead>
<tbody>
<tr>
<td>H + suffix → H-H</td>
<td>LM + suffix → L-M</td>
</tr>
<tr>
<td>H H + suffix → H H-H</td>
<td>L M + suffix → L L-M</td>
</tr>
</tbody>
</table>

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 /ghësë/.

(6) a. á kwërë ` më mbà → [á kwërë më mbà] "he has taken meat"

b. á ghësë ` më ŋkwërë mbà → [á ghësë më ŋkwërë mbà] "he has just taken meat"

c. á ghësë ŋkwërë mbà → [á ghësë ŋkwërë mbà] "he has just taken meat"
For the description of the tonal behaviour of the verbal forms of 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 sô ^ àbô yi' → [à sô abô yi]
   "he has pierced his hand"

   b. à kôô ^ atû yi' → [à kôô atû yi]
   "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 Nelmers (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 everyday experience. This action, although forming part of his total experience, is regarded as belonging to the distant past. The experiential perfect is marked by /lééN̂/.

(8) a. à lééN̂ kûrê ŋsô → [à lééN̂ kûrê ŋsô]
   "he has once eaten elephant meat"

   b. à lééN̂ ghêê Kumba → [à lééN̂ ghê'ê Kumba]
   "he has once or some time been to Kumba"

   c. à lééN̂ yô ŋkû → [à lééN̂ yô ŋkû]
   "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:
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 desylabifies and its L tone is deleted.

The derivation of (8b) is as follows:

(10) a. à lëéŋ' ghëë Kumba underlying
b. à lëéŋ' ghëë Kumba tone grounding to the right
c. à lëéŋ' ghëë Kumba simplification and ds

d. à lëéŋ' kürë nsëë nasal desylabification and tone deletion

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 /kfin'/.

(11) a. à kïìn' jwI → [ã kïïn jwI]
"she gave birth"

b. à kïïm' fë'ë wâ ñdâ → [ã kïïm fë'ë wâ' ndâ]
"he moved out of the house"

The tone of the marker is HLH 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
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 T0

The present tense imperfective aspect (IMPF T0) 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. á kwéré mbá → [á 'kwéré mbá]  
T "he is taking meat"

b. á sáŋa mbá → [á sáŋa mbá]  
T "he is drying meat"

c. bó kwéré mbá → [bó 'kwéré mbá]  
T "they are taking meat"

d. bó sáŋa mbá → [bó sáŋa mbá]  
T "they are drying meat"

As can be observed in (12), the imperfective differs from the forms of the T0 perfective only by tone (cf. 14.2). In (12a) the marker is an underlying HL tone on the subject pronoun /á/. The derivation of (12a) is given here below:

(13) a. á kwéré mbá underlying
b. á kwéré mbá T0 replacive tone on pronoun
c. á 'kwéré mbá tone simplification and de

d. á 'kwéré mbá desyllabification and tone deletion

In (13a) the underlying tones are given. In (13b) the T0 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 /b6/ to give the form /bô/. The derivation of (12c) is as follows:

(14) a. bô kwêrê mbā underlying
    b. bô kwêrê mbā TO replacive tone on pronoun
    c. bô 'kwêrê mbā tone simplification and ds
    d. bô 'kwêrê mbā 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 H tone pattern on the tense morpheme.

(15) a. â nĩŋ kwêrê mbā → [â nĩŋ kwêrê mbā] T "he was taking meat (today)"
    b. â nĩŋ sãŋė mbā → [â nĩŋ sãŋė mbā] T "he was drying meat"
    c. bô nĩŋ kwêrê mbā → [bô nĩŋ kwêrê mbā] T "they were taking meat (today)"
    d. bô nĩŋ sãŋė mbā → [bô nĩŋ sãŋė mbā] T "they were drying meat (today)"

The derivation of (15a) is as follows:

(16) a. â nĩŋ kwêrê mbā underlying
    b. â nĩŋ kwêrê mbā IMPF P1 tone on pronoun
    c. â nĩŋ kwêrê mbā tone simplification
    d. â nĩŋ kwêrê mbā tone grounding
    e. â nĩŋ kwêrê mbā tone lowering
    f. â nĩŋ kwêrê mbā desyllabification and tone deletion
In (16a) the underlying tones are given. In b. the HL IMPF 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. bọ ` nin` sàńẹ mbà underlying
    b. bọ ` nin` sàńẹ mbà IMPF P1 tone on pronoun
    c. bọ ` nin` sàńẹ mbà tone simplification
    d. bọ ` nin` sàńẹ mbà tone grounding
    e. bọ ` nin` sà'ǹẹ mbà simplification and ds
    f. bọ ` nin` sà'ǹẹ mbà 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 simplified 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 /kì sì^-/

The imperfective P2 is marked by the P2 tense marker, /kì/ (for tense) and /sì^-/ (for aspect).

(18) a. á kì sì^- kwêrâ mbà → [á kì sì^- 'kwêrâ mbà] "he was taking meat"
    b. á kì sì^- sàńẹ mbà → [á kì sì^- sàńẹ mbà] "he was drying meat"
    c. á kì sì^- sàńẹ `tìtà → [á kì sì^- sàńẹ tìtà] "he was drying pepper"

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d. bó kĩ sǐ̂ kwérọ́ ṣmbà → [bó kĩ sǐ̂ 'kwérọ́ mbà] “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. á kĩ sǐ̂ kwérọ́ ṣmbà underlying
b. á kĩ sǐ̂ kwérọ́ ṣmbà simplification and ds
c. á kĩ sǐ̂ kwérọ́ ṣmbà 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. á kĩ sǐ̂ sān̄ ṣ̄tē̄ underlying
b. á kĩ sǐ̂ sān̄ ṣ̄tē̄ simplification and ds
c. á kĩ sǐ̂ sān̄ ṣ̄tē̄ tone grounding to the right
d. á kĩ sǐ̂ sān̄ ṣ̄tē̄ dissimilation
e. á kĩ sǐ̂ sān̄ ṣ̄tē̄ tone lowering
f. á kĩ sǐ̂ sān̄ ṣ̄tē̄ 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 /lěn sǐ̂/

The P3 imperfective aspect is marked by the P3 tense marker and the imperfective morpheme, /sǐ̂/.

(21) a. lěn sǐ̂ kwérọ́ ṣmbà → [lěn sǐ̂ 'kwérọ́ mbà] "he was taking meat a long time ago."
b. à lën sf' săñə mbà → [à lën sf' săñə mbà]
"he was drying meat"

c. à lën sf' săñə títá → [à lën sf' săñə títá]
"he was drying pepper"

d. bó lën sf' kwéré mbà → [bó lën 'sf' 'kwéré mbà]
"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 /sf-/ 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 /á/ causes the P3 marker /lën/ 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 T0 or IMPF P3 have both progressive and habitual meanings as in the following examples.

(22) a. [á 'b55ă ndá]
"he is building houses/a house" PROG
"he builds houses/he is a builder" HAB

b. [á lë sf' b55ă ndá]
"he was building houses/a house" PROG
"he used to build houses" HAB

The additional suffix /-a/ to the verb b55 is an optional morpheme which may or may not be present. The derivation of (22a) is similar to (19) as far as the verbal constructions or forms are concerned; (22b) is derived in a similar way to (19) as can be seen below:
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 IMPF Future

The imperfective future 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 kî/

The FO imperfective form is marked by /kâ kî/. The imperfective marker, /kî/, like /kâ/, has a surface H tone but following its behaviour in context, we postulate an underlying HL tone for it thus /kî/, just as we did for /kâ/.

(24) a. á kâ kî kwërâ → [á kâ kî ’kwërâ] "he will be taking"
    b. á kâ kî sâñê mbâ → [á kâ kî sâñê mbâ] "he will be drying meat"
    c. bó kâ kî kwërâ mbâ → [bó kâ ’kî ’kwërâ mbâ] "they will be taking meat"
    d. bó kâ kî sâñê ’tîtâ → [bó kâ ’kî sâñê tîtâ] "they will be drying pepper"

In (24a) the underlying HL tone of the imperfective marker /kî/ 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 /kî/ to downstep. The lowering of the H tone of the FO marker to M by the L tone of the preceding pronoun /á/ is of general application for the future tenses, as already discussed in the preceding chapter.

The derivation of (24a) is as follows:
(25) a. á kā kǐ kwērē underlying
   b. á kā kǐ kwērē tone lowering
   c. á kā kǐ kwērē tone simplification
   d. á kā kǐ 'kwērē tone simplification and ds

   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).

(26) a. bō kā kǐ sānō ˈtītā underlying
   b. bō kī 'kī sānō ˈtītā tone simplification
   c. bō kā 'kī sānō ˈtītā tone simplification and ds
   d. bō kā 'kī sānō ˈtītā tone grounding
   e. bō kā 'kī sānō ˈtītā dissimilation
   f. bō kā 'kī sānō ˈtītā tone lowering
   g. bō kā 'kī sānō ˈtītā 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 /āmbā/ 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 /kī/ to the markers of the various future tenses as illustrated in 15.4.6.2.1-3 below.
15.4.6.2.1 **IMPF F1 /kā lō kī/**

(27) a. ā kā lō kī kwērē mbā → [ā kā lō kī 'kwērē mbā] "he will be taking meat (today)"

b. ā kā lō kī sānjē mbā → [ā kā lō kī sānjē mbā] "he will be drying meat (today)"

c. bó kā lō kī kwērē mbā → [bó kā lō kī 'kwērē mbā] "they will be taking meat (today)"

d. bó kā lō kī sānjē mbā → [bó kā lō kī sānjē mbā] "they will be drying meat (today)"

15.4.6.2.2 **IMPF F2 /kā lō kī/**

(28) a. ā kā lō kī kwērē mbā → [ā kā lō kī 'kwērē mbā] "he will be taking meat (tomorrow)"

b. ā kā lō kī sānjē mbā → [ā kā lō kī sānjē mbā] "he will be drying meat (tomorrow)"

c. bó kā lō kī kwērē mbā → [bó kā lō kī 'kwērē mbā] "they will be taking meat (tomorrow)"

d. bó kā lō kī sānjē mbā → [bó kā lō kī sānjē mbā] "they will be drying meat (tomorrow)"

15.4.6.2.3 **IMPF F3 /kā yī kī/**

(29) a. ā kā yī kī kwērē mbā → [ā kā yī kī 'kwērē mbā] "he will be taking meat (in the distant future)"

b. ā kā yī kī sānjē mbā → [ā kā yī kī sānjē mbā] "he will be drying meat (in the distant future)"

c. bó kā yī kī kwērē mbā → [bó kā yī kī 'kwērē mbā] "they will be taking meat (in the distant future)"

d. bó kā yī kī sānjē mbā → [bó kā yī kī sānjē mbā] "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 imperfective 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.
6.2.1 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. kó nää yà "catch the animal!"
    b. fâ mbà yà "give the meat!"
    c. kwērē mbà yà "take the meat!"
    d. kūrē mbà yà "eat the meat!"
    e. kāgōtē mbà yà "chop the meat!"
    f. kōtē 'mō'ō 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. kó "catch!"
    b. fâ "give!"
    c. kwērē "take!"
    d. kūrē "eat!"
    e. kākētē "chop!"
    f. kōtē "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 different tone patterns as used in the imperative:

(3) a. sō- mbā yā → [sō mbā yā] "pierce the meat!"
    b. tū- mbā yā → [tū mbā yā] "spit out the meat!"
    c. sō- laŋā wā → [sō laŋā wā] "pierce the horse!"
    d. lō mbā yā → [lō mbā yā] "look for the meat!"
    e. lōgō mbā yā → [lōgō mbā yā] "fetch the meat!"
    f. lō'ōsē mbā yā → [lō'ōsē mbā yā] "hide the meat!"
    g. bōōntsē mbā yā → [bōōntsē mbā yā] "cover the meat!"
    h. bōōntsē 'fōrē wā → [bōōntsē 'fōrē wā] "cover the mouse!"

The surface tone patterns that we notice above are LM, LM, LLM. However, we find L and LLL in (3c,h). These are caused by the
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. së' → [së] "pierce!"
   b. tû' → [tû] "spit out!"
   c. lës → [lën] "look for!"
   d. lëgë → [lëgë] "fetch!"
   e. lë'sës → [lë'sës] "hide!"
   f. bëöntë → [bëöntë] "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:

| fa    | "where?"  | á 'yá | "why?"
| ka    | "what?"   | wo    | "who?"

16.3.1.1 Fa

The usage of fa is illustrated in the following sentences:

(5) a. ò ^ ghëë ã fa → [ò ghëë fə]
   "where are you going?"

   b. ò ^ ghëë ã fa → [ò ghëë fə]
   "where are you going?"

   c. ò ^ lë ã fa → [ò lë fə]
   "where are you from?"
d. bô lô' à fə → [bô lôà fə]
   they leave suff. where
   "where are they from?"

e. bô kĩ sî' ghêţ ̀ à fə → [bô kĩ sî' ̀ ghêţ 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. 6 ghêţ ̀ à fə  underlying
b. 6 ghêţ ̀ à fə  IMPF T0 replaces tone on pronoun
c. 6 ghêţ ̀ à fə  tone simplification
d. 6 ghêţ ̀ à fə  tone lowering
e. 6 ghêţ ̀ fə  V-deletion
f. 6 ghêţ ̀ fə  tone grounding
g. 6 ghêţ ̀ fə  tone copying

In (6a) the underlying tones are given. The HI, 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 /fa/ can be used alone in asking questions and in this usage it carries an H tone; e.g.

(7) Fā "where?"

16.3.1.2 ka, wo, а 'yā

In the following paragraphs we are going to treat the rest of the question words, /ka/, /wo/ and /а 'yā/. The words, /ka/ 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. а nī а ka → [а nī kā] "what is it?"
b. а nī а wo → [а nī wō] "who is it?"
c. а nī yā а ka → [а nī yā а kā] "what did he see?"
d. а nī yā а wo → [а nī yā а wō] "whom did he see?"
e. а nī yā а ka → [а nī yā 'kā] "what did he see?"
f. а nī yā а wo → [а nī yā 'wō] "whom did he see?"

The derivation of (8a) is as follows:

(9) a. а nī а ka underlying
b. а nī а ka tone simplification
c. а nī а ka tone lowering
d. а nī а ka V-deletion
e. а nī а ka tone grounding
f. а nī а ka 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 /ka/ 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 A H tone of the Pl marker to M while the Q-words, /ka/ and /wo/ copy the L tone of the preceding suffix, /а/.
The derivation of (8e) is given here below:

(10) a. ā nî yâ ā ka 
    underlying
b. ā nî yâ ā ka 
    tone lowering
c. ā nî yâ ā ka 
    simplification
d. ā nî yâ - ka 
    v deletion
e. ā nî yâ ka 
    tone grounding
f. ā nî yâ 'kâ 
    tone simplification, ds
and tone copy

In (10a) the full form of the question (i.e. with the morpheme /â/) 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 /ka/ 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. ो nî yâ wô bi' 
    you Pl see Q Q Bi
    "Bi, whom did you see?"
b. ö nǐ yó 'wó ngwā
   you Pl see Q Ngwa
   "Ngwa, whom did you see?"

c. ö kī sī' fā'ā kē ghū
   you P2 impf. work Q there
   "what were you doing, there?"

In (11a,b,c) the Q-words, /wo/ and /ka/ 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 /yā/ and not the L tone of the following word, ngwa; in (11c) /ka/ copies the L tone of the ML falling tone but not the M tone of the following word /ghū/.

The question words /ā 'yā/ are used together. /ya/ is bound to /a/. It is used in Q-sentences as follows:

(12) a. ö zl' á' yā → [ö zl á 'yā]
   you come why
   "why have you come"

   b. ö kī kūrō ningōo nyā' 'á yā
   you P2 eat plantain the Q
   "why did you eat the plantain?"

The derivation of (12a) is as follows:

(13) a. ö yI á yā underlying
   b. ö yI á yā simplification
   d. ö yI á 'yā 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 /ka/ and /wo/ can be used together with /ā/ just as we have seen for /ā 'yā/ to form questions in themselves, for example:

(14) a. á 'yā  "why?"
   b. á 'kā  "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 nî fită "it is a calabash"
   b. à nî fită "is it a calabash?"
   it be calabash

(16) a. à ki lôgă mbă yă "he took the meat"
   b. à ki lôgă mbă yă "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. à 'ji "he is eating"
   b. à 'ji "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 ki kürǹ ngǹgò
take plantains (yesterday)"
   b. à ki kürǹ ngǹgò
take 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
emphatic statement would end in a raised low while the sentence ending in Level 1 tone will indicate a question, e.g.

(19)  
  a. ã kí kôrõ ìnìŋgôô  "he ate plantains!"
  b. ã kí kôrõ  ìŋgôô  "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 /'káá sì/ 

NEG marker is /'káá...sì/ as illustrated below.

(1) a. "káá å sì mbå kwêrê " → [káá sì mbå kwêrê] wxT "he has not taken meat"
   Neg he Neg meat take T

b. "káá å sì mbå såñê " → [káá sì mbå såñê] wxT "he has not dried meat"
   Neg he Neg meat dry T

c. "káá å sì 'títä såñê " → [káá sì 'títä såñê] wxT "he has not dried pepper"
   Neg he Neg pepper dry T

d. "káá bó sì mbå kwêrê " → [káá bó sì mbå kwêrê] wxT "they have not taken meat"
   Neg they Neg meat take T

e. "káá bó sì mbå såñê " → [káá bó sì mbå såñê] wxT "they have not dried meat"
   Neg they Neg meat dry T

f. "káá å sì såñê " → [káá sì såñê] wxT "he has not dried"
   Neg he Neg dry T

g. "káá bó sì yā'ā " → [káá bó sì yā'ā] wxT "they have not cried"
   Neg they Neg cry T

h. "káá bó sì kwêrê " → [káá bó sì kwêrê] wxT "they have not taken"
   Neg they Neg take T
In the above examples we find that the underlying tones of the Neg morpheme are \( \uparrow \HH \ldots \uparrow \HH \). These tones come out on the surface as MM..LM by T-rule 1. We have posited a \( \uparrow \) tone before /kää/ in order to explain the surface MM tones on it. As in the case of the possessive pronouns (cf. 11.4 (10)), the \( \uparrow \) 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 /ä/ is deleted and its tone is grounded to the left on the first part of the NEG morpheme, /kää/. We also notice that the second part of the NEG morpheme, /sî/, 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:

\[
\begin{align*}
(2) & a. \quad \text{kää a sî mbä kwërä} \quad \text{underlying} \\
& b. \quad \text{kää a sî mbä kwërä} \quad \text{NEG replacive tone} \\
& c. \quad \text{kää a sî mbä kwërä} \quad \text{tone lowering} \\
& d. \quad \text{kää a sî mbä kwërä} \quad \text{tone deletion} \\
& e. \quad \text{kää a sî mbä kwërä} \quad \text{tone lowering} \\
& f. \quad \text{kää sî mbä kwërä} \quad \text{V-deletion} \\
& g. \quad \text{kää sî mbä kwërä} \quad \text{tone grounding} \\
& h. \quad \text{kää sî mbä kwërä} \quad \text{simplification} \\
& i. \quad \text{kää sî mbä kwërä} \quad \text{desyllabification} \\
& j. \quad \text{kää sî mbä kwërä} \quad \text{tone lowering}
\end{align*}
\]

In (2a) the underlying tones are given. Note should be taken of the floating \( L \) tone of the NEG morpheme /\~ kää/ 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
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 /kām/ (2g,h). In (21) 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 bō sī ābā sānē | underlying |
| b. | kāā bō sī ābā sānē | NEG verb tone |
| c. | kāā bō sī ābā sānē | tone lowering |
| d. | kāā bō sī ābā sānē | tone deletion |
| e. | kāā bō sī ābā sānē | simplification |
| f. | kāā bō sī mbā sānē | desyllabification and tone deletion |
| g. | kāā bō sī mbā sānē | tone lowering |

The particular point to note in the above derivation is the assimilation process whereby the LH tone of /sī/ simplifies to level M in (3e) as a result of the preceding H tone of the pronoun /bō/. We have also noticed this in the derivation of the tones of the Fl-3 markers (cf. 14.9-11).

Here below is a derivation of (1h)

(4)  
| a. | kāā bō sī kwērā | underlying |
| b. | kāā bō sī kwērā | NEG verb tone |
| c. | kāā bō sī kwērā | tone lowering |
| d. | kāā bō sī kwērā | tone deletion |
| e. | kāā bō sī kwērā | dissimilation of LH to L before H |
| f. | kāā bō sī kwērā | 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) /sī/ is raised by the H tone of bō 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 /sī/ to L before the H tone of the verb /kwērā/. Another way of explaining this is that the LH contour tone simplifies to L by the process of absorption.
17.3 NEG IMP /tsuG/

The imperative NEG marker is /tsuG/. Unlike the NEG marker /tsuG/ is not a discontinuous morpheme. It has an underlying 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. tsuG mba kwérollable → [tsuG mba kwérollable] "do not take meat"
b. tsuG lõna kwérollable → [tsuG lõna kwérollable] "do not take a horse"
c. tsuG mba sãnhé → [tsuG mba sãnhé] "do not dry meat"
d. tsuG kwérollable → [tsuG kwérollable] "do not take"
e. tsuG sãnhé → [tsuG sãnhé] "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 /- kãã...wáá/ 

The NEG construction for the past tenses, P1, P2 and P3 is similar in all cases as can be seen below.
17.4.1 NEG P1

(6) a. "kāā a nī wā’ā mbā kwērā" → [kāā nī wā’ā
NEG he P1 NEG meat take T  mbā kwērā]
"he did not take meat"

b. "kāā a nī wā’ā ’lānē kwērā" → [kāā nī wā’ā
NEG he P1 NEG horse take T  lānē kwērā]
"he did not take a horse"

c. "kāā a nī wā’ā mbā sānā" → [kāā nī wā’ā
NEG he P1 NEG meat dry T  mbā sānā]
"he did not dry meat"

d. "kāā bō nī wā’ā mbā kwērā" → [kāā bō nī ’wā’ā
NEG they P1 NEG meat take T  mbā kwērā]
"they did not take meat"

e. "kāā bō nī wā’ā ’fōrē sānā" → [kāā bō nī ’wā’ā
NEG they P1 NEG mouse dry T  fōrē sānā]
"they did not dry mouse"

17.4.2 NEG P2

(7) a. "kāā a kī wā’ā mbā kwērā" → [kāā kī wā’ā
NEG he P2 NEG meat take T  mbā kwērā]
"he did not take meat"

b. "kāā a kī wā’ā mbā sānā" → [kāā kī wā’ā
NEG he P2 NEG meat dry T  mbā sānā]
"he did not dry meat"

c. "kāā bō kī wā’ā mbā kwērā" → [kāā bō kī wā’ā
NEG they P2 NEG meat take T  mbā kwērā]
"they did not take meat"

d. "kāā bō kī wā’ā mbā sānā" → [kāā bō kī wā’ā
NEG they P2 NEG meat dry T  mbā sānā]
"they did not dry meat"

e. "kāā a kī wā’ā kwērā" → [kāā kī wā’ā
NEG he P2 NEG take T  kwērā]
"he did not take"

f. "kāā bō kī wā’ā yā’ā" → [kāā bō kī wā’ā
NEG they P2 NEG cry T  yā’ā]
"they did not cry"
17.4.3 NEG P3

(8) a. "kāā ā lē wā'ā mbā kwērē " → [kāā lē wā'ā
NEG he P3 NEG meat take T mbā kwērē] "he did not take meat"

b. "kāā bō lē wā'ā 'kāā sānē" " → [kāā bō lē 'wā'ā
NEG they P3 NEG crab dry T kāā sānē] "they did not dry a crab"

c. "kāā bō lē wā'ā sānē " → [kāā bō lē 'wā'ā
NEG they P3 NEG dry T sānē] "they did not dry"

d. "kāā ā lē wā'ā kwērē " → [kāā lē wā'ā
NEG he P3 NEG take T kwērē] "he did not take"

The following remarks could be made about the NEG P1-3. The NEG morpheme for all these tenses is "kāā ...wā'ā/, a discontinuous morpheme. The underlying tone of "kāā/ is LHH while that of /wā'ā/ is H LH. The tone of /kāā/ is lowered by the tone of the deleted 3rd person singular pronoun, e.g., as in (6). The derivation of this has already been seen in (2) above. The tone of /wā'ā/ undergoes both processes of assimilation and contamination. In (6b,e, 8b) the LH tone of /wā'ā/ 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 /' kāā...wā'ā/

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 F0

(9) a. "kāa a kā wā'ā ābā kwērā" → [kāa kā wā'ā
    NEG he FO NEG meat take T mbā kwērā]
"he will not take meat"

b. "kāa a kā wā'ā lāŋā kwērā" → [kāa kā wā'ā
    NEG he FO NEG horse take T lāŋā kwērā]
"he will not take the horse"

c. "kāa bó kā wā'ā sāŋā" → [kāa bó kā 'wā'ā
    NEG they FO NEG meat dry T mbā sāŋā]
"they will not dry meat"

d. "kāa bó kā wā'ā kwērā" → [kāa bó kā 'wā'ā
    NEG they FO NEG take T kwērā]
"they will not take"

17.5.2 NEG F1

(10) a. "kāa a kā lē wā'ā ābā kwērā" → [kāa kā lē wā'ā mbā kwērā]
"he will not take meat"

b. "kāa a kā lē wā'ā tītā sāŋā" → [kāa kā lē wā'ā tītā sāŋā]
"he will not dry pepper"

c. "kāa bó kā lē wā'ā ābā kwērā" → [kāa bó kā lē wā'ā mbā kwērā]
"They will not take meat"

d. "kāa bó kā lē wā'ā sāŋā" → [kāa bó kā lē wā'ā sāŋā]
"they will not dry"

17.5.3 NEG F2

(11) a. "kāa a kā lē wā'ā ābā kwērā" → [kāa kā lē wā'ā mbā kwērā]
"he will not take meat"
b.  he  lo  wa'a  la'w kwewa  he will not take a horse

Neg he F 2 Neg horse take T

[kaa la'w kwewa]  "he will not take a horse"

c.  they  lo  wa'a  mb a  san  they will not dry meat

Neg they F 2 Neg meat dry T

[kaa lo'w mb a san]  "they will not dry meat"

d.  they  lo  wa'a  kwewa  they will not take

Neg they F 2 Neg take T

[kaa lo'w kwewa]  "they will not take"

17.5.4 Neg F3

(12) a.  he  y la'w kwewa  he will not take meat

Neg he F 3 Neg meat take T

[kaa y la'w kwewa]  "he will not take meat"

b.  he  y la'w tit a san  he will not dry pepper

Neg he F 3 Neg pepper dry T

[kaa y la'w tit a san]  "he will not dry pepper"

c.  they  y la'w kwewa  they will not take meat

Neg they F 3 Neg meat take T

[kaa y la'w kwewa]  "they will not take meat"

d.  they  y la'w san  they will not dry

Neg they F 3 Neg dry T

[kaa y la'w san]  "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 F1-3 and Neg F0, 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
simplification of the HL contour tone of /kä/ causes the following H of the NEG marker to downstep (cf. 14.8). The rules that work in FO, P1-3 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 /`käã...sì'/

The NEG IMPF TO is marked by /`käã...sì'/ 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. `käã `sì' mbâ kwëró` → [käã sì']
   NEG he NEG meat take T mbâ kwërô
   "he is not taking meat"

b. `käã `sì' mbâ sàŋâ` → [käã sì']
   NEG he NEG meat dry T mbâ sàŋâ
   "he is not drying meat"

c. `käã `sì' `förê sàŋâ` → [käã sì']
   NEG he NEG mouse dry T 'förê sàŋâ
   "he is not drying a mouse"

d. `käã bó `sì' mbâ kwëró` → [käã bó sì']
   NEG they NEG meat take T mbâ kwërô
   "they are not taking meat"

e. `käã bó `sì' `titâ kwërô` → [käã bó sì']
   NEG they NEG pepper take T 'titâ kwërô
   "they are not taking pepper"

f. `käã bó sì' kwëró` → [käã bó sì']
   NEG they NEG take T 'kwërô
   "they are not taking (it)"

g. `käã bó sì' sàŋâ` → [käã bó sì']
   NEG they Neg dry T sàŋâ
   "they are not drying"
The following remarks are pertinent for the NEG IMPF TO: /kää...
behaves as we have seen so far in the rest of the cases. The surface tone on /...sf'/ does not fluctuate. The surface tone pattern H'H as found on /...sf'/ 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. 14c) 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. kää ä sī mbä kwërē underlying + NEG IMPF TO tones
    b. kää ä sī mbä kwërē superimp. of NEG IMPF TO tones
    c. kää ä sī mbä kwërē tone lowering (T-rule 1)
    d. kää ä sī mbä kwërē tone deletion (T-rule 5)
    e. kää sf mbä kwërē V-deletion (P-rule 3)
    f. kää sī mbä kwërē tone grounding (T-rule 4)
    g. kää sf mbä kwërē tone simplification (T-rule 7)
    h. kää sī mbä kwërē tone grounding
    i. kää sī mbä kwërē simplification and ds (T-rules 7, and 2)
    j. kää sī mbä kwërē desyllabification (P-rule 4)
    k. kää sī mbä kwërē and tone deletion (T-rule 5)
    l. kää sī mbä kwërē 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. `káá á sf `fóre sánhá` underlying
b. `káá á sf `fóre sánhá` superimposition of NEG IMPF TO verb tones
  c. `káá á sf `fóre sánhá` tone lowering
d. `káá á sî `fóre sánhá` tone deletion
e. `káá `sî `fóre sánhá` V-deletion
f. `káá `sf `fóre sánhá` tone grounding
g. `káá `sî `fóre sánhá` tone simplification
h. `káá `sf `fóre sánhá` tone grounding
i. `káá `sî` `fóre sánhá` tone grounding
j. `káá `sî` `fóre sánhá` simplification and ds
k. `káá `sî` `fóre sánhá` 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. `káá bó sî` sánhá underlying
b. `káá bó sî` sánhá tone lowering
c. `káá bó sî` sánhá tone deletion
d. `káá bó sî` sánhá simplification and ds
e. `káá bó sî` sánhá 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).
The imperfective imperative negative constructions is marked by the morpheme /tsū/.../kī/ with surface tones as indicated. Following the behaviour of the imperfective marker in context, we have posited a HL underlying tone for it, thus /kī/. Examples of this construction are given below:

