

THE TONOLOGY OF XHOSA

THESIS

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by

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ABSTRACT

This thesis is an examination of the tonology of Xhosa. After an initial survey of the surface tones of the language, and a review of previous studies of Xhosa tone, a description is given of the major tonal patterns of Xhosa noun and verb morphology. In the course of this description the major tonological rules are allowed to emerge. In particular it is shown that some of these rules lead to complex patterns of variation in the pronunciation of the same individual. The derivation of the tone patterns of adjectives and relatives is discussed and it is shown that these tone patterns offer partial support for the derivation of some adjective and relative constructions as derived from embedded sentences but also support for deriving simple attributive adjective constructions by means of phrase structure rules. Some interesting tonal patterns such as that shown by reduplicated stems are then explored. The tones of loan words are then investigated and evidence for the identification of English and Afrikaans stress with high tones by Xhosa speakers is adduced. In the final chapter certain general problems of Xhosa tone are discussed. In particular it is argued that attempts to interpret the tonal system in terms of an accent are unrevealing and also it is suggested that attempts to unify the various rules that spread tones to the right are mistaken. In the appendices a comprehensive survey of the tones of Xhosa inflections is given together with a substantial list of Xhosa words with the tones marked.

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PREFATORY NOTE

Xhosa examples have been presented in the current orthography (Xhosa Terminology and orthography 1972). Note that where a vowel is represented by two letters as in *oomama*, the sign for the tone will go on the first letter as in *ôomamá*. where the *ôo* represents one vowel with a falling tone.

In the bibliography I have followed the format of the journal *Language* and also to a large extent with regard to references in the text. I have made a distinction between 'Black (1986)' and 'Black 1986'. The first refers to the person with the date indicating the work concerned while the second refers to the work itself. So 'Black (1986) wrote the first account of tone in this language,' but 'Black 1986 contains the first account of tone in this language.'

In some respects the language makes more use of the first person than in many theses. This is deliberate as I believe it results in a simpler and more accessible style, partly through enabling one to avoid the passive. Where I have used 'we' it normally refers to the reader and myself and is, I hope, never the royal 'we'.

Appendix Three is a slightly amended and corrected version of Claughton (1983). The style of presentation is less rigorous than in the main body of the text but does have a fairly thorough coverage of the tones of Xhosa inflections and will serve as a reference to the reader, who may wish to check the details of analyses presented in the text. I hope that the main body of the text when supplemented by Appendices 3 and 4 provides a fairly comprehensive account of Xhosa tone.

ABBREVIATIONS

H	high
L	low
F	falling
H-tone	high tone
L-tone	low tone
F-tone	falling tone
SC	subject concord
OC	object concord
BP	basic prefix
FBP	fixed basic prefix
V	Vowel

CHAPTER ONE

INTRODUCTION

1.1 Aims

This dissertation is an inquiry into Xhosa tone. On the one hand it is a presentation of much of the data of Xhosa tone - what tone patterns occur on the present subjunctive, what tone patterns are possible on disyllabic noun stems and so on - presented to the interested reader who wants to know the data for his own tonal researches or because he wants to learn or teach the language with the correct tones.

On the other hand, and, more importantly, it is an attempt to understand the data, to make sense of the data, and to explain the data. Essentially this means a searching for patterns in the data, a looking for underlying principles and regularities. At first sight the data seem random, irregular and almost capricious. The same stem or morpheme seems to be capable of having several different tone patterns associated with it. Closer examination shows that these variations are not nearly as random as they appear at first sight and that it is possible to set up one underlying tone pattern for most morphemes and then have a series of rules which transform this underlying form into the various surface forms.

In part this means relating the data to established theories and using such approaches as autosegmental phonology as tools to arrive at generalizations. Thus, this analysis of major aspects of Xhosa tone will also be an attempt to see to what extent autosegmental phonology can aid in making sense of Xhosa tone.

One particular feature of the material presented here, which as far as I know has not been treated elsewhere in tonal studies, is the presentation of the large-scale occurrence of free variation, which nevertheless is susceptible to description by means of rules. This phenomenon, involving what I have called X-sequences, will be introduced in 2.3 and is in some respects similar to the variation between schwa [ə] and full vowels which occurs in English.

Although I have made use of autosegmental formalism where it seemed appropriate I have generally avoided formalizing rules as I believe that there is little to be gained by such formalization in phonology and have instead given an informal verbal description. In physics the use of mathematical symbolism has so many advantages as to make its use essential. In the field of phonology the gains seem far less clear.

Partly the difference can be seen from the following example. In physics a short algebraic formula becomes excessively cumbersome when put into words and in articles in physics such a formula is seldom accompanied by a translation into English.

In texts on phonology the reverse is the case: formulae are normally accompanied by translations into English and the English is often clearer than the formulae.

Admittedly, generative phonology has another goal in mind in the use of formalism. This is stated by Householder (1979:252):

The task of the linguist (as a grammar writer for a particular natural language) is to duplicate in explicit notation the grammar which is implicitly present in the idealized speaker-hearer's brain, a grammar which he acquired as a child by the use of a number of specialized innate language learning devices. The explicit notation must somehow correspond functionally to some of the innate devices.

This matter is pursued further by McCawley (1973). One might perhaps say that one of the goals of generative phonology is to develop a notation that is powerful enough to express any possible rule in a phonological grammar but not powerful enough to express any rule that is

not possible. McCawley (1973:210) criticizes this aim as unrealistic, one that would never be made in logic or physics. The generative phonologist would, however, claim that he is trying to replicate in some way the abstract structure of the phonological module in the human mind or brain, while a physicist or logician is simply finding a concise way of stating propositions.¹

The difference is that in phonology if the class of possible phonological rules is determined by the innate structures of the brain, then such a notation that is just powerful enough to express all possible rules should in some way correspond to the innate structures of the brain. In physics there would not be a similar motivation for developing notations that can only express possible states of the universe.

McCawley and, I think, Householder would hold that the programme of developing such a system of notation is not a profitable goal in phonology. But, even if it is, I do not believe that trying to force the facts of a language into an accepted formalism is desirable in a study such as my own with more modest goals.

In Chapter 4 and the first part of Chapter 5, autosegmental theory has some explanatory power and autosegmental representations help to make clearer what is happening. In the

1. One of the other advantages of mathematical notation is that there are rules to enable one to convert one expression into another so that if the first is true the second will also be true. For instance, the distance fallen in metres by a body from rest is given by the equation:

$$d = \frac{1}{2}gt^2$$

where g is a constant and t is the time elapsed in seconds. From this we can deduce, using principles of mathematics rather than physics, that if a body has fallen d metres then the time elapsed will be given by the equation

$$t = \sqrt{\frac{2d}{g}}$$

Generative phonological notations do not have similar possibilities of transforming one representation into another.

second part of Chapter 5, in the discussions about the final suffix, I do not believe that autosegmental theory throws much light on what is happening.

1.2 Language and dialect

Xhosa belongs to the Benue-Congo branch of the Niger-Congo family and to that part of Benue-Congo that is generally referred to as Bantu (Welmers 1971). In terms of Dokean classification it belongs to the South-Eastern Zone of Bantu and to the Nguni group, which includes Zulu, Swazi and Ndebele (Doke 1954:23).

The term **Xhosa** is used in a wider and narrower sense. In the wider sense it refers to that form of the Nguni language spoken by what anthropologists refer to as the Southern or Cape Nguni, that is, those Nguni-speakers who live in the Eastern Cape, Ciskei and Transkei, and in fact is the language used by most Africans over the whole of the Cape Province with the exception of the area in the North-West where Tswana is spoken. In this wider sense, the Southern Nguni are commonly referred to as the Xhosa (amaXhosa) and the language they speak as Xhosa (isiXhosa).

But in a narrower sense the term **Xhosa** refers to those people who are members of those chiefdoms derived from the original Xhosa chiefdom (amaXhosa) and the language they speak (isiXhosa) as distinct from those belonging to other closely related chiefdoms such as the Mpondo, Mpondomise and Thembu (amaMpondo etc.) and the language they speak (isiMpondo etc.). These people are often referred to as the "Xhosa proper". Also included among the Southern Nguni are the amaMfengu (Fingos), who are the descendants of people who fled from Natal at the time of the Chaka wars.²

The Xhosa in the narrower sense are divided into two groups, the Gcaleka and the Rharhabe, named after the chiefs who were the heads of the two groups when the original chiefdom

2. This has been the accepted view about the origin of the Mfengu, but recently it has been challenged by Webster (1991).

split, and the Rharhabe are divided into the Ngqika and other small groups such as the Ndlambe.

The people of the Ciskei and of regions west of the Ciskei are mainly Rharhabe or Mfengu, and today the speech of the Mfengu differs very little if at all from that of their Xhosa neighbours, although my principal informant has sometimes stigmatized certain forms as Fingo, that is, as typical of the speech of the amaMfengu.

Although Gcaleka Xhosa, spoken by the amaGcaleka, who live in the Transkei, is very similar to Rharhabe Xhosa, it does have some slight differences; for instance, where the disyllabic noun prefix is usually HH in Rharhabe Xhosa it is LH in Gcaleka Xhosa.³ Compare Rharhabe *ámáXhosa* with Gcaleka *amáXhosa*.

Scottish missionaries at Lovedale, near Alice, were the first to print the language. The first printed piece of Xhosa was produced at Lovedale in 1823 (Pahl 1989:xxxiii). The people around Lovedale were largely amaNgqika and so the form of their speech became the basis for the written language and the form of the language taught in the schools and thus this dialect has come to form the basis of the contemporary standard language, although there is an increasing tendency to admit features from other dialects, especially vocabulary, into the standard language. The language of the Thembu and Mpondomise, who live in the Transkei, is fairly close to standard Xhosa, while the speech of peoples like the Mpondo shows greater divergences.

1.3 Informants and variety of the language studied.

This investigation has been mainly centred on the spoken version of the written language as used in Grahamstown, and is thus mainly Ngqika Xhosa.

3. This difference is a reflection of the fact that the left-delinking rule is generally optional in Rharhabe Xhosa but obligatory in Gcaleka Xhosa. See 4.3 and Pahl 1977:19.

This study is, in fact, largely based on the speech of one informant, Stanley Vuyisile Bentele, a Ngqika Xhosa, who was born in Grahamstown in 1932 and has lived in Grahamstown or its environs for almost all his life. His speech is representative of the type of Xhosa spoken in Grahamstown, which is similar to that spoken elsewhere in the Eastern Cape and the Ciskei. His speech is moderately conservative. There are forms cited by Pahl (1977, 1978) where he has more regularized forms and thus presumably more recent forms. There are other cases where younger speakers will show divergent, often more regularized forms where he retains the older form.

This has been supplemented with a limited amount of work with a few other informants. In the last few years I have taught the subject of Xhosa tone to mother-tongue students at Rhodes University and have checked forms with them. In addition I have checked forms obtained from Stanley Bentele with the few other studies of Xhosa tone. In the final stages of the research I was able to check many forms with Professor Peter Mtuze of Rhodes University, who is also a Ngqika Xhosa.