(19) a. tsū mbā kī kwērā → [tsū mbā kī 'kwērā]
   NEG-IMP meat IMPF take "do not be taking meat"

b. tsū lēnā kī kwērā → [tsū lēnā kī 'kwērā]
   NEG-IMP horse IMPF take "do not be taking a horse"

c. tsū mbā kī sānā → [tsū mbā kī sānā]
   NEG-IMP meat IMPF dry "do not be drying meat"

d. tsū kī kwērā → [tsū kī 'kwērā]
   NEG-IMP IMPF take "do not be taking"

e. tsū kī sānā → [tsū kī sānā]
   NEG-IMP IMPF dry "do not be drying"

The NEG-IMP particle /tsū/ changes as indicated in (5) above; it is affected by a dissimilation rule as in (19b). The underlying HL tone of /kī/ downsteps the following H tones of the verb kwērā (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. tsū lēnā kī kwērā underlying

b. tsū lēnā kī kwērā tone grounding

c. tsū lēnā kī kwērā dissimilation

d. tsū lēnā kī kwērā tone lowering

e. tsū lēnā kī 'kwērā tone simplification and ds

In (20a) the underlying tones are given. In (20c) the LH 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.
11.6.3 NEG IMPF P1-3 / káá...wá’á/

The marker of the NEG in the imperfective past tenses (P1-3) is the same as for the perfective past (P1-3). / káá...wá’á/ behaves almost exactly the same as for the past tenses. For comparative purposes the examples given below will follow the same order of presentation as for NEG P1-3 (cf. 17.4.1-3)

11.6.3.1 NEG IMPF P1

(1) a. " káá a ni wá’á mbá kwérá " → NEG he P1 NEG meat take T

[káá ni wá’á mbá kwérá]
"he was not taking meat"

b. " káá a ni wá’á lēŋā kwérá " → NEG he P1 NEG horse take T

[káá ni wá’á lēŋā kwérá]
"he was not taking a horse"

c. " káá a ni wá’á mbá sāŋē " → NEG he P1 NEG meat dry T

[káá ni wá’á mbá sāŋē]
"he was not drying a meat"

d. " káá bó ni wá’á mbá kwérá " → NEG they P1 NEG meat take T

[káá bó ni wá’á mbá kwérá]
"they were not taking meat"

e. " káá bó ni wá’á ’titā sāŋē " → NEG they P1 NEG pepper dry T

[káá bó ni wá’á ’titā sāŋē]
"they were not drying pepper"

11.6.3.2 NEG IMPF P2

(2) a. " káá a ki sī’ wá’á mbá kwérá " → NEG he P2 IMPf Neg meat take T

[káá ki sī’ wá’á mbá kwérá]
"he was not taking meat"
b. "kāā ā kī sī" wā'ā mbā sānā →
   NEG he P2 IMPF NEG meat take T
   [kāā kī sī' 'wā'ā mbā sānā]
   "he was not drying meat"

c. "kāā bó kī sī' wā'ā mbā kwērē →
   NEG they P2 IMPF Neg. meat take T
   [kāā bó kī sī' 'wā'ā mbā kwērē]
   "they were not taking meat"

d. "kāā bó kī sī' wā'ā mbā sānā →
   NEG they P2 IMPF NEG meat dry T
   [kāā bó kī sī' 'wā'ā mbā sānā]
   "they were not drying meat"

e. "kāā ā kī sī' wā'ā kwērē →
   NEG he P2 IMPF NEG take T
   [kāā kī sī' 'wā'ā kwērē]
   "he was not taking"

f. "kāā bó kī sī' wā'ā yā'ā →
   NEG they P2 IMPF NEG cry T
   [kāā bó kī sī' 'wā'ā yā'ā]
   "they were not crying"

17.6.3.3 NEG IMPF P3

(23) a. "kāā ā lē sī' wā'ā mbā kwērē →
   NEG he P3 IMPF NEG meat take T
   [kāā lē sī' 'wā'ā mbā kwērē]
   "he was not taking meat"

b. "kāā bó lē sī' wā'ā 'tītā sānā →
   NEG they P3 IMPF NEG pepper dry T
   [kāā bó lē sī' 'wā'ā 'tītā sānā]
   "they were not drying pepper"

c. "kāā bó lē sī' wā'ā sānā →
   NEG they P3 IMPF NEG dry T
   [kāā bó lē sī' 'wā'ā sānā]
   "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
to their tonal behaviour. However, there are certain points of particularity about 17.6.3.1-4 that should be noted. In NEG IMPF PI 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, kāā. This is because, as will be explained by the following derivation (cf. 21a), the pronoun receives the IMPF HL tone which eventually simplifies to H and grounds to the left where it is absorbed by the H tone of the NEG morpheme.

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 /ā/ and the P3 marker /n̩/ 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 /wa'ā/ to downstep.

17.6.4 NEG IMPF PO, F1 - F3 / kāā...wa'ā...kāN/

The future imperfective NEG construction is marked by / kāā ...wa'ā/ which conditions, an imperfective marker /kāN/. The morpheme /kāN/ has an underlying H tone. This imperfective marker is particular to the NEG construction because it is different from
/ki/ 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. *káá a ká wá’a mbá káñ kwérá →
   NEG he FO NEG meat IMPF take
   [káá ká wá’a mbá káñ kwérá]
   "he will not be taking meat"

b. *káá a ká wá’a mbá káñ sáñé →
   NEG he FO NEG meat IMPF dry
   [káá ká wá’a mbá káñ sá’ñé ]
   "he will not be drying meat"

c. *káá bó ká wá’a *títá káñ kwérá →
   NEG they FO NEG pepper IMPF take
   [káá bó ká ’wá’a *títá káñ kwérá]  "they will not be taking pepper"

d. *káá bó ká wá’a *títá káñ sáñé →
   NEG they FO NEG pepper IMPF dry
   [káá bó ká ’wá’a *títá káñ sá’ñé ]  "they will not be drying pepper"

e. *káá bó ká wá’a káñ kwéró →
   NEG they FO NEG ’ IMPF take
   [káá bó ká ’wá’a káñ kwéró]  "they will not be taking"

f. *káá bó ká wá’a káñ sáñé →
   NEG they FO NEG IMPF dry
   [káá bó ká ’wá’a káñ sá’ñé]  "they will not be drying"

17.6.4.2 NEG IMPF F1

(26) a. *káá a ká lá wá’a mbá káñ kwérá →
   NEG he F 1  NEG meat IMPF take
   [káá ká lá wá’a mbá káñ kwérá]
   "he will not be taking meat"
b.  "kāā ā kā lō wā'ā mbā kān sā'nga →
    NEG he F 1 NEG meat IMPF dry
    [kāā kā lō wā'ā mbā kān sā'nga]  
    "he will not be drying meat"

c.  "kāā bó kā lō wā'ā tītā kān kwērō →
    NEG they F 1 NEG pepper IMPF take
    [kāā bó kā lō wā'ā tītā kān kwērō]  
    "they will not be taking pepper"

d.  "kāā bó kā lō wā'ā tītā kān sā'nga →
    NEG they F 1 NEG pepper IMP dry
    [kāā bó kā lō wā'ā tītā kān sā'nga ]  
    "they will not be drying pepper"

e.  "kāā ā kā lō wā'ā kān kwērō →
    NEG he F 1 NEG IMPF take
    [kāā kā lō wā'ā kān kwērō]  
    "he will not be taking"

f.  "kāā ā kā lō wā'ā kān sā'nga →
    NEG he F 1 NEG IMPF dry
    [kāā kā lō wā'ā kān sā'nga]  
    "he will not be drying"  

17.6.4.3  NEG IMPF F2

(27)  a.  "kāā ā kā lō wā'ā mbā kān kwērō →
    NEG he F 2 NEG meat IMPF take
    [kāā kā lō wā'ā mbā kān kwērō]  
    "he will not be taking meat"

b.  "kāā ā kā lō wā'ā mbā kān sā'nga →
    NEG he F 2 NEG meat IMPF dry
    [kāā kā lō wā'ā mbā kān sā'nga]  
    "he will not be drying meat"

c.  "kāā bó kā lō wā'ā tītā kān kwērō →
    NEG he F 2 NEG pepper IMPF take
    [kāā bó kā lō wā'ā tītā kān kwērō]  
    "they will not be taking pepper"

d.  "kāā bó kā lō wā'ā tītā kān sā'nga →
    NEG they F 2 NEG pepper IMPF dry
    [kāā bó kā lō wā'ā tītā kān sā'nga ]  
    "they will not be drying pepper"
e. "kää bó kā lō wā'ā kān kwērā →
   NEG they F 2 NEG IMPF take

[kää bó kā lō wā'ā kān kwērā]
"they will not be taking"

f. "kää bó kā lō wā'ā kān sā'ŋā →
   NEG they F 2 NEG IMPF dry

[kää bó kā lō wā'ā kān sā'ŋā]
"they will not be drying"

17.6.4.4 NEG IMPF F3

(28) a. "kää ā kā yī wā'ā mbā kān kwērā →
   NEG he F 3 NEG meat IMPF take

[kää kā yī wā'ā mbā kān kwērā]
"he will not be taking meat"

b. "kää ā kā yī wā'ā mbā kān sā'ŋā →
   NEG he F 3 NEG meat IMPF dry

[kää kā yī wā'ā mbā kān sā'ŋā]
"he will not be drying meat"

c. "kää bó kā yī wā'ā tītā kān kwērā →
   NEG they F 3 NEG pepper IMPF take

[kää bó kā yī wā'ā tītā kān kwērā]
"they will not be taking pepper"

d. "kää bó kā yī wā'ā tītā kān sā'ŋā →
   NEG they F 3 NEG pepper IMPF take

[kää bó kā yī wā'ā tītā kān sā'ŋā]
"they will not be drying pepper"

e. "kää ā kā yī wā'ā kān kwērā →
   NEG he F 3 NEG IMPF take

[kää kā yī wā'ā kān kwērā]
"he will not be taking"

f. "kää ā kā yī wā'ā kān sā'ŋā →
   NEG he F 3 NEG IMPF dry

[kää kā yī wā'ā kān sā'ŋā]
"he will not be drying"

In the NEG IMPF FO, F1-3, the NEG particles /"kää...wā'ā/
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 /kā/ causes the following H of the NEG morpheme /wā'ā/ to downstep as already explained in 14.7.

The imperfective marker /kān/ 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 surface H 'H tone pattern. This is caused by the tone of the imperfective marker /kān/, 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. `kāā bó kā lō wā’ā `tītā kān kwērā underlying
b. kāā bó kā lō wā’ā `tītā kān kwērā tone lowering
c. kāā bó kā lō wā’ā `tītā kān kwērā tone deletion
d. kāā bó kā lō wā’ā `tītā kān kwērā simplification
e. kāā bó kā lō wā’ā `tītā kān kwērā simplification
f. kāā bó kā lō wā’ā `tītā kān kwērā dissimilation
g. kāā bó kā lō wā’ā `tītā kān kwērā tone grounding
h. kāā bó kā lō wā’ā `tītā kān kwērā simplification

The following points in particular should be noted about the above derivation: in (29f) the LH tone on the NEG particle /wā’ā/ 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):
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 /N-/ 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. ə nín zí ŋ-kwelré ʰ mbá  → [ə nín zí ŋkwērē mbā]  
he P1 come CNS-take T meat  "he came and took meat"

b. ə nín zí ŋ-lágé ʰ lăŋgə  → [ə nín zí n15'gá 'lăngē]  
he P1 come CNS-fetch T horse  "he came and took a horse"

c. ā lēn zí ŋ-sāŋ̐e ʰ mbā  → [ā lēn zí nsa'ŋ̐é mbā]  
he P3 come CNS-dry T meat  "he came and dried meat"

d. bó lēm fū ŋ-kwelré ʰ mbā  → [bō lēm 'fū ŋ-kwelre mbā]  
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 T0, this whole tone pattern is superimposed on the underlying tone of the verb. The HH tone pattern of the verb /kwērē/ 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 T0 (cf. 17.6.1).

18.3 P2 CNS

(2) a. ə kī zí ŋ-kwelré mbā  → [ə kī zí ŋkwērē mbā]  
he P2 come CNS-take meat  "he came and took meat"

b. ə kī zí ŋ-lágé mbā  → [ə kī zí n15'gē mbā]  
he P2 come CNS-fetch meat  "he came and fetched meat"

c. bó kī zí ŋ-kwelré mbā  → [bō kī zí ŋkwērē mbā]  
they P2 come CNS-take meat  "they came and took meat"

d. bó kī zí ŋ-lágé mbā  → [bō kī zí n15'gē mbā]  
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. Ω  ` mä ŋ-kwéťa  lěňä  →  [mä zi mä ŋkwéťa lěňä]
   he come T PO CNS-take horse  "he has come and taken a horse"

b.  â jį˘ ` mě ŋ-fe'ë  ↔  [â jį mě mfë'ë]
   he eat T PO CNS-go out  "he has eaten and gone out"

c.  bọ zi˘ ` mä ŋ-kwéťa  lěňä  →  [bọ zi mä ŋkwéťa lěňä]
   they come T PO CNS-take horse  "they have come and taken a horse"

d.  bọ jį˘ ` mě ŋ-fe'ë  →  [bọ jį mě mfë'ë ]
   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.  â ø zi˘ ` ŋ-kwéťa mba˘  →  [â zi ŋkwéťa mba]  
   he TO come T CNS-take meat  "he has come and taken meat"

d.  â ø zi˘ ` ŋ-tsya ŋgwà  →  [â zi ŋtsya ŋgwà]
   they TO eat T CNS-pass Ngwa  "they have eaten more than Ngwa"

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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. bó zǐ ~ ŋkwërë underlying
b. bó zǐ ŋkwërë TO tones
c. bó zǐ ŋkwërë tone spreading
d. bó zǐ ŋkwërë tone superimposition
e. bó zǐ ŋkwërë nasal desyllabification
f. bó zǐ ŋ'kwërë 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. zǐ ŋ-kwërë ~ ląn̄e wā → [zǐ ŋkwërë ląn̄e wā] come CNS-take horse the "come and take the horse!"
b. zǐ ŋ-logë mbà yà → [zǐ nłoğë mbà yà] come CNS-fetch meat the "come and fetch the meat!"
c. fù ŋ-kwërë ~ ląn̄e wā → [fù ŋ'kwërë ląn̄e wā] go CNS-take horse the "go (to the farm) and take the horse!"
d. fù ŋ-logë mbà yà → [fù nłoğë mbà yà] 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 /ŋ-/ 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. á kā ə jí ŋ-kūrē mbā → [á kā jí 'kūrē mbā]
   he F 0 eat CNS-eat meat "he shall eat and eat meat"

   b. bó kā lō zi ŋ-lōgē mbā → [bó kā lō zi lōgē mbā]
   they F 1 come CNS-fetch meat "they will come and fetch meat"

   c. á kā lō fū ŋ-kwērē 'lēnē → [á kā lō fū 'kwērē lēnē]
   he F 2 go CNS-take horse "he will go (to the farm) and take a horse"

   d. bó kā yī fū ŋ-lōgē mbā → [bó kā yī fū lōgē mbā]
   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. á kā jí ŋ-kūrē mbā underlying
   b. á kā jí ŋ-kūrē mbā simplification
   c. á kā jí ŋ-kūrē mbā tone lowering
   d. á kā jí ŋ-kūrē mbā nasal desyllabification
   e. á kā jí 'kūrē mbā nasal deletion
   f. á kā jí 'kūrē mbā tone grounding
   g. á kā jí 'kūrē mbā tone simplification and ds
   h. á kā jí 'kūrē mbā nasal desyllabification
   i. á kā jí 'kūrē 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 FO marker simplifies. In (8c) the L tone of the pronoun lowers the H on the FO marker to M. In (8d) the syllabic nasal of
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 simplifies 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:

\[
\begin{align*}
(9) & \quad \text{a. bö kā lō zi ṅ-ługə mbə} & \quad \text{underlying} \\
& \quad \text{b. bö kā lō zi ṅ-ługə mbə} & \quad \text{simplification} \\
& \quad \text{c. bö kā lō zi ṅ-ługə mbə} & \quad \text{simplification} \\
& \quad \text{d. bö kā lō zi ṅ-ługə mbə} & \quad \text{tone lowering} \\
& \quad \text{e. bö kā lō zi ṅ-ługə mbə} & \quad \text{nasal desyllabification} \\
& \quad \text{f. bö kā lō zi ṅ-ługə mbə} & \quad \text{nasal and tone deletion} \\
& \quad \text{g. bö kā lō zi ṅ-ługə mbə} & \quad \text{tone lowering} \\
& \quad \text{h. bö kā lō zi ṅ-ługə mbə} & \quad \text{nasal desyllabification} \\
& \quad & \quad \text{and tone deletion}
\end{align*}
\]

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. á ~ ø ghēō á ṭí-kwērō mbā →
    he IMPF TO go to CNS-take meat
    [á ghēō ṭí-kwērō mbā]
    "he is going to take meat"

    b. bō ~ ø fū á ṭí-lōgō mbā →
    they IMPF TO go to CNS-fetch meat
    [bō 'fū nī-lōgō mbā]
    "they are going (to the farm) to fetch meat"

    c. á ~ ø ghēō ṭí-kwērō ṭí ni mbā →
    he IMPF TO go CNS-take T IMPF meat
    [á ghēō ṭí-kwērō ni mbā]
    "He is going and taking meat"

    d. bō ~ ø tsō ṭī-bī'í ṭí ni ṭí kl →
    they IMPF TO go CNS-carry T IMPF water
    [bō 'tsō mbī'ī ni ṭī kl]
    "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 /ā/ (cf.12.2.1.3) above. This preposition or infinitive marker is deletable (cf. 3.7). After the infinitive marker /ā/ 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 PI 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 /nī/ with an underlying HL tone pattern. This marker follows the CNS verb.
18.8.2 P2, P3 Imperfective CNS

(11) a. ̀ à ki sì’ zì ṅ-sàŋê ̀ ní ǹmbà →
he P2 IMPF come CNS-dry T IMPF meat

[à ki sì’’ zì sà’ŋé ní ǹmbà]
"he was coming and drying meat"

b. bò ki sì’ fû ṅ-kò ̀ ní ǹmbà →
they P2 IMPF go CNS-catch T IMPF meat

[bò ki sì’’ fû ñkò ní ǹmbà]
"they were going (to the farm) and catching animals for meat"

c. ̀ à lèn sì’ fû ṅ-kyá ̀ ní ̀ kôfì →
he P3 IMPF go CNS-harvest T IMPF coffee

[à lèn sì’’ fû ñkyá ní kôfì]
"he was going to the farm) and harvesting coffee"

d. bò lèn sì’ fû ǹ-bì’I ̀ ní ̀ kôfì →
they P3 IMPF go CNS-carry T IMPF coffee

[bò lèn sì’’ fû mbì’’ ní kôfì]
"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., /nì/.

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.
16.9.1 Negation of Both Clauses

(1) a. "kāā bó nī wā'a mbā yā fū ŋ-kwērō →
    Neg they P1 Neg meat the go CNS-take

[kāā bó nī 'wā'a mbā yā fū ŋ'kwērō]
"they did not go (to the farm) and take the meat"

b. "kāā bó kī wā'a mbā yā fū ŋ-lōgā →
    Neg they P2 Neg meat the go CNS-fetch

[kāā bó kī wā'a mbā yā fū nūlōgā]
"they did not go (to the farm) and fetch the meat"

c. "kāā bó lēn wā'a mbā yā zī mī-fē'ē →
    NEG they P3 NEG meat the come CNS sell

[kāā bó lēn 'wā'a mbā yā yī mī-fē'e]  
"they did not come and sell the meat"

d. "kāā bó kā lō wā'a mbā yā zī ŋ-kwērō →
    NEG they F 2 NEG meat the come CNS-take

[kāā bó kā lō wā'a mbā yā zī ŋ'kwērō]
"they will not come and take the meat"

e. "kāā bó kā yī wā'a mbā yā fū m-bēnsē →
    NEG they F 3 NEG meat the go CNS-return

[kāā bó kā yī wā'a mbā yā fū mbēnsē]
"they will not come and take the meat"

f. "kāā bó kī sī' wā'a nī lēŋā wā zī ŋ-sī'I →
    NEG they P2 IMPF NEG IMPF horse the come CNS-wash T

[kāā bó kī sī' 'wā'a nī lēŋā wā zī nsī''I]
"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 LH of the L tone verb is lowered to a LL pattern when the preceding verb is a H tone verb. In the

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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. bọ ọ zi `kää wä'ä `ländä ọ kwërë` →
  they T0 come NEG NEG horse CNS take T
  [bọ zi kää wä'ä ländä kwërë]
  "they went (to the farm) and did not take a horse"

b. bọ nǐm fũ `kää wä'ä `ländä ọ lôngä` →
  they P1 go NEG NEG horse CNS fetch T
  [bọ nǐm 'fũ kää wä'ä lôngä lôngä]
  "they went (to the farm) and did not take a horse"

c. bọ kĩ zi `kää wä'ä `ländä ọ fâ` →
  they P2 come NEG NEG horse CNS give T
  [bọ kĩ zi kää wä'ä ländä fâ]
  "they came and did not give a horse"

d. bọ lën zi `kää wä'ä `ländä ọ fëë` →
  they P3 come NEG NEG horse CNS sell T
  [bọ lën zi kää wä'ä ländä fëë]
  "they came and did not sell a horse."

e. bọ kä ọ kwëë `kää wä'ä `ländä ọ kwërë` →
  they F O come-home NEG NEG horse CNS take T
  [bọ kä 'kwëë kää wä'ä ländä kwërë]
  "they will come home and will not take a horse"

f. bọ kä lọ zi `kää wä'ä tändä ọ lôngä` →
  they F 2 come NEG NEG horse CNS fetch T
  [bọ kä lọ zi kää wä'ä ländä lôngä]
  "they will come and will not take a horse"
g. bó lë sî' ghëc ' kää wā'ā nī mbâ ø kwërë → they P3 IMPF go NEG NEG IMPF meat CNS take T

[bó lë sî' ghëc kää wā'ā nī mbâ kwërë] "they were going and not taking meat"

18.10 CNS and Sequential Construction

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 zI ^ bó ø kwërë ^ mbâ → he TO come T they TO take T meat

[à zI bó kwërë mbâ] "he came and they took meat"

b. bó ø kwëc ^ á sâŋë ^ këfI → they TO come T he dry T coffee

[bó kwëc á sâŋë këfI] "they came home and he dried coffee"

c. á nín yë ñgwà á kwëtë ^ yI → he P1 see Ngwa he help T him

[á nín yë ñgwà á kwëtë yI] "he saw Ngwa and he (Ngwa) helped him"

d. á kë tumë ^ nàângwë yI kghë ^ → he P2 shoot leopard it run T

[á kë tum nàângwë yI kghë] "he shot a leopard and it ran away"

e. bó len yùù ñbâ më kûëø → they P3 buy meat I eat T

[bó len 'yùù mbâ më kûëø] "they bought meat and I ate (it)"

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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.
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.

19.2 Co-ordinative Sentences

Co-ordinative sentences are marked by the conjunctions /bɔ/, /nʃ/ and /kiN/. The first two of these, as can be noticed, have an underlying HI contour tone while /kiN/ has an underlying H tone. All these conjunctions, however, have a surface H tone.

19.2.1 /bɔ/

The conjunction /bɔ/ is used to join two different 3rd person subjects of the same verb, e.g.,

(1) a. ñgwà bɔ Asò kik tsò ~ à ñkį → [ñgwà bɔ sɔ kik tsò ńkį]
    "Ngwa and Aso went to the stream"

    b. Asò bɔ Nība'ä lêm ńfū ā āfɔ → [Asò bɔ Nība'ä lêm 'ńfū fɔ]
    "Aso and Niba went to the farm"

    c. ñgwà bɔ Sùù lēn lądà mbà → [ñgwà bɔ sùù lēn lądà 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. \( \text{ki tsō} - \text{ā ŋki} \) underlying
b. \( \text{ki tsō} - \text{ā ŋki} \) P2 replacive tone
c. \( \text{ki tsō} - \text{ā ŋki} \) tone absorption
d. \( \text{ki tsō} - \text{ ŋki} \) V-deletion
e. \( \text{ki tsō} - \text{ ŋki} \) tone grounding
f. \( \text{ki tsō'} - \text{ ŋki} \) simplification and ds
g. \( \text{ki tsō'} - \text{ ŋki} \) 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 bave 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 /bō/. The derivation of the NP in (1a) will serve to explain the tone changes found on the conjunction.

(3) a. \( \text{ŋgwa bō Asō} \) underlying
b. \( \text{ŋgwa bō Asō} \) simplification
c. \( \text{ŋgwa bō Asō} \) tone lowering
d. \( \text{ŋgwa bō sō} \) V-deletion
e. \( \text{ŋgwa bō sō} \) tone grounding
f. \( \text{ŋgwa bō sō} \) simplification

In (3a) the underlying tones are given. In (3b) the contour tone on the pronoun simplifies to H. In (3c) the tone of /bō/ is lowered by the preceding L tone to M. In (3d) the V-prefix of /Asō/ 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 /bō/ acts across phrase boundary as shown in the derivation of the relevant section of (1b).

(4) a. \( \text{Asō bō Nibā'ā lēm fū} \) underlying
b. \( \text{Asō bō Nibā'ā lēm fū} \) simplification
c. \( \text{Asō bō Nibā'ā lēm fū} \) simplification
d. \( \text{Asō bō Nibā'ā lēm 'fū} \) simplification and ds

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In the above derivation the H of the conjunction /bô/ 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 /Nîbâ'â/. In (4a) the underlying tones are given. In (4b) the HL contour tone on /Āsō/ simplifies to M. In (4c) the HL contour tone on the conjunction /bô/ simplifies to H. In (4d) the HL contour tone on /lēŋ/ is simplified to H causing the following H of /fû/ to downstep. The effect of the H tone of the conjunction can be clearly seen, if we take it away from the sentence:

\[5\] nîbâ'â lēŋ fû "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 /fû/ 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 /bô/, "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. /Āsō bô Nîbâ'â bô lēm fû/  
   Āsō and Neba they P3 go (to the farm)

19.2.2 /nî/

The second co-ordinative conjunction /nî/ behaves in the same way as /bô/. /nî/ is used when one of the conjoined subjects includes a 1st person pronoun.

\[6\] a. mā nî Āsō kî tsô ą ĕktî  → [mā nî sō kî tsól' ętî]  
   "I and Āsō went to the stream"

\[6\] b. Āsō nî mā lēm fû ą āfô  → [Āsō nî mā lēm 'fû fô]  
   "ARIO and I went to the farm"
c. mə nĩ sũn  lẽn lõgã mbã → [mə nĩ sũn  lẽn lõgã mbã]
"I and Shu took meat"

It should be noted that here, in the above examples, the surface H tone of /nĩ/ 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 /kĩN/

The third coordinative conjunction /kĩN/ is used to conjoin two clauses with the same subjects, e.g.,

(7)  a. ə nĩn ji  âtsũgã  kĩñ  nõ  mĩlũ'ũ →
     [ə nĩn ji  'tsũgã  kĩñ  nõ  mĩlũ'ũ]
     "he ate fufu and also drank wine"

b. ə nĩn kûrã  ânsæn  kĩñ  kûrã  âmbõrã →
     [ə nĩn kûrã  ânsæn  kĩñ  kûrã  âmbõrã]
     "he ate maize and also ate vegetables"

c. bó nĩn  lõgã  mbã  kĩñ  lõgã  mbãŋ →
     [bó nĩn  lõgã  mbã  kĩñ  lõgã  mbãŋ]
     "they took meat and also took kernels"

d. bó nĩn  sõ  mbã  kĩñ  sõ - l{text-uary}ŋä →
     [bó nĩn  sõ  mbã  kĩñ  sõ'  l{text-uary}ŋä]
     "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 conjunction, 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 [l{text-uary}ŋä] 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 /* m̄/ 

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 /* m̄/. The surface tone of the conjunction is H, but following its behaviour in context we have posited an underlying LIH tone pattern for it. The following sentences are examples of objective sentences:

\( \begin{align*}
\text{(8) a. } & \text{ a nǐn swósito } \text{ m̄ yǔ ghecc ã m̄itàà} \\
& \text{[a nǐn swísimo 'm̄ yǔ ghecc ã m̄ıtáà]} \\
& \text{"he said that he (es) was going to market"} \\
\text{b. } & \text{ bò m̄ɔnté } \text{ m̄ à jwí m̄} \\
& \text{[bò m̄ɔnté 'm̄ à jwí m̄]} \\
& \text{"they think that she has given birth"}
\end{align*} \)

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:

\( \begin{align*}
\text{(9) a. } & \text{ a nǐn swísimo } \text{ m̄} \\
& \text{\text{underlying}} \\
\text{b. } & \text{ a nǐn swísimo } \text{ m̄} \\
& \text{\text{tone lowering}} \\
\text{c. } & \text{ a nǐn swísimo } \text{ m̄} \\
& \text{\text{tone simplification}} \\
\text{d. } & \text{ a nǐn swísimo } \text{ m̄} \\
& \text{\text{V-deletion}} \\
\text{e. } & \text{ a nǐn swísimo } \text{ m̄} \\
& \text{\text{tone grounding}} \\
& \text{\text{and absorption}} \\
\text{f. } & \text{ a nǐn swísimo } \text{ m̄} \\
& \text{\text{tone grounding}} \\
\text{g. } & \text{ a nǐn swísimo } \text{ m̄} \\
& \text{\text{tone simplification and ds}}
\end{align*} \)

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 /swísimo/, becomes /swísimo/ before the nasal of the conjunction, /m̄/ (cf. 3.6).
The steps followed are given in (9d-e). In (9f) the floating H 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 /-má/

The relative subordinative sentence is marked by the morpheme /-má/, which has an underlying LH tone pattern.

(10) a. à nin yá níng55 nyá' má bó ki kwër5 ā →
[à nin yá níng55 nyá' 'ma bó ki kwër5] "he saw the plantain that they had taken"

b. à nin lôg5 mbá yá'- má bó ki bi'í ā →
[à nin lôg5 mbá yá' 'ma bó ki bi'í] "he took the meat that they carried"

c. kó fôr5 wá'- má yà'ā ā
[kó fôr5 wá' 'má yà'ā] "catch the mouse that is crying!"

In the above examples, the main clause in each case precedes the conjunction /-má/. The main clauses in (10a,b) are both in the PI 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:
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 /ā/

The subordinative sentence of purpose is marked by the morpheme /ā/ (which is also the infinitive marker). Examples of this type of sentence are given below:

(11) a. à zī `ā ņlɔg ē mbā → [à zī` nÌg mbā]  "he has come to take meat"

b. à zī `ā mā ŋkwèr ē nìbò 3 → [à zī mò’ n’kèwr nìbò’ 3]  "he has come to take a pumpkin"

c. à n‘m fū à ŋkò ` fòrò → [à n‘ ì fù n’kò ’fòrò]  "he went (to the farm) to catch a mouse"

d. bó kī fù ` ā ŋkò ` fòrò → [bò kī fù‘ n’kò ’fòrò]  "they went (to the farm) to catch a mouse"

As can be noticed in the above examples, the tone of the purpose clause marker /ā/ is H. In (11a) the deletion of the marker /ā/ 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 TO tense, (11c) in the PO, and (11d) in the P2. Reference should be made to chapter fourteen where the verb tones have been described. A sample derivation of (11b) is given in (12) below.
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 (12c) is given below:

(13) a. à nîm fû à ƞkô 'fôrê simplification and ds
b. à nîm fû à ƞkô 'fôrê simplification and ds

c. à nîm fû à ƞkô 'fôrê simplification and ds
d. à nîm fû à ƞkô 'fôrê simplification and ds
e. à nîm fû à ƞkô 'fôrê simplification and ds
f. à nîm fû à ƞkô 'fôrê simplification and ds
g. à nîm fû à ƞkô 'fôrê simplification and ds
h. à nîm fû à ƞkô 'fôrê simplification and ds
i. à nîm fû à ƞkô 'fôrê simplification and ds
j. à nîm fû à ƞkô 'fôrê simplification and ds

In (13a) the underlying tones are given. The main clause is in the today past (P). 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 /mboŋ/ (tā)/

The temporal subordinative sentence is marked by the morphemes /mboŋ/ (tā)/ with underlying tones as indicated. The second morpheme, /tā/, is a subject marker. It is used to show that different subject are involved. This will be illustrated in the examples below.

(14) a. ò nīn zi mboŋ tā bó jī → [ò nī zi mboŋ' tā bó jī] “he came before they ate”

b. ò nīn zi mboŋ tā bó ghē → [ò nī zi mboŋ' tā bó ghē’e] “he came before they went”

c. bō nīn zi mboŋ’ yū’ū → [bō nīn zi mboŋ’ ‘yū’ū] “they came before receiving the news”

d. ò nīn fā mboŋ’ fē’e → [ò nīn fā mboŋ’ ‘fē’ē] “he gave (it) before going out”

As can be observed in the above examples the second morpheme /tā/ 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. mboŋ' tā bó jī → underlying
b. mboŋ' tā bó jī → subordinative verb tone
c. mboŋ' tā bó jī → tone grounding
d. mboŋ' tā bó jī → nasal desyllabification and tone deletion
e. mboŋ' tā bó jī → simplification and ds
f. mboŋ' tā bó jī → tone lowering
In (15a) the underlying tones are given. In (15b) the $HH$ 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 /tā/ lowers the $H$ of the pronoun /bō/ 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 /tā/. The tone pattern of this verb form is $HH$ 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 /tā/ 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. mb5q- yū'ū underlying
    b. mb5q- yū'ū desyllabification of nasal
        and tone deletion
    c. mb5q' '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 conjunction simplifies causing the following $H$ tones to downstep as indicated.
The subordinative sentence of reason is marked by /áá nlóó mä...áá/ with underlying tones as indicated.

(17) a. á kí kúrē ^ áá nlóó mä bó kí fá ^ áá → [á kí kúrā'a n'lóó 'mä bó kí fááá] "he ate (it) because they gave (it to him)"

b. á kí túu ^ áá nlóó mä á kí bwē ^ áá → [á kí túú'a n'lóó 'mä kí bwēáá] "he refused it because it was rotten"

c. bó kí lé ^ áá nlóó mä mbën yä kí lōō ^ áá → [bó kí lē'á n'lóó 'mä mbën yä kí lōāå] "they stayed the night because it rained"

d. bó kí ghēē ^ aa nlóó mä bó kí kōnē ^ áá → [bó kí ghē̄'á n'lóó 'mä bó kí kōnā] "they went away because they wanted to"

e. á nǐn kúrē áá nlóó mä á nǐn yō áá → [á nǐn kúrā'a n'lóó 'mä nǐn yāáá] "he ate it because he saw it"

f. á nǐn yā'ā áá nlóó mä á nǐn wō áá → [á nǐn yā'ā n'lóó mä nǐn wōáā] "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 /nlóó mä/ the verbs in both clauses have the suffix /-áá/ and /-áá/, 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. á kí kúrē ^ áá underlying
b. á kí kúrē áá P2 replacive tones
c. á kí kúrā áá V-assimilation
d. á kí kúrā á V-deletion
e. á kí kúrā'a simplification and ds
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. ȵlōŋ m̩ bō kì fā` îaa underlying
    b. ȵlōŋ m̩ bō kì fā` îaa P2 replacive tones
    c. ȵlōŋ m̩ bō kì fā` îaa tone lowering
    d. ȵlōŋ má bō kì fā` îaa tone deletion
    e. ȵlōŋ má bō kì fā` îaa 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 conjunction /ȵlōŋ m̩/ 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 /-aa/. 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.

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The conditional sentence is marked by either /bEE/ or /bā ... bōn/, with tones as indicated on the morphemes.

(20) a. bEE bó nīn zī ò jē'ē - - wāā
[bee bö nīn zī ò jē'ē wāā]
"If they come (today) feed them"

b. bEE bó lōŋ - - kwēē ò lōgē - - wāā
[bee bö lōŋ 'kwēē ò lōgē wāā]
"If they come home tomorrow (you) fetch them"

c. bEE bó yīn - - kwēē bó lōgē - - yi'I
[bee bö yīn 'kwēē bö lōgē yi'I]
"If they come (in the distant future), they should fetch us"

d. bEE bó lōŋ - - , ò fā - -
[bee bö lōŋ, ò fā]
"If they beg, you should give (it) to them"

e. bEE bó yā'ā - - , ò mā'ātā - -
[bee bö yā'ā, ò mā'ātā]
"If they cry, you should leave (it)"

f. ò bā' zī bōn ò yā - -
[ò bā' zī bōn ò yā]
"If you come you will see"

g. bó bā' yā bōn bó kwērē - -
[bō bā' 'yā bōn bó kwērē]
"If they see, they will take"

The conditional sentence marker /bEE/ 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 /nīŋ/ while the tomorrow future conditional marker is /lōŋ/. The distant future conditional marker is /yIN/. The underlying tones of these three markers are as indicated. The future markers, /lōŋ/ and /yIN/, 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 T0 tense, as seen in (20d) and (20e). The marker /bEE/ occurs before the conditional
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. bée bó nin zi, ó jé'e ̣ waaa underlying
b. bée bó nin zi, ó jé'e ̣ waaa replacive
c. bée bó nin zi, ó jé'e ̣ waaa tone simplification
d. bée bó nin zi, ó jé'e ̣ waaa intonation
e. bée bó nin zi, ó jé'e ̣ waaa tone lowering
f. bée bó nin zi, ó jé'e ̣ waaa 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 /nín/ 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 /ő/ 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 /wáaa/ to M.

The derivation of (20c) is given below:

(22) a. bée bó yiŋ ̣ kwée bó lóga ̣ yi'I underlying
b. bée bó yiŋ ̣ kwée bó lóga ̣ yi'I superimposed tone
c. bée bó yiŋ ̣ kwée bó lóga ̣ yi'I replacive tone
d. bée bó yiŋ ̣ kwée bó lóga ̣ yi'I simplification and ds
e. bée bó yiŋ ̣ kwée bó lóga ̣ yi'I 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 /yiŋ/ 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 simplifies 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 yi'I to M.

The derivation of (20b) is similar to that of (20c). The conditional sentence markers /bés...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. bō bā' zī bōn ő yā ʃ ʃ ʃ ʃ underlying tone
b. bō bā' zī bōn ő yā replacive tone
 c. bō bā' zī bōn ő yā simplification and ds
d. bō bā' zī bōn ő yā tone absorption
e. bō bā' zī bōn ő yā tone lowering
f. bō bā' zī bōn ő yā 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, /bā'/, 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 /bōn/. In (23e) the L tone on the verb then lowers the following H tone of the marker /...bōn/ 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 /ő/.

The derivation of (20g) is given below.

(24) a. bō bā' yā bōn bō kwērā ʃ ʃ ʃ ʃ underlying tone
b. bō bā' yā bōn bō kwērā replacive tone
c. bō bā' yā bōn bō kwērā 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 /bā'...bōn/

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. /báá~ ...bón/ with underlying tones as indicated.

(25) a. á nim báá~ yé bón á twóñá ~ →
   [á nim báá 'yá bón á twóñá]
   "If he had seen he would have called"

b. á kí báá~ ~ yé bón á lágá ~ →
   [á kí báá' 'yé bón á lágá]
   "If he had seen, he would have taken it"

c. bó kí báá~ ~ wá'átá bón bó lágá ~ →
   [bó kí báá' 'wá'átá bón bó lágá]
   "If they had remembered they would have taken it"

d. bó lém báá~ b'éta bón bó fá ~ →
   [bó lém 'báá 'béta bón bó fá]
   "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, /báá~ / 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. á nim báá~ yé bón á twóñá ~ underlying
   b. á nim báá~ yé bón á twóñá TO replacive tones
   c. á nim báá~ yó bón á twóñá simplification
   d. á nim báá~ yé bón á twóñá tone lowering
   e. á nim báá~ yó bón á twóñá tone grounding
   f. á nim báá 'yó bón á twóñá simplification and ds
   g. á nim báá 'yé bón á twóñá 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. ā kī bāā'- yā bōn ā lōgā' - underlying
b. ā kī bāā'- yā bōn ā lōgā' - P2 verb tones
c. ā kī bāā'- yō bōn ā lōgā T0 verb tones
d. ā kī bāā'- yō bōn ā lōgā tone grounding to the left
e. ā kī bāā'- yā bōn ā lōgā tone spreading to the left
f. ā kī bāā'- 'yā bōn ā lōgā simplification and ds
g. ā kī bāā'- 'yō bōn ā lōgā 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, /lōgā/. The tone processes involved in the rest of the derivation have already been discussed in the preceding chapters (especially in chapter 14).

The derivation of (25c) is similar to that of (25b).

The derivation of (25d) is as follows:

(28) a. bó lēm bāā' bētē bōn bō fā' - underlying
b. bó lēm bāā' bētē bōn bō fā' T0 verb tones
c. bó lēm 'bāā' bētē bōn bō fā' simplification and ds
d. bó lēm 'bāā' bētē bōn bō fā' tone grounding
e. bó lēm 'bāā' bētē bōn bō fā' simplification and ds
f. bó lēm 'bāā' bētē bōn bō 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.
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 Introduction

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
account for both the phonemic and morphemic structures." Taulli (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 morphophonemic 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 orthographies, 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
vocabulary is very limited. The cost of time spent in school is very enormous."

Vietnamese once had a Chinese-type writing system but switched over completely to a writing system which represents sounds by its symbols (i.e., a phonemic writing system). Smalley says that although the writing system of Vietnamese is not fully consistent, it is more consistent than English or French and that the amount of time needed by Vietnamese children to learn to read their own language is much less than is required by either Japanese or Chinese or even French or English. He says that in about two years of normal school study a Vietnamese child can read anything which he sees in print, he can pronounce what he sees written. In contrast, a Chinese child at the same point can at best pronounce a few hundred words when he sees them in print.

Comparing the English writing system with that of Spanish, Smalley says that the child learning to read English meets relatively more difficulties. The English child learning to read his own language requires many grades of drilling in school before he could be said to read everything he sees in print. By contrast, he says that the Spanish-speaking child in a year or two reaches 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 writing 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 morphophonemic 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 /~/ (Low), /~/ (High-low) and /~/ (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 /~/ . High-mid glide (i.e. H'H), /~/ is not marked at all just as H and M are not marked. This again means that no distinction is made between /~/ (H), /~/ (M) and /~/ (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 System 2

In this system only the basic tones 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. nō yā  "the snake"
    b. ãbō yā  "the hand"
    c. atēē yā  "the calabash"

In citation form the above nouns are realized as follows:

(2) a. nō  "snake"
    b. ãbō  "hand"
    c. atēē  "calabash"

However, their basic tones are as follows: /nō/, /ãbō/ and /atēē/. 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. fā nibē nyā  "give the colanut!"
    b. kwērā nibē nyā  "take the colanut!"
    c. lōgē mbā yā  "fetch the meat!"
    d. sō mbā yā  "pierce the meat!"

The verbs in the above sentences occur in their basic tones /fā/ "give!", /kwērā/ "take!", /lōgē/ "fetch!", and /sō/ "pierce!". However, this is how they are realized in isolation:

(4) /fā/, /kwērā/, /lōgē/, /sō/

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 sanë mba [á sânë mba]  
   "he has dried meat"

b. á sanë mba [á sânë mbà]  
   "he is drying meat"

c. bó nîn kwërë abàà [bó nîn 'kwërë abàà]  
   "they took corn fufu (today)"

d. bó nîn kwërë abàà [bó nîn kwërë bàà]  
   "they took corn fufu (today)"

e. a kì sì sanë tità [à kì sì' sânë titá]  
   "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, /\/.

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) àbàà "bag" and àbàà "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. á zi ǹkwọre mba "he has come to take meat"
    b. ̀á zi ǹkwọre mba "he has come and taken meat"

The words /bọ/ "build!" and /bọ̀/ "cover!" would be differentiated thus, /bọ/ "build!" and /bọ̀/ "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 (3), 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. kò åbàà ya "take the bag!"

20.2.4 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 IL (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
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
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 test that the students wrote towards the end of the experiment were achievement tests meant to measure the competence of the students.
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 orthography, 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 Voorhoeve (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 influential theories in linguistics of the transformational-generative grammarians who give a central importance 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 Smalley's 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 phonemic theory. We have seen above that Pike demands 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 absorption. 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 /fɔrɛ/ "mouse" has H tone and that /nibɑ/ "wing" has L tone, while it was difficult for them to recognize the tones in /mɑɑ/ "grandmother or /mɑtɑ/ "mat" or /sɑrɑ/ "weaver bird". However, given /mɑɑ/ and /mɑtɑ/, it would be easier for them to hear the tones in /mɑtɑ/ than in /mɑɑ/. It was much more difficult again to hear tone glides, e.g., given /mɑtɑ/ and /mɑtɑɑ/ "trap" it was more difficult to hear the HL glide on the first syllable of mɑtɑɑ than the level H tone on /mɑtɑ/.  

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: /akik̩n/ "owl", /takumbɑn/ "a kind of juju", /lɑm/ "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. sɔ "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) [yɛ wʊrɑ ndɑ yɑ] "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.
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) ataa maa "calabash of grandmother"
(ii) ngu maa "fowl of grandmother"
(iii) ngu taa "fowls of father"
(iv) aba fora "bag of mouse"

This is how the different groups were expected to mark tone in this exercise.

Group 1

(i) ataa maa "calabash of grandmother"
(ii) ngu maa "fowl of grandmother"
(iii) ngu taa "fowls of father"
(iv) aba fora "bag of mouse"

Group 2

(i) ataa maa "calabash of grandmother"
(ii) ngu maa "fowl of grandmother"
(iii) ngu taa "fowls of father"
(iv) aba fora "bag of mouse"

Group 3

(i) ataa maa "calabash of grandmother"
(ii) ngu maa "fowl of grandmother"
(iii) ngu taa "fowls of father"
(iv) aba fora "bag of mouse"

Group 4

(i) ataa maa "fowl of grandmother"
(ii) ngu maa "fowl of grandmother"
(iii) ngu taa "fowls of father"
(iv) aba fora "bag of mouse"

The following is part of L 14 *1:

Write the necessary tones in the following sentences:
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 Practical 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

A ki be yijon Aso fe'e mitaa nyuu njoo ji. A fe'e ma, mben kän lóó, a ghec ñkwere akônə a mbo mumaà yi ntsirà ta kàra lóó njoo jii me à ki tswe ni nyùùa. Kaa ndûu njoo ki wa'á si'i maa njwi tië nlon me mbèn ya ki si loo a. A ki yuu ñga'á níngoo yiwe tsii'î ni ñkghi ji tara ni mwum mìntaà. À ki ki nyuu atu naa bo nikà'á ni kàu a bo'ó abàa ànsanà. À ki si mënsè a nyuu njoo jya ábèn ya ki ntswanà. A ghec mbënsè akôn ya kaa wà'á mumaà yi wa yè; ñtìga nlogo ñkwëc ni yu. A kwëc më nkuu a ndà nyë laa níngò ni aòtsë'á aòtsë'ë yu. Àbûre wànsè ntsì'oo ntsë a múm nki. A tsë ñà mbèn wà'áte ma kaa kàrësi si a ndà tswë. La a tìgë nìn niki ghu nlae mé yu ka lo tìgë ghec yuu kàrësì a titëgë bân si'í laa níngò ña ghu.

G 2

A ki be yijon Asö fe'e mitaa nyùù njöö jì. A fe'e ma, mbën kän lóó. A ghec ñkwerë akônë a mbô múmaa yi ntsirë tà kàrà lóó njöö jìì mà a ki tswe nì nyùùa. Kaa ndùu njöö ki wà'á si'i mëà njëi tië nlon mà mbèn yà ki ñë lóó a. À ki yùù nìgà'á níngò yiwe tsii'î nì nkshi jì tárë nì mwùm mìntëa. À ki ki nyùù atù naa bo nika'á nì kàu à bo'ó abàa ànsàànsà. À ki si mënsè à nyùù njöö jyi mben yà ki ntswanà. A ghec mbënsè akôn yà kàa wà'á múmaa yi wà yè; nògè nlogue ñkwëc ni yù. A kwëc më nkùù à ndà nyë laa níngò nì atsòtsà'á atsë'ë yù. Mbûre wànsè ntsì'oo ntsë à múm nki. A tsë ñà mbèn wà'atë mà kàa karësi si à ndà tswë. Là à tìgë nìn niki ghu
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

<table>
<thead>
<tr>
<th>Group</th>
<th>L 6*5</th>
<th>L 7*8</th>
<th>L 7*9</th>
<th>L 9*2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>per-</td>
<td>per-</td>
<td>per-</td>
<td>per-</td>
</tr>
<tr>
<td></td>
<td>mean cent</td>
<td>mean cent</td>
<td>mean cent</td>
<td>mean cent</td>
</tr>
<tr>
<td>1</td>
<td>2.75 55</td>
<td>3.4 68</td>
<td>2.75 68.7</td>
<td>6 75</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>40</td>
<td>2.56 51</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td>-</td>
<td>1.5</td>
<td>37.5</td>
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<tr>
<td>4</td>
<td>2</td>
<td>40</td>
<td>1.33 26.6</td>
<td>.75</td>
</tr>
</tbody>
</table>

Results: Table 2

<table>
<thead>
<tr>
<th>Group</th>
<th>L 10*1</th>
<th>L 11*3</th>
<th>L 12*1</th>
<th>L 14*1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>per-</td>
<td>per-</td>
<td>per-</td>
<td>per-</td>
</tr>
<tr>
<td></td>
<td>mean cent</td>
<td>mean cent</td>
<td>mean cent</td>
<td>mean cent</td>
</tr>
<tr>
<td>1</td>
<td>3.83 76.6</td>
<td>2.66 66.5</td>
<td>6.33 79.1</td>
<td>7.62 89.6</td>
</tr>
<tr>
<td>2</td>
<td>3.5</td>
<td>70</td>
<td>1.37 34.5</td>
<td>4.87 60.9</td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td>-</td>
<td>2.5</td>
<td>62.5</td>
</tr>
<tr>
<td>4</td>
<td>2.12 42.4</td>
<td>2.25 56.2</td>
<td>3.16 39.5</td>
<td>5.78 63.4</td>
</tr>
</tbody>
</table>

Results: Table 3

<table>
<thead>
<tr>
<th>Group</th>
<th>Reading Test</th>
<th>Written Text</th>
<th>class Exercises</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>per-</td>
<td>per-</td>
<td>per-</td>
<td>per-</td>
</tr>
<tr>
<td></td>
<td>mean cent</td>
<td>mean cent</td>
<td>mean cent</td>
<td>mean cent</td>
</tr>
<tr>
<td>1</td>
<td>146 89.8</td>
<td>19 63.3</td>
<td>35.34 72.31</td>
<td>73.16</td>
</tr>
<tr>
<td>2</td>
<td>101 61.5</td>
<td>19 63.3</td>
<td>25.56 51.81</td>
<td>53.88</td>
</tr>
<tr>
<td>3</td>
<td>97 59.5</td>
<td>-</td>
<td>18.87 65.9</td>
<td>56.64</td>
</tr>
<tr>
<td>4</td>
<td>93 57.1</td>
<td>10.5 35</td>
<td>21.14 41.7</td>
<td>42.57</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>73.16 percent</td>
</tr>
<tr>
<td>Group 2</td>
<td>53.88 percent</td>
</tr>
<tr>
<td>Group 3</td>
<td>56.64 percent</td>
</tr>
<tr>
<td>Group 4</td>
<td>42.57 percent</td>
</tr>
</tbody>
</table>

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 exhaustive 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 I 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. fora ghû [föré ghû] "this mouse here"

b. bifora bû [bifóra bê] "these mice here"
c. atē yu [atē yu] "this calabash here"
d. maā ghū [maā ghū] "this grandmother here"
e. bimāā bu [bimāā bu] "these grandmothers here"
f. fitē fū mé [fitē fū mé] "this calabash here that..."
g. fībwē fā [fībwē fā] "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 ndā [ā tū ndā] "on the roof"
   b. atu ndā [ātū'ndā] "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., Practical Guide to Bafut Tone Orthography, 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 represented orthographically.

(13) Tones H 'H M 1L L H'H HL 'HL ML LM LML

Orth.
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 orthography 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 system 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 constructions 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 performance 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
Chapter Twenty-one

BAMBIKI 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

ājāŋ "xylophone"  ājāŋ "kernel"  ājāŋ "a kind of dance"
ābōō "corn fufu"  āyōō "path"  ābōō "bag"
ātō’ "tin/can"  nībōō "pumpkin"  ātō’ "(raffia bush"

These tones also contrast in the following set of constructions where the nouns are used as objects of the verb:

(2) a. Yē n’ājāŋ H ‘H [”] "see a xylophone!"
b. Yē ājāŋ H M [”] "see kernels!"
c. Yē ājāŋ 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 /ājāŋ/ "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 /ājāŋ/ "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-shín   "bird"
   b. CV ní-bɔ'   "pumpkin"
   c. V  ā-tsán   "prison"
   d. N  m-bân   "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  shín   "bird"
        shán   "month"
   b. M  i-shôm   "farm"
        ŋi-jân   "kernels"
   a. L  ŋ-jân   "a kind of dance"
        m-bân   "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  -kóó  "crab"  
    M-H H  a-bóó  "corn fufu"  
b.  Ø-M M  -tyɛɛ  "father"  
    M-M M  ñ-dɛɛ  "song"  
c.  Ø-L L  -kɪɛɛɛ  "weaver bird"  
    L-L L  a-bóó  "bag"  
d.  Ø-L M  -tátá  "father"  
    L-L M  i-yáɡá  "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  Yá  "see!"  
b.  LH  gi  "go!"

As seen above the verb, /gi/ 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, /kó/, 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  kó  "take!"

Following are patterns that are found on disyllabic verbs (in the imperative mood):

(8)  
a.  H H  fígéé  "give!"  
b.  L H  sháňé  "dry!"
As can be seen above in (8), the low tone verb has an underlying L H tone pattern.

The underlying 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 phonetic 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:
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:

\[
\begin{array}{c}
\text{Npfx} \\
\text{L} \rightarrow \text{M} / _{-}\left\{ \text{H} \right\} \\
\text{M} \\
\end{array}
\]

This rule is illustrated by the following examples:

(11) a. átô' \rightarrow [ätô] "head"
    b. àbôô \rightarrow [äbôô] "corn fufu"

(12) a. ñjåŋ' \rightarrow [ñjåŋ] "kernel"
    b. àti' \rightarrow [ätî] "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. \(HL \rightarrow H\)  
b. \(LH \rightarrow M\)

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. \(âtò\) underlying  
b. \(âtò\) L tone raising to M (10)  
c. \(âtò\) tone grounding  
d. \(âtò\) 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 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. ābō̂̂̂ underling
b. ābō̂̂̂ L tone raising (rule (10))
c. ābō̂̂̂ tone spreading (T-rule 6)
d. ābō̂̂̂ simplification (rule (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. 4.6.6).

The derivation of the (12a) is as follows:

(16) a. ŏn̄jā̂̂̂ underlying
b. ŏn̄jā̂̂̂ tone grounding (T-rule 4)
c. ŏn̄jā̂̂̂ simplification (rule (13b))
d. ŏn̄jā̂̂̂ 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).
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 simplification 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. shiŋ 'mwòó → [shiŋ 'mwòó] "bird of child"
    b. mò 'míghe → [mò'míghe] "(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 prefixes but the tone of the deleted prefix still remains floating. The examples in (18) further illustrate this fact.