1.4 Method of investigation and collection of data

As stated in the previous section, most of the tonal data in this thesis was collected using Stanley Bentele, a Ngqika Xhosa, as informant. Since my method of working with him was somewhat unusual I have included a full description of how we worked together in Appendix 1. Basically, the method involved training him to hear his own tones and then asking him to say what the tones of a word are, checking it with my own auditory impression but actually relying more on his judgement of what the tones were than my own.

This may be a method with many dangers. But I did check forms with him over several months and in fact in many cases over several years and had his replies not been based on some genuine response to the language they would not have been consistent over time. I would point out also that it was my responsibility to check that his responses were accurate and it took about two years of working with him and in fact training him before I could rely on his responses. I was able to check his responses with the tones given by previous workers

on the language, for instance, Davey (1973) and Westphal, Notshweleka and Tindleni (1967) and there was a substantial measure of agreement. I believe I was extremely fortunate to find an informant with such a talent for recognizing the tones he uses. With the exception of Professor Mtuze, I have yet to find another Xhosa speaker who can tell me what tones a word contains and whose response I can unhesitatingly rely on. Professor Mtuze could already analyse the tones when we met. I have attempted to train other informants but only with very partial success.

Nevertheless, without this reliance on Stanley Bentele, it would not have been possible for me to have produced the coverage of the data, partially shown in Appendix 3 and Appendix 4, and I would suggest that anyone attempting to study the tonology of a language of which he is not a native speaker would be well-advised to try to seek out and train such an informant if possible.

On the negative side, this has meant that this study is largely a study of words as pronounced in isolation and in slow speech. There is reason to believe that with the exception of the HH-to-FL rule words are little influenced by the context beyond the word and that unlike many other Bantu languages tones do not usually spread from one word to another.⁴

4. An apparent exception like *lá mádoda* 'these men', where the H-tone on *lá* has spread onto the first syllable of *madoda*, is not really an exception as if we apply criteria of wordhood such as interruptability (e.g. a speaker cannot pause while uttering a word, linguistic items can be inserted fairly freely between words but not between elements of a word) then *lá mádoda* is as much one word as *nalé* 'and this' or *nórhfâzi* 'and the woman', which are conventionally written as one word.

CHAPTER TWO

SURFACE TONOLOGY

2.1 General features of Xhosa as a tone language

2.1.1 Definition of a tone language

The question of what is a tone language has often been debated. Welmers (1973:79-80) discusses the question and comes up with the definition,¹ taken from an earlier publication (Welmers 1959): 'A tone language is a language in which both pitch phonemes and segmental phonemes enter into the composition of at least some morphemes.'

We can illustrate his definition by comparing Xhosa and English. In English we can have the utterances:

- (1) *three* with a falling intonation [↘] and
(2) *three* with a rising intonation [↗].

The first one could be a simple answer to a question, *How many do you want?* while the second could be part of a question, *How many do you want? Three?* In (1) and (2) there

1. This definition is adequate if one wishes to distinguish a stress language like English from a fully tonal language like Xhosa. It is not adequate if one wishes to distinguish a pitch-accent language like ancient Greek or Japanese from English or Xhosa or if one wishes to consider the various languages that seem to be on the border between tonal and non-tonal. See McCawley 1970 and 1978.

seem to be a common morpheme {θri:} which consists of vowels and consonants but not pitch and which has the meaning '3'. There seem to be two other morphemes² {↘} and {↗}, which consist solely of a falling and rising pitch, the first having the general meaning of 'statement' while the second has the meaning 'question'. In English the morphemes consist either solely of vowels and consonants, but not pitch, or else consist solely of pitch.

Let us now take the following exchanges in Xhosa.

- (3) *Ufúna ntóni?* 'What do you want?'
Ímzi. [ˈ ˈ ˌ] 'Homesteads.'
- (4) *Ufúna ntóni?* 'What do you want?'
Ímizl. [ˈ ˌ ˌ] 'Rushes.'

In (3) the morpheme {zi} with a low tone occurs, while in (4) the morpheme {zɪ} with a high tone occurs. The tones are as much a part of the morphemes as the vowels and consonants, and the specification of the features of these two morphemes contain reference to high or low pitch as well as to consonants and vowels, while in English the specification of non-intonational morphemes contains reference to features relating to vowels and consonants but not to features relating to pitch.

There will in addition be an intonation contour {statement} in the responses in (3) and (4), which will be roughly comparable to the statement intonation in (1) above.

2.1.2 Xhosa as a tone language

Xhosa is a tone language. There are many cases of words that are distinguished solely by tone, as is shown by the following table:

2. In describing these as morphemes I am following Welmers (1973:79), who says, 'Superimposed on entire phrases are intonational melodies, which themselves are morphemes with meanings, but which in themselves contain no consonants or vowels.'

Tone Contrasts

Lexical contrasts

Nouns:

íthanga 'pumpkin'
íthangá 'thigh'
í'thânga 'cattle-post'

úrhi 'homestead'
úrhi 'reed'

íkhala 'aloe'
íkhála 'collar'

Verbs:

úkúsinda 'smear floor with cow dung'
úkúsínda 'be beyond one's strength'
úkúsínda 'to escape'

Grammatical contrasts

íbéthê 'he struck'
íbéthé 'that he strike' (subjunctive)

íbéthile 'he struck' (indicative)
íbéthíle 'he having struck' (participial)

ángábéthwa 'he may be beaten'
ángabêthwa 'he should not be beaten'

Miscellaneous contrasts

bôna 'see'
boná 'them'

fyéza 'medicine'
fyéza 'he is coming'

abafúndi 'they do not study'
ábafúndi 'students'

Although such minimal pairs do exist and are not rare, the total number of lexical items distinguished by tone is not very large. A search of a dictionary of about 30,000 items produced about fifty minimal pairs and produced about an equal number of homonymous pairs of stems which are not distinguished even by tone. In verbs especially there are very few stems distinguished only by tone. Since the three way contrast among disyllabic verbs is only maintained in about a third of inflections, any triplets of disyllabic verb stems kept apart only by tone would fail to be distinguished in many of the inflections.

It is also true that Xhosa is written perfectly satisfactorily without tone marks. Only occasionally does the omission of tone marks lead to ambiguity.

In the Bible occasionally tone marks are used to disambiguate a passage and Bennie (1937:13) mentions that there are passages in the book of Job where the insertion of tone marks to distinguish second person singular from third person singular makes the passage very much more easily intelligible.³ The latest version of the New Testament has occasional tone marks (some of which are incorrect). Other than in the Bible or grammatical works, tone marks are very, very rarely used if at all. Nevertheless, Xhosa speakers seem to cope perfectly well with written texts without indication of tone, in spite of these occasional cases of ambiguity. According to Welmers (1973:118) mother-tongue speakers of some West African languages have great difficulty in reading a passage where tone-marks are omitted.

Modern Hebrew is normally written without indication of vowels but speakers of Modern Hebrew seem to be able to cope perfectly adequately without indication of vowels. One would not therefore argue that vowels in Modern Hebrew are not important or non-

3. He writes 'For the inflectional tone of verbs, I have been content to mark tone only where there was danger of confusion, or at least a lack of clearness. If similar parts of the verb follow in succession, it is usually sufficient to mark the first of the series; e.g., in a passage where all the predicates are in the 2nd pers. sing., only the first need be marked; but where there is transition to cl. 1 of the 3rd pers., this must be shown. In the book of Job are many transitions of this kind, backwards and forwards; and without the marking of tone it is often difficult to ascertain the meaning, and impossible to read the passage correctly without previous study.'

phonemic. Foreign learners of Hebrew find it very difficult to read such texts. Texts without indication of tone do not offer similar difficulties in understanding to learners of Xhosa, though they are likely to mispronounce the tones if they have to read the text aloud.

I have also had the experience of studying Igbo tone in the company of a Venda speaker in London. He was simply amazed at the role played by tone in Igbo compared to the role played by tone in Venda, and other South African Bantu languages with which he was familiar.

It is also possible for speakers of a West African language like Yoruba to carry on a conversation by whistling, (provided the topic is familiar to the participants). This is not possible in Xhosa though if a man is courting a girl it is possible for him to go outside her house and whistle the tones of her name and she will know he is calling her. It is also possible for a 'tsotsi' (minor gangster) to go into a bottle store and whistle his order.

The above observations, although of an unsystematic nature, seem to imply that the role of tone in Xhosa is different from that of tone in many West African languages and that it plays a lesser role. I do not, however, believe that tone plays a marginal role in Xhosa.

One reason for maintaining that tone plays more than a marginal role in Xhosa is that the rules of Xhosa tonology, particularly those relating to the inflectional morphology manifest a very high degree of complexity, as will be shown in the following sections of this dissertation. As an illustration, consider disyllabic noun prefixes. These are normally HL before a stem with a high tone on the first syllable and HH before a stem with a low tone on the first syllable. This applies to the vast majority of nouns. There seem to be a small minority (about one per cent of stems with two syllables) where although the first syllable of the stem is H, the prefix is HH. These nouns stems seem to be relatively constant from speaker to speaker and do not seem to be being regularized (see 4.4.1). If tone were merely a marginal feature, one would not expect this irregularity to be maintained.

I also think that speakers of Xhosa tend to rely on tone first when trying to identify morphemes. When I played a recording of the three words, *íthanga* ‘pumpkin,’ *íthangá* ‘thigh,’ *íthânga* ‘cattle-post’, to an informant to see whether he could tell them apart, he identified the third word as *íthâambo* ‘bone’, getting the tone right, but mishearing two consonants and one vowel. This seems to imply that for this speaker the tones were more important than vowels and consonants.

It might be instructive to compare the role or functional load of tone in Xhosa with that of stress in English. There are very few minimal pairs distinguished solely by stress in English. There are the well-known pairs like *súbject* and *subjéct* though there is actually a change in vowels between the two forms, i.e. [¹səbdʒɪkt] and [səbdʒekt]. Less familiar is a pair like *below* [bɪˈləʊ] and *billow* [ˈbɪləʊ].⁴ Getting the stress wrong on a word is unlikely to change it into another word.

It would be wrong, however, to consider that stress is unimportant in English. Misplaced stress by a foreigner speaking English seems to make it very difficult for mother-tongue speakers to understand. In fact, it has been argued that a foreigner learning English will be far better advised to concentrate on getting the stress patterns right (both of words and sentences) than on getting the vowels and consonants (in spite of the numerous minimal pairs that exist). If he fails to get a contrast between two consonants or vowels only occasionally will this lead to misunderstanding. But if he fails to get a reasonable approximation to the stress pattern of English, a native speaker of English may totally fail to understand him.

Partly this may be due to the fact that changing the stress will change the quality of the vowels. For instance, *Canada* [kænədə] becomes [kəˈnædə] if we place the stress on the second syllable. Partly this is due to the fact that getting the stress wrong affects the intonation contour and English speakers seem to pay attention to intonation contours when processing speech. Certainly, I have found that when someone, foreigner or native speaker, pronounces a name with a wrong stress, the effect is that instead of understanding him

4. I owe this minimal pair to A.C. Gimson.

immediately, there is a delay of one or two seconds before it dawns on me what the speaker has just said. Foreigners habitually misplacing stresses are forcing their listeners to work a great deal harder to decode what is being said to them.