(18) a. fighé 'mwòó → [fighé 'mwòó] "give a child"
    b. yá 'móó → [yá '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 /'mwòó/ "child". These processes have been described in Rafut 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 ńjáŋ → [yé n'jáŋ] "see a xylophone"

The derivation of the tones in (19) is as follows:

(20) a. yé ńjáŋ underlying
b. yé njáŋ desyllabification (P-rule 4) 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) áˈkwéˈkóó → [áˈkwéˈkóó] "he is taking a crab"
L HL H H HH → H 'H HH [ˈ − − ]

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
/kóó/, 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. áˈkwéˈkóó underlying
b. áˈkwéˈkóó IMPF replacive tone
c. áˈkwéˈkóó tone grounding
d. áˈkwéˈkóó 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 [kóó] are caused to be
realized on the same level as the preceding 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:
<table>
<thead>
<tr>
<th>(23) a. [fighE n'jâŋ]</th>
<th>H 'H [ − − ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>give xylophone</td>
<td></td>
</tr>
<tr>
<td>&quot;give a xylophone!&quot;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(23) b. [fighE njâŋ]</th>
<th>H M [ − − ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>give kernels</td>
<td></td>
</tr>
<tr>
<td>&quot;give kernels!&quot;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(23) c. [á 'kwéshô 'mwoô]</th>
<th>H 'H H 'H H [ − − − − ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>he help child</td>
<td></td>
</tr>
<tr>
<td>&quot;he is helping a child&quot;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(23) d. [á kwéshô mwoô]</th>
<th>H H M H H [ − − − − ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>he help child</td>
<td></td>
</tr>
<tr>
<td>&quot;he helped a child&quot;</td>
<td></td>
</tr>
</tbody>
</table>

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 /kwéshô/ 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:

<table>
<thead>
<tr>
<th>(24) a. H [ − − ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. 'H [ − − ]</td>
</tr>
<tr>
<td>c. M [ − − ]</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>(25) a. fighE ŋjâŋ'</th>
<th>underlying</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. fighE ŋjâŋ</td>
<td>tone grounding (T-rule 4)</td>
</tr>
<tr>
<td>c. fighE njâŋ</td>
<td>nasal desyllabification (P-rule 4) and tone deletion (T-rule 5)</td>
</tr>
<tr>
<td>d. fighE njâŋ</td>
<td>simplification (rule (13b))</td>
</tr>
</tbody>
</table>

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 derivation given in (22) above. The derivation of (23d) is given in (26) below.
In (26a) the underlying tones are given. The narrative past tense has a replacive H tone (after the pronoun /å/) 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)  
|   | H H'H 'H H [---] |
|----|-----------------|---|---|
| a. | [å kwɛ́ 'kóó] | he take crab |
|    | "he has taken a crab" |
| b. | [å kwɛ́ kóó] | he take crab |
|    | "he took a crab" |

The tone on the word /kwɛ/ "take in (26a) is a H'H contour tone while the tone on the same word in (26b) is a HM tone. 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 /kóó/, "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.
In (28a) the underlying tones are given. Note should be taken of the P0 replacive tones, H (before the verb) and H L (after the verb). In (28b) the P0 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 (35) below.

The normal M tone can occur in the following environments:

(29) a. Before or after a pause:

n̂ibó' "pumpkin"

b. After a L tone (cf. example in c. below)

c. Before a H tone

[áti mwóó] "stick of child"

d. After a H tone

tákámbeŋ "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:
(30) a. [á 'kwéshá 'mwoó]  "he is helping a child"

    H 'H H 'H H

    [ - - - ]
    1 2 3

b. [áshó'ó tyé'cé]  "hoe of father"

    L H 'H H 'H

    [ - - - ]
    1 2 3

    [ - ]
    4

c. [á kí ligh'á 'kwéshá 'mwoó i zöö]  "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 /mwoó/ 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 /mwoó/. 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

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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 kí líghé kwéshé mwóó ́zóó 
he P2 help child preposition yesterday

A possible derivation of the tones in the above construction is as follows:

(32) a. à kí líghé kwéshé mwóó ́zóó underlying
b. à kí líghé kwéshé mwóó ́zóó tone spreading
c. à kí líghé kwéshé mwóó ́zóó tone grounding
d. à kí líghé kwéshé mwóó ́zóó tone absorption
e. à kí lí'ghé kwéshé mwóó ́zóó simplification
and ds
f. à kí lí'ghé kwéshé mwóó ́zóó tone grounding
g. à kí lí'ghé kwéshé mwóó ́zóó tone grounding
and ds
h. à kí lí'ghé kwéshé mwóó ́zóó tone grounding
i. à kí lí'ghé kwéshé mwóó ́zóó simplification
and ds
j. à kí lí'ghé kwéshé mwóó ́zóó M tone level and level resetting
k. à kí lí'ghé kwéshé mwóó ́zóó tone grounding
l. à kí lí'ghé kwéshé mwóó ́zóó tone spreading
m. à kí lí'ghé kwéshé mwóó ́zóó simplification
by rule (13b)
n. à kí lí'ghé kwéshé mwóó ́zóó L tone raising (10)

In the above derivation 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 is, by rule (31), reinterpreted as M M (as indicated in (32j)) and at this point the level of the following 'H on ['́] 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. ṃbi `yā → [ṁbi yā] "my goat"
   goat my

   b. ṃbi `yā → [ṁbi yā] "my goats"
   goats my

In the above examples we see that the difference between the two constructions is made solely 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 possessive, 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:
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.

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
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 Orthography

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 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
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: /~/ (L), /~/ (HL), and /~/ (LH). We have said that the tone LH comes out on the surface as LM by T-rule 1. This means that /~/ represents LM. The tone mark /~/ 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 distinguished 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 indicated in (37), (38) and (39) respectively.

(37) a. mbi ya "my goat"
   b. mbi ya "my goats"

(38) a. a kwọsha mwoo "he is helping a child"
   b. a kwọsha mwoo "he has helped a child"
   c. a kwọsha mwoo "... he helped a child"

(39) a. a shan'a nọ "he is drying meat"
   b. a shan'a nọ "he has dried meat"
   c. a shan'a nọ "... 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 ['kɔɔ̃]. 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 /lîghâ/ is not very certain. Is it part of the P2 tense marker or is it 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 /gî/ "go!", used as a secondary verb. This means that we will then have a serial (or consecutive) construction of the form:

/â ki lî gî- 'û- kwêså 'mâôô i 'zôô/

he P2 stay go CNS help child preposition yesterday
Chapter Twenty-two

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. /-kāŋ/ [-kāŋá] "squirrel"
b. /-kám/ [-kámó] "crab"
c. /-dzā/ [-dzá] "sauce"
d. /-dā/ [-dā] "house"
e. /Ø-bû`i`-Ø-síŋ/ [bû'ú sìŋá] [""""] "the chimpanzee of bird"

The example in (1e) above shows the realization of the super high tone. In her notation, the up-arrow (1) before a H tone indicates a super H tone while the down-arrow (1) 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. 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 bû' "chimpanzee"
    b. L ñû "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 tákumbèŋ "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 tîin "grandfather"
    d. L L kîrè "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 kûrê "chew!"

The following tone patterns are found on low tone verbs in isolation:

(6) a. LM lê "go (away)!"
    b. L M lôgâ "fetch!"

Just as in Bafut and the other Ngemba languages the verb /kô/ "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 kô "take!"

The form of the verbs given in the above examples is the imperative. The imperative form of the verb is the simplest 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
verbs actually have a rising-falling tone pattern. Thus the tone of the verb form in (6a) above is as follows:

(7)  LML  Iɔ "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 below:

(8) a.  H  ghá mbáb zà  "give the meat!"
give meat the

b.  H H  kúré mbáb zà  "eat the meat!"
eat meat the

c.  LM  lɔ ḥeɛɛ  "go away!"
leave go

d.  L M  lɔgɔ mbáb zà  "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 definable 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
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 preceding 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. titá 'síná → [tí tá 'síná] "pepper of bird"

H H L H H H → H H 'H H

b. 'ká' 'bú' → [ká' 'bú'] "(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, /tí tá/ "pepper" and /'ká'/ "(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
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)  
\begin{enumerate}
  \item a. ghā īshôme → [ghā 'shmē] "give farm!"
  \item b. ghā ātī → [ghā 'tī] "give tree"
\end{enumerate}

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: /īshôme/ "farm" and /ātī/ "tree". In a construction 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)  
\begin{enumerate}
  \item a. ghā ātī \hspace{1cm} underlying
  \item b. ghā ātī \hspace{1cm} tone grounding
  \item c. ghā ātī \hspace{1cm} tone absorption
  \item d. ghā 'tī \hspace{1cm} vowel deletion
  \item e. ghā 'tī \hspace{1cm} tone grounding
  \item f. ghā 'tī \hspace{1cm} simplification and downstep
\end{enumerate}

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
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` 'kám` wá → [mà ghá` 'kám wá]  "I gave the crab"
L H L HL H H H HL

L LHL H H HL  → [ L H'H 'H HL]

b. mà lógé` 'kám`wá → [mà ló'gá` 'kám wá]  "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 /lógá/ "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 má'` 'ghá kámá  "I shall give a crab"
F1 give crab

b. á á lá`' ghēē  "he shall/must go!"
F3 go

In the examples in (15) above, the tone of the future morphemes /má'/ (F1) and /lá`'/ (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:

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a. mà ·mè·ghà ·kàmò "I shall give a crab"

L H L H H H H
L H L H H H H → [L H 'H H H H]

b. à à ·là· ghèt "he will go"

H H H H L H L H
H H H H L H L H → [L H H 'H H H]

The H 'H and H 'H tones also occur in the associative construction as indicated in the examples in (17) below:

(17) a. ñtøm’ ‘fúú "heart of mouse"
     heart mouse

b. akà'nà ‘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. ñtøm’ ‘fúú
     L H L H H H H
     L H L H H H H → [L H 'H H H H]

b. akà’nà ‘fúú
     L H L H H H H
     L H L H 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. ñtøm’ ‘fúú underlying
  b. ñtøm’ ‘fúú tone grounding
  c. ñtøm’ ‘fúú tone coalescence
  d. ñtøm’ ‘fúú simplification and downstep
  e. ñtøm’ ‘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
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. ákáŋə 'fuũ' underlying  
b. ákáŋə fuũ tone coalescence  
c. ákáŋə fuũ tone grounding  
d. ákáŋə 'fuũ' simplification and downstep³

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.

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(21) [bɪló'm bi'mó 'nywá] "husbands of the child"

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 development. 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 Gu 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 Gu 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 Gu 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
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. tǐŋ   "grandfather"
   b. tákümbar   "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. lógò mó wiŋa   "take that child"
       L M H H L
       [ -  - ]      1
       [ -  - ]      2
       [ -  - ]      3

   b. yí nzá   "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. ikù'ú tsá   "the colocoshia"
       L L M H

   b. äfù ké   "what leaf?"
       L LM H
c. ūkūn fūū  "tail of mouse"

L LM HH

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. ātīō bī'lım 'tsā  "the tree of husbands".
L LM HH 'H 'H

[  ]
[  ]
[  ]

b. ūndāā kām mó 'zá  "the house of crab of child"
L ML M H 'H

[  ]
[  ]
[  ]

(26)

c. ūndāā'ā 'kām mó 'já  "the houses of crab of child"
L H'H 'H 'H 'H

[  ]
[  ]
[  ]
[  ]

(27)

d. ātū'á' mó ghō wīnē  "the head of this child of yours"
L H'H 'H L ML

[  ]
[  ]

In the above examples, the diagrams that plot the relative heights of the tones in each utterance help us to see the
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:

\[
\begin{align*}
H : & \quad - \quad 1 \\
'H : & \quad - \quad 2 \\
M : & \quad - \quad 3 \\
L : & \quad - \quad 4
\end{align*}
\]

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:

\[
\begin{align*}
27) & \quad \text{a. ŋdåå 'kåm'mó' zá'} \\
& \quad \text{L H L L H H L L H L H L } \quad \text{M M M H 'H'}
\end{align*}
\]

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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)

<p>| | | | | | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>ŋdáá</td>
<td>'kám'</td>
<td>'mó'</td>
<td>já'</td>
<td>underlying</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>b.</td>
<td>ŋdáá</td>
<td>kám</td>
<td>'mó'</td>
<td>já</td>
<td>tone coalescence</td>
<td></td>
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<tr>
<td>c.</td>
<td>ŋdáá</td>
<td>kám</td>
<td>'mó'</td>
<td>já</td>
<td>tone grounding</td>
<td></td>
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<tr>
<td>d.</td>
<td>ŋdáá</td>
<td>'kám'</td>
<td>'mó'</td>
<td>já</td>
<td>simplification and double downstep</td>
<td></td>
<td></td>
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<tr>
<td>e.</td>
<td>ŋdáá</td>
<td>'kám'</td>
<td>'mó'</td>
<td>já</td>
<td>ground and absorption</td>
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</tr>
<tr>
<td>f.</td>
<td>ŋdáá</td>
<td>'kám'</td>
<td>'mó'</td>
<td>já</td>
<td>tone coalescence</td>
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</tr>
<tr>
<td>g.</td>
<td>ŋdáá</td>
<td>'kám'</td>
<td>'mó'</td>
<td>já</td>
<td>tone grounding</td>
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<tr>
<td>h.</td>
<td>ŋdáá</td>
<td>'kám'</td>
<td>'mó'</td>
<td>já</td>
<td>simplification and downstep</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>i.</td>
<td>ŋdáá</td>
<td>'kám'</td>
<td>'mó'</td>
<td>já</td>
<td>tone grounding</td>
<td></td>
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<tr>
<td>j.</td>
<td>ŋdáá</td>
<td>'kám'</td>
<td>'mó'</td>
<td>já</td>
<td>simplification and downstep</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>k.</td>
<td>ŋdáá</td>
<td>'kám'</td>
<td>'mó'</td>
<td>já</td>
<td>tone grounding</td>
<td></td>
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</tr>
<tr>
<td>l.</td>
<td>ŋdáá</td>
<td>'kám'</td>
<td>'mó'</td>
<td>já</td>
<td>simplification</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>

In (27a) the underlying tones are given. Special note should be taken of the intervening floating L tones. The construction includes two associative constructions: /ŋdáá 'kám/ "house of crab" and /'kám' 'mó'/ "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. 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 in 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 simplifies 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.
We give here below some of the examples taken from Leroy (1977:73):

(29) a. /f-u' `sin'/ [fû` sînê] "mouse of bird"
   H H I H H

b. /i-ti` i `sin'/ [iîi sînê] "trees of bird"
   L L H H H

c. [âtiá bîlîmâ] "tree of husbands"
   L L H I H 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 construction 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. fû` 'sin' underlying
b. fû` `sin' vowel deletion
c. fû` `sin' tone coalescence
d. fû` `sin' tone grounding
e. fû` 'sin' 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) [fû` 'sinê] "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. [ǐti sǐná] "trees of bird"  
        LM   H   H
  b. [ātiš bǐlómá] "tree of husbands"  
        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. ātiš i bilómá underlying
  b. ātiš bilómá vowel deletion
  c. ātiš bilómá tone coalescence
  d. ātiš bilómá tone grounding
  e. ātiš bilómá tone lowering
  f. ātiš bilómá 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:

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(34) a. ifigi bik’umé "and took nobles"
   L HH IH’HH

b. ndōg’i nil’ōnē "and took a harp"
   L HH’HH’HH

c. mà lō ndōg’i miikómé "I took a long head basket"
   LLH L LH HH

Leroy (1979:61) explains the tone processes involved in the examples given in (34) above by the following rules:

R4a:  
   HH / L
b:  
   HL H → IH’H / LH
   
   By R4a, the tones of the noun in (34c) are derived as follows:

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 (ifigi) bik’umé yields (ifigi) 1bi’kúmé.

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:

(35) (mà lō dōg’i) miikómé → (mà lō ndōg’i) miikómé

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 IH and thus yielding H IH 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 (ifigi) bik’umé yields (ifigi) 1bi’kúmé.

(36) a. /ifigi bik’umé/ → /ifigi bi’kúmá/ "and took nobles"
   LH H HL H H L MM H’HH

b. /ndōg’i nil’ōnē/ → /ndōg’i nil’lōnā/ "and took a harp"
   L HLH HL H H L P’HH H’HH

c. /mà lō ndōg’i miikómé/ → /mà lō ndōg’i miikómé/ "I took long head basket"
   L LE L L LH H H L LM L L MM H H

The tones of the strings to the left of the arrow in the above examples are intermediate tones. These forms are given so
as to highlight the rules that are 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. i-figi bikumé underlying
    b. i-figi bikumé tone spreading to the right
    c. i-figi bikumé tone lowering
    d. i-figi bikumé tone tone spreading to the left
    e. i-figi bikumé tone absorption
    f. i-figi bi'kumé 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, (i-), 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. ń-dögó niloné underlying
    b. ń-dögó niloné CNS tone pattern
    c. ń-dögó niloné tone spreading
    d. ń-dográf niloné simplification and ds
    e. ń-dográf niloné tone spreading to the left
    f. ń-dográf niloné tone absorption
    g. ń-dográf niloné 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
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)  

<table>
<thead>
<tr>
<th>Step</th>
<th>Underlying Form</th>
<th>Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>mà lọ n-dogá mikómé</td>
<td>underlying</td>
</tr>
<tr>
<td>b.</td>
<td>mà lọ n-dogá mikómé</td>
<td>tone lowering</td>
</tr>
<tr>
<td>c.</td>
<td>mà lọ n-dogá mikómé</td>
<td>desyllabification and tone deletion</td>
</tr>
<tr>
<td>d.</td>
<td>mà lọ n-dogá mikómé</td>
<td>tone spreading</td>
</tr>
<tr>
<td>e.</td>
<td>mà lọ n-dogá mikómé</td>
<td>tone spreading to the left</td>
</tr>
<tr>
<td>f.</td>
<td>mà lọ n-dogá mikómé</td>
<td>tone absorption</td>
</tr>
<tr>
<td>g.</td>
<td>mà lọ n-dogá mikómé</td>
<td>tone dissimilation</td>
</tr>
<tr>
<td>h.</td>
<td>mà lọ n-dogá mikómé</td>
<td>tone lowering</td>
</tr>
<tr>
<td>i.</td>
<td>mà lọ n-dogá mikómé</td>
<td>tone simplification</td>
</tr>
</tbody>
</table>

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 an 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 simplification. 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, 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. Farclas (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."
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:

\[
\text{RT: 4 } \text{HLH} \rightarrow \text{H} \text{IH} \\
\text{RT: 5 } \text{HIH} \rightarrow \text{1HIH}
\]

In her notation, the down arrow, \(\downarrow\), can represent either a downstep or a return to a normal high tone while the up arrow, \(\uparrow\), 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 HIH is converted to 1HIH 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 phenomenon 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. Farasclas (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 extremely 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 simplification), 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:

[i] [f] [g] [b] [k][u] [m] "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 1H 'HH. By her analysis she says that a downstep after a super H tone is a return to a normal H, i.e. 0 'H after a 1H 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 actually 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, /fû/ (with M) is 154 herts while the syllable, /'kû/ (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:

\[
\begin{array}{c}
\text{IH} \\
\text{'H} \\
\text{M} \\
\text{L}
\end{array}
\]

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 /fû/ "mouse" are H H, she ought to recognize that the tones in the stem of /bifû/ "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 H1H 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 Leroy 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, /ishôm/ "farm", /âti/ "tree", /nâm/ "animal", etc., would be marked as shown rather than their underlying tones: /ishôme/., /âti/. and /-nâm/. 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 /"/ HL, marked /"/ 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 /ñtémá/.

3 In the associative construction, some people would say /âká'ñé fuú/, 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, /âká'ñé 'fuú/.

4 What is happening in this construction is similar to what we have said about the example in 3 above. /ñdá'â'kám/ may be said /ñdá'â 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 Mbuì, 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:

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(1) a. $Ø$ $Ø$-kóó "crab"
   b. $V$ â-bóó "corn fufu"
   c. CV ní-bóó "pumpkin"
   d. N ñ-jáñ "kernel"

The following citation tone patterns are attested on monosyllabic noun stems:

(2) a. -H -mó "child"
      fí-nwó "snake"
      -nwi "cutlass"
   b. -M m-búm "eggs"
      fí-nwí "knife"
   c. -L -nwi "god"
      m-fó "chief"

The following tone patterns were found on disyllabic noun stems:

(3) a. $Ø$-H H -bú-ú "chimpanzee"
   b. $Ø$-H 'H -má'ghúum "hawk"
   c. $Ø$-H L -máa "mother"
   d. M-M M mí-tóó "market"
   e. L-M M â-bóó "corn fufu"
   f. $Ø$-M L -táa "father"
   g. $Ø$-L L -nóó "meat"
   h. L-L L ñ-gòó "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).
23.2.2 Tone Patterns of Verbs

The following tone patterns are found on monosyllabic verb stems in the imperative mood:

(4) a. H fi "give!"
    b. LH gi "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. HH kwásá "help!"
    b. LH sáná "dry!"

As we saw above, the LH tone pattern comes out as LM 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 LH or LH pattern of the verb in its citation form becomes LM or LM by T-rule 1. The following examples further illustrate this process.

(6) a. bikó → bikó "crabs"
    b. kó fú → kó fú "take mouse!"

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

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tone verb where the underlying L H tone becomes LL before a H tone of an object. This is illustrated in the following examples.

(7) lóó kóó → [lóó kóó] "take a crab"
    fetch crab

The derivation of the surface tones in the above example is given in (8).

(8) a. lóó kóó underlying tones
    b. lóó kóó dissimilation
    c. lóó kóó 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 /kóó/ 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 ningóm yá → [fí ningóm yá] "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 'mó' → [fí 'mó] "give a child!"
    give child
    b. má'ghúm 'fúú' → [má'ghúm 'fúú] "hawk of child"
    hawk child
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 see in the underlying strings. A sample derivation will illustrate these tone processes. We present the derivation of (10b) in (11) below.

(11) a. má'ghūm fuú underlying tones
    b. má'ghūm fuú tone grounding
    c. má'ghūm fuú tone simplification and ds
    d. má'ghūm fuú tone grounding
    e. má'ghūm fuú 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 floating 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 important 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
difference in the tone of the associative marker (which in each case is a tonal morpheme).

(12) a. ʰmvi ʰmô  [ʰmvi mô] "dog of child"
    dog child

b. ʰmvi ʰmô  [ʰmvi' mô] "dogs of child"
    dog child

(13) a. ʰmva ʰmô  [ʰmva mô] "fowl of child"
    fowl child

b. ʰmva ʰmô  [ʰmva' mô] "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. ʰmvi ʰmô  underlying
    b. ʰmvi ʰmô  tone grounding
    c. ʰmvi mô  tone coalescence
    d. ʰmvi mô  tone grounding to the left
    e. ʰmvi mô  tone lowering
    f. ʰmvi mô  tone grounding
    g. ʰmvi mô  tone simplification
    h. ʰmvi mô  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. ̂mvi' 'm5' underlying
b. ̂mvi' 'm5' tone grounding
c. ̂mvi' 'm5' tone grounding
d. ̂mvi' 'm5' simplification and ds
e. ̂mvi' 'm5' tone grounding
f. ̂mvi' 'm5' simplification and ds
g. ̂mvi' 'm5' tone grounding
h. ̂mvi' 'm5' 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. á 'kwásá 'mó' + [á 'kwásá 'mó]
   he T help child "he is helping a child"

b. á 'kwásá 'mó' + [á 'kwásá' 'm5]
   he T help child "he has helped a child"

The imperfective marker in (16a) is a HL replaceive tone that replaces the underlying L tone of the pronoun /á/ "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. á 'kwásá 'má' underlying
b. á 'kwásá 'm5' imperfective tone
c. á 'kwásá 'm5' simplification and ds
d. á 'kwásá 'm5' tone grounding
e. á 'kwásá 'm5' simplification and ds
f. á 'kwásá 'm5' tone grounding
g. á 'kwásá 'má' simplification

In (17a) the underlying tones are given. In b. the HL imperfective tone replaces the underlying L tone of the pronoun
/â/. 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 kwásâ 'mö' underlying
b. à kwásâ 'mö' T0 verb tone pattern
c. à kwásâ 'mö' tone grounding to the left
d. à kwásâ 'mö' tone spreading to the left
e. à kwásâ 'mö' simplification and ds
f. à kwásâ 'mö' tone grounding
g. à kwásâ 'mö' simplification

In (18a) the underlying tones of the string are given. In b. the T0 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 fî 'âbôô → [à fî 'âbôô] "he has given corn fufu"
    he give T c.fufu
b. à fî 'âbôô → [à fî 'bôô] "has he given corn fufu?"
    he give T T c.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 T0 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. ã fĩ ãbɔɔ underlying  
b. ã fĩ ̂ ̃ ãbɔɔ TO verb tone pattern  
c. ã fĩ ̂ ̃ ãbɔɔ Question tone  
d. ã fĩ ãbɔɔ tone absorption  
e. ã fĩ ãbɔɔ tone deletion  
f. ã fĩ ãbɔɔ simplification and ds  
g. ã fĩ ãbɔɔ tone lowering  
h. ã fĩ ˘bɔɔ V-deletion  
i. ã fĩ bɔɔ tone deletion  
j. ã fĩ bɔɔ tone spreading  
k. ã fĩ bɔɔ 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 /ã/ 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: /~/ (L), ~/ (HL), ~/ (LH). In this tone marking system both HL and ML are marked as ~/-. 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. ṅi mo "dog of child"
    b. ṃi mo "dogs of child"
(22) a. a kwase mo "he is helping a child"
    b. a kwâse mo "he has helped a child"
(23) a. â fi aboo "he has given corn fufu"
    b. â fi aboo "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. mē    "our (n.class 6)"
    c. nū    "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:

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(2) a. HL mō "child"
   b. LM nígōn "plantain"
   c. H'H álî' lēn "bat"

Two other contour tones, ML and LML occur in grammatical constructions, for example, as in (3) below:

(3) mígōn mā L LML ML "my plantains"

The following tone patterns were found on disyllabic noun stems:

(4) a. Ø-H H -fârō "mouse"
   b. Ø-H L -bôô "children"
   c. Ø-HL L -lâmshi "orange"
   d. H-L M ī-tāā "father"
   e. L-M L â-tînë "calabash"
   f. L-L M nî-bô'ā "pumkin"
   g. L-L L ŋ-gô'â "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 zê "see!"
   b. LH ghî "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 kwésé  "help!"
    b. L H sànë  "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 Mankan. 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).
24.3.2 Tone Spreading

There is tone spreading in Nkwen as illustrated by the following examples:

(7) a. fyá mingárá myá' → [fyá mingárá myá] "give the guns!"
    b. jì níbó'ó nyá' → [jì níbó'ó nyá] "eat the pumpkin!"

The tone processes involved in the above examples have been discussed already in the preceding 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) á 'kwésé 'mó' → [á 'kwésé mó] "he is helping a child"

The derivation of the downstep in the above example is given in (9) below:

(9) a. á 'kwésé 'mó' underlying tones,
    b. á kwésé 'mó' replace IMPERF tone
    c. á 'kwésé 'mó' tone simplification and downstep
    d. á 'kwésé mó' tone grounding
    e. á 'kwésé 'mó' simplification and ds
    f. á 'kwésé 'mó' 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 /á/. In (c) the HL contour tone simplifies to H tone
and at the same time causes the following tones to downstep. In d. the floating L tone of the 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 4.6.11, 14.2 and 14.3 the replacement is usually a grammatical tone or tone pattern.

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 example, 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.
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 " jì ̀bànà  he T eat c.fufu → [a 'jì bànà] "he is eating corn fufu"
b. a jì ̀ " ̀bànà  he eat T c.fufu → [a jì bànà] "he has eaten corn fufu"

(11) a. à " lò̀ ̀bànà  he T take c.fufu → [a lò̀ bànà] "he is taking corn fufu"
b. a lò̀ " ̀bànà  he take T c.fufu → [a lò̀ bànà] "he has taken corn fufu"

(12) a. à " kwèsè mó wè  he T help ch. the → [a 'kwèsè mó wè] "he is helping the child"
b. à kwèsè ́ " mó wè  he help T ch. the → [a kwèsè mó wè] "he has helped 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. ə jì ābānè zë' → [ə 'jì bän zë]  
    he T eat c.fufu this T  
    "is he eating this corn fufu?"

    b. ə jì ābānè zë' → [ə 'jì bän zë]  
    he T eat c.fufu this T  
    "he is eating this corn fufu"

(14) a. ə jì ābānè zë' → [ə jì bän zë]  
    he eat T c.fufu this T  
    "has he eaten this corn fufu?"

    b. ə jì ābānè zë' → [ə jì bän zë]  
    he eat T c.fufu this T  
    "he has eaten this corn fufu"

(15) a. ə jì ābānè → [ə jì bän3]  
    he eat T c.fufu T  
    "has he eaten corn fufu?"

    b. ə jì ābānè → [ə jì bänə]  
    he eat T c.fufu  
    "he has eaten corn fufu"

(16) a. ə kwēsē → [ə kwēsē]  
    he help T T  
    "has he helped?"

    b. ə kwēsē → [ə kwēsē]  
    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
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 Mkwên grammar. In (12a), for example, the imperfective aspect is marked by a HL tone pattern that replaces the underlying tone of the subject pronoun /á/ "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 input 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.
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. á kwěsá `mó' wé' underlying tones
    b. á kwěsá `mó' wé' T0 replacive tones
    c. á kwěsá mó' wé' tone grounding
    d. á kwěsá mó' wé' simplification
    e. á kwěsá mó' wé' tone grounding
    f. á kwěsá mó' wé' simplification
    g. á kwěsá mó wé' tone grounding
    h. á kwěsá mó wé' 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 /kwěsá/ "help!". The grammatical replacive tones mark the verb for the T0 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.
the HL contour tone on /mɔ/, "child", simplifies to H. In h. the HL contour tone on the demonstrative, /wɛ/, 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. átyé' → ['mɔ'] "head of child"
   b. nɪbyɛ' → ['zɛ'] "our fish"

In (18a) the floating H tone is the associative marker of the noun class of the first noun /atyé'/, "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. átyé' → 'mɔ' underlying
   b. átyé → 'mɔ' tone grounding to the left
   c. átyé' → 'mɔ' tone grounding to the left
   d. átyé' → 'mɔ' simplification and ds
   e. átyé' → 'mɔ' tone grounding
   f. átyé' → 'mɔ' simplification and ds
   g. átyé' → 'mɔ' 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 simplifies 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'HHL 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:
In (20a) the underlying tones are given. Here the second floating H tone is the possessive marker for the class of the noun /ńbyẹ/, 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: /-/ (L), /-/ (HL) and /-/ (LH). In this system LM is marked as HL and HL and ML are both marked as LH. H 'H and M are not marked.