It would seem that something similar is true with regard to tone in Xhosa. Although, unlike Yoruba, getting the tone wrong will be unlikely to result in a person saying something different from what was intended it will make it more difficult for the Xhosa listener to understand him. It seems that the Xhosa listener (and perhaps also speakers of other South African Bantu languages, where tone plays a similar role) use tone as an important recognition clue when processing speech. Even the literate speaker who has no difficulty in reading Xhosa with no indication of tone may still depend on tone when decoding spoken Xhosa. Hence, a speaker of Xhosa who hears a non-mother-tongue speaker speaking the language without the correct tones may have to learn a new strategy in order to process such speech and thus understand such a speaker.

2.1.3 Tone and intonation

It used to be thought that tone and intonation were exclusive categories - a language was either a tone language or an intonation language (see Samarin (1952:80), who disputes this view). We now know that this is not the case and there have been many studies in intonation in tone languages (e.g. Miller and Tench 1980 and 1982) and at least one in Xhosa (Theron 1991).

I have done little research on the intonation of Xhosa but I would point out that the main way of distinguishing yes/no questions from statements in Xhosa is by changing the intonation:

uyagula [- - -] 'You are ill' but

uyagula [^ ^ ^] 'Are you ill?'

The difference seems to be largely in the absence of downdrift and also a much reduced degree of penultimate lengthening (Lanham 1963:58).

I have done a little work with one informant where I explained that in English the fall-rise nuclear tone very often has a 'yes, but' meaning in English. He suggested that there was an equivalent intonation contour in Xhosa. I then recorded him saying the three following sentences with a normal neutral declarative intonation and with this yes-but intonation:

Ndibóna íthanga 'I see the pumpkin'

Ndibóna íthangá 'I see the thigh'

Ndibóna í'thânga 'I see the cattle-post'

Although to my ear the 'yes, but' intonation contour seemed to make the penultimate syllable a falling tone in each case, when I stopped the tape at random he was able to identify the word in each case. It was clear that although the 'yes, but' intonation contour placed some sort of falling glide on the penultimate syllable in each case, this falling glide did not eliminate the distinction between the tones.

We might picture the pitch contour in Xhosa as determined by two components, the tonal component and an intonation component, but although the two interact they do not eliminate each other - i.e. the listener can recover both the tones and the intonation from the gross acoustic contour.

2.2 Pitch-realisation rules for the tones of Xhosa

2.2.1. General remarks

As we have seen in the previous section, Xhosa is a tonal language as is shown by the existence of tonal minimal pairs. In this section I will outline the basic contrastive units of the tonal system of Xhosa as it appears in the surface.

Most Bantu languages are characterized by a two-tone system of high and low, for instance, Sotho (Doke and Mofokeng 1957:38), Shona (Odden 1981:5). Moreover they are what Welmers (1973:82) calls terraced level tone languages in contrast to discrete level tone languages. Essentially, each tone, according to Welmers, is not realised on a constant pitch. A succession of high tones will be realised on more or less the same relatively high pitch. For example, HHH will be realised as [˥˥˥]. If, however, a low tone occurs between two highs, the second high tone will be realised on a lower tone than the first. HLH for example will be realised as [˥ ˨ ˥]. Since this process can be repeated, a word with several high tones separated by low tones can have high tones realised on several different pitches. In some terraced level languages, low tones are all realised on the same relatively low pitch; in others, low tones tend to become lower as the high tones become lower. In discrete level languages all high tones are realised on roughly the same pitch and all low tones will be realised on the same pitch.⁵

Pike (1948:5) divided tone languages into two groups, those having contour systems, typically languages of South East and East Asia, and register systems, to which group the tone languages of Africa belong. I think this division is basically correct, and it would seem that languages like Chinese or Vietnamese have very different tonal systems from those of West or South Africa, and I would agree that Xhosa, in spite of the falling tone, has basically a register system. I do not believe, however, that the difference between high tone and low tone is simply one of relative pitch. A high tone is characterized by a level pitch with sustained intensity throughout the vowel. A low tone is characterized by a slightly falling pitch with the intensity falling away towards the end of the syllable. There is also a tendency for low syllables to be marked by breathy voice, though this might be a concomitant of low pitch. Because of these differences of pitch and intensity I believe it would be possible for

5. In addition, Welmers regards the occurrence of phonemic downstep (see 2.2.4) as necessary for a language to be regarded as a terraced level language. It is not clear to me why Welmers holds this view. Clearly if highs are all realised on the same pitch as they are in discrete level tone languages, the loss of a low tone should not produce downstep. But surely the major difference between the two types of languages is whether highs are all produced on the same pitch or whether the presence of a low lowers subsequent high tones, and that therefore the crucial factor is the occurrence of downdrift rather than downstep?

a speaker of Xhosa to recognize a high tone from a low tone on a syllable in isolation, although this might be difficult to test because of the low frequency of monosyllables. If we compare the forms *é'cáléni* 'on the side' [ˈ - - ˌ] with *émálni* 'in the money' [ˈ - - ˌ], the relative height of the second syllables in each word is very similar. They are kept apart in pronunciation by the slight fall in pitch and intensity in the *-ma-* which is absent in the *-cá-*.

Nevertheless I would not dispute that relative pitch usually plays an important role in distinguishing high tone from low tone and normally the major one.

2.2.2 Basic units

Basically Xhosa is a terraced level language. It has a high and a low tone, and also has phonemic downstep. High tones are realised on a lower pitch after each low tone as described in the previous paragraph. Low tones tend to become lower in tone as the high tones become lower, but not in such a marked fashion as the high tones.

However, at least on the surface, there is a third tone, in addition to the high and low tones, that is, a falling tone as is seen in *bôna* 'see'.

The tonal system of Xhosa thus involves four phonemic entities:

High Tone	H	ˈ
Falling Tone (or Fall)	F	ˆ
Low Tone ⁶	L	ˌ (or the syllable may be left without a mark)
Downstep	ˑ	ˑ

6. From this point on these will usually be abbreviated to H-tone, F-tone, and L-tone. Each tone has a basic realisation in pitch, which is then affected by the tones that precede and follow it and also by the accompanying consonants. If the intonation is varied, this will also have its effect on the way the tones are realised but this factor will be ignored in this account and an unmarked neutral statement intonation assumed throughout.

The basic pitch realisation of each tone is as follows:

The H-tone is realised by a high level pitch. [ˉ]

The F-tone is realised by a falling glide. [ˆ]

The L-tone is realised by a low level or slightly falling pitch.⁷ [ˉ] or [ˆ]

Downstep is manifested by its effects on the following tone. See 2.2.4. Briefly it may be described as an instruction to lower the pitch of a following tone.

2.2.3 Downdrift⁸

An uninterrupted sequence of two or more H-tones are all pronounced on the same pitch.

ámáthanga [ˉˉˆˉ] ‘pumpkins’

únómátsé [ˉˉˉˉ] ‘mongoose’

A F-tone after a H-tone begins on the same pitch as the H-tone.⁹

ámânzi [ˉˆˉ] ‘water’

7. A F-tone and a L-tone may both be realised as a falling glide. A native speaker, however, will always be able to tell the two glides apart. The distinction appears in part to be made by the F-tone having greater length than a L-tone.

8. What follows is largely a restatement of material in Lanham (1963), except that, on the basis of pitch measurements made with the aid of a spectrograph, I have described successive H-tones as being on the same pitch rather than as each being pronounced slightly higher than the preceding H-tone.

9. This follows from the previous sentence if we consider a F-tone to be close-knit cluster of a H-tone and a L-tone. In fact, in all the rules that follow, the rules applying to F-tones can be deduced by regarding the F-tone as being a H-tone followed by a L-tone on the same syllable. With regard to pitch-realisation rules and the occurrence of downstep, a F-tone behaves like a H-tone with regard to preceding syllables and like a L-tone with regard to following syllables.

If, however, two H-tones are separated by one or more L-tones, then the second H-tone is lower than the first.

<i>úkutyá</i>	[^ˉ ˋ-]	'food'
<i>úsikólupáti</i>	[^ˉ - - - -]	'tortoise'
<i>ámaséla</i>	[^ˉ - - -]	'thieves'
<i>íshishiní</i>	[^ˉ ˋ - -]	'factory'

A H-tone after a F-tone has a lower pitch than the beginning of the fall.

<i>ĩisénti</i>	[ˋ ^ˉ -]	'cents'
<i>wâtyá</i>	[ˋ ^ˉ -]	'he ate'

This is also true if a L-tone intervenes.

<i>ôomamá</i>	[ˋ - -]	'mothers'
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If a H-tone is followed by a F-tone but separated from it by one or more L-tones, then the falling glide of the F-tone begins at a lower pitch than the H-tone does.

<i>bálimê</i>	[^ˉ - -]	'they ploughed'
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Similarly if a F-tone is followed by another F-tone, either immediately or separated by one or more L-tones then the second F-tone begins at a lower point than the beginning point of the first F-tone.

<i>ôonyâna</i>	[ˋ ^ˉ -]	'sons'
<i>nâhlekísa</i>	[ˋ ^ˉ -]	'you caused to laugh'

2.2.4 Downstep¹⁰

We see from 2.2.3 that when a H-tone immediately follows another H-tone it will be as high as the first H-tone, but if it is separated from it by one or more L-tones then it will be lower than the first H-tone.

i.e. HH is realised by [ˉˉ]
 but HLH is realised by [ˉˉˉ]

However, we find cases where H-tones occur together, but where nevertheless the second H-tone is lower than the first.

tséla [ˉˉˉ] ‘thief’
 cf *tsénti* [ˉˉˉ] ‘cent’

There is even the minimal pair,

iCáwa [ˉˉˉ] ‘Sunday, church’
 and *iCáwa* [ˉˉˉ] ‘Port Alfred’.

We need some way of distinguishing these two cases as both are marked HHL but are realised by different pitch contours. The entity, **downstep**, indicated by ˘ or ˙, serves this purpose. As said before, downstep is an instruction to realise the following H-tone or F-tone on a lower pitch than the preceding tone, rather than on the same pitch.

i.e. HH is realised by [ˉˉ]
 but H˘H is realised by [ˉˉˉ]

So *tsénti* will remain *tsénti*
 but *tséla* will become *t˘séla*.

Similarly, *iCáwa* ‘Sunday, church’ remains *iCáwa*
 but *iCáwa* ‘Port Alfred’ will become *i˘Cáwa*.

10. The suggestion is sometimes made that instead of downstep, one should recognize a mid-tone. See Welmers 1973:82 for reasons why this suggestion will not work. In brief we would be forced to recognize several varieties of mid-tone in a structure like H˘H˘HL [ˉˉˉˉ].

Similarly, if a F-tone immediately follows a H-tone, it will commence on the same pitch as the H-tone, but if it is separated from it by one or more L-tones then it will commence on a lower pitch than the preceding H-tone.

i.e. HF is realised by [ˈ \]
 but HLF is realised by [ˈ - \]

But we also find cases where a F-tone immediately following on a H-tone nevertheless commences at a lower pitch than the H-tone.

There is the minimal pair,

ínêne [ˈ \ _] ‘gentleman’
 and *ínêne* [ˈ \ _] ‘truth’.

These likewise can be differentiated by the use of downstep, taking downstep to be an instruction to produce a F-tone after a H-tone starting on a lower pitch than the preceding H-tone.

i.e. HF is realised by [ˈ \]
 but H˦F is realised by [ˈ \]
 So *ínêne* ‘truth’ will remain *ínêne*
 but *ínêne* ‘gentleman’ will become *í˦nêne*.

It follows from the above rules that downstep can only occur between two H-tones or between a H-tone and a F-tone. It can never occur before or after a L-tone, nor can it occur at the beginning of a word, except within a phrase.

Historically, many cases of downstep have arisen where a L-toned syllable has fallen out between two H-tones or between a H-tone and a F-tone. *í˦séla* was originally **íliséla* with the pitch contour [ˈ - - \]. When the *-li-* fell away, the *-se-* was still pronounced on a lower pitch than the initial H-tone, instead of changing to a higher pitch bringing it about that there were now H-tones on successive syllables where the second was lower than the first. Depressors can also give rise to downstep as in *í˦dyókhwe* ‘yoke’, which, although it

belongs to the same class as *ísénti*, has downstep because of the presence of the depressor [ɟ]. See 4.2.2 and 4.2.3.

2.2.5 L-tones

As stated in 2.2.2 a L-tone is realised as a low level tone, or as a slightly falling glide. This slight fall is particularly evident at the end of a word or phrase.

ndiyalima [- - ~ -] ‘I am ploughing’.

A L-tone immediately following a H-tone is raised, particularly when it is preceded by a non-depressor (see 2.2.6) and becomes a falling glide, if the syllable is long enough.

íphiko [~ \ -] ‘wing’

úkutyá [~ \ -] ‘food’

This is particularly noticeable on the penultimate syllable. When it occurs further back in the word the glide may be barely discernible and the L-tone may appear as a raised level pitch slightly lower than the following H-tone. Just as when two H-tones are separated by one or more L-tones the second H-tone is lower than the first, so L-tones separated by H-tones tend to become lower as the H-tones become lower. (See examples of L-tones in 2.2.3.)

Although, as said before, Xhosa is basically a terraced level language as described by Welmers (see 2.2.1), the behaviour of L-tones is different from that described by him where L-tones are said always to be on the lowest pitch throughout the utterance.

2.2.6 Depressors¹¹

Certain consonants, known as depressors, have a marked lowering effect on following tones. Depressors are characterized by a combination of voice and a ‘noise’ component (plosion or friction) produced by the pulmonic airstream. The following is the complete list of

11. According to Rycroft (1980b:1), Beach (1924) was the first to give ‘a scholarly account of consonantal tone-lowering in Nguni,’ and the term **depressor** was first introduced by Lanham (1958). See also Welmers (1973:94ff). For Shona see Fivaz (1970).

depressors: *bh, d, dy, j, g, gc, gq, gx, v, z, gr, dl, mh, nh, nyh, ngc, ngq, ngx, r, h* ([ʔ] as in *t'háshe* 'horse' not [h]¹² as in *úhíli* 'mythical river-dwarf'). The remaining consonants are non-depressors.

A depressor before a H-tone or a F-tone depresses the first part of the tone and so the H-tone is realised as a rising glide and the F-tone as a rising-falling glide.

t'háshe [ˀ ˀ ˀ] 'horse' *dywída* [ˀ ˀ ˀ] 'seize greedily'

A L-tone in a syllable commencing with a depressor and preceded by a H-tone is realised on a low almost level pitch rather than as a falling glide, i.e. the depressor nullifies the effect of 2.2.5.

índlebé [ˀ ˀ ˀ] 'ear' cf *úkutyá* [ˀ ˀ ˀ] 'food'
ídada [ˀ ˀ ˀ] 'duck' cf *tphiko* [ˀ ˀ ˀ] 'wing'

2.3 X-sequences and indication of variation

In many cases in Xhosa, there are sequences of H-tones followed by a L-tone, where all but the last H-tone may be replaced by L-tone. For instance, *líníbéthisa* 'he hits you' may also be *linibéthisa*. Not all sequences are subject to such lowering. *líníbéthile* 'he hit you' can only be HHHLL and cannot be LLHLL i.e. **linibéthile*.

Sequences of syllables which can be either all H-tones or all L-tone have been marked as X and referred to as X-sequences. So *linibethisa* can be said to have the tone pattern XXHLL and be marked as *líníbéthisa*.

X-sequences have relationship with depressors in that a depressor between two H-tones usually gives rise to downstep but a depressor between two Xs or between an X and a H-tone usually does not. For instance, *l'hámBILE* where the first syllable have a H-tone has a downstep while *líníbéthisa* where the first syllable can have a H-tone or a L-tone does not have a downstep.

12. The voiceless [h] is extremely rare in Xhosa. *úhíli* is about the only common word in which it occurs.

I have described X-sequences as being all high or all low, and this is the more usual case but it is possible for a sequence to become partly low and partly high provided that when we convert Xs to H-tones or L-tones, we start from the left and choose either H-tones or L-tones but that once we have chosen to make an X high, all subsequent Xs must also be H-tones, that is, given the sequence XXXHLL, this is most likely to be HHHHLL or LLLHLL. The following are also possible:

LHHHLL

LLHHLL

*HLHHLL is not, however, possible.

For example, *ǀkǀshǀkǀúmisa* 'to shake' is most likely to be *ǀkǀshǀkǀúmisa* or *ukushúkúmisa*. It could also be pronounced *ukǀshǀkǀúmisa* or *ukushúkúmisa*

It cannot, however, be pronounced **ǀkǀshǀkǀúmisa*.

If such a sequence is partly high and partly low, the change from low to high is most likely to take place at the beginning of the stem.

Where a depressor occurs in an X-sequence or adjacent to it, an X is more likely to become a L-tone. For instance, *ǀsǀlo* 'animal' can be either HHL or LHL but is more likely, at least in Rharhabe Xhosa, to be HHL. *ǀzǀlo* 'animals', where [z] unlike [s] is a depressor, is likely to be LHL and unlikely, if ever, to be HHL.

This topic is further discussed in Chapters 4, 5 and 10.

2.4 Tone patterns and pitch contours

The sequence of tonemic entities (i.e. tonemes and downstep) that occur on a word or formative will be referred to as the tone pattern of the word or formative. For instance, *ǀkutyá* 'food' has the tone pattern HLH and *tǀthambo* 'bone' has the tone pattern H*FL.

The symbol X which occurs in X-sequences will also be regarded for this purpose only as a quasi-tonemic entity¹³ and so *ámátikiti* 'tickets' can be said to have two tone patterns LLHLL or HHHLL or can be said to have the tone pattern XXHLL.

Each utterance in Xhosa is characterized by a pitch contour which will be determined by the surface tones, the intonation pattern and the effect of the segmental phones (mainly the presence or absence of depressor consonants). This contour can be displayed by a series of lines between square brackets. Since this thesis is not concerned with intonation and is mainly concerned with words pronounced in isolation, the term pitch contour applied to an isolated word will refer to the pitch contour when that word is pronounced on its own with an unmarked neutral statement intonation.

For instance, *úkutyá* 'food' has the pitch contour [^ˉ \ -] and *t̂thâmbó* has the pitch contour [^ˉ \ -].

13. In fact an X is really a type of morphophonemic symbol and does not represent a separate phoneme.

CHAPTER THREE

REVIEW OF LITERATURE

This is a review of previous work on Xhosa, and to a lesser extent Zulu, tone.

According to Doke (1954:16), tone was first recorded by John Bennie in his unpublished Xhosa grammar of 1832 who wrote:

The rising or the falling inflexion of the accent gives to words, which correspond in letters, a different signification: *bona*, see, they; *umnyama*, dark, the rainbow; *tiya*, snare, hate. (as quoted by Doke)

The earliest published reference to tone in Xhosa is, according to Doke (*ibid.*), by Appleyard (1850:95-6), who writes:

67. The sound of every word will also be more or less influenced, by the *general tone* of the full proposition or period in which it forms a part. In reference to this oratorical accent, it may be sufficient to observe, that in Kafir oratory the voice often commences at the highest pitch, and gradually descends in a kind of revolving manner, to the lowest. Where this is the case, therefore, the word will be enunciated in a higher or lower key, according to its relative position in the falling inflection. In other circumstances, nothing appears so peculiar as to call for remark.

68. In addition to the accent, some words are further distinguished by a *peculiar intonation* given to them in the act of enunciation. This, however, is only observable in those words which are similar in form, but not in sense. Thus *itanga*, *hlanza*, *unkombe*, etc, express two or three different ideas according to the particular mode of their pronunciation.

According to Doke (*ibid.*), ‘after Appleyard, tone passed unnoticed in Xhosa until Godfrey and McLaren mentioned it in 1915 and 1917 respectively.’

This is not true as I have been able to trace at least four references to it during this period.

The first is by Bleek (1862:80), who writes:

372. Such cases of intonation used for the distinction of homophonous words occur also in other Bâ-ntu languages, - for example, in Kafir and Zulu. Thus Kafir *intânga* 9. is ‘the house of the second wife,’ etc, and *intânga* 9. ‘seed of pumpkin,’ *úmkómbe* 3. rhinoceros, and *umkômbe* 3. ship. (Appleyard §68, Colenso §28.)

The second is by Endemann (1876:25), who in his grammar of Sotho, having said that ‘die drei Töne, die das Sotho hat, scheinen überhaupt den Negersprachen eigen zu sein; wenigstens habe ich sie auch im Kafir beobachtet und Dr Lepsius hat sie als im *Ibo*, *Yoruba*, *Eve*, *Akra* vorhanden notiert,¹’ adds a footnote:

Es ist merkwürdig, dass man bisher z. B. die sonst unmögliche Unterscheidung der 2. u. 3. Pers. Sing. (Personalcl.) noch nicht entdeckt hatte, da eine Untersuchung doch so nahe lag, worin *u ya bala* (2.Pers.) und *u ya bala* (3. Pers.) verschieden seien. (Das *u* der 3. Pers. hat nämlich hohen Ton.)²

1. ‘The three tones, which Sotho has, seem to be generally features of Black languages; at least I have also observed them in Xhosa and Dr Lepsius has noted that they also occur in *Ibo*, *Yoruba*, *Ewe* and *Akan*.’

2. ‘It is noteworthy that up to now, for example, the distinction that is otherwise not made between 2nd and 3rd person singular (in the personal classes) has not been discovered seeing that an investigation was so clearly required into what respect *u ya bala* (2nd person) and *u ya bala* are different. (That is that the *u* of the 3rd person has a high tone.)’

The third is by McLaren (1886:56), who after a table 'Pronominal Subjects' (i.e. subject concords) giving the second person concord as *ù* and the third person class 1 concord as *ú*, states:

U in the third person is distinguished from *ù* in the second person, by having a rising inflection of the voice in pronunciation.