The LML contour tone is marked as LH, i.e., /~/L. 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 /~/ rather than as /~/ 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
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. 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 */* 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 distinctions that we
need in order to avoid most ambiguity in the language. This
orthography 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 orthographically:

(21) a. a ləɔ abanə        "he is taking corn fufu"
b. à ləɔ ɔbanə          "he has taken corn fufu"
(22) a. à ji ɔbanə zə      "has he eaten corn fufu?"
b. à ji ɔbanə zəf        "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 phonetic
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 time 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 /-/ 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. /fibwɛ fâ/ [fïbwɛ fâ] "my fish"
   b. /nibyɛ zɛ/ [nibyɛ zɛ] "our fish"

The advantage of writing the LML tone in the above examples as /-/ is that 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 orthographically as HL. The tone of the possessive in b. would by the same token be read correctly as M.
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 Nsamba 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     BAMBIUI     BAMBILI
a. 'káá       'kámé     'káá     'kóó     'kóó     "crab"
b. 'fóóré     'fuú       'fóóré     'fuú     'foó     "mouse"
c. 'nwi       'ńwí     'nwi     'nwi     'ńwí     "cutlass"
d. 'mó'       'mó'     'mó'     'mó'     'mwóó     "child"
e. 'mó'ó      'mó'     'mó'     'muú     'móó     "fire"
f. 'táá       'táa     ń-táa     ń-táa     ń-téě     "father"
g. ń-báá      ń-báá     ń-báá     ń-bóó     ń-bóó     "corn fufu"
h. ń-tí'      ń-tí'     ń-tí'     ń-tí'      ń-té'     "tree"
i. ń-nóó      ń-shóó     ń-sóó     ń-shóó     ń-shóó     "farm"
j. ń-náá      ń-ńáá     ń-náá     ń-nóó     ń-nóó     "animal"
k. ħ-góó'   ħ-góó'   ħ-góó'   ħ-góó'   ħ-góó'   "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     BAMBIUI     BAMBILI
a. jí       jí     jí     jí     jí       "eat!"
b. kwéte     kwéte     kwésé     kwási     kwáshé     "help!"
c. ló'      ló'     lyé'     ló'     lú'     "leave!"
d. sáná     sáná     sáná     sáná     sáná     "dry!"

The underlying tones of the verbs shown in the above examples are the same in each language.
25.2.2 Surface Tones

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          BAMBIU          BAMBILI
a. káá              kámé            káá            kóó            kóó          "crab"
b. fóré             fúú              fóró           fóó            fóó          "mouse"
c. nwi               nwi             nwi            nwi            nwi          "cutlass"
d. mú               mó              mó             mó             mó          "child"
e. mó'ó              mó              mó             mó             mó          "fire"
f. tāā              tīn            i-tāā         tāā            tyeš          "father"
g. ābāā          ābānā             ābānā        ābō5          ābō5          "c. fufu"
h. āti               āti            āti            āti            āti          "tree"
i. āsōō          āshōmō        āsōn          āshōmō        āshōmō        "farm"
j. nāā             nząmà            nàà            nòó            nòó          "animal"
k. ŋò'ō          ŋò'          ŋò'          ŋò'          ŋò'          "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.

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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.

![Table of Examples](#)
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 orthography.

(5) Tones | H | 'H | M | 'L | L | H'H | HL | 'HL | ML | LM | LML

BAFUT
MANKON
NKWEN
BAMBUI
BAMBILI

The tones that are found in all the above languages are: L, M, '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 //, /'/, and /'/. 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 // 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.
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. 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:
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) [kwɑ:] "maize"
    [rɔiː] "small rat with squirrel-like tail"

(3) [rlɑː] "passion fruit"
    [kɑː] "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:
(4) [ŋər] "ant"  
[báː] "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  sháŋ "prison"
   b. M  ndōŋ "cup"
   c. L⁺ mbāŋ "kernel"
   d. L  mbāŋ "sceptre"
   e. HL  lī "language"
   f. LM  ngūr "bedbug"
   g. ML  tā "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 occurrence of this tone:

(6) a. HM  [bbāa bcā]³ "those corn fufu (loaves)"
   b. [e m sān yēē] "he wrote a song"
26.2.2.2 Tone on Disyllabic Nouns

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 bângâ "swallow"
c. H L buru' "lion"
d. M H târkë "grandfather"
e. M M jêmör "smoke"
f. M L bkôkë "mumps"
g. L M kintâ "cross"
h. L L* ngèrè "dragon fly"
i. L L kàtë "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)

<table>
<thead>
<tr>
<th>PB</th>
<th>Limbum Reflexes</th>
</tr>
</thead>
<tbody>
<tr>
<td>* L-H-H</td>
<td>-H-H</td>
</tr>
<tr>
<td>* L-H-L</td>
<td>-H-L</td>
</tr>
<tr>
<td>* L-L-H</td>
<td>-L-H</td>
</tr>
<tr>
<td>* L-L-L</td>
<td>-L-L</td>
</tr>
</tbody>
</table>

As can be seen in (9) above, we have posited the following derivation:

(10) 

\[
\begin{align*}
H-H & \rightarrow H \\
H-L & \rightarrow M \\
L-H & \rightarrow L^* \\
L-L & \rightarrow L
\end{align*}
\]

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)

\[
\begin{align*}
H-H & \rightarrow H \\
H-L & \rightarrow M \\
L-H & \rightarrow L^* \\
L-L & \rightarrow L
\end{align*}
\]

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
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) respectively.

One of the things that we see from the derivation of tones is
the fact that Limbum nouns have lost their prefix tones. Histologically 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*  vù  [vù]  "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  kòsì  "count!"
      b. L H  lìnmì  "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, /kỳësé/, "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 Limbu. 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 Limbu, 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 Limbu 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 Limbu, 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:
(14) \( \text{dù kàtè} \rightarrow \{\text{dù kàtè}\} \) "go to the bush!"

\( \text{L L L} \rightarrow \{\text{L L L}\} \)

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. \( \text{ê ké' fá bá} \rightarrow \{\text{ê ké' fá báa}\} \)
    he HAB give c.fufu  "he (always) gives corn fufu"

b. \( \text{ê ké' fá fúu} \rightarrow \{\text{ê ké fá fúu}\} \)
    he HAB give mouse "he (always) a mouse"

c. \( \text{ê bá cě fá fúu} \rightarrow \{\text{ê bá cě fá fúu}\} \)
    he P1 IMPF give mouse "he was giving a mouse"

d. \( \text{Mé mů' cě fá lělé} \rightarrow \{\text{Mé mů cě fá lělé}\} \)
    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 underlying HL tone. The derivation of the surface tones of (15) above is as follows:

(16) a. \( \text{ê ké' fá báa} \) underlying
b. \( \text{ê ké fá báa} \) tone grounding
c. \( \text{ê ké' fá báa} \) simplification and ds
d. \( \text{ê ké' fá báa} \) 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 /báa/ 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
of the 'H on /fā/ 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 /'e ké fā bāa/, with the 'H on /'fā/ 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 maintain '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 (16c) is given in (17) below.

(17) a. ē 'bā 'cē fā fūu underlying tones  
b. ē 'bā 'cē fā fūu tone grounding  
c. ē 'bā 'cē fā fūu simplification and ds  
d. ē 'bā 'cē fā fūu L tone deletion  
e. ē 'bā 'cē fā fūu M level (rule (16e) and T-rule 13)

In (17a) the underlying tones are given. In b. the floating tone of the PI tense marker is grounded to the left on the pronom 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.,
the H tone level resetting rule, the level of the H tones of the noun /fau/ 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., /'bâ/, /cê/, /kô/ and /fâ/ 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-rule 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 /mê/ 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
tones one level below the preceding H tone. This means that a double downstep is not permitted in Limbum.

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 Tone in Grammar

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 Grammatical Tones

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 closely 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 characteristic 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.

<table>
<thead>
<tr>
<th>N.class</th>
<th>sg.</th>
<th>pl.</th>
<th>sg.</th>
<th>pl.</th>
<th>sg.</th>
<th>pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&quot;my&quot;</td>
<td>&quot;our&quot;</td>
<td>&quot;your&quot;</td>
<td>&quot;your&quot;</td>
<td>&quot;his&quot;</td>
<td>&quot;their&quot;</td>
</tr>
<tr>
<td>1</td>
<td>yá</td>
<td>yér</td>
<td>yò</td>
<td>yè</td>
<td>yì</td>
<td>yáp</td>
</tr>
<tr>
<td>2</td>
<td>wá</td>
<td>wér</td>
<td>wó</td>
<td>wée</td>
<td>yì</td>
<td>wáp</td>
</tr>
<tr>
<td>5</td>
<td>ló</td>
<td>lóisèe</td>
<td>ló</td>
<td>lé</td>
<td>lì</td>
<td>láp</td>
</tr>
<tr>
<td>6</td>
<td>mó</td>
<td>móisèe</td>
<td>mó</td>
<td>mém</td>
<td>mì</td>
<td>máp</td>
</tr>
<tr>
<td>7</td>
<td>yá</td>
<td>yér</td>
<td>yò</td>
<td>yée</td>
<td>yì</td>
<td>yáp</td>
</tr>
<tr>
<td>8</td>
<td>wá</td>
<td>wér</td>
<td>wó</td>
<td>wée</td>
<td>yì</td>
<td>wáp</td>
</tr>
<tr>
<td>9</td>
<td>yá</td>
<td>yér</td>
<td>yò</td>
<td>yée</td>
<td>yì</td>
<td>yáp</td>
</tr>
<tr>
<td>10</td>
<td>yá</td>
<td>yér</td>
<td>yò</td>
<td>yée</td>
<td>yì</td>
<td>yáp</td>
</tr>
</tbody>
</table>

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Looking at the table in \( \text{(18)} \), 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. However, 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 \( \text{(19)} \) below we have given the citation tones of words following the attested tone patterns given in 26.2.2.

\[
\begin{array}{cccccc}
\text{n. class} & \text{N1} & \text{N2} & \text{H} & \text{M} & \text{L} \\
1, 9 & H & H & H & H M & H L^* & H L \\
& M & M & H & M M & M L^* & M L \\
& L^* & L^* & H & L^* M & L^* L^* & L^* L \\
& L & L^* & H & L^* M & L^* L^* & L^* L \\
2, 5, 6, 7, 8, 10 & H & H & H & H M & H L^* & H L \\
& M & H & H & H M & M L^* & M L \\
& L^* & LM H & LM M & LM L^* & LM L \\
& L & LM H & LM M & LM L^* & LM L \\
\end{array}
\]

From the the table in \( \text{(19)} \) 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.
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:
(20) a. \( V + O \)

<table>
<thead>
<tr>
<th>H</th>
<th>H</th>
<th>H</th>
<th>( H H H )</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>H</td>
<td>LH</td>
<td>( H H M )</td>
</tr>
<tr>
<td>H</td>
<td>H</td>
<td>L</td>
<td>( H H L )</td>
</tr>
<tr>
<td>H</td>
<td>LH</td>
<td>H</td>
<td>( H M H )</td>
</tr>
<tr>
<td>H</td>
<td>LH</td>
<td>LH</td>
<td>( H M M )</td>
</tr>
<tr>
<td>H</td>
<td>LLH</td>
<td>|</td>
<td>( H L M )</td>
</tr>
<tr>
<td>H</td>
<td>L^o</td>
<td>L^o</td>
<td>( L^o L^o )</td>
</tr>
<tr>
<td>H</td>
<td>L</td>
<td>L</td>
<td>( H L L )</td>
</tr>
</tbody>
</table>

b. \( V + O \)

<table>
<thead>
<tr>
<th>LH</th>
<th>H</th>
<th>H</th>
<th>( L M H H )</th>
</tr>
</thead>
<tbody>
<tr>
<td>LH</td>
<td>H</td>
<td>LH</td>
<td>( L M H M )</td>
</tr>
<tr>
<td>LH</td>
<td>H</td>
<td>L</td>
<td>( L M H L )</td>
</tr>
<tr>
<td>LH</td>
<td>LH</td>
<td>H</td>
<td>( L M M H )</td>
</tr>
<tr>
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<td>LH</td>
<td>LH</td>
<td>( L M M M )</td>
</tr>
<tr>
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<td>LLH</td>
<td>|</td>
<td>( L M L M )</td>
</tr>
<tr>
<td>LH</td>
<td>L^o</td>
<td>L^o</td>
<td>( L M L^o L^o )</td>
</tr>
<tr>
<td>LH</td>
<td>L</td>
<td>L</td>
<td>( L M L L )</td>
</tr>
</tbody>
</table>

c. \( V + O \)

<table>
<thead>
<tr>
<th>L^o</th>
<th>H</th>
<th>H</th>
<th>( L^o H H )</th>
</tr>
</thead>
<tbody>
<tr>
<td>L^o</td>
<td>LH</td>
<td>|</td>
<td>( L^o M )</td>
</tr>
<tr>
<td>L^o</td>
<td>L^o</td>
<td>|</td>
<td>( L^o L^o )</td>
</tr>
<tr>
<td>L^o</td>
<td>L</td>
<td>|</td>
<td>( L^o L )</td>
</tr>
</tbody>
</table>
d. \( V + O \)

\[
\begin{align*}
L & \quad HH \rightarrow L^o \quad HH \\
L & \quad LH\ LH \rightarrow L^o \quad MM \\
L & \quad L^o \quad L \rightarrow L^o \quad L^o \\
L & \quad L \rightarrow L^o \quad L
\end{align*}
\]

From the above tables we notice that the surface \( H \) tone of the object (in the output string) is not lowered by the \( L^o \) tone of a preceding \( L \) tone of the verb. We also notice that the \( L \) tone of the verb becomes \( L^o \) 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. ī 'bá fā bāa → [Ī 'bā fā bāa] "he gave corn fufu"
    he P1 give c.fufu

b. Mē 'bā fā bāa → [Mē bā fā bāa] "I gave corn fufu"
    I P1 give c.fufu

c. Mē 'bā lāngēr → [Mē bā lāngēr] "I grumbled"
    I P1 grumble

d. ī 'bā dū → [Ī 'bā dū] "he went"
    he P1 go

e. ī 'bā lip → [Ī 'bā lip] "he beat"
    he P1 beat
f. ɛ̀ bā lip ngwè →  [ɛ̀ 'bā lip ngwè] "he beat a dog"
       he P1 beat dog

We notice from the example in (21) above that the P1 marker is /' bā/, 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) /mɛ̌/  

(22) a. ɛ̀ mɛ fā bāa →  [ɛ̀ 'mɛ fā bāa] "he gave corn fufu"
       he P2 give c.fufu

b. Mɛ̀ mɛ fā bāa →  [Mɛ̀ mɛ fā bāa] "I gave corn fufu"
      I P2 give c.fufu

c. Mɛ̀ mɛ lángér →  [Mɛ̀ mɛ lángér] "I grumbled"
      I P2 grumble

d. ɛ̀ mɛ dù nɛŋkûr →  [ɛ̀ 'mɛ dù nɛŋkûr] "I came yesterday"
      he P2 go yesterday

The P2 marker is /mɛ̌/, 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) /m/  

(23) a. ɛ̀ m fā bāa →  [ɛ̀ 'm fā bāa] "he gave corn fufu"
       he P3 give c.fufu

b. Mɛ̀ m fā bāa →  [Mɛ̀ m fā bāa] "I gave corn fufu"
      I P3 give c.fufu

c. ɛ̀ m yā'ání →  [ɛ̀ 'm yā'ání] "he crossed over"
       he P3 cross [over]
d. Me m langur  → [Me m langur] "I grumbled"
I P3 grumble

e. € m lala baa  → [€ m lala baa] "he cooked corn fufu"
he P3 cook c.fufu

f. € m san ye€  → [€ m san ye€] "he wrote a song"
he P3 wrote song

The P3 marker is /m/, 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, /€/, 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 (TO) /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 TO, reference should be made to 14.2.

(24)

a. € fá baa  → [€ 'fá baa] "he has given corn fufu"
   he T give c.fufu

b. Me fá baa  → [Me fá baa] "I have given corn fufu"
   I T give c.fufu

c. Me misi shan  → [Me misi shan] "I have finished the prison sentence"
   I T finish prison

d. € kóni baa  → [€ kóni baa] "has got corn fufu"
   he T got c.fufu

e. € ye€ ye€  → [€ ye€ ye€] "he has sung a song"
   he T sing song
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 /γέε/ "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. ˄ bé' fá báa  → [˄ bé 'fá báa] "he will give corn futu"
   he FO give c.fufu

   b. Mć bé' fá báa  → [M bé 'fá báa] "I shall give corn futu"
   I FO give c.fufu

   c. ˄ bé' lângér  → [˄ bé lângér] "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 /Mć/ 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_ ló/

(26) a. ˄ bé' ló fá báa  → [˄ bé ló fá báal] "he will give corn futu"
   he F 1 give c.fufu

   b. Mć bé' ló fá báa  → [M bé ló fá báal] "I shall give corn futu"
   I F 1 give c.fufu

   c. ˄ bé' ló lângér  → [˄ bé ló lângér] "he will grumble"
   he F 1 grumble

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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 FO.

26.4.3.4.3 Tomorrow Future (F2) /bé'fê/

(27) a. é bé' fû fâ bâa → [é bé' fû fâ bâa] "he will give corn fufu"
   he F 2 give c.fufu

b. Mê bé' fû fâ bâa → [M bé' fû fâ bâa] "I shall give corn fufu"
   I F 2 give c.fufu

c. é bé' fû lângâr → [é bé' fû lângâr] "he will grumble"
   he F 2 grumble

The F2 marker is /fê/. This marker has an underlying H tone.

26.4.3.4.4 Remote Future (F3) /bé'kè/

(28) a. é bé' kê fâ bâa → [é bé' kê fâ bâa] "he will give corn fufu"
   he F 3 give c.fufu

b. Mê bé' kê fâ bâa → [M bé' kê fâ bâa] "I shall give corn fufu"
   I F 3 give c.fufu

c. é bé' kê lângâr → [é bé' kê lângâr] "he will grumble"
   he F 3 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 T0 imperfective

(29) a. ë ' cé fá bāa → [ë 'cé fá bāa] "he is giving corn fufu"
    he IMPF give c.fufu

    b. Mê ' cé fá bāa → [Mê fá bāa] "I am giving corn fufu"
    I IMPF give c.fufu

    c. ë ' cé lángér → [ë 'cé lángér] "he will grumble"
    he IMPF 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, /Mê/ "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. ë ' bā ' cé fá bāa → [ë 'bā cé fá bāa] "he was giving corn fufu"
    he P1 IMPF give c.fufu

    b. Mê ' mū ' cé fá lélél → [Mê mū cé fá lélél] "I was giving rainwater"
    I P2 IMPF give r.water

    c. ë m ' cé lángér → [ë m 'cé lángér] "he was grumbling"
    he P3 IMPF grumble

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 /cé/ goes as far as /fá/ (cf. (29b)) but...
it does not lower the H tones of /lélé/. We have discussed these facts above (cf. rules (16e) and (17f)).

26.4.3.5.3 Future Imperfective

(31) a. ɛ bɛ' - ɛ fɔ bɔa  →  [ɛ bɛ 'ɛ fɔ bɔa]  
    he FO IMPF give c.fufu  "he will be giving corn fufu"

b. ɛ bɛ' lɔ ɛ fɔ bɔa  →  [ɛ bɛ lɔ ɛ fɔ bɔa]  
    he F 1 IMPF give c.fufu  "he will be giving corn fufu"

c. Mɛ bɛ' fʊ ɛ lɔɲɛr  →  [M bɛ 'fʊ ɛ lɔɲɛr]  
    I F 2 IMPF grumble  "I shall be grumbling"

d. Mɛ bɛ' kɛ ɛ yə'ni lɛlɛ  →  [M bɛ kɛ ɛ yə'ni lɛlɛ]  
    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
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.
with /bɔː/ in the speech of the same speaker.

The HM tone on /bɔː/ varies with H tone, thus /bɔː/ varies

```
 two [tua] baa [baa]
 bag [baŋ] baa [baa]
 madness'' [maðnəs] baa [baa]
```

only on the first vowel. This is illustrated as follows:

...In the orthography of Limbum it was decided, for economic
reasons, that in the case of Long vowels, tone should be marked
practically arrangements that the research and theLimbum experimen-
tal results for the Limbum project, who helped a lot in making the
response. I am very grateful to Virginius Bradley, the S.I.L. linguist
in the wet dialect.

area. The dialect spoken in this area is not very different from

I am also grateful to Mr. Brice and whom I

\[\text{Note to Chapter Twenty-six}\]
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 pitch and 5, the lowest. Van Reenen and Voorhoeve (1982) use the following tone marks in their text: /'L/, /'H/, /'M/ and /'K/. The marks indicate extra L tone. Higgens and Bradley (1985) mark /'L/ (H), /'H/ (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, System 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 (\text `{\textquotedbl} ), LH tone (\text `{\textquotedbl} ), and HL tone (\text `{\textquotedbl} ). This means that M tone and H tone were not marked. The contour tone LM was marked as /\text `/-/ (LH) while the contour tone ML was marked /\text `/-/, 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 (\text `{\textquotedbl} ), HL tone (\text `{\textquotedbl} ), and LH tone (\text `{\textquotedbl} ). 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 (\text `{\textquotedbl} ). This system thus marked only one out of the eight tones in Limbum.

System 5 marked H tone (\text `{\textquotedbl} ), L tone (\text `{\textquotedbl} ), HL tone (\text `{\textquotedbl} ), LH tone (\text `{\textquotedbl} ), (i.e. LM) and HM tone (\text `{\textquotedbl} ). 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 Général 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 villages 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 lesson. 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 lessons 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:

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TATA A M DÜ NTAA

Tāta à m yuu mbāŋ, a koo ŋkunyām yi tā te e bo dū ntaa āwo. E m lōr kwāa a lc ńjep bāa. E ka' lē njo, a lor bāa kwāa a kcti mbe tu bkuu, a nọn. Tā' à ka' raa, e nati, a lor mbāŋ a byē', a tēr ŋkunyām ā kūw, a ce dū ntaa. E ka' bā', a ye enc bēe mō' a ce kapni ntaa buu, bēe mō' a ce gēe yap kinfč. Tāta à suusi mbāŋ embe tū. Nwë mō' à vu a kapni ŋkunyām, ntaa à tēc ka'. Maku yi Nfō à vu a yuu a du rkwe āwo. Tāta à fyēni yi mbāŋ ce e ba tēr à gee ŋkunyām. E ka' fyēni, a lor mbāa mbāŋ a kyēse à mē mbāa ŋkunyām. E m yuu buu gōr sē. E m yuu ngār, ba ngo', ba mlaa mbāa, ba mbu', ba ńkāa, ba bkāa, ba shā'tu, ba sāp, ker ba mbāa buu. E ka' yuu a kūti à là'. Ngwā yi à ka' ye, a čaŋ a kōni ye. E m laa bāa, a laa enc Tāta su'isī mbo, ye. Tāta à sū'isī mbo, a ye, a yū' rbōŋ.
E ka' ye, a saa nguu. E ka' saa nguu, a saa yi cê'.

TATA A M DU NTA 

Tata à m yuù mbañ, à kôo nkunyâm yi tâ tê é bô du ntâa âwo. À m lôr kwâa à lé njêp bâa. E kâ' le njo, à lôr bâa kwâa à ketti mbé tu bkuu, à non. Tu' à kâ' raa, é nati, à lôr mbañ à bye', à tûr nkunyâm à kuu, à cé du ntâa. 
E kâ' bâ', à yê ènc bêe mo' à ce kapni ntâa buu, bêe mo' à cé gee yap kinfé. 

Tata a suusi mbañ èmbe tu. Ñwe mo' a vu à kápni nkunyâm, ntâa à têt ka'. Mâké yi Nfô a vu à yuù à du rkuwe âwo. 
Tata a fyên yi mbañ cé é ba têr à gee nkunyâm. E kâ' fyênì, à lôr mbâa mbañ à kyësè à mu mbâa nkunyâm. È m yuù buu gor sé. È m yuù ngar, bâ ngo', bâ mlâa mbâa, bâ mbû', bâ nkâa, bâ bkaa, bâ sha'tu, bâ sáp, ker ba mbââbeu. E kâ' yuù à kêtì à lâ'. 
Ngwa yi à kâ' yê ye, à cân à kôni ye. 
E m lâa baa, à lâa ènc Tata su'si mbo, ye. Tata a su'si mbo, à yê', à yû' rboñ. 
E kâ' yê, à saa nguu, E kâ' saa nguu, à saa yi cê'.

TATA A M Dû NTA 

Tàtà à m yuù mbañ, à kôo nkunyâm yi tà te è bo dù ntàa âwo. È m lôr kwâa à lé njêp bâa. È kà' le njo, à lôr bâa kwâa à ketti mbé tu bkuu, à non. 
È È À KÀ' RAA, É NATI, À LÔR MBÂN À BYÈ', À TÛR NKUNYAM À KÛU, À CÉ DÛ NTÀA. 
È KÀ' BÀ', À YÈ ÈNC BÊE MÔ' À CE KAPNI NTÀA BUU, BÊE MÔ' À CÉ GEE YAP KINFÈ. 

Tàtà à suusi mbañ èmbe tu. Ñwè mô' à vu à kápni nkunyâm, ntàa à têt ka'. Mâkè yi Nfô à vu à yuù à du rkuwe âwo. 
Tàtà a fyên yi mbañ cé è ba têr à gee nkunyâm. È kà' fyênì, à lôr mbâa mbañ à kyësè à mu mbâa nkunyâm. È m yuù buu gor sé. È m yuù ngar, bâ ngo', bâ mlâa mbâa, bâ mbû', bâ nkâa, bâ bkaa, bâ sha'tu, bâ sáp, ker ba mbââbeu. È kà' yuù a kêtì a lâ'. 
Ngwa yi à kà' yê ye, à cân à kôni ye. 
È m lâa baa, à lâa ènc Tàtà su'si mbo, ye. Tàtà a su'si mbo, à yê', à yû' rboñ. 
È kà' yê, à saa nguu. È kà' saa nguu, à saa yi cê'.