Finally, Meinhof in his *Hottentottische Laute und Lehnworte im Kafir* (1905:731) makes the following reference to tone in Xhosa:

Die vorliegende Untersuchung bedarf aber später noch einer eingehenden Nachprüfung, da die Töne im Bantu bisher nicht gründlich festgestellt sind und wir über die Töne der Kaffersprachen fast gar nichts wissen. Für die Bedeutung eines Hottentottenwortes ist die Tonhöhe noch wichtiger als für die Bedeutung eines Bantuwortes. Die Gleichstellung von Worten, die wir hier also vornehmen, muss nach Feststellung der Töne noch geprüft werden und wird da ihre Bestätigung oder Berichtigung finden.³

In 1915, Godfrey in his preface to the second edition of Kropf's dictionary (1915:vi) says, 'Mr W G Bennie has rendered untiring assistance; he it was who revealed to me the secret of tone in the Kafir language, a fact which has still to be reckoned with and for the expression of which some printing device has yet to be invented.'

In view of McLaren's later treatment of what we now know to be distinctions of tone as matters of accent and length, it is doubtful whether he really knew what he was referring to in the passage quoted above, but there seems little doubt that Appleyard and Bleek knew what they were dealing with.

3. 'The present investigation will later need a thorough check since the tones of Bantu have not up to now been thoroughly established and we know practically nothing about the tones of the Nguni languages. For the meaning of a Hottentot word the tone is even more important than for the meaning of a Bantu word. The identification of words that we here accept will have to be rechecked once the tones have been ascertained and either be confirmed or corrected.'

Meinhof's and Godfrey's references are interesting in that they show an awareness of the importance of tone, but no description of it. Godfrey in effect says, 'Tone is very important, but we don't know how to describe it.'

Meinhof equally says that tone is important and that the final identification of words in Xhosa with their Hottentot source will require that tone be taken into account but at the moment we know little about Bantu tone and practically nothing about the tone of the Nguni languages. Now Meinhof was able to handle tone in Nama, as he marks the tone of all the Nama words he cites. Why did he not do so in Bantu languages? In the case of the above cited work he was largely working from Kropf's dictionary and he may not have had access to an informant, but in his work on other Bantu languages, tone is mentioned but not treated in detail. It should be noted that, while in this period some scholars recognized the existence of tone in Nguni but were unable to describe it in detail, 1875 saw Christaller's work on Akan with detailed reference to tone and 1876 Endemann's work on Sotho, in which he not only draws attention to the existence of tone in Sotho but also marks tone to some extent in his examples.

It is interesting to consider McLaren, who in the first edition of his grammar (1906) does not refer to tone, in spite of having referred to it in his earlier work (1886). He, does, however, have a section devoted to accent (page 11). In the main he is referring to the lengthening of the penultimate syllable of the word. However, he lists certain words which are exceptions to this rule. Most of these exceptions seem to be cases where the tones of the word would make the penultimate lengthening less apparent to an English observer and make him perceive a stress on another syllable. For instance, the examples he lists of words with the accent on the last syllable are all of words with a high or falling tone on that syllable, e.g. *flizwí* 'voice' and *báfikê* 'they arrived', which he gives as *ili-zwí* and *bafiké*. In his description of the grammatical forms he points out forms which are differentiated by tone alone though he describes the difference as being one of accent or vowel length. Examples are:

'The pronoun of Class 1 singular of the third person is distinguished from the pronoun of the second person singular by being strongly accented.' (page 39)⁴

'The corresponding plural form is *izim*, which, however, is contracted to *im* ...' (page 19). An example is given of *im-vana* 'a lamb' with a plural *im-vana* 'lambs'. (cf 4.4.2)

'They [the participles] differ from the tenses in accent, the accented syllable in the participles being longer.' (page 85)⁵

'The past tense of the subjunctive mood is the same in spelling as the past indefinite tense of the indicative mood, but differs from it in the length of the auxiliary vowel; e.g. *ndāfika ndāteta*, 'I arrived and spoke'.' (p 94) (See Appendix 3, section 6.1, paradigms 13 and 19.)

From the above examples it will be clear that although McLaren did not at this date realise the true nature of the feature with which he was dealing, and confused tone, vowel length and the lengthening of the penultimate syllable, he was able to point out those forms distinguished by tone alone, although he described the distinction as one of length or accent.

McLaren (1915:x) devotes two paragraphs to tone in the introduction to his Kafir-English dictionary. He recognizes a 'higher or rising tone' indicated by an acute accent (´) and 'a lower or falling tone' indicated by a grave accent (`). The few examples do, with one exception (which refers to the intonational difference between statement and question) refer to forms distinguished by tone but the tone markings are incomplete and in some cases wrong. For instance, *ndibónê yoná* 'I have seen it' and *ndiboné yoná* 'that I see it' are said to be *ndiboné yona* and *ndibonè yona*.

The first attempt to produce some analysis of Xhosa tone, as distinct from citing a couple of words or inflections solely distinguished by tone, was a short article by Nauhaus (1924).

4. Compare the correct description given in his 1886 work cited above.

5. McLaren is referring to the subject concords of the participial mood of verbs. These in the present-day language are either high or low and therefore should not be longer than in the indicative. In the participial mood of copulatives, the subject concord does have a falling tone, which is longer than a high or low tone.

This does not purport to be a scholarly article and he restricts himself to describing the tones of the last two syllables of the word (with the implication that the tones of other syllables can be predicted from these). Nevertheless, he does distinguish the five tonal classes of disyllabic noun stems, shows an awareness of regular changes when stems are inflected (with examples of exceptions to these rules) and also shows an awareness of the relationship between tone in Xhosa and tone in other Bantu languages. He also points out the desirability of indicating tone in dictionaries.

The next article to refer to Xhosa tone was by Beach (1924). This is a plea for a science of tonetics but it includes a good account of the three tonemes of Xhosa and their principal members. He also recognized the importance of depressor consonants, though he did not call them such. In addition, Beach described allomorphic variation in the tones of certain prefixes. Nothing comparable was produced in this field until Lanham's work about thirty-five years later.

The 1931 orthography (Doke 1954:16) introduced marks for tone-marking: ^ˈ for high tone, _ˌ for low tone and ^ˈ_ˌ for falling tone, as in *b^ˈeth_ˌa* for *bétha* 'hit', and *b^ˈo_ˌn_ˈa* 'see' for *bôna* for 'see'. It was recommended that they be used to mark nouns distinguished only by tone and where confusion was likely to arise (Bennie 1937:10ff). Such tone marks, however, were only used sporadically, mainly in the Bible, where according to Bennie (1937:13), they greatly increase the comprehensibility of certain passages.

McLaren's dictionary (1936) marks the tones of words distinguished only by tone (and sometimes of homonyms to show that they are not distinguished even by tone) and Bennie (1939) makes occasional references to tone of some interest.

The next publication that makes really detailed reference to tone is by Tucker (1949). This is a proposal for a common orthography for the Sotho and Nguni languages, but includes a reasonably complete account of what he calls 'the Beach system' of tone marking (he uses Beach symbols for the tonemes, ^ˈ for high tone, ^ˈ_ˌ for falling, leaving the low tone

unmarked). As far as Xhosa is concerned, however, it is little more than a restatement of Beach 1924.

Westphal (1951) produces a long list of disyllabic verb stems with the tone pattern in sentence final position indicated. He shows that they fall into three tonal classes and that the HL pattern corresponds to stems with a long vowel in Central Bantu languages. This represents the first work to produce a list of any length of words with the tones marked and also the first to make any historical-comparative statements.

Lanham published two articles on the tonemes of Xhosa (1958, 1963), the latter being an updating of the former and being based on a chapter in his unpublished PhD thesis on Nguni phonology (Lanham:1960). These give a very detailed exemplification of the Xhosa tonemes and also give examples of the tonal morphology of disyllabic noun and verb stems. The latter differs from the first by its greater attempt at structuralist rigour and marks a significant step forward in postulating unpredictable downstep as a phonemic entity. In the latter the falling tone is analysed as a high-low cluster.

Jordan (1966) does not set out to write a theoretical treatise but rather a course introduction to the language. Apart from an introduction, he marks the tone in most vocabularies and in the vocabulary at the end of the book. He marks the tone for some grammatical forms e.g. the locative, but does not present the rules for the most common verb forms e.g. present indicative. His method of indicating tone is clumsy and the phonemicization of tones is inadequate. He recognizes (1966:17) three 'tone families' : High, High Falling and Low. He points out that in a sequence HLHLHL each H is lower in pitch than the preceding H, and similarly each L is lower than a preceding L and that these could be marked H-L-H₁-L₁-H₂-L₂-H₃-L₃. All the low tones are marked ₁, but of the high tones, only those that should bear the symbol H are marked ¹, and those that should be marked by H₁, or H₂ and so on are left unmarked. Although this is not specifically stated, he allows more than one H to occur in the same word and this allows him to differentiate HHL from H¹HL as H-H-L from H-H₁-L, e.g. *'inqw¹el₁o* i.e. HHL but *injan a* i.e. H¹HL. He does not have any provision for

distinguishing HF from H'F. It is, however, just possible that this distinction does not occur in his idiolect.

Westphal, Notshweleka and Tindleni (1967) give a very thorough account of the various noun types that occur in Xhosa. They also mention the effect of the antepenultimate rule.

Louw (1968) offers a great number of rules for Xhosa tone and his subsequent papers are also of interest (1969, 1971).

Riordan *et al.* 1969 is again a practical work where all the Xhosa is tone-marked, ´, ` , ^ , indicating high tone, low tone and falling tone. Although unfortunately marred by misprints, this is a mine of data, though few rules are given and these are often wrong. The tone marks are, except for the misprints, reliable and it is generally possible, in spite of the misprints, to deduce the tone pattern of many forms by examining and comparing the sentences or paradigms in the book. One point that should be mentioned is that my work, Davey's thesis (1973), and Riordan's work (1969) are all based mainly on the speech of one informant, Stanley Bentele. Fortunately, his tones do not appear to be idiosyncratic in any way.

Davey (1973) gives a thorough account of the tonal inflections of disyllabic verb stems but except for infinitives does not deal with longer forms.

Pahl (1977 and 1978a) gives an account of certain forms. His work is mainly important for the wealth of accurate observation of dialectal detail.

Claughton 1983 is mainly a descriptive account of the major inflections of Xhosa. Much of it has been incorporated into Appendix 3.

Goldsmith, Peterson and Drogo (1989) attempt to interpret certain paradigms in Claughton 1983 in terms of metrical accent. Their work is discussed in Chapter 10.

Parallel to work in Xhosa, work has been done on Zulu. Although tone was first recognized by Colenso before 1860,⁶ it was first studied in any detail by Doke (1926). Unfortunately Doke analysed the tonal system in terms of nine tones and for some reason was unable to group these into the three tones that underlay them. The precise reason is unclear. He was certainly aware of the possibility of grouping tones into tonemes and for Sotho he writes a high and low tone. Was it because of a failure to recognize depression as a conditioning factor or was it because the same tone functions sometimes as a member of the high tone and sometimes as member of the low tone and his theory did not permit phonemic overlapping?

This cumbersome system inhibited work being done on the tonal grammar of Zulu, although Doke and Vilakazi (1948) mark the tones of all words in their dictionary.

Subsequent work by Rycroft (1963 and 1978) and Cope (1956, 1959 and 1966) has increased our knowledge of Zulu tone, though in the case of Cope, this is made rather difficult of access by an idiosyncratic theoretical approach based on that of Malcolm Guthrie.

Khumalo 1981 is an attempt to produce a comprehensive generative treatment of Zulu tone. Although only partly successful, it is the first attempt at a generative treatment of tone in a Nguni language and does succeed in reducing the tonology to a limited set of rules.

Khumalo 1987 is a comprehensive study of Zulu phonology in a framework of autosegmental and lexical phonology. The section on tone is largely devoted to the verbal forms.

Rycroft (1979) and Davey (1981) have produced accounts of Swati tonology and Rycroft has also produced an account of tone in Zimbabwean Ndebele (1983) and an attempt to relate the tonology of Nguni to common Bantu (1980a).

6. According to Rycroft (1978:322) in his *First Steps in Zulu* published in Pietermaritzburg in 1859, although Rycroft makes this claim on the basis of an examination of the second edition (Colenso: 1871), not having been able to find a copy of the first edition (Rycroft 1980b:1).

CHAPTER FOUR

NOUNS

This chapter is a brief sketch of the major features of the tones of Xhosa nouns, with the aim of showing the most salient characteristics of their tonology. The material will be presented in such a way as to allow the main general rules of Xhosa tone to emerge.

4.1 Disyllabic prefixes

Consider the following nouns with a disyllabic prefix, shown here in the form that occurs when the nouns are used in isolation or finally in a sentence after a verb in the positive as in:

(1) *Ndibóna úkutyá.* 'I see food.'

Table [1]

ílí-tye 'stone'	úku-tyá 'food'
ímí-nwe 'fingers'	úm-thí 'tree'
ámá-langa 'suns'	áma-séla 'thieves'
ámá-hobé 'doves'	áma-gâma 'names'

Examination of the above forms shows that there are two tone patterns for disyllabic prefixes: HH and HL and that the tone-pattern HH appears to occur if the first syllable of the stem is L and HL if the first syllable of the stem is H or F.

4.1.1 The prefix rule

We might suggest the following rule:¹

The Prefix Rule: A disyllabic noun-prefix has the tone pattern HH if the first syllable of the stem is L but HL if the first syllable of the stem is H or F.

4.1.2 The prefix-spread rule

If we consider additional forms a different formulation of the rule suggests itself.

A noun prefix consists of 2 parts - an initial vowel (sometimes called a preprefix) and a basic prefix. In the *áma-* of *ámaséla* 'thieves' the *á-* is the initial vowel while the *-ma-* is the basic prefix. Nouns can occur in certain syntactic contexts without the initial vowel, for example, after negatives.² Compare for instance:

(2) *Ndifúna ímithí.* 'I want trees.' but

(3) *Andifúni mithí.* 'I don't want trees.'

Let us now consider the forms of the nouns in Table 1 when the initial vowel is not present. These are shown in Table 2.

Table [2]

li-tye	ku-tyá
mi-nwe	ìn-thí
ma-langa	ma-séla
ma-hobé	ma-gâma

1. This is essentially the formulation of Davey (1973:18): 'The initial tone of the macro-prefix is high and the tone on the second syllabic exhibits polarity with the inherent tone of the following syllable.'

2. One very important use of the noun without the initial vowel is in vocatives, as in *Yizáni, madoda* 'Come, men.', where *madoda* is related to *ámádoda*.

These forms suggest an alternative formulation of the prefix rule which I will call the **prefix-spread rule**. While in table 1 the initial vowel always has a H-tone, and the basic prefix is sometimes H and sometimes L, in Table 2, where the initial vowel is absent, the basic prefix always has a L-tone.

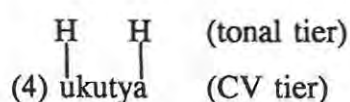
These facts suggest that rather than regarding the disyllabic prefix as having two tone patterns it might be better to regard the prefix as having a H-tone on the initial vowel and a L-tone on the basic prefix and then to postulate a rule which spreads the H-tone onto the basic prefix if the first syllable of the stem is L.

Note how we are now setting up underlying and surface forms of the prefix and then a rule linking the two. The new version of the prefix rule which we will now call the prefix-spread rule will be as follows:

The Prefix-spread Rule: The H-tone on the initial vowel spreads onto the basic prefix if the first syllable of the stem is L. e.g. *flitye* becomes *flítýe*.

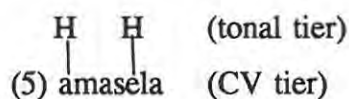
4.1.3 Autosegmental interpretation

We might then ask whether the one H-tone now becomes two H-tones. Autosegmental phonology suggests an alternative way of handling this phenomenon.³ If we represent the H's as separate entities on a tonal tier linked by association lines to the vowels on a segmental tier we could represent *úkutyá* as



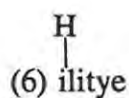
3. For a brief general introduction to autosegmental phonology see van der Hulst and Smith 1982. For a more detailed account see Goldsmith 1990.

and *ámaséla* as

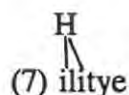


Vowels that on the surface have a L-tone have no representation on the tonal tier and therefore are in some sense underlyingly toneless. We will see later that there is a L-tone default rule that applies at a certain point to all vowels which are not attached to a H-tone to give these syllables a L-tone on the tonal tier.⁴

Underlyingly *íltíye* would be

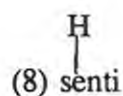


The effect of the prefix-spread rule would be to produce



Notice how this representation shows that the H has spread but that although the first two syllables are shown as H there is in some sense only one H-tone present.

Consider now a form like *ísénti* 'cent' belonging to class 9. The form without an initial vowel is *sénti*, so we will postulate that the underlying form of the morpheme *sénti* is:



4. We will continue to refer informally to these toneless syllables as L-toned. See 10.4.1.

We have seen that the initial vowel has a H-tone so we will represent *áma-* in *ámaséla* as

(9) $\begin{array}{c} \text{H} \\ | \\ \text{ama} \end{array}$

Since the initial vowel seems always to have an underlying H-tone it seems reasonable to suppose that the *í-* in *ísénti*⁵ where the basic prefix has disappeared and only the initial vowel remains should also have a H-tone and be represented autosegmentally as:

(10) $\begin{array}{c} \text{H} \\ | \\ \text{i} \end{array}$

In this case the underlying representation and the surface representation of *ísénti* can both be represented as

(11) $\begin{array}{c} \text{HH} \\ | \quad | \\ \text{isenti}^6 \end{array}$

Note now how although *ísénti* and *ílitye* have identical tone patterns and more or less identical pitch contours, namely [$\overset{\sim}{-}$ \sim \sim], the autosegmental representations are different being

(12) $\begin{array}{c} \text{H} \\ \diagdown \quad \diagup \\ \text{ilitye} \end{array}$

and

(13) $\begin{array}{c} \text{HH} \\ | \quad | \\ \text{isenti} \end{array}$

5. Even in those class 9 stems where the basic prefix is present as in *íntêtho* 'speech' from *thêtha* 'speak', the nasal is non-syllabic and consequently does not acquire a L-tone.

6. There is a slight difference in that the surface representation would have L-tones added.

It may seem strange that two forms that have the same pitch contour and the same tone pattern (HHL), should have different surface autosegmental representations. We shall see that this difference in autosegmental representation can have important effects when we apply other rules. Also notice that the above representation of *ísénti* is a violation of the obligatory contour principle (OCP), first put forward by Leben (1973), which would force (13) to become

(14) $\begin{array}{c} \text{H} \\ \diagdown \\ \text{ísenti} \end{array}$

since the obligatory contour principle states that two similar tones cannot occur adjacent to each other.

4.1.4 The antepenultimate rule

An additional reason for regarding the initial vowel as H and the basic prefix as L can be shown if we take forms like

(15) *ámátkiti* ‘tickets’

(16) *ísíphósiso* ‘mistake’

and compare the corresponding forms without the initial vowel

(17) *matikiti*

(18) *siphosiso*

we see that when the initial vowel does not occur the rest of the word contains only L-tones. If we assume that the underlying form of the stem of *ámátkiti* is *tikiti* then we can set up the underlying form

(19) $\begin{array}{c} \text{H} \\ | \\ \text{a-ma-tikiti} \end{array}$

The application of the prefix-spread rule will produce:

(20) $\begin{array}{c} \text{H} \\ | \quad \diagdown \\ \text{amatikiti} \end{array}$

In order to explain the spread of the H-tone to *-ti-* we need to invoke another spreading rule.

Let us take a verb like *úkúphosa* 'to miss'. Forms such as *ndiyaphosa* 'I miss' and *kuphosa* 'to miss' lead us to make the assumption that the stem is *phosa*' without any H-tones.

If we compare *ndiyaphosa* 'I miss' with *báyáphosa* 'they miss', we see that the H-tone on *bá-* has spread up to the antepenultimate syllable. If we further take forms with a verbal extension *-isa*, e.g. *kuphosisa* 'to make a mistake' or *ndiyaphosisa* 'I make a mistake', and then compare this with *báyáphosisa* 'they make a mistake' we can formulate a rule, which we will call the antepenultimate rule:

The Antepenultimate Rule: A H-tone more than three syllables from the end of a word becomes linked to all the vowels to the right up to and including the third vowel from the end provided none of the vowels to the right of the H-tone are linked to a H-tone.

Forms like *ámáphakathí* 'councillors' or *báphosisê* 'they threw away' show how the H-tone does not spread if there is a H-tone to the right of the first H-tone.⁸

The application of the rule to an underlying

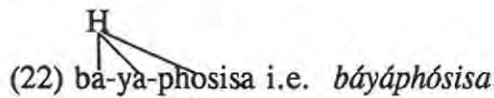
(21) $\begin{array}{c} \text{H} \\ | \\ \text{ba-ya-phos-is-a} \end{array}$

7. The imperative *phosá* does not show the underlying tones.

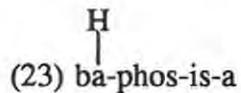
8. This assumes that the final vowel of *báphosisê* is at some stage of the

derivation something like $\begin{array}{c} \text{HL} \\ \vee \\ \text{ê} \end{array}$.