TATA A M Dû NTA 

Tàtà à m yûu mbân, à kôô nkunyâm yi tê tê è bó du ntàa âwo. È m lôr kwâa à lé njêp bâa. È kà' le njo, à lôr bâa kwâa à ketti mbé tu bkuu, à non. 
È È À KÀ' RAA, É NATI, À LÔR MBÂN À BYÈ', À TÛR NKUNYAM À KÛU, À CÉ DÛ NTÀA. 
È KÀ' BÀ', À YÈ ÈNC BÊE MÔ' À CE KAPNI NTÀA BUU, BÊE MÔ' À CÉ GEE YAP KINFÈ.
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
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**

<table>
<thead>
<tr>
<th>G2</th>
<th>G3</th>
<th>G4</th>
<th>G5</th>
</tr>
</thead>
<tbody>
<tr>
<td>L4 *2</td>
<td>8</td>
<td>5.89</td>
<td>8.75</td>
</tr>
<tr>
<td>L5 *3</td>
<td>20.25</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>L6 *5</td>
<td>96.42</td>
<td>66.67</td>
<td>75</td>
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</table>

Results Table 2

<table>
<thead>
<tr>
<th>G2</th>
<th>G3</th>
<th>G4</th>
<th>G5</th>
</tr>
</thead>
<tbody>
<tr>
<td>L8 *1</td>
<td>4.83</td>
<td>3</td>
<td>4.33</td>
</tr>
<tr>
<td>L11 *1</td>
<td>80.50</td>
<td>50</td>
<td>72.17</td>
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<tr>
<td>L11 *2</td>
<td>17</td>
<td>12.25</td>
<td>12.25</td>
</tr>
<tr>
<td>mean %</td>
<td>85</td>
<td>61.25</td>
<td>61.25</td>
</tr>
<tr>
<td>mean %</td>
<td>5.5</td>
<td>5.5</td>
<td>5.75</td>
</tr>
<tr>
<td>mean %</td>
<td>80</td>
<td>55</td>
<td>57.50</td>
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</tbody>
</table>

Results Table 3

<table>
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<th>G4</th>
<th>G5</th>
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<tbody>
<tr>
<td>L12 *1</td>
<td>11.17</td>
<td>8.5</td>
<td>10.13</td>
</tr>
<tr>
<td>L12 *2</td>
<td>93.08</td>
<td>70.83</td>
<td>84.41</td>
</tr>
<tr>
<td>L15 *3</td>
<td>8.5</td>
<td>8</td>
<td>8.75</td>
</tr>
<tr>
<td>mean %</td>
<td>85</td>
<td>80</td>
<td>87.50</td>
</tr>
<tr>
<td>mean %</td>
<td>5.33</td>
<td>4.63</td>
<td>5.28</td>
</tr>
</tbody>
</table>
Results Table 4

Writing Mean

<table>
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<tr>
<th></th>
<th>points</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>G2</td>
<td>92.21</td>
<td>80.89</td>
</tr>
<tr>
<td>G3</td>
<td>71.31</td>
<td>62.55</td>
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<td>G4</td>
<td>83.96</td>
<td>73.65</td>
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<td>G5</td>
<td>57.91</td>
<td>50.80</td>
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</table>

Results Table 5

Reading Tests

<table>
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<tr>
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<th>L15 *4</th>
<th>L17 *2</th>
<th>Final text</th>
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</thead>
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<tr>
<td></td>
<td>mean</td>
<td>mean</td>
<td>mean</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>G2</td>
<td>40</td>
<td>96.33</td>
<td>190</td>
</tr>
<tr>
<td>G3</td>
<td>35.63</td>
<td>96</td>
<td>179.75</td>
</tr>
<tr>
<td>G4</td>
<td>35.63</td>
<td>94.75</td>
<td>174.50</td>
</tr>
<tr>
<td>G5</td>
<td>33.33</td>
<td>91.67</td>
<td>167.67</td>
</tr>
</tbody>
</table>

Results Table 6

Reading

<table>
<thead>
<tr>
<th></th>
<th>mean</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>G2</td>
<td>325.33</td>
<td>92.95</td>
</tr>
<tr>
<td>G3</td>
<td>311.38</td>
<td>88.81</td>
</tr>
<tr>
<td>G4</td>
<td>304.88</td>
<td>87.09</td>
</tr>
<tr>
<td>G5</td>
<td>292.67</td>
<td>83.59</td>
</tr>
</tbody>
</table>
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:

\[
\begin{array}{cccc}
S1 & G2 & G3 & G4 \\
baa & baa & baa & baa \\
bba & baa & baa & baa \\
bba & baa & baa & baa \\
bba & baa & baa & baa \\
baa (L*) & baa & baa & baa \\
baa (L) & baa & baa & baa
\end{array}
\]

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 ẹ bé lò cē fā bāa | ẹ bé lò cē fā bāa | "he will be giving corn fufu (tomorrow)"

G2 E be lò ce fa baa
G3 ẹ bé lo ce fa baa
G4 E be lò ce fa baa
G5 ẹ 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 (\(^{\circ}\)). This tone occurs mostly in the associative noun construction (cf. 26.5.2) and in compound nouns or in a few nouns like /mbaabēu/ "cowries". This tone is not realized in a number of dialects of Limbum. e.g. in the one spoken around Ngaram. 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.
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-' ˌ li-kɔndə  "pantain"
b. N- ˈ m-bɔŋ  "cassava"
c. C- ˈ j-əm  "matter"
d. ə- ˌ ə-kaa  "book"

The tone 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 ˈ kɔp  "fowl"
b. L ˈ mɔt  "person"
c. HL ˈ fɔm  "plantation"
d. LH ˈ jɔmb  "packet"

The following tone patterns were found on disyllabic nouns:

(3) a. HH ˈ bɛbə  "sin"
b. H HL ˈ jɔmbɛ  "shirt"
c. HL ˈ wində  "window"
d. LH ˈ nʊgə  "animal/meat"
e. LL ˈ məba  "return"

Most loan noun words have the H L tone pattern. The falling
contour tone is found mostly in loan words also.
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 je "eat!"

b. LH yɔŋ "take!"

Still in the imperative mood, the following patterns are found on disyllabic verb stems:

(5)

a. H H tɛhɛ "see!"

b. L H lɔná "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, /jɛ/ "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"
   yɔŋ "to be full"

b. H HL tɛhɛ "to see!"
   bɛhɛ "to warn!"
   kɔŋɔp "to lie sideways"
   kɔŋi "to lay sth. sideways"

The following tone patterns are found on monosyllabic and disyllabic low tone verb stems in the infinitive form:
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 ń-je mbóndó → [à ń'je mbón'dó] "he is eating a coconut"
    he imp. eat c.nut

b. à ń-je mbóndó → [à ńjć mbón'dó] "he has eaten a coconut"
    he per eat c.nut

In the above examples the tones of the verb and the noun in their citation forms are /'je/ "to eat" and /mbóndó/ "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 further illustrates the effect of downstep in Basaa and thus, the extent of tone changes.
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 ñ'kwó i' só' só' lép underlying
b. à ñ'kwó i' só' só' lép P1 tone
c. à ñ-kwó i' só' só' lép tone grounding
d. à ñ-kwó i só' só' lép tone grounding
e. à ñ-kwó i' só' só' lép simplification and downstep
f. à ñ-kwó i' só' só' lép tone grounding
g. à ñ-kwó i' só' só' lép simplification and downstep
h. à ñ-kwó i' só' só' lép tone grounding
i. à ñ-kwó i' só' só' 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 /i/ "in", grounds and creates the contour tone which then simplifies in e. and causes the following H tones to downstep. The adjective, /só só/ "big", is made up of a reduplicated word, whose underlying tones have been posited as /só '/. 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:
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 /á/, "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) /jé/ "to eat", (12) /ló/ "to come" and (14) /yóŋ/ "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
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 Orthography

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 /\,
falling (HL) tone, marked /\ and rising (LH) tone, marked /\.

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 drift down. 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 (/n-/) of the verb becomes a high tone while the surface low tone of the word, /mbondô/ "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 yôn/ → [á yô'ôn] "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 (P.C.) 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.
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.

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 një mbondo "he is eating a coconut"
    b. à ñjë mbondo "he has eaten a coconut"

(19) à ṣkwô i soso lep "he fell in a big river"

(20) a. à yôn "he took"
    b. à yôn "he took (long ago)"
    c. à yôn "that he take"

It can be seen that by marking only the three tones, /L/, /H/ and /'H/, 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

I am thankful to Mr Zachée Bitjaa Kody from whom I got most of the data. I appreciated his patience during our work sessions and his willingness to work with me sometimes at inconvenient periods. I am grateful to Dr. Emmanuel Njock with whom I worked towards the final stages of the work. I appreciated the data that he provided and also his encouragements to me as we worked together.
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. 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 lētōŋ "feather"
    b. L-'H lē'tōŋ "to read"
    c. L-L' lētōŋ "navel"
    d. L-L lētōŋ "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. lètɔŋ́' → [lètɔŋ] "feather"
    L H H \ H

b. lètɔŋ́' → [lè'tɔŋ] "to read"
    L H L L 'H

c. lètɔŋ́' → [lètɔŋ] "navel"
    L L H L \L

d. lètɔŋ́' → [lètɔŋ] "to pay"
    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:
(3) a. á ŋkó'õ → [á ŋ'kó'õ] "near"
   b. á ápá → [á'pá] "on the lid"
   c. ŋ-kõn⁻ → [ŋ'kõn] "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-kõn⁻ underlying
      b. ŋ-kõn tone grounding
      c. ŋ'-kõn 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. lětōŋ⁻ → [lě'tōŋ] "to read"
      b. ŋgyá⁻ → [ŋ'gyá] "house"
      c. ŋdō⁻ → [ŋ'dō] "husband"
      d. átō⁻ → [á'tō] "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, nº)
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" Tadadjieu (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 Tadadjieu (1974:287-288) and Hyman and Tadadjieu (1976). Tadadjieu says that the downstepped L tone is encountered often in the associative construction. In Hyman and Tadadjieu (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. mbhú' sán' → [m'bü sán] "the dog of bird"
    b. á' kón' → [áa 'kón] "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 Tadadjieu 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 Tadadjieu 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 kë tòŋò 'sэн "he called a bird"
he P2 call bird
b. à kë tòŋò 'mó "he called a child"
c. à kë tòŋò 'kân" "he called a squirrel"
d. à kë tòŋò 'nâ "he called an animal"

(9) a. à kë tòŋò sэн "if he called a bird"
b. à kë tòŋò 'mó "if he called a child"
c. à kë tòŋò kân" "if he called a squirrel"
d. à kë tòŋò nâ "if he called an animal"

The above examples show the tonal differences between the indicative and conditional verb forms, where the nouns /sэн/ "bird", /mó/ "child", /kân/ "squirrel", and /nâ/ "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:
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 /'m5/ 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 relevant. 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) [lətɔŋ] + [ŋjʊ] → [lətɔŋ ŋjʊ] "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: /\ (L), /~/ (LH), and /~/ (HL). The L'H contour tone as seen in (10b) above should be marked as LH, i.e., /~//. 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. - - - - -

The tones in the examples in (10) will be marked orthographically as indicated bellow:

(13) a. mësêŋ pâ "my birds"
b. zuq səŋ yi ŋko ɔ ŋgya mô ɔ "kill the bird near the house of father"
c. a kē tocô səŋ "he called (only) a bird"

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
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 kë toọ mo   "he called a child"
    b. à kë toọ kän   "he called a squirrel"
    c. à kë toọ nà   "he called an animal"

(15) a. à kë toọ mo   "if he called a child"
    c. à kë toọ kän   "if he called a squirrel"
    c. à kë toọ 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:
Although the frequency count was done only on a single text, it serves roughly 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

2 The tone on ['kɔn'] 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 in the Ocean Division of Cameroon. The Atlas linguistique du Cameroun (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. 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 -dó "thigh"
HL dó "nouse"
LH -kō "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. kō  "leg"
    b. kōō  "maternal uncle"

Renaud has problems with the above examples 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 /kō/ is a one-syllable word while /kōō/ 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 dèː]  "he is eating"
    b. á dè tité  /á dèː titéː/  [á dé tsiti]  "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
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 mwânô "child"
    c. L L kâlâ "mat"
    d. L H nôni "bird"

The H H nouns 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. gyû "to kill"
    b. nôn "to take"

The following tone patterns were found on disyllabic verbs:

(6) a. H H dîké "to look"
    b. L L vûsô "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.

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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. kâlâ yâán \rightarrow [kâlâ yâ'ân] "my mat"
   mat my

   b. kâlâ yâán \rightarrow [kâlâ yâ'ân] "my pepper"
   pepper my

   c. kâlâ yéé \rightarrow [kâlâ yé'ê] "his mat"
   mat his

(8) a. kâlâ ́ngá kûmá \rightarrow [kâlâ ́ngá kûmá] "pepper of chief"
   b. kâlâ ́ngá kûmá \rightarrow [kâlâ ngá kûmá] "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. kâlâ ́ngá kûmá underlying
   b. kâlâ ́ngá kûmá tone grounding to the left
   c. kâlâ ngá kûmá nasal desyll. and tone grounding
   d. kâlâ 'ngá kûmá 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. 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 nõn kālā] "he is taking a mat"
    b. [á nõn kālā] "he has taken a mat"
    c. [á'á nõn kālā] "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 kālā → [bē kālā] "plant pepper!"
    b. nõn kālā → [nõn kālā] "take a mat!"
    c. vūsò kālā → [vūsò kālā] "fetch a mat!"
    d. kābō kālā → [kābō kālā] "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 (fH) 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, [kɔ] would be written /kɔo/. However, we have seen in the example given in (2) above that there is a contrast between short and long vowels in Bagyeli. This means that we have to mark contour tones in Bagyeli as such in order to avoid ambiguity.
The tone orthography of Bagyéli would be as follows: /`/ (L), /`/ (HL), and /`/ (LH). This means that in this system of tone marking, H, 'H and IH are not marked. The following table presents the tones in Bagyéli and how they would be marked:

(12) Tones L H IH 'H HL LH

The examples given in (2), (7a-b), and (10) above would be marked as shown in (13), (14) and (15) respectively.

(13) a. kō "leg"
    b. koo "maternal uncle"

(14) a. kālà yaan "my mat"
    b. kala yaan "my pepper"

(15) a. a nōn kālà "he is taking a mat"
    b. ā nōn kālà "he has taken a mat"
    c. aa nōn kālà "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 Bagyéli 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 Bagyéli. The new edition of the Bagyéli first Primer is being tested. We hope that this will also be an opportunity for the proposed tone orthography to be tested.
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).
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. lâtôn' → [lâtôn] "feather"
    L H H L H

b. lâtôn' → [lâtôn] "to read"
    L H L L 'H

c. lâtôn' → [lâtôn] "navel"
    L L H L L

d. lâtôn' → [lâtôn] "to pay"
    L L L L L
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) 

<table>
<thead>
<tr>
<th>underlying tones</th>
<th>Yemba</th>
<th>Limbum</th>
</tr>
</thead>
<tbody>
<tr>
<td>-H H</td>
<td>H</td>
<td>Y</td>
</tr>
<tr>
<td>-H L</td>
<td>'H</td>
<td>M</td>
</tr>
<tr>
<td>-L H</td>
<td>'M</td>
<td>M</td>
</tr>
<tr>
<td>-L H</td>
<td>L°</td>
<td>L°</td>
</tr>
<tr>
<td>-L L</td>
<td>L (falling L)</td>
<td>L (extra L)</td>
</tr>
</tbody>
</table>

We present in (5) and (6) the tones found in Yemba and Limbum respectively and how they are marked in orthography.
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: /L/, /L/ and /L/ 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
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 IH 'H HL LH
Orth. - -

(8) Basaa
Tones L H H'H 'H HL LH
Orth. - -

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 /~/, /~/ 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.
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 /\, /~\ and /\.

### 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 Grassfield languages while Basaa and Bagyeli are Northern Equatorial Bantu languages.

#### (2) Yemba

<table>
<thead>
<tr>
<th>Tones</th>
<th>L</th>
<th>L'</th>
<th>'L</th>
<th>'L'</th>
<th>'H</th>
<th>'H'</th>
<th>H'H</th>
<th>LH</th>
<th>L'H</th>
<th>HL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orth.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### (3) Limbum

<table>
<thead>
<tr>
<th>Tones</th>
<th>L</th>
<th>L'</th>
<th>H</th>
<th>'H</th>
<th>M</th>
<th>LM</th>
<th>HL</th>
<th>HM</th>
<th>ML</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orth.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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 /−/, /−/ and /−/.

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 Limbhum 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, /−/, /−/ and /−/, 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.
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.
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)

<table>
<thead>
<tr>
<th>Group</th>
<th>Overall Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>73.16 percent</td>
</tr>
<tr>
<td>Group 2</td>
<td>53.88 percent</td>
</tr>
<tr>
<td>Group 3</td>
<td>56.64 percent</td>
</tr>
<tr>
<td>Group 4</td>
<td>42.57 percent</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th>Written Tests</th>
<th>Reading Tests</th>
<th>Overall results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>points</td>
<td>%</td>
<td>points</td>
</tr>
<tr>
<td>Group 2</td>
<td>92.21</td>
<td>80.89</td>
<td>326.33</td>
</tr>
<tr>
<td>Group 3</td>
<td>71.31</td>
<td>62.55</td>
<td>311.38</td>
</tr>
<tr>
<td>Group 4</td>
<td>83.96</td>
<td>73.65</td>
<td>304.88</td>
</tr>
<tr>
<td>Group 5</td>
<td>57.91</td>
<td>50.80</td>
<td>292.67</td>
</tr>
</tbody>
</table>

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)
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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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 (occurrence) 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

<table>
<thead>
<tr>
<th>Tone</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>82</td>
</tr>
<tr>
<td>M</td>
<td>77</td>
</tr>
<tr>
<td>H</td>
<td>76</td>
</tr>
<tr>
<td>HL</td>
<td>10</td>
</tr>
<tr>
<td>LH</td>
<td>2</td>
</tr>
<tr>
<td>H'H</td>
<td>7</td>
</tr>
</tbody>
</table>

(11) Frequency Count of Tones in Limbum

<table>
<thead>
<tr>
<th>Tone</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>65</td>
</tr>
<tr>
<td>M</td>
<td>68</td>
</tr>
<tr>
<td>H</td>
<td>76</td>
</tr>
<tr>
<td>HL</td>
<td>6</td>
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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 (occurrence) 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 assimilatory 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 /\&, /\&, and /\&, 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 /\&, /\& and /\&. 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 according 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 Mundaní 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.
Notes to Chapter Thirty-two

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
Ntwöna n à ñwà'ana Nji
ni Nìghàà n ñ Bifìñ

Reading and Writing Tone
in the Bafut Language.

A PRACTICAL GUIDE TO BAFUT
TONE ORTHOGRAPHY

by

Joseph Ngwa Mfomyam

Société Internationale de Linguistique

Part of Thesis for the "Doctorat de 3e Cycle"
Degree in Linguistics of the University
of Yaoundé, Cameroon.

1982

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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.
PART I

LETTERS OF THE BAFUT ALPHABET

In this section of the book we shall concentrate 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.
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 ãbãà "bag"
B b as in ãbaà "corn fufu"
D d as in ãdàà "wine calabash"
E e as in ñibè "cola nut"
F f as in ãfù "leaf"
G g as in ãdùgã "compound"
I i as in ãti "tree"
J j as in ju'ù "yams"
K k as in kò "take"
L l as in làà "gum"
M m as in màtaà "trap"
N n as in nò "snake"
O o as in ãkò "bush"
R r as in ãkòrà "foot"
S s as in sò "pierce"
T t as in tàà "father"
Ts ts as in tsàà "reception house"
U u as in lu "tree rat"
W w as in wà "cut down"
Y y as in yò "see!"
Z z as in zì "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
words. For example, the words for "corn fufu" and "bag" are exactly the same except for the difference 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:

€ e as in kwër$ "take"
θ θ as in âtēh "calabash"
İ i as in âtîi "half"
Ø ë as in boö "build!"
Gh gh as in ghēë "go"
Ĳ ij as in njijij "night mosquito"
’ ’ as in àbà’à "door"

Lesson 2: Unfamiliar vowel letters

Letter ī

The vowel ī is different from the vowel u. Read these pairs of words and notice the difference in the way you pronounce ī and u:

àkû "raffia seed case"
àkî "bowl"
ńdûü "colocashia seed"
ńdîî "witch"
1) Write these words, putting in the correct vowel, i 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 a

The vowel a is different from the vowel i. Read these pairs of words and notice the difference in the way you pronounce a and i:

bili "witches"
binè "ground squirrels"
kghì "burn!"
kghè "run"
àtiì "part, half"
àtêè "calabash"
*2) Write these words, putting in the correct vowel, ø or è:

nt_   "heart"    nd_r_  "to be heavy"
nt_   "to stand"  nd_g_  "creeper, rope"
f_r_  "window"    am_g_  "dew"

**Letter ø**

The vowel ø is different from the vowel e. Read these pairs of words and notice the difference in the way you pronounce ø and e:

nìbè  "cola nut"

fìkweè  "firewood"

nìkweè  "arm"

*3) Write these words, putting in the correct vowel e or è:

t_te  "select!"    l_  "hang bag on shoulder"

nìk_  "soap"    k_  "mend!"

nd_  "mother"

**Letter ò**

The vowel ò is different from the vowel o. Read these pairs of words and notice the difference in the way you pronounce ò and o:

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boð "hunt!"  loð "bite!"
boð "build!"  loð "beg (for something)!"

*4) Write these words, putting in the correct vowel, o or o:

| t__  | "fight!"    | as__ | "hoe" |
| b__  | "they"      | ab__ | "hand" |
| y__  | "big basket"| s_re | "witch" |

Lesson 3: **Unfamiliar consonant letters**

**Letter η**

The letter η is pronounced like the ng in the English word "sing". Read these pairs of words and notice the difference in the way you pronounce η and n.

| ηu   | "person"   | ηaα | "acquire as a result of good luck!" |
| nũ   | "body"     |     |                                  |
| nẽõ  | "ground squirrel" | ηaa | "animal" |
| ŋη̂sõ | "tickle!"  |     |                                  |

*l) Write these words putting in the correct letter, n or η:

| aka_ | "pan"   | li_α | "lick!" |
| a_u  | "thing, matter" | _aa | "animal" |
| _a_α | "jump down!" | sa_α | "dry!" |
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'å "door"  ìbù'ù "slave"
àbàà "bag"  ìbùù "ridge"
mà'å "throw!"
maà "grandmother"

*2) Write these words, putting in the letter ' where necessary:
alaa "country"  abaatø "flaming stick"
alaa "forge"  ataa "snail"
akuutø "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:
nìgø "chest"  ìghèè "to go"
nìghø "oil pit"  ìghèè "grass"
3) Write these words, putting gh or g where necessary:

a_ii "part of calabash" alu_ə "oil beater"

a_o "fool" co "beat"

ni_əa "language" ni_əo "illness"

Combination of consonants letters

In many words, the nasal letters m, n, and ə are followed by other consonants, before a vowel. Read these words and notice how you pronounce the first two letters:

 ámbii "trunk of tree" ətən "hut"

姆fə'ənə "blindman" ətsəl "father-in-law"

hdə "thing" əzi "to know"

ñjəə "axe" əkə "ghost"

ñələs "to look for" əgə "fowl"

ñsu "friend" əghəə "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):

_s0 "war" _i "to come"

_s_a'a "garbage" _i "face"
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!"  ǹywà'akē "lightning"
dwènë "weed!"  ǹtwi "to crack kernels"
fwame "eight"  Ngwe "bangle"
ǹfweë "bangle"  ǹjyà "soup"
tswë "antelope"  Nyà "pinch!"
nwi "cutlass"  Tsyà "pass!"

*5) Write these words which should each contain consonant combinations with w or y:

_ a "bitter cola"  _ ala'a "story"
_ ona "call"  ŋ_e  "charcoal"
_ i "god"  a__ee "cone of palm nuts"
_ ii "roof!"  a "pick fruits!"
_ a'a "blade, scissors"  _ a "fence"
_ a "hold!"
PART II

NOUN AND NOUN PREFIXES

In this section we are going to treat the tones on the noun and noun prefixes.
Lesson 4: High and Low Tones

High Tone

When reading or writing Bafut, it is important to keep in mind the melody or music of the words; for example, if we say nwi "cutlass", we mean something different from nwi "god". The tone of the first word is high and this is indicated 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:

- fora "mouse"
- tita "pepper"
- ba'a "calabash dish"

Read these words and say whether they have the same tone as the examples above:

- ləŋə "horse"
- bu'u "chimpanzee"
- mɔ'c "fire"

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 fèrè "window" and compare it with that of fora "mouse" which has high tone. The word fèrè 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" ṣgò'ò "termite"
batè "wine calabash" ìbò'ò "mushroom"
nìbà "wing" làà "gum"
ìmbà' à "button" ìjìàà "axe"

*2) Now show the difference between the words with low tone and those with high tone by marking those that have low tone:

fèrè "window" kaa. "crab"
fora "mouse" abaa "bag"
nwi "cutlass" mbeè "chalk"
nwi "god" mfo "chief"
dàà "wine calabash" ṣgò'ò "termite"
ba'a "calabash dish" tso'ò "patridge"

When the low tone words which we have seen follow other words e.g. verbs, the tone patterns may change.
Words like mfò "chief" and mbà'à "button" njàà etc; maintain the low tone (of the stem) in phrases like these examples:

fa mfò "give the chief"
fa njàà "give the axe"

With words like ýgò'ò "termite" and mbàà "chalk", the low tones (of the noun stem) become high as in the following examples:

kure ýgò'ò yà "eat the termite"
kò mbàà yà "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 batà "give a wine calabash"

*3) Now read and write the following, marking the tones:

ko njaa "take an axe"
ko laa "take gum"
yà sore "see a witch!"
bu'u nsùo "clear a farm"
ko nàa "catch an animal"
løgø nike "take soup"
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 nouns 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.

àtaw yà "the calabash" àtaa wà "the leg"
àbaw yà "the corn fufu" àsaw wà "the elephant"
fìtw yà "the wine calabash" ògara wà "the gun"
ìmbw yà "the nail" ìmbore wà "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.
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 followed by it, the tone glides downwards to low e.g. notice the melody of abo "hand" here below:

abo yâ      "the hand"
abo        "a hand"

Now read these items:

ŋwû      "a fowl"  mbî      "a goat"
ŋwû yâ    "the fowl"  mbî 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"  njka       "a fence"
mbu      "a dog"  njka 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.

kô fitâa 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:
kò abaa yā "take the corn fufu!"
kò mbec yā "take the nail!"
wùre nda yā "build the house!"

*2) Read the following phrases taking particular note of the mid tones that are raised to the level of high.

kò njoo jyā "take the things!"
kò nkabw yā "take the money!"
fa nsa' a yā "give the needle!"
ye nsèe yā "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 following 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:
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 \( \text{njin} \) \( \text{njin} \) "night mosquito" becomes mid:

\( \text{binjin} \)

*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:

- bitita "peppers"
- asisan "sugar cane"
- bitumo "hats"
- akoti "forest"
- akikun "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: \( ^{^}\text{as in mataa} \). Read the following words and notice the tone where there is the mark: \( ^{^}\)...
mâghum  "baobab tree"
mûngén  "bride"
lâm  "lamp"

*5) Read the following words and mark the tones where necessary:

lamsi  "orange"  manji  "road"
munjø  "young-man"  mängye  "mother of twins"
manjøn  "Bafut cultural association"  bilam  "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 following and notice how you pronounce these small words and also notice that their tone is now high mid:

àtøø ya mø  "the calabash which..."
àbøø ya mø  "the corn fufu which..."
fløø fya mø  "the wine calabash which..."
møøø ya mø  "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.
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:

<table>
<thead>
<tr>
<th>Word</th>
<th>Tone</th>
</tr>
</thead>
<tbody>
<tr>
<td>atēə</td>
<td>&quot;calabash&quot;</td>
</tr>
<tr>
<td>no</td>
<td>&quot;snake&quot;</td>
</tr>
<tr>
<td>nda</td>
<td>&quot;house&quot;</td>
</tr>
<tr>
<td>mu</td>
<td>&quot;child&quot;</td>
</tr>
<tr>
<td>abo</td>
<td>&quot;hand&quot;</td>
</tr>
<tr>
<td>lu</td>
<td>&quot;tree rat&quot;</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Word</th>
<th>Tone</th>
</tr>
</thead>
<tbody>
<tr>
<td>atēə</td>
<td>&quot;calabash&quot;</td>
</tr>
<tr>
<td>no</td>
<td>&quot;snake&quot;</td>
</tr>
<tr>
<td>nda</td>
<td>&quot;house&quot;</td>
</tr>
<tr>
<td>mu</td>
<td>&quot;child&quot;</td>
</tr>
<tr>
<td>abo</td>
<td>&quot;hand&quot;</td>
</tr>
<tr>
<td>lu</td>
<td>&quot;tree rat&quot;</td>
</tr>
</tbody>
</table>

Many words have a combination of tone levels. Read the following words and notice their melody and see how the tones are written:

<table>
<thead>
<tr>
<th>Word</th>
<th>Tone</th>
</tr>
</thead>
<tbody>
<tr>
<td>àlalaə</td>
<td>&quot;bat&quot;</td>
</tr>
<tr>
<td>bimâtaa</td>
<td>&quot;traps&quot;</td>
</tr>
<tr>
<td>môngên</td>
<td>&quot;bride&quot;</td>
</tr>
<tr>
<td>àtsêtsa'a</td>
<td>&quot;mud&quot;</td>
</tr>
<tr>
<td>takumbèn</td>
<td>&quot;type of juju&quot;</td>
</tr>
<tr>
<td>bimângye</td>
<td>&quot;mothers of twins&quot;</td>
</tr>
</tbody>
</table>
*6) Now pronounce each of these words and write the melody over them:

- akwɛɛ "cough"
- taɛɛ "father"
- ataa "calabash"
- maa "grandmother"
- akikug "owl"
- tangyɛɛ "father of twins"
- bifora "mice"
- manjii "manji"

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:

- nìbà "wing"  hò "chief"
- bifora "mice"  ñándà "house"
- ñbaa "fufu"  ñgìgì "egusi"
- ìbbì "mushroom"

You will notice that the prefix may be composed of two letters as "nì" and "bì" or of one letter as "a" and "i" 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.
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 nîbɔ'ɔ "give the pumpkin"
fa fîtæ fɔ̀ "give the wine calabash"
fa bîforɔ bɔ̀ "give the mice"

*1) Now write tones on the following phrases:

kwɛrɔ nîggɔ nɔ̀ "take the plantain"
kwɛrɔ fîkwe fɔ̀ "take the firewood"
kwɛrɔ nîkɛ nɔ̀ "take the soap"
kwɛrɔ bîbɔ̀ a bɔ̀ "take the wine calabash"

When following verbs like lɔgɔ "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:

lɔgɔ nîbɔ'ɔ "fetch the pumpkin"
lɔgɔ fîtæ fɔ̀ "fetch the wine calabash"
lɔgɔ bîforɔ bɔ̀ "fetch the mice"

*2) Now write the tones on the following phrases:

lɔgɔ nîbɔ nɔ̀ "take the eggs"
lɔgɔ fîngwɔ nɔ̀ "take the salt"
Logə biləŋə bya "take the horses"
Logə milu'u mya "take the wine"

When the prefix is m, n or η, 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:

lɔɡə mfɔ "fetch the chief"
fa ndeqna wa "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"
wə ndeqna wa "cut the bamboo"
kweŋəŋ wa "cut the root"

If the prefix is a vowel "a" or "i", 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 pronounce the vowel and its low tone. We do not also mark the low tone of the vowel prefix.

fa ɪkɔ̀b "give a song"
fa abaa yə "give the fufu"
4) Now read and write the tones on the following phrases:

- fa abaa ya  "give the bag"
- fa atsugə ya  "give the achu"
- ko ili 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 falling 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 ålələə yə  "give the bat"
- fa åkikun yə  "give the owl"
- Łɔgə ålələə yə  "take the bat"
- Łɔgə åkikun yə  "take the owl"

5) Now read and write tone on the following phrases:

- ko fiŋjɔɔ fya  "take the frog!"
- yə bəsɔre bya  "see the witches!"
- fa atsətsa'a ya  "give the mud!"
- ko mba ya  "take the meat!"
- tsetə aba'a ya  "close the door!"
PART 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).
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.