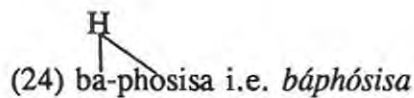
will produce the surface form



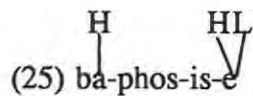
The application of the rule to an underlying



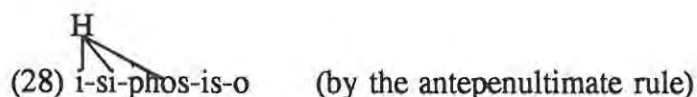
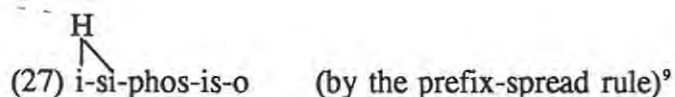
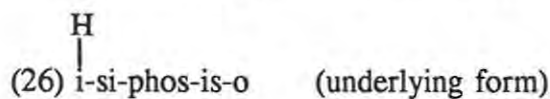
will produce the surface form



On the other hand the rule does not apply to



If we now take the noun, *tsíphósiso* ‘mistake’ with the form without the initial vowel, *síphósiso* derived from *-phósisa* and ultimately from *-phosa*, it seems reasonable to postulate the following underlying form and derivation:



9. I am assuming that the rules are ordered and that the prefix-spread rule occurs before the antepenultimate rule. It is possible that the reverse order is the case and then the antepenultimate rule would apply to the underlying form to produce the surface form. I do not have any arguments at present for preferring the first ordering of the rules.

A similar derivation will apply to underlying $\overset{\text{H}}{\text{a}}\text{-ma-tikiti}$ to produce *ámátíkíti*.

4.1.5 Prefix-spread and antepenultimate rules compared

The forms *ámátíkíti* (cf *matíkíti*) and *ámáphakathí* (cf *maphakathí*) show the difference in the application of the antepenultimate rule and the prefix-spread rule. In *ámátíkíti* from

(29) $\overset{\text{H}}{\text{a}}\text{matíkíti}$

the prefix-spread rule spreads the H-tone to *-ma-* and the antepenultimate rule spreads it to *-ti-* to give a surface form¹⁰

(30) $\overset{\text{H}}{\text{a}}\text{mátíkíti}$.

In *ámáphakathí* from underlying

(31) $\overset{\text{H}}{\text{a}}\text{-ma-phakathí}$

the prefix-spread rule spreads the H-tone to the *-ma-* but the H-tone cannot spread onto the stem through the antepenultimate rule because of the H-tone on the final syllable. The surface structure will therefore be

(32) $\overset{\text{H}}{\text{a}}\text{-má-phakathí}$

10. We will see later that the L-default rule applies to add L-tones to the vowels not linked to a H-tone. Similarly with *ámáphakathí* below.

We therefore have an additional reason for assuming that the initial vowel has an underlying H-tone, and that the basic prefix is underlyingly L, and that the surface forms with a H-tone on the basic prefix are always produced by a rightward-spreading rule and have set up two such rules, namely, the prefix-spread rule and the antepenultimate rule, the latter being a powerful rule applying very generally in the language.

Note that an attempt to regard *ísphósiso* and *ámátikiti* as showing the basic tones and a form like *matikiti* as being produced by some form of lowering will result in a more complex and less revealing description.

4.2 Monosyllabic prefixes and downstep

4.2.1 Monosyllabic prefixes

We saw above that a noun like *ísénti* [ˈ́-̀] seems to have a prefix which has a simple H-tone. We now turn to class 5 nouns like *ʔséla* ‘thief’ or *ʔháshe*¹¹ where the prefix *ʔ-* seems to be derived from an underlying *ʔ-li-*, which occurs on the surface with monosyllabic stems as in *ʔlitye* ‘stone’, *ʔlizwí* ‘voice’.

ʔséla has a pitch contour [ˈ́-̀]. We see that, although it appears to have H-tones on the first two syllables, the second H is on a lower pitch than the first, unlike *ísénti* where the first two syllables are on the same pitch. We cannot simply mark both as HHL since the pitch contours are different. From a purely descriptive point of view we can solve the problem as we did in 2.2.4 by postulating an element **downstep**, represented by ˆ. This is an instruction to produce a following H (or F) on a lower pitch rather than on the same pitch as the preceding H.

We have suggested that the underlying form of *ʔséla* is *ʔliséla*, and historically *ʔséla* is derived from an older form **ʔliséla*.

11. ‘Jllehasche - das Pferd.’ occurs in a list of Xhosa words compiled by Franz von Winkelmann who visited the Eastern Cape in 1788-1789 (Nienaber 1960:162). This shows that *ʔháshe* was pronounced *ʔliháshe* at the end of the eighteenth century.

At some stage the *-li-* is dropped in stems of more than one syllable. In historical terms we can see this as being brought about in the following fashion. In order to achieve clarity I append the forms for *íséti* for comparison.

The original forms were

(33) **líséla* [ˈ- - ˌ] and *íséti*¹² [ˈ- - ˌ].

A rule deleting the *-li-* then applied. At this stage two developments in the language were possible: either *íséla* could have been pronounced as [ˈ- - ˌ] identical with *íséti* or it could have continued to be pronounced with *-se-* on a lower pitch than the *í-*. Had *íséla* been pronounced like *íséti* downstep would not have arisen and *íséla* and *íséti* would both have had the same tone pattern (and pitch contour). In fact *í'séla* was pronounced with the lower pitch as if the L-tone was still present. See 4.4.2 for an additional possibility.

At this stage the difference in pitch became significant and requires the postulation, at least on the surface, of a quasi-phonemic junctural entity, **downstep**, in order to indicate the difference in pitch contour.

4.2.2 Autosegmental interpretations of downstep

Autosegmental theory provides an interpretation of downstep.

In explaining tone spreading we used autosegmental representations that involved using only H's linked to vowels. Syllables without a H-tone had no tone attached. There was, in other words, no underlying L-tone. There seem to be good reasons for maintaining that the underlying forms of morphemes contain only H's (see 10.4). This certainly makes the process of spreading H-tones simpler.

12. I am assuming contrary to fact that *íséti* existed in the language at the time this change took place. Alternative forms like *ímíni* 'day' could have been used instead.

On the surface it seems theoretically better to assume that every syllable is linked to an entity on the tonal tier and this involves postulating L-tones on the surface. We can follow Pulleyblank (1986) in setting up the following rule:

The L-default Rule: At a certain point in the derivation all vowels which are not linked to a H-tone become linked to a L-tone by default.

For instance:

(34) $\begin{array}{cc} \text{H} & \text{H} \\ | & | \\ a\text{-}ma\text{-}sela \end{array}$ becomes $\begin{array}{ccc} \text{H} & \text{L} & \text{HL} \\ | & | & | | \\ a\text{-}ma\text{-}sela \end{array}$

and (35) $\begin{array}{c} \text{L} \text{L} \text{L} \text{L} \\ | | | | \\ ndiyahlamba \end{array}$ becomes $\begin{array}{c} \text{L} \text{L} \text{L} \text{L} \\ | | | | \\ ndiyahlamba \end{array}$.

Likewise (36) $\begin{array}{cc} \text{H} & \text{H} \\ | & | \\ ilisela \end{array}$ would become

(37) $\begin{array}{cc} \text{HL} & \text{HL} \\ | | & | | \\ ilisela \end{array}$

If we assume that the rule deleting the *-li-* of **ilisela* deletes the consonant and vowel but not the tone,

HLHL
then (37) *ilisela* will become

(38) $\begin{array}{cc} \text{H} \circ & \text{HL} \\ | & | | \\ i & sela \end{array}$ with an unattached or floating L-tone.¹³

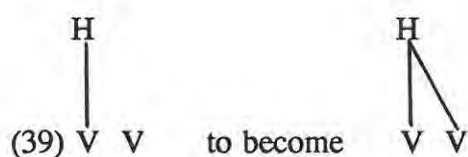
13. The circle round the L indicates that the L-tone is not attached to any element in the CV tier.

The floating L-tone is not pronounced directly but causes the pitch of the following H-tone to have a lower pitch than the first syllable of the word just as if there were a L-tone between the two syllables.

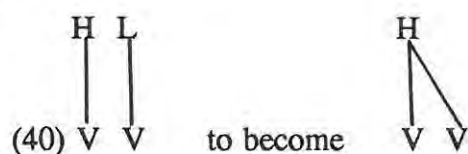
We notice that *ʔséla* and *ísénti* are different in tone pattern although the stems are both HL because *ʔséla* belongs to class 5 and consequently an original *-li-* has fallen away and *ísénti* to class 9, where no *-li-* deletion has taken place.

If we take *flanga* ‘sun’ and *ínyama* ‘meat’ with LL stems we see that although the first belongs to class 5 and the second to class 9, that they have identical tone patterns (and also identical pitch contours). The falling away of the *-li-* has not affected the pitch contour of the word. We need to explain why.

In giving the derivation of these words, we have a rule-ordering problem; we have to decide whether the prefix-spread rule takes place before or after *-li-* deletion i.e. does *-li-* delete from **ílilanga* or from **íllanga*. It seems natural to assume that all spreading rules take place before the L-default rule. This is because it is simpler for



than for



as in (40) an association line needs to be deleted unlike (39). For further discussion, see 10.4.

We either have to delete the L or make it a floating tone. *-li-* deletion can only take place after the L-default rule has applied otherwise it would not produce a floating L-tone.

Hence we must assume the following order of derivation

(41) $\begin{array}{c} \text{H} \\ | \\ \text{i-li-langa} \end{array}$ (underlying form)

(42) $\begin{array}{c} \text{H} \\ \diagdown \quad | \\ \text{i-li-langa} \end{array}$ (by prefix-spread rule)

(43) $\begin{array}{c} \text{H} \quad \text{L} \quad \text{L} \\ \diagdown \quad | \quad | \\ \text{i-li-langa} \end{array}$ (by L-default rule)

(44) $\begin{array}{c} \text{HL} \quad \text{L} \\ | \quad | \\ \text{i-langa} \end{array}$ (by *-li-* deletion)

It seems reasonable to assume that while the deletion of the consonants and vowels of a syllable should not lead to the tone being deleted as they occur on different tiers, it will lead to the falling away of the association line between the vowel and the tone and hence to a floating L-tone.

Hence in

(45) $\begin{array}{c} \text{HL} \quad \text{HL} \\ | \quad | \quad | \quad | \\ \text{i-li-sela} \end{array}$

the falling away of *-li-* will produce a floating L-tone but in

$\begin{array}{c} \text{H} \quad \text{L} \quad \text{L} \\ \diagdown \quad | \quad | \\ \text{i-lilanga} \end{array}$ the deletion will simply produce $\begin{array}{c} \text{HL} \quad \text{L} \\ | \quad | \\ \text{lilanga} \end{array}$ without a floating L-tone. Hence the fact that *lilanga* and *inyama* have the same tone pattern and pitch contour although they belong to different noun classes.

This seems to be the correct derivation. But a floating L-tone before a L-tone would probably not have any effect on the pitch contour anyway.

We could also look at the derivation of these forms, using the approach used in 2.2.4, and assume that the deletion of the *-li-* does not affect the remainder of the pitch contour of the word. In the case of **líséla* and *ísénti* the pitch contours are [$\bar{\text{ - - _}$] and [$\bar{\text{ - - _}}$] respectively. The deletion of the second syllable would produce the contours [$\bar{\text{ - - _}}$] and [$\bar{\text{ - - _}}$], which will imply a difference in the tone pattern. In the case of **lílilanga* and *ínyama* (assuming that prefix spreading takes place before *-li-* deletion) the pitch contours will be [$\bar{\text{ - - _ _}}$] and [$\bar{\text{ - _ _}}$] respectively and the deletion of the *-li-* will produce identical contours.