- nǐbɔ̀'ɔ̃ nī maa "the pumpkin of grandmother"
- bìdàà bì maa "wine calabashes of grandmother"

*1) Now read and write the following phrases with their tones:

- bitsaa bì maa "reception houses of grandmother"
- nĩngɔɔ nĩ fora "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.

- bìlɔɔ bì fora "husbands of mouse"
- nĩlĩ'i nĩ fora "eye of mouse"

*2) Now read and write the tones on the following phrases:
(a) Read these phrases and notice that the tones of the second noun and also of the small words change:

- ñëbbò nì tɑ̀ "the egg of father"
- mìngbò nì nsoọ "plantains of the farm"

*3) Read and write the tones on the following:

- bɪtsaa bɪ sɔrɛ "reception houses of witch"
- nìsɔg nì nssɛ "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.

- bɑ'a fɔrɛ "calabash dish of mouse"

Read this example and notice that the tones of the first and of the second words change:

- ɲgù mǎa "fowl of grandmother"

*4) Now read and write the following phrases with tone marks:
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:

\[
\begin{align*}
\text{jàkùù fořè} & \quad \text{"tail of mouse"} \\
\text{hṭaa taà} & \quad \text{"leg of father"}
\end{align*}
\]

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.

\[
\begin{align*}
\text{àtaa maa} & \quad \text{"calabash of grandmother"} \\
\text{àbàà sɔrè} & \quad \text{"bag of witch"}
\end{align*}
\]

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.

\[
\begin{align*}
\text{ंgü maà} & \quad \text{"fowls of grandmother"} \\
\text{mbeɛ taà} & \quad \text{"nails of father"}
\end{align*}
\]

*5) Now read and write the following phrases with tone marks:

\[
\begin{align*}
\text{ंgare taa} & \quad \text{"gun of father"} \\
\text{abaa maa} & \quad \text{"corn fufu of grandmother"} \\
\text{aʃɛ naa} & \quad \text{"tongue/blood of animal"}
\end{align*}
\]
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 bifore "calabash dish of mice"
- ba'a ningiddi "calabash dish of plantains"
- dàà mâlù'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.

- bìba'a bì ningòdò "calabash dishes of plantains"
*6) Read the following and write the tones:

\[
\begin{align*}
\text{bzn bi niggw} & \quad \text{"plantain suckers"} \\
\text{njoo bi maa} & \quad \text{"things of grandmothers"} \\
\text{mitaa mi milu'\u00b9} & \quad \text{"calabashes of wine"} \\
\text{biywi'i bi miwure} & \quad \text{"calabashes of oil"} \\
\text{ibo'c bimaa} & \quad \text{"mushrooms of grandmothers"}
\end{align*}
\]

*7) Now read the following phrases and write the tones correctly:
When the prefix of the second noun is a vowel "a" or "i", 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.

άfu ati "leaf of tree"
ningbó ni abu'ù "slave's plantain"
ba'ā abu'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 àkikung "calabash dish of owl"
nili'i ni àlala "the bat's eye"

*8) Now read the following and write the tones:

ŋkira abaa "robe of a bag"
abo ìlarọ "hand-rail of a bridge"
bìba'a bi abu'u "calabash dishes of slave"
atu ìkùù "head place of a bed"
nili'i ni akikung "the eye of an owl"

*9) Read the following and mark the tones where necessary:
Lesson 8: Pronouns

The pronouns (which stand for nouns) also have basic tones. For the person or persons talking, the pronouns mè 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 combination 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 pronouns 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 attention to the tone marks of the pronouns.

à sàngé mba  "he has dried meat"

a sàngé mba  "he is drying meat"

---

NOTE: (1) Wò most of the time occurs as ð, especially at the beginning of sentences or clauses, while the form wò occurs after other words ending with a vowel sound.
bo n"n kw"re aba" "they took corn fufu (today)"
bo n'ny kw"re aba" "they have taken corn fufu (today)"
b' ny kura nji'i "they (the rats) have eaten groundnuts (today)"
yi "qlicheNibbo "it (fowl) has laid an egg"
ji "qliche mbod "they (fowls) have laid eggs"
i bê më "it (mushroom) is cooked enough"
ni bê më "it (plantain) is cooked enough"
a bê më "it (corn fufu) is cooked enough"
f" bê më "it (fish) is cooked enough"
à nin yë Ngwål a kwetë yi "he saw Ngwa who helped helped him"

There are three pronouns in the above sentence: à, a and yi
à kî tumë naëngwë yi kghë "he shot a lion (yes- terday) but it ran away"

The pronouns here are à and yi.
*1) Underline the pronouns in these sentences and note their tones:

a nǐm bu'u ngɔɔ bo bëne "he was drumming and they were dancing"

bɔ ki si yəe ɩ kɔɔ mbënə "they were singing and dancing"

nìŋgɔɔ nya ni wò mâ "the plantain (it) has fallen"

mà nîn yə yi sîl "I saw him today"

fìbwë fya ff be mâ "the fish is cooked enough"

Pronouns sometimes show ownership. We call the pronouns which show ownership possessive pronouns. There are many forms of possessive pronouns according to the nouns they modify. The tones of the nouns sometimes change because of the tones of the possessive pronouns. The following are the different forms of the possessive pronoun "my" which depend on the class of the noun that is possessed:

1. ñorɔ g hà "my mouse"
2. ñoforɔ bà "my mice"
3. ñgegɔ g hà "my gun"
4. nỳngɔɔ nà "my plantain"
5. nỳngɔɔ mà "my plantains"
6. àtɔ̀ yà "my calabash"
7. ìtɔ̀ jà "my calabashes"
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 wil "that mouse", forə ghuə "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. bîforə byâ  "the mice"
3. ŋgara wâ  "the gun"
4. mîngbô nyâ  "the plantain"
5. mîngbô myâ  "the plantains"
6. atəə yâ  "the calabash"
7. lîța jyâ  "the calabashes"

*2) Now write each of these nouns above with the possessive pronoun that means "your".
8. ŋgò'ò yà  "the stone"
9. ŋgò'ò jyà  "the stones"
10. fìbwè fyà  "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.

fore wìl  fore waà

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:

fore yìm fili  "black mouse"
bìfore bì fili  "black mice"
nìŋgòò nì fèè  "plantain for sale"
ìmbàŋ jì twì  "cracked kernels"
fìbwè fì fàŋtò  "big fish"
fìtòò fì fàŋtò  "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:

35

576
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:

- ñlwen màngyè  “old lady”
- münkghè màngyè  “young lady”
- ñdìì ñù  “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. ñbà  "meat"
2. bìlìngè  "horse"  6. lâmsì  "orange"
3. àtàò  "calabash"  7. fìngwàŋ  "salt"
4. ñdà  "house"  8. mìbò’è  "pumpkins"
Lesson 10: Prepositions and Adverbs

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"
bl̃̃̃ mbʊ̃̃̃ "I with a dog"

bũ mbʊ̃̃̃ "you (sing.) with a dog"

Another small word, ni, indicates accompaniment, generally by something being carried, or instrument involved in some action (i.e. what it was done with):

ni mbî "with a goat"

ni mlîlû'û "with wine"

ni 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"
2. "on Ngwa's back"
3. "in the pot"
4. "from me"
5. "to the house"

Adverbs

Some expressions tell you when, where or how an action takes place. These are called adverbs.

The prepositions a and ni 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 yoo "yesterday (or tomorrow)"

a yi:jɔŋɔ "on market day"
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 tšetsɔŋə "he is sleeping now"

Some adjectives are used as adverbs without joining words. e.g.

- a fà'ə sigənə "he works well"
- à kì fà'a tsi'il sigənə "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 nì wàŋsə nzi "he came early"
- à qhèsə mə 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:
à nín tîgô a nżą "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"
PART 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.
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.

<table>
<thead>
<tr>
<th>High Tone Verbs</th>
<th>Low-Mid Tone Verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>ba'ā &quot;weave&quot;</td>
<td>bà'ā &quot;treat (a wound)&quot;</td>
</tr>
<tr>
<td>bɔɔ &quot;build&quot;</td>
<td>bɔɔ &quot;cover&quot;</td>
</tr>
<tr>
<td>fl'i &quot;take out of&quot;</td>
<td>fl'i &quot;be going&quot;</td>
</tr>
<tr>
<td>lɔɔ &quot;beg (for something)&quot;</td>
<td>lɔɔ &quot;look for&quot;</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Command Sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>ba'a abàà &quot;weave a bag&quot;</td>
</tr>
<tr>
<td>bà'a ala'a &quot;treat a wound&quot;</td>
</tr>
</tbody>
</table>
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 njì'i jya "plant groundnuts"
bi'i nikoo nya "carry the head-basket (kenja)"
sa'a isa'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. Its melody is like the tone pattern of bòò "cover!" but it occurs on words of only one syllable.

Read these sentences and notice how you say the tones of the verb.

sò nå "pierce an animal"
lọ nghèc "go away!"
le anbaa   "hang (a bag) on the shoulder"

*2) Now read and write the tones on the following command sentences:

zi faa   "come here!"
ko mba yu   "take this meat"
wa ati yu   "cut down this tree"
wyc nikuq "make announcement (of town/village crier)"
tsya faa   "pass this way"
ji atsuga ya   "eat the achu"
ko laga   "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 "ma" and of the verb:

à kwere ma mba   "he has taken meat"
à sang ma mba   "he has dried meat"
à sô me mba   "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):
à sàŋõ mbà  "he has dried meat."
Sàŋõ 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 sàŋõ tìta  "they have dried pepper"
2. bo sàŋõ tìta  "they are drying pepper"
3. bo kwërõ tìta  "they have taken pepper"
4. bo kwërõ tìta  "they are taking pepper"

You may have noticed that although the verb kwërõ is written the same in (3) and (4) they are pronounced differently in each sentence. In sentence (3) kwërõ 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 ..."
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 nin kwere abaa "he took corn fufu (today)"

à nin kwere abaa "he has taken corn fufu (today)"

a nin kwere abaa "he was taking corn fufu (today)"

bo nin kwere abaa "they took corn fufu (today)"

bo nin kwere abaa "they have taken corn fufu (today)"

bo nin kwere abaa "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 nin starts with b or f, the n will change to m; if the following word starts with k or g, nin will always end with n; if the following word starts with any other letter, the tense marker will end with n, giving nin.
1. à nin 5. bò nin
2. a nin 6. bo nin
3. à nin 7. bo ... mô
4. bo nin 8. à ... mô

*2) Read this short letter with the correct tones:

Taà,
Mumaà ghà, Lùm à nin jwi
mûmbâŋnë sìl, ëkum mu wà à ñi Nìba'a.
A ñìn yë'a si'i, si'i, la à këntë mô
a nyë'e.

A ñì më' Yàkobë 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 kë kwërâ mbà "he took meat"
à kë kwëre tita "he took pepper"
bo kë sàŋë mbà "they dried meat"
à kë so tita "he pierced pepper"
bo kë sì sàŋë tita "they were drying pepper"
bo kë sì sàŋë mbà "they were drying meat"
à kì sì kwére mbà  "he was taking meat"
bo kì sì kwére tita  "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 kì ...
2. bo kì ...
3. à kì sì ...
4. bo kì sì ...

If the action were done many days ago or a long time ago, we would have sentences like these:

à lèn kwére mbà  "he took meat"
à lèn sàŋə mbà  "he dried meat"
à lèn sàŋə tita  "he dried pepper"
bo lèn kwére mbà  "they took meat"
bo lèn sò ləŋə  "they pierced a horse"
à le sì kwére mbà  "he was taking meat"
à le sì sàŋə mbà  "he was drying meat"
à le sì sàŋə tita  "he was drying pepper"
bo le sì 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:
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 leën kurà nsàa "he once ate elephant meat"
à leën gheè a Yàoundè "he has once been to Yàoundè"
bo leën kurà nsàa "they once ate elephant meat"
bo leën gheè a Yàoundè "they once have been to Yàoundè"
bo leën so naàngwè "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 leën ...
2. bo leën ...

If the action were done once not long ago, we would use a different tense marker. Read these examples:

à kiin jwi mûmbânnà "she gave birth to a male child"
bo kĩn fe'e wa ndá "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 kĩn ...

2. bo kĩn ...

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 kwẹrẹ mба "he will take meat"
à ka lọgọ mба "he will fetch meat"
à ka lọgọ lẹ̀ṣẹ "he will take a horse"
bo ka kwẹrẹ mба "they will take meat"
bo ka sọ lẹ̀ṣẹ "they will pierce a horse"
à ka kí kwẹrẹ mба "he will be taking meat"
bo ka kí sànọ mba "they will be drying meat"
bo ka kí sànọ títà "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 kì
2. bo ka  4. bo ka kì

If the action is to take place today, another marker is used. Read the following:

à ka lè kwere mbà  "he will take meat (today)"
à ka lè sånë mbà  "he will dry meat (today)"
à ka lè sånë tita  "he will dry pepper (today)"
bo ka lè kwere mbà  "they will take meat (today)"
bo ka lè só läne  "they will pierce a horse today"
à ka lè kì kwere mbà  "he will be taking meat today"
à ka lè kì sånë mbà  "he will be drying meat today"
à ka lè kì só läne  "he will be piercing a horse today"
bo ka lè kì kwere mbà  "they will be taking meat today"
bo ka lə ki səŋə tita "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 lə ... 3. a ka lə ki ...
2. bo ka lə ... 4. bo ka lə ki ...

If the action is to take place tomorrow, the markers are again different. Read the following:

à ka lə kwere mbà "he will take meat tomorrow"
bo ka lo səŋə tita "they will dry pepper tomorrow"
a ka lə ki nìŋe mbàŋ "he will be crushing palm nuts tomorrow"
bo ka lo ki boɔ ndà "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 lə ... 3. à ka lə ki ...
2. bo ka lo ... 4. bo`ka lo ki ...

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If the action is to take place in the distant future, there is another marker. Read the following:

à ka yi kwere mbà "he will take meat in the distant future"
bo ka yi sągà tita "they will dry peppers in the distant future"
à ka yi ki ninge mbàŋ "he will be crushing palm nuts in the distant future"
bo ka yi ki 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 yi ... 3. a ka yi ki ...
2. bo ka yi ... 4. bo ka yi ki ...

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 ñ except in the future. The letter m, n or ñ 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.
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 len zi ŋkwere løŋe  "he came to take a horse"
b) à len zi ŋkwere løŋe  "he came and took a horse"

2. a) à zi me ŋkwere mba  "he has come to take meat"
b) à zi mə ŋkwere mba  "he has come and taken meat"

3. a) à zi me nsanə mba  "he has come to dry meat"
b) à zi mə nsanə mba  "he has come and dried meat"

4. a) à zi me nsə løŋe  "he has come to pierce a horse"
b) à zi mə nsə løŋe  "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 ŋkwere mba  "he has come to take meat"
b) à zi ŋkwere mba  "he has come and taken meat"
2. a) à ghèe nlògə mbà "he has gone to take meat"
   
b) à ghèe nlògə mbè "he has gone and taken meat"

In (la) here above, the first zi is said with high-mid tone while in (lb) 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 sentences:

7. a ghèe mfa nìbɔ'ɔ nya "he has gone to give the pumpkin"
8. a ghèe mfa nìbɔ'ɔ nya "he has gone and given the pumpkin"
9. a ghèe mfa nìbɔ'ɔ nya "he is (in the process of) going to give the pumpkin"
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 nin zi a jf
   b) à nin zi ji

2. a) à nin laa mbà a nkura
   b) à nin laa mbà nkura

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 kî laa mbà nlâe

bo len si laa mbà nkura

bo len si sâne mbà nlâe

à len ghèè nkwerâ lenâe

bo len kghâ ntsya ghâ

"he came to eat"
"he came and ate"
"he cooked meat to eat"
"he cooked meat and ate it"
"he cooked meat and kept it"
"they were cooking meat and eating it (long ago)"
"they were drying meat and keeping it (long ago)"
"he went (long ago) and took a horse"
"they ran faster than I (they ran, they over-came me, long ago)"
à ka lō zǐ ghè mitaa  "he will come and (he will) go to the market (tomorrow)"

bo ka lə ghè kure ŋgů  "they will go (today) and eat a chicken (today)"

à ka lō ghè kí kuu a ndəŋwà'nè a Kumba  "he will go to attend school in Kumba"

à leɛŋ ghee ntigə nyə'ə  "he went (long ago) and was crying"

bo kì tso a ŋki ŋka ndora  "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 nin ... 4. à ka lō ...
2. à len si ... 5. bo ka yi kì
3. bo kì 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 nin yì ntso ntu'u ŋkì "he came, went and carried water today"
*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 indicates the different subject.

Notice the difference in these two sentences, indicated only by the second pronoun.

à kì tuma ñàìngwè ñkhè
"he shot a leopard (yesterday) and (he) ran away."

à kì tuma ñàìngwè yi ñkhè
"he shot a leopard (yesterday) and it ran away."

Notice the difference in these two sentences, indicated only by the pronouns:

à mìì yi nye Ngwà a kwetè yi
"he came and saw Ngwa (today) and he (Ngwa) helped him."
à nin zì nye Ngwà ñkwete yi
"he came, saw him (Ngwa and helped him (Ngwa)"

Read these also, noticing the pronouns:
mè len laa mbà bo kurè
"I cooked meat (many days ago) and they ate (it)"

`à nin zì mò bì'ñ a alà'ña yì
"he came (today) and I treated his wound"

mè kì zi bo ba'à alì'ña yà
"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 different from the pronoun subject of the first.

*5) Read the following passage paying particular attention to the tones.

Mè kì fu a afò a yòo a ntsà'ña màtaà. Mè ghattè mà ñka nzwi'i a mbèc màtaa wa, nyu'u naa yi kà ñkoo ghu. Mè kghè tsi'i nìtìì ngecs nyò, yi be njiirè! Mè fi'i nzwíte nñiæ a mûm àbàà mà; ñtígì ñkwêc; ñtíì gha nìluu nì nìdore nì we. Mè nìn lò ñgecs mfèè a màtaa sìi nì bi-fräñ ñgghì jinífwaà. Mè ka lò ko'ç a awusaa fi'i ñkghì jintaà ghu yuu anwà'ànà ya yì twòñë ghu.
PART 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 complex sentences.
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 ni wa'à tita kurè
"he did not eat pepper (today)"

kaa bo kì wa'à tita sanè
"they did not dry pepper (yesterday)"

'kaa bo le si wa'ă mbà sanè
"they were not drying meat (long ago)"

kaa bo ka wa'ă abaa kwèrè
"they will not take corn fufu"

kaà ka lô wa'ă nìngòò kurè
"he will not eat plantains (tomorrow)"

kaa bo si aòò lògè
"they have not taken medicine"
kaa mè leè wa'à nsèè yè
"I have never seen an elephant"

kaa bo burtu afù ya nò
"they have not yet taken the medicine"

*2) Complete the following to make negative sentences:
1. kaa ka lò wa'à ..... 
2. kaa bo ka yi wa'à ..... 
3. kaa kì si wa'à ..... 
4. kaa bo si ..... 
5. kaa bo leè wa'à ..... 

There is sometimes a further change in word order when there are two verbs of which at least one is negative. Read these sentences and notice the difference in word order:

mè nì ghèe nłògè lèŋè
"I went to take a horse"

kaa mè nì wa'à nłògè lèŋè gheè
"I did not go to take a horse"

mè nìn ghèe nłògè lèŋè
gheè nłògè lèŋè
"I went and took a horse (today)"

mè nìn ghèe kaa wa'à lèŋè logè
"I went but I did not take a horse (today)"

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*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:

- fe "where?"
- a ya "why?"
- kà "what?"
- a ... kà "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 ghèè à fè "where are you (sing.) going?"
- ò kì si ghèè a fè "where were you going yesterday?"
à nî kè. "what is it?"

ò kî kùrè nìngbò 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 nî fitsè. "it is a wine calabash"
à nî fitsè? "is it a wine calabash"
à nën lògè mbà ya "he has taken the meat today"
à nën lògè 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 kî kùrè nìngbò
may mean either "they ate plantains (yesterday)'
or "did they eat plantains yesterday?"

1) Write one sentence with each of the following question words:
1. wò "who?" 4. a ya "why?"
2. kè "what?" 5. a ... kè "what?"
3. fa "where?" 6. à ... wò "who?"

*2) Read the following dialogue:

- Abèè fù'ù mè Ambè?
- Óma. Ò bîinè mè Tsè?
- Ò gheè à fà?
- Mè gheè nta borè. Ò yî bî'ìnè ghèè nta?
- Ógana gèhà. Kaa mbe mè yî wa'â borè bu nta.
- A ya?
- Mè len fè'è a ndâgwà'ànè a njwi yimbò'c nta
  borè ntìgè a mbìì. Mè len mbìì ñkuu a ndà
  ni nòò ñkweè àfò; taà gèhà a ghòò gha, nsùnghà
  mè tâ mè yî mè tsuù borè 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 mè and then another clause. Read
these examples:
"he said that he was going to market"

"I think that they have eaten"

2. Sometimes the second clause describes something in the first clause, and again the joining word is ma. Read these examples:

"I saw the child who came here"

"He ate (yesterday) the plantain which they had carried"

3. Sometimes two clauses are joined together by ki. Read these examples:

"he ate achu and drank wine"

"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 following sentences, in (i) the joining word is bēr, in (ii) there are two small joining words, bə and bōŋ, in (iii) and (iv) the joining words are
baa and boŋ. Read these sentences:

(i) bɛɛ bo nin ɔl ɔ je'ɛ ɗ waa
   "If they come today (you) feed them"

(ii) ɔ bɛ ɔl boŋ ɔ yə ghə
   "If you come you will see me"

(iii) ɔ kɛ baa ɔl boŋ ɔ kura nŋɔɔ
   "If you had come (yesterday) you would have eaten plantains"

(iv) bo lem baa kura nŋɔɔ nə boŋ bo kwɔ
   "If they had eaten the plantains, they would have died"

5. Sometimes two clauses are joined together by other joining words (mbɔŋ tɔ), to show that one action takes place before another. Read the following sentences and notice the joining word.

ə nin ɔl mbɔŋ tɔ bo ghə
   "he had come before they went"

bo kɛ kwɛɛ nkəu mbɔŋ tɔ mbɔŋ ya wo
   "they had come home before it began to rain"

The joining word tɔ is also used with mə. Read these sentences and notice the joining words mə tɔ:

mə lɔɔ mə tɔ nə zi nə ghə
   "I want that you should come to see me"
6. Two clauses may be joined by nloŋ ma, 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.

nîn zî a nloŋ mə bì kî twọnọ yi à
"he came because he had been invited"

mu wa a ñâ'è a nloŋ mə kà bùràtà ji 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 ni. Read the following sentences and notice how the joining words are used.

Nîgwà bo Sùù kì fu aboù
"Ngwa and Shu went hunting"

mè ni nìba'à bì'l nìn tso ykì
"Neba and I went to the stream"

*1) Using the above sentences as examples, make a sentence with each of the following joining words:

1. mə
2. mə
3. kì
4. bec
5. bə ... bon 9. me tå
6. baa ... bon 10. bo
7. mbonj 11. ni
8. nlonj me

*2) Read the following passage taking note of changes in the basic tones of the words.

Aso bo Nibā'ā len tso a ntu'ū ḳkì nì ìtèè. Bo tsò mé ntu'ū ḳkì wa ḳka ḳkwès, ìso swon me tå bo Nibā'ā ka ndore. Bo kà mé ndore, Nibā'ā ti'ìnì ḳwo nzwi atèè yi. Bo kwèè mé ḳkuu a ndugū, kaa Nibā'ā wa'ā yi a nda kuù. Aso kuu a nte'e yìi atee ya, ndè wàà a betè me Nibā'ā fè le. Aso swon ghu mbo me à tòe a bee. Ndè wàà a fe'è nyo Nibā'ā, kaa wa'ā atee ghu atu yè, ḳburè nyo ììe Nibā'ā à tsò mé ḳka ndore nzwi atee yà. Ndè wa a gheè nlogè atì, nzi naŋse nghoc Nibā'ā ghu nì nlwintoŋè; nswon ghu mbo me, ìbe a yi mbù nzwi atee yi mo'c bonj à ka le ti jì. Ntòn Nibā'ā yi lwì a nu Aso si'i nlonj me a len gherè yu me tå à ti'ìnì wò nzwi atee yà. Nlonjo maa njwi bee Aso yi mbù nswonj a mbo Nibā'ā me bo yu ka ndore a mânji ḳkì, kaa wa'ā yi bù mbii.
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<tr>
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Bë Limbum Yëcni

Reading and Writing Tone in Limbum

System 2

by

Joseph Mfonyam
and
Samson Ngah
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:

- Aa as in baa "corn fufu"
- Bb as in bo "hand"
- Dd as in dù "go!"
- Ee as in bêe "people"
- Ff as in for "fo mix, stir!"
- Gg as in gôr "big"
- Ii as in bi "give birth!"
- Jj as in jâ' "help!"
- Kk as in kar "travel!"
- Ll as in lîp "beat!"
- Mm as in muu "child"
- Nn as in no "drink"
- Oo as in boo "children"
- Pp as in kep "break!"
- Rr as in raa "clean"
- Ss as in saa "split"
- Sh as in shëshi "chop"
- Tt as in to "hole"
- Uu as in buu "things"
- Vv as in vi "his"
- Ww as in wëp "bitter leaves"
- Yy as in yar "wear!"
Reading and writing tone in Limbum, System 2

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:

- **Cc** as in *ce* "tree"
- **Ec** as in *lele* "zebra"
- **Gh gh** as in *ghonê* "bless!"
- **Eta** as in *shant* "prison"
- **Ut ut** as in *vù* "come!"
- **I I** as in *bê* "count!"

The vowel letters can be pronounced long; for example,

- **aa** as in *baa* "corn fufu"
- **ee** as in *lee* "bat"
- **uu** as in *fuu* "mouse"
- **ee** as in *têe* "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__n "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!"
- bée "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:
Reading and writing tone in Limbum, System 2

E b k p v p nā! "he will break the bone of a cow."
wow "they"
l_ "set a trap!"
s ns "wipe!"
nt "heart"

The Letter e
The letter e is different from the letter e.
Read the following words and see how you say them:

1. yc "see!"
2. llc "rain water"
3. bcp "he-goat"

*4. Write these words putting in the correct letter e or ē:
   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"
fū "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 u

The letter u is different from the letter u. Read the following words and notice how you pronounce the letter u:

1. tw "shoot!"
2. vù "come!"
3. rfuù "feather"

*6. Write these words putting in the correct letter, u or u:

1. Nfò t_r f__ "Nfo has a leaf."
2. Y__ "thing"
3. l_r "fool"
4. l__ "bite!"
Lesson 3  Unfamiliar consonant letters

Letter η

The letter η is pronounced like the -ng in the English word "sing". Read these pairs of words and notice the difference in the way you pronounce η and n:

ηop  "pinch"  no  "drink!"
ηap  "crawl!"  nà'  "cow"

1. Write these words putting in the correct letter η 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.

fù'  "wind"  fù  "leaf"
fà'  "work"  fa  "give"
bè'  "count!"  be  "invite"
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*2. Write these words putting in the letter ' where necessary:

1. mbā    "cloud"
2. mbāa    "money"
3. ngo     "termite"
4. nkaa    "monkey"
5. nka     "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!"
ghee    "calabash"
goo     "bend (one's arm)"
gēe     "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:

cI'    "shake!"
cē'    "oil!"
ce'    "to be bitter."
Reading and writing tone in Limbum, System 2

*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 pronounce the first two letters:

mbën "rain"; ñgwñ "fowl"
mbgn "goat"; ñgar "gun"
mfär "twins"; ñkar "friend"
mfoon "(animal) fats"; ñkàa "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" _oñ "cup"
_aaa "money" _ukuu "toe"
_a "kind of bird with long tail" _ŋ ñ "large pot"
_a "spear stick"
_uup "animal skin" _a' "monkey"
_u "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.

ηwā'i  "book"
ηwē  "person"
kwāa  "corn"
kwārakwarā  "bambo mat"
byē'  "carry"
kyēe  "four"
nyo  "snake"
ryēe  "rock"

*6. Write these words, putting in the right consonant combination with either w or y:

_e  "moon"  _a  "garden eggs"
_er  "selfish person"  _or  "body"
_e  "wife"  _er  "broom"
_e  "die!"  _er  "good/bad luck"
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 bāa "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"
lele  "rain water"  bu'  "chimpanzee"
shan  "prison"

1. Read these words and say whether they have the same tone as the examples above:

lele  "zebra"
buu  "land squirrel"
rlun  "harb"
mbu'  "sweet potatoes"
tee  "ring"
cece  "pieces of the hard outer covering of a bamboo"
ŋkunjku  "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 rkoŋ "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.

rfæu "feather" baa "bag"
ŋgërë "dragon fly" kätë "bush"
tap "hut" rkăr "scaby"
ŋgō' "grinding stone" mbaa "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"
bāa "bag" .tāp "hut"
rep "hard wood used for making hoe or axe handles"
rep "ganglion"

*2. Indicate whether the following words are high or low. Mark only low tone and leave high tone unmarked.

ju' "elephant" rycr "broom"
rkce "razor blade" toro "cricket"
cece "stick" rwaa "mat"
ŋku "bachelor" maku "grandmother"
tase "junction" ŋka' "fence"
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'
bû  
3. ñka' 4. njan
ñkâ'  
5. baa 
bâa  

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. mbanj "kernel" 2. mbanj "sceptre, stick"
mbagere "dragon fly" keŋ "door"
mbáp "rat" ta' "snail"
tar "father" ñwá "person"
tap "hut" kuu "foot"
mrc' "yams" cc' "clothe, cloth"
bu "tadpole" kwæn "bracelet"

5. Write the following words in two groups differentiating the level low tone from the low falling tone:

ntoŋ "valley"  yıwa' "book"
ŋkoŋ "tail"  njaa "axe"
ku' "weave"  na' "animal"
ŋkoŋ "motor pistol"  rbru "egg"
saa "millet"  rkoŋ "spear"
cuu "mouth"  yko' "basket"
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 bāa "madness" and not as low as the music of bāa "bag". Now say or whistle these words in this order: bāa, bāa, bāa. 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:

bu "wood ash"  ñwce "moon"
nfur "wound"  rwce "cat"
mor "fire"  nyu "bees"
mgwā "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.

būu "things"  bāa "corn fufu"
būu "land squirrel"  bāa "madness"
ngo' "termite"  ngo' "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. būu __________   2. bsc __________
   būu __________   bsc __________
Reading and writing tone in Limbum, System 2

Now read the following pairs of words and also notice the difference between mid tone and low tone:

1. baa "corn fufu" 2. ṭkaa "monkey"
bàa "bag" ṭkāa "basket"

3. ṭgö' "termite" 4. mbā' "rattle"
ngö' "grinding stone" mbā' "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. rkār 2. ṭgwā'
rkar ngwa

3. mbāa 4. ṭgwē'
mbāa ngwe

5. kān 6. rbēe
kan rbēe
*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.

<table>
<thead>
<tr>
<th>Word</th>
<th>Tone</th>
<th>Meaning</th>
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<tbody>
<tr>
<td>ngup</td>
<td>Mid</td>
<td>&quot;animal skin&quot;</td>
</tr>
<tr>
<td>toro'</td>
<td>Low</td>
<td>&quot;cricket&quot;</td>
</tr>
<tr>
<td>mba'</td>
<td>Mid</td>
<td>&quot;thread&quot;</td>
</tr>
<tr>
<td>nfyp</td>
<td>Mid</td>
<td>&quot;cockroach&quot;</td>
</tr>
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<td>rkwa'</td>
<td>Mid</td>
<td>&quot;gravel&quot;</td>
</tr>
<tr>
<td>nciu</td>
<td>Mid</td>
<td>&quot;beads&quot;</td>
</tr>
<tr>
<td>run'</td>
<td>Mid</td>
<td>&quot;a kind of yam&quot;</td>
</tr>
<tr>
<td>kuu</td>
<td>Mid</td>
<td>&quot;funnel&quot;</td>
</tr>
<tr>
<td>ta'</td>
<td>Mid</td>
<td>&quot;snail&quot;</td>
</tr>
<tr>
<td>fer</td>
<td>Mid</td>
<td>&quot;plum&quot;</td>
</tr>
<tr>
<td>be'</td>
<td>Mid</td>
<td>&quot;sparrow&quot;</td>
</tr>
<tr>
<td>rman'</td>
<td>Mid</td>
<td>&quot;palm front&quot;</td>
</tr>
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<td>nca'</td>
<td>Mid</td>
<td>&quot;mud&quot;</td>
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<td>yo'</td>
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<td>&quot;rubbing oil&quot;</td>
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<td>ngap</td>
<td>Mid</td>
<td>&quot;antelope&quot;</td>
</tr>
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<td>ju'</td>
<td>Mid</td>
<td>&quot;elephant&quot;</td>
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<td>&quot;mucus&quot;</td>
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<td>Mid</td>
<td>&quot;thigh&quot;</td>
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<td>Mid</td>
<td>&quot;three&quot;</td>
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<td>Mid</td>
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<td>ken'</td>
<td>Mid</td>
<td>&quot;door&quot;</td>
</tr>
<tr>
<td>nto'</td>
<td>Mid</td>
<td>&quot;palace&quot;</td>
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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 bają "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:

- bása "madness"  
- bása "two"  
- bása "corn fufu"  
- bása "bag"

Here is another word with high-mid tone; pronounce it several times and note how you say it.

rlása "passion fruit"

In this book we are not going to mark high-mid tone.
Reading and writing tone in Limbum, System 2

*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”
lc’ “calabash” nga “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 /fw “language” and notice how you say its tone and see how the high-low tone is marked. Now compare the high-low tone of /fw “language” with the high tone of ruŋ “harp” and see how these two tones are different.

Read the following words taking note of how you say the high-low tone:

sāp “file” cē “ladder”
rkIr “louse” rsi1 “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 ngār "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:

ngāa "week"
ngār "ant"
ngar "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" mbanj "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 tă "his father"
Tată à dū, a kër dū
"Tata went, and again went."

Notice how you say the mid-low tone on tă 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, .
Reading and writing tone in Limbum, System 2

Tone combination in words of more than one syllable

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.

buré' "lion" kosI "cough"
malär "million" nilenýwé "adult"
bcrē' "dove" njerywé "woman"

Mid tone and High tone can combine as illustrated in the following words:

tarke "grandfather"
mbaɓu "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:

kinta "cross" wáawa "hawk"
shá'tu "comb" mbútu "oxford"
ŋkérsoo "hoe handle"
kíntor "bamboo stick used for carrying things"
ŋkóni "handle of bag or basket"
ŋgáptu' "day break, morning"

You must have noticed that the above words begin with low tone followed by mid tone.

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*4. Read the following words and mark their tones:

fu'kibar "dung beetle" bko'ge' "mumps"
njendōn "voice" wanga "rabit"
nciguu "son-in-law" ngombe "plantain"
nyaanjip "cutting grass"

*5. Read the following words and mark their tones:

kaaŋko' "crow"
mme' "dew"
bukubuku "a type of brown beans,"
Nyu "God"
taâce "cricket"
labâ' "shoe"
nfenfu "dust"
ta "five"
bati "wine calabash"
nfeé "leg"
fi "viper"
bânga "swallow"
msur "pepper"
njaŋ "xylophone"
rtu' "thigh"
mbcp "air, cold"
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:

ndaŋ "house"  mndaŋ "houses"
ma "mother" mma "mothers"
ndoŋ "cup"  mndoŋ "cups"

*1. Give the plural forms of the following nouns:

fuu "mouse"  wāawa "hawk"
lele "zebra"  cor "church"
tarku "grandfather"  beerē "dove"
njik1 "fly"  ŋkō' "basket"
hurē' "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.

- **rwcc** "cat"  
  - **mwcc** "cats"
- **rkär** "scaby"  
  - **mkär** "scabies"
- **rluŋ** "harp"  
  - **mluŋ** "harps"

*2. Now give the plural forms of the following words:

- **rfěu** "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"
- **kInta** "cross"  
  - **bkInta** "crosses"
- **bâa** "bag"  
  - **bbâa** "bags"

*3. Now give the plural forms of the following nouns:

- **yuu** "thing"  
  - **shâ'tu** "comb"
- **kâtè** "bush"  
  - **tû'** "ear"
- **tu** "head"  
  - **kosî** "cough"
Reading and writing tone in Limbum, System 2

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.

ngwe "dog" ngwe "dogs"
mbāp "rat" mbāp "rats"
nca "fish" nca "fishes"

*4. Give the plural forms of the following nouns:

ngup "fowl" ngwē "carrot"
mbāŋ "kernel" njunyām "pig"
njēe "sheep" nā' "cow"
mbu "goat"
Lesson 8 Noun combinations

In Limbum two nouns can be put together to show possession. The phrase, ɲkɔ' 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 târ "cup of father"
- muu mbâp "child of rat"
- ɲgup ma "fowl of mother"

*1. Read the following phrases and mark the tones:

- njendoŋ ma "voice of mother"
- rlun târ "harp of father"
- mbâŋ ma "walking stick of mother"
- ɲgere muu "dragon fly of child"
- ɲkar 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:

- rfwi siŋ "feather of bird"
- mkâr muu "scabies of child"
- rkâr bâa "rope of bag"
- ɲkûnyâm târ "pig of father"
Reading and writing tone in Limbum, System 2

2. Now read the following phrases and mark the tones:

- ngan mbap "tail of rat"
- rfuu ngwp "feather of fowl"
- mban tarkw "kernels of grandfather"
- cuu fuu "mouth of mouse"
- ngwe make "carrot of grandmother"

Read the following phrases and again notice how the tone of the first noun changes:

- baa makw "corn fufu of grandmother"
- rwee ma "cat of mother"
- ma fuu "mother of mouse"
- tu nkar "head of friend"

3. Read the following phrases and mark the tones:

- baa ma "corn fufu of mother"
- soo muunje "hoe of girl"
- ghee ngaaba "bowl of mad man"
- vup ngwe "bone of dog"
- nfees muu "leg of child"
Lesson 9  pronouns

Pronouns are words that stand for nouns. In the sentence *Nfô à dû* "Nfor has gone" the underlined word, à stands for the noun *Nfor*. Read the following sentences and take note of the pronouns and their tones.

1. *më dû* "I have gone"
2. *wë dû* "you have gone"
3. *E dû* "he has gone"

The pronouns in the above sentences are *më* "I", *wë* "you" and *E* "he*. *Më* and *wë* have low tone while the tone of *E* is high.

Now read these other sentences taking note of the pronouns and their tones:

*wër à dû* "we have gone"
wëe à dû "you have gone"
wowëe à dû "they have gone"

The pronouns in the above sentences are *wër*, wëe and wowëe. Wowëe has mid and low tones as marked while the others have low tones. As you can see, they are the plural forms of *më*, *wë* 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 yc mɛ  "he has seen me"
E yc wɛ  "he has seen you"
E yc wɛr "he has seen us"
E yc wɛe "he has seen you"
E yc wowɛe "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.

sɔ ñ dɔ "I and you have gone
sɛe ɔ dɔ "we (and you) have gone"
The pronouns used are sô and sëe.

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. sîŋ à ye kwāa "the bird has eaten maize"
2. bsîŋ vi ye kwāa "birds have eaten maize"
3. rwcc li ye kwāa "the cat has eaten maize"
4. mwcc mi ye kwāa "cats have eaten maize"
5. soo yi gwē "a hoe has fallen"
6. bsoo vi gwē "hoes have fallen"
7. ngup à ye kwāa "the fowl has eaten maize"
8. ngup yi ye kwāa "fowls have eaten maize"

The different pronouns used in the above sentences are, à, vi, li, mi and yi.

*3. Make sentences in Limburn using the pronouns à, 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 noun which they modify.

Read these phrases and see how the form of the possessive pronoun changes according to the noun that is possessed:

yā sîŋ "my bird" yēr sîŋ "our bird"
wâ bsîŋ "my birds" wer bsîŋ "our birds"
lâ rwcc "my cat" lisē rwcc "our cat"
### Reading and writing tone in Limbum, System 2

<table>
<thead>
<tr>
<th>Limbum</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>ma mwec</td>
<td>&quot;my cats&quot;</td>
</tr>
<tr>
<td>ya soo</td>
<td>&quot;my hoe&quot;</td>
</tr>
<tr>
<td>yëe siŋ</td>
<td>&quot;your bird&quot;</td>
</tr>
<tr>
<td>wo bsiŋ</td>
<td>&quot;your birds&quot;</td>
</tr>
<tr>
<td>le rwec</td>
<td>&quot;your cat&quot;</td>
</tr>
<tr>
<td>mo mwec</td>
<td>&quot;your cats&quot;</td>
</tr>
<tr>
<td>yo soo</td>
<td>&quot;your hoe&quot;</td>
</tr>
<tr>
<td>misëe mwec</td>
<td>&quot;our cats&quot;</td>
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<tr>
<td>yer soo</td>
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<tr>
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<tr>
<td>me mwec</td>
<td>&quot;your cats&quot;</td>
</tr>
<tr>
<td>yee soo</td>
<td>&quot;your hoe&quot;</td>
</tr>
</tbody>
</table>

*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.*

<table>
<thead>
<tr>
<th>English</th>
<th>Limbum</th>
</tr>
</thead>
<tbody>
<tr>
<td>his bird</td>
<td>their bird</td>
</tr>
<tr>
<td>his birds</td>
<td>their birds</td>
</tr>
<tr>
<td>his cat</td>
<td>their cat</td>
</tr>
<tr>
<td>his cats</td>
<td>their cats</td>
</tr>
<tr>
<td>his fowl</td>
<td>their fowl</td>
</tr>
<tr>
<td>his fowls</td>
<td>their fowls</td>
</tr>
</tbody>
</table>
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 ča "that bird"
bsin bca "these birds"        bsin bcā "those birds"
rwnc ca "this cat"           rwnc ča "that cat"
mwnc mca "these cats"        mwnc mcā "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

Adjectives are describing words. There are different forms of an adjective according to the class of the noun it qualifies.
Read these descriptive phrases and notice how the form of the adjective changes according to the class of the noun it qualifies:

siŋ nsil "black bird"
bsiq bsił "black birds"
rwcc rsił "black cat"
wweć msil "black cats"
soo sił "black hoe"
bsoo bsil "black hoes"
ŋgup nsil "black fowl"
ŋgup sił "black fowls"

siŋ nkc "small bird"
bsiq bk'ke' "small birds"
rkar rgör "big wheel"
mtaa mböbnoŋ "good caps"
mbăng ngör "big rat"
mbăng görgör "big rats"

*2. Write down the following descriptive phrases in Limbum and mark the tones:

white mouse clean birds
good hoe good ears
black dog big dogs
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:

- bṣiŋ baa - "two birds"
- mwēe mbaa - "two cats"
- bsoo baa - "two hoes"
- ngup 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 nouns 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 dù mbe ndap  "he has gone into the house"

The words tu and ndù 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 bë'të  "he is in the pit"
mbap yu njer baa  "the rat is in the bag"

Read these sentences and note the use of the prepositions, à gee (gëŋ) and note the tones

E tće à gee yl tâ  "he is beside his father"
E tće à gee yl mâ  "he is standing besides his mother"
E tće à gee yl ndap  "he is standing beside his house"

Now read the following sentences and see how
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the preposition nē is used.

E fa baa nē Nfo "he has given corn fufu to Nfor"
E fa baa nē mē "he has given corn fufu to me"
Nfō a fa rkôn nē 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. à gee
4. nē

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 vū sē'ni "he has come now"
E mu vū nēŋkūr "he came yesterday"
E mu vu nēŋkūr sen "he came last Ndu market day"
E ce fā' kūna "he is working up here"
E dū kūna "he has gone up here"

The adverbs that we have used in the above
sentences are sē'ni, "now" nēŋkūr "yesterday"
nēŋkūr sen "last" sen (Ndu market day)"
kūna "up here"
Now read the following sentences and study the adverbs used:

vè cercr  "come quickly!"
can ghâghêr  "run quickly!"
lâa muflè  "talk softly!"
lâa muwèc  "talk slowly!"
E ke fâ' sê  "he works very hard"

The adverbs used in the above sentences are cercr "quickly", ghâghêr "quickly, muflè "softly", muwèc "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!"
   kāŋ "tremble!" sāa "tear!"
3. ba' "weave!" 4. re "jump!"
   bā' "arrive, reach!" rē "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!"
ja` "gum!"  laa "say, talk!"
too "support!"  tee "to cut off"
too "roast"  tee "to be hard"
tan "to be tough  yər "warm oneself!"
   (of meat)"
tan "fight for  yər "sweep!"
   something"

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:
1. sa'si "feel sharp pains"
   sā'si "scatter!"

2. kani "refuse!"
   kā'ni "promise!"

3. bersi "light, kindle!"
   bērsi "spread out!"

*2. Read the following words and write the tones where necessary:

bye' "carry!"
bye "carrying!"
ve "come!"
va' "help!"
cete "close, cover"
ma' "throw!"
ja' "help!"
ca' "greet!
"kiss!"
ca' "greet!" lwcsi "kiss!"
ca' "shake!"
she "refuse!"
nati "stand!"
langer "grumble!"

Read the following command sentences and notice how the tones are written:

fa lele "give rain water!"
fa mē baa "give me corn fufu!"
fa ye bāa "give him a bag!"
bye' lele "carry rain water!"
kō ngup "take the fowl!"
fa muu nē yi mā "give the child to its mother!"
fa dā nē yi tā "give the cutlass to his father!"

*3. Read the following command sentences and mark the tones:

koo ngup "catch the fowl!"
kosi kosi "cough (a cough)!"
fa mc kaa "give me the crab!"
cai'ni tarku ne mc "greet grandfather for me!"
bye' mbuu sin "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 ye ye "he is singing (a song)"
E ce yaati kwaa "he is drying corn"
Nfô ce vê "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 ye ye "he has sung (a song)"
E yaati kwaa "he has dried corn"
Nfô a vê "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 me mbaa "he gives me money."
- E ke fa' sê "he works hard."
- Nfô ke länger "Nfor always grumbles."
- E ke dû ñwâ' "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 today we would have sentences like these:

- E ba fa baa "he gave corn fufu (today)."
- E ba ce fyêní baa "she was selling corn fufu"
- E ba yaati kwâa "he dried corn"
- E ba ce yaati kwâa "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 mu fa baa "he gave corn fufu (yesterday)"
Nfó à mu dû nènjûr "Nfor went yesterday"
Nya' a mu vù nènjûr "Nya' came yesterday"
E mu ce fà' nènjûr "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 fûnîn kwàa "she was selling corn"
Nfó a m koo buu' "Nfor caught a lion"
Nya' a m ce fâ' nsuû së "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
6. Read the following story and pay attention to
the tense markers and the tones of the words.

Ngâ' à mu du ntaa nènkîr. E mu du ntaa nè mbe.
E mu fyëni mbu ana yeñi së. E mu fyëni wa'â, a yuu
buu nè yi mà. E mu yuu kan njâp, ba nyâa nà', kër
ba soo. E mu vè nè buu ca a fa nè yi mà. Yi mà à
ka' koo buu ca, à làa ene Ngâ' yu më mu mbënmbën.
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 că'ni tarke'  "I shall greet grandfather"
- Nfō be dù Ṽwā'  "Nfor will go to school"
- Nya' be byē kwāa  "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 lò fa baa  "he will give corn fufu today"
- Wèr be lò dù côr  "we shall go to church"
- Nfō be lò lànger së  "Nfor will grumble a lot"
- Wowëe a be lò jā' më  "they will help me"
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*2. Using the small words ... be'lō ... 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 fu fa ye baa "he will give him corn fufu (tomorrow)"
M be fu du "I shall go"
Tarku be fu koni ye bônbôn "grandfather will receive him well"
Tânyû be fu du wec "Tanyu will go hunting"
Nya' be fu ce fâ' nsuu "Nya' will be farming (tomorrow)"

*3. Using the words give, write sentences in Limbum and mark the tones.

1. Maku be fu ce...
2. M be fu ...
3. E be fu ...
4. Wèr be fu ...

If the action were to take place in the distant future we would have sentences like these:

E be kê fa baa "he will give corn fufu"
E be kê ce fâ' nsuu së "she will be farming very hard"
Nfô be kê du nje Yawunde. "Nfor will go to Yaounde.
E be kê ce yuu mkuu "she will be buying beans."
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' à dù à rtu' mdip. E tur bblē' bbaa. E be dù tu' mdip te Nya' bo laa baa òwo. Nya' be laa baa fa ye. E ka' vù ye baa yi mí, banc Nya' be kër lô laa baa mo'.

Njū' à mu du mdip něŋkûr. E mu ce dù mdip à tur bblē' bke'ke' bbaa. E mu tu' mdip a fa nè Nya'.

Nya' à mu laa enc Njū' e ke tu' mdip së. E m tu' mdip nè yi maku.

Njū' be fu tu' mdip. E be fu tu' mdip fa nè Nya'. Nya' be fu laa baa nè mdip anâ. Nya' be fu ce laa baa, te Njū' ce sù'si bkan.

Njū' be kë rîŋ à rlaa baa. E be kë 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"

Fyéni kwâa nê ye  "sell him corn"
Fa fyéni kwâa nê ye ka' "do not sell him corn!"

Jër mwëce  "go slowly!"
Fa jër mwëce 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 nàni ka'  "he is not standing"
E dû ka'  "he has not gone"
E ke fa më baa ka'  "she does not give me corn fufu"
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E ke fa bèe buu së 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.

Njù' à ba fâ' nsuu ka'
"Nju' did not farm"
E me ce se' nguu nènkûr ka'
"He was not fetching firewood yesterday"
Nfô à m dü kû Garwa ka'
"Nfor did not go to Garoua"
Nya' be lô laa baa ka'
"Nya' will not cook corn fufu (today)!
E be fu tu' mdip ka'
"She will not carry water (tomorrow)"
M be ke fa muu wa ngar 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:

Nfö e ke dû cor sê. E ba dû cor ntînî. E ba ter nwâ' Nyû. E m yu u nwâ' Nyû ana ese nwê Kimbûn.
E mu dû cor âwo nênkûr. E mu dû a bê' nwâ' Nyû anâ mbe cor.
E be fu dû cor âwo âyãnsê. Nuê à ka' laa nê ye enc e fa fu dû âwo ka', e byemî ka'.
E ke dû ngu u, ter nwâ' Nyû anâ ka'.
Lesson 16  Questions

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:

fc  "where?"  nda  "who?"
kc  "what?"  njoke  "why?"
á se'kc "when?"

Read the following question sentences and note how they are made.

E dū ba fc?  "where has he gone?"
E vů fc?  "where is he from?"
yi yu ba fc?  "where is it?"
È ce ye ba kc?  "what is he eating?"
a kc?  "what is it?"
È ba vu a se'kc?  "when did he come?"
È be mísì á se'kc?  "when will he finish?"
A nda?  "who is it?"
wè ye ba ndaa?  "who have you seen?"
wè lāa ba nè nda?  "to whom are you speaking?"
È lāa wa'na njoke?  "why has he said so?"
wè lìp ye njoke?  "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. fc  "where"  2. kc  "what?"
3. á se'kc "when?"  4. nda  "who?"
5. njoke "why?"
Reading and writing tone in Limbum, System 2

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 mu və nəŋkür
>E mu və nəŋkür a?
"he came yesterday."
"did he come yesterday?"

>E dü shaŋ
>E dü shaŋ a?
"he has gone to prison"
"has he gone to prison?"

Nfõ ke ye mtu'
Nfõ ke ye mtu a?
"Nfor eats potatoes"
"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?
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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:

Nfô ba Nya' a mu vô
"Nfor and Nya' came"
Yà mä ba yâ tâ a vê
"My mother and my father have come"

2. Sometimes two verbs in the same sentence are joined by the word a:

E dô a kâti. "He has gone and come back"
Nfô a ye baa a no mdip
"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:

Nfô à vô a Nya' "Nfor has come with Nya'"

A verb that expresses saying, thinking or a desire is followed by enc and then by another clause.

E làa enc e be dô "He has said that he would go"
Wèr à mu làa enc wowêe a be vû ka'.
"We said that they would not come"
M ce kwâ' menc e be vû
"I think that he will come"
M ce kôn menc e dü
"I want that he should go"

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A ce kôn wone 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".

Njëwë ce e ce vû na yu yà tâ.
"The person who is coming is my father."

Njënywë ce e ba vû na yu ba fc?
"Where is the woman who came?"

5. Two clauses may be joined by njobë' so that the second clause gives a reason for the action in the first one.

Nya' â ba ce war njobë' Nfô â ba lip ye.
"Nya' was crying because Nor had beaten her"

Nje ce yan' ye njobë' e be ye yuu ka'.
"He is hungry because he has not eaten anything"

6. Sometimes two clauses are joined by the word, â, 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 dü à rkep nga' Nfô.
"He has gone to break Nfor's fence"

E vû à rfa baa.
"He has come to five corn fufu"

E mu vû a rbyë' mbû'
"He came to carry sweet potatoes."

7. Sometimes two clauses are joined together by tc to show that one action takes place before another.

E be vû tc m ka' dü.
"He will come before I go."
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Wowee a ba ye baa tc m kā' vu.
"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' vu, m dū "If he comes, I shall go."

Njū' ka' lip ye, e ku wār.
"If Nju' beats him, he will cry."

E ka' ye, e ku ka'.
"If he sees him, he will call."

E ka' ba vu, wēr a ba lip ye.
"If he had not come we would have beaten him."

E ka' mē ba lāa wa'a, mē ba mē rīŋ.
"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. tc
2. a 6. jobē'
3. ce 7. ka'
4. enc 8. ka' ba

2. Read the following story while paying attention to the tones:

Ngāla' ā m dū ā rcuu mbu a ka' bā', a yc yi too mbu mo' ka'. E gwar too mbu mō' a jir. E ka' jir a rcu mbu mō' āwo. Yi mbū yi kē' a ce ye mjēc. Yi ka' ce ye mjēc, Ngāla' ā iē mgwān mbendū rycc, boɔ mbu ā kaari mbo a cē bēŋ. Boɔ mbu ā ka' ce 'bēŋ, e dū nē mgwān më a fa nē mbu ndonŋ ba njēe.
E ka' fa mgwān nē mbu wcc, a ko' a tc mbendū
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rycc. E ka' tece mbo, a ye âmbô jaa ce ye mjcc nje rtûu. E ka' ye mjcc, a co mbe bû'.

Ngâla' â sùu embendû rycc, a lor mi mkôn ce e ba tur. Mi mkôn ana mi m ba mi mbaa. Yi tâ à rûn mi mkôn anâ bônbôn sê. E ka' ce dû, a co' rmo', a kânsî, a mâ' mbekî, a yâ. E ka' yâ a lâa enc, "Jaa â kwe ntlînî."

E ka' dû bâ'a, a ye jaa âmbô e tece mbe bu. E co' rkôn a nappî jaa câ âwo bônbôn. E ka nappî a tu jaa âwo â mngân. E ka tu, jaa â sâ'tî mbekî, a gwê, a ker gwê. E ka' kër lô enc' e sâ'tî mbekî Ngâla' â ba war mbe ndû mu. E ba nè cew ma yi mbâka mî' à gee nyor. E co' a sec âwo.

E ka' sec, a byc' yi jaa, a dû âwo, a fa nè yi tâ. Yi tâ à ka' ye, a lâa enc Ngâla' yu muu mbanrû. E ka' lâa wâ'â, a gwar jaa ana, a lor rkoo mo' a laa.

E ka' lea, wowse a ye. A ka' ye wco yi tâ à sô ye rfru kânkô', kû tû. E ka' sô, Ngâla' à yu' rbôn, a dû, a sun 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?

12. What are the weaknesses of your tone orthography?

13. How long have you been using this system.

14. Has it been easy to teach or learn tone using your system? What is the best way to teach it?
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