If prefix spreading does not take place before *-li-* deletion, the pitch contours of **lílilanga* and *ínyama* before *-li-* deletion will be [$\bar{\text{ - _ _}}$] and [$\bar{\text{ - _ _}}$] respectively and the deletion of the *-li-* might be expected to produce a contrast between [$\bar{\text{ - _ _}}$] and [$\bar{\text{ - _ _}}$]. So this would seem to be additional evidence for believing that high spreading takes place before *-li-* deletion.

4.2.3 Depressors and downstep

Let us now look at two forms *íháshe* ‘horse’ and *ídyókhwe* ‘yoke’. These differ from *íséla* and *ísénti* in that their stems begin with depressors. As we saw in 2.2.6 depressors are consonants which have a combination of voice and pulmonic friction which have a lowering affect on the pitch of the following vowels. Unlike *íséla* and *ísénti*, *íháshe* and *ídyókhwe* have the same pitch contour [$\bar{\text{ - _}}$] in spite of the fact that they belong to classes 5 and 9 respectively. The downstep in *íháshe* can be explained by *-li-* deletion. But why is there a downstep in *ídyókhwe*, where no *-li-* has fallen away?

It would seem that there are reasons for suggesting that there is an inherent L in a depressor (Kisseberth 1984:137).

We can think of the L-tone as naturally belonging to the tonal tier. Depressor consonants belong to the segmental tier but have an inherent L-tone. There seems to be a natural tendency for this L-tone to rise up to the tonal tier provided that it does not have to cross an association line to do so. We can describe this tendency as the **buoyancy principle**. Association lines can only link tones to vowels and not to consonants. So when a L-tone rises from the segmental tier to the tonal tier it will be unattached or floating, so it is natural that it will be equivalent to downstep.

So when a depressor occurs between two vowels linked to different H-tones, this L seems to rise up to the tonal tier and become a floating L-tone, which we saw was the auto-segmental equivalent of downstep.

For instance, from an underlying $i\text{-}dy\acute{o}khwe$, we get $i\text{'}dy\acute{o}khwe$, with a pitch contour [ˈ˨˨˨] (the pitch of the H-tone on the second syllable is lower than the H-tone on the first). The surface autosegmental representation will be

(46) $\begin{array}{c} H \quad H \\ | \quad | \\ i\text{-}dy\acute{o}khwe \end{array}$

We can formalize this by means of the following rule:

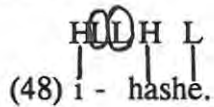
The Depressor-downstep Rule:

(47) $\begin{array}{c} H \quad H \\ | \quad | \\ V \quad d \quad V \end{array}$ becomes $\begin{array}{c} H \quad \text{L} \quad H \\ | \quad | \quad | \\ V \quad d \quad V \end{array}$ (where d represents a depressor)

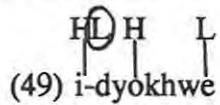
If we assume that two words that have the same pitch pattern have the same tone pattern, then since $i\text{'}h\acute{a}she$ in class 5 and $i\text{'}dy\acute{o}khwe$ in class 9 have the same pitch contour [ˈ˨˨˨] they must have the same tone pattern. Since in $i\text{'}h\acute{a}she$ the syllable *-ha-* is lower than the first H in the word there is reason for suggesting that there is downstep in $i\text{'}h\acute{a}she$. In $i\text{'}h\acute{a}she$, the underlying *-li-* with its associated L-tone provides an explanation for its

presence. In *ídyókhwe* there is no underlying *-li-* but the L-tone associated with the depressor *dy* provides the explanation.

With reference to *íháshe* we should notice that the deletion of the *-li-* will produce one unlinked L and the depressor a second, so that the autosegmental representation of *íháshe* should be:



Compare this with



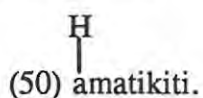
This might imply the need for a rule that collapses two unlinked adjacent L's into one unlinked L, but this might be a case where this collapse could be produced by the obligatory contour principle.

4.3 The left-delinking rule and related matters

4.3.1 The left-delinking rule

Although we have stated that the initial vowel always has an underlying H-tone, we will come across many forms where the initial vowel has a L-tone on the surface. For instance, *amadódàna* 'little men' more usually has a L-tone on the first two syllables and is only very rarely *ámádódana* and *ámátíkiti* 'tickets' is very often pronounced *amatíkiti*. In order to explain these forms we need to invoke what we will call the left-delinking rule.

The form *ámátíkiti* is derived from an underlying



After the application of the prefix-spread and the antepenultimate rules we get the form

(51) $\begin{array}{c} \text{H} \\ | \quad \diagdown \\ \text{amatikiti.} \end{array}$

In order to get the desired *amatikiti*, we need a rule that deletes the first two association lines in (51) *ámátikiti*. We can call such a rule the left-delinking rule and formulate it as follows:

The Left-delinking Rule: When two or more successive vowels are linked to a H, all but the rightmost association line may be deleted.

This rule is in certain contexts obligatory and in certain contexts optional.

If the rule is applied to the above form we will get

(52) $\begin{array}{c} \text{H} \\ | \\ \text{amatikiti.} \end{array}$

So we have the variants, *ámátikiti* and *amatikiti*, depending on whether or not the left-delinking rule has applied. Instead of saying the tone pattern can be HHHLL or LLHLL, it is possible to use the terminology we set out in 2.3 and say the tone pattern is XXHLL.

X-sequences are always produced by the application of a right-ward spreading rule such as the antepenultimate rule followed by the optional application of the left-delinking rule.

4.3.2 Depressors and the left-delinking rule

We noticed at the beginning of 4.3.1 that the rule was far more likely to apply to *ámádódana* than to *ámátikiti*. This is because *d* is a depressor while *t* is not.

In explaining the downstep in *ídyókhwe*, we made use of the buoyancy principle, which stated that the inherent L-tone in a depressor had a strong tendency to rise up to the tonal tier provided it did not have to cross an association line.

Let us now look at the autosegmental representation of *amadódana* after the antepenultimate rule has applied:

(53) $\begin{array}{c} \text{H} \\ | \\ \text{amadódana} \end{array}$

We see that the L-tone in the first *d* cannot rise to the tonal tier because of the association lines linking the vowels on either side. The result is that the left-delinking rule applies so as to allow the L-tone to rise to the tonal tier.¹⁴ The operation of the rule suggested above (page 51) will delete one of the adjacent L's.

4.3.3 Application of the above principles to *bhótile* and *bhotile*

The effect can be seen if we compare two alternative pronunciations of the word for 'bottle': *ibhótile* and *íbhótile*. The first relates to a stem *bhotile* with L-tones and the second to a stem *bhótile* with a HLL tone pattern, which are the two possible pronunciations of the word when the initial vowel is not present. These two forms are used by different speakers and to some extent used in different areas. Speakers born in Grahamstown use the first form and speakers from around Queenstown tend to use the second.

(54) *andifúni bhotile*. 'I don't want a bottle.' or

(55) *andifúni bhótile*.

The derivation of the first form is as follows:

(56) $\begin{array}{c} \text{H} \\ | \\ \text{i-bhotile} \end{array}$ (underlying form)

14. Although my principal informant normally gives *amadódana* and equivalent forms, he does very occasionally mark such a form as *ámádódana*.

(57) $\begin{array}{c} \text{H} \\ | \quad \backslash \\ \text{i-bhotile} \end{array}$ (by antepenultimate rule)

(58) $\begin{array}{c} \text{H} \\ | \\ \text{i-bhotile} \end{array}$ (by left-delinking rule)

The derivation of the second form is

(59) $\begin{array}{c} \text{H} \quad \text{H} \\ | \quad | \\ \text{i-bhotile} \end{array}$ (underlying form)

(60) $\begin{array}{c} \text{H} \text{ } \text{H} \\ | \quad | \\ \text{i-bhotile} \end{array}$ (by depressor-downstep rule)

Note how *í-tíkiti* (from a LLL stem) and *í-kétile* ‘kettle’ (from a HLL stem) may have identical tone patterns when the initial vowel is present, though different autosegmental representations:

(61) $\begin{array}{c} \text{H} \\ | \quad \backslash \\ \text{i-tíkiti} \end{array} \quad \begin{array}{c} \text{H} \quad \text{H} \\ | \quad | \\ \text{i-kétile} \end{array}$

The difference in autosegmental representation is not present on the surface, but because of the difference in autosegmental representation, the left-delinking rule can apply to *í-tíkiti*, where the first two vowels are linked to one H-tone, to produce *itíkiti*, while it cannot apply to *í-kétile*, where the first two vowels are linked to separate H-tones. In other words, the word for ‘ticket’ is *itíkiti* but the word for ‘kettle’ is *ikétile*.

4.4 Other prefixes

There are two topics that need further treatment:

- (i) tonally irregular disyllabic prefixes.
- (ii) prefixes of class 10.

4.4.1 Irregular disyllabic prefixes

I will first deal with the irregular disyllabic prefixes. Let us take the forms:

ílíwá 'cliff'

úrnswí 'Cape thrush'

úrnfó 'chap'

ábáfó 'chaps'

úrnfána 'youth'

úrnfâzi 'woman'

úMthâtha 'Umtata'¹⁵

The above nouns are exceptional in that instead of the expected HL of the noun prefix before a stem beginning with a H-tone or F-tone, the prefix has the tone pattern HH. In other words the H-tone on the initial vowel spreads onto the basic prefix even though the first syllable of the stem is not L, whereas according to the prefix-spread rule it should only spread if the first syllable of the stem is L.

The list of nouns with this tone pattern in the prefix is small although some of them are very common. In the nouns I have investigated they seem to be about one per cent of the total but the list of such nouns seems to be fairly constant from speaker to speaker. Westphal, Notshweleka and Tindleni give similar lists of such forms (1967:37 and 42). Note how the related nouns *úrnfó*, *úrnfána*, and *úrnfâzi* all belong to the class, implying that it is some property of the root which leads to this behaviour.

For these forms it seems that we need to set up the underlying form of the prefix with the normal H on the initial vowel and L on the basic prefix but mark the nouns in such way that

15. The left-delinking rule is applicable and these nouns have an alternative tone pattern LH on the prefix, for instance, *ilíwá* for *ílíwá*.

the prefix spreading takes place even though the first syllable of the stem is H or F. For *líwá*¹⁶ we would have the following derivation.

(62) $\begin{array}{c} \text{H} \quad \text{H} \\ | \quad | \\ \text{i-li-wa} \end{array}$ (-*wa* will need to be specially marked to show that prefix-spread rule applies even though -*wa* has a H-tone.)

(63) $\begin{array}{c} \text{H} \quad \text{H} \\ \diagdown \quad | \\ \text{i-li-wa} \end{array}$ (by prefix-spread rule)

For most of my informants, the corresponding forms without the initial vowel are:

liwá
 ṁswí
 ṁfó
 bafó
 ṁfána etc.

These are the forms one would expect and the autosegmental representation of, for instance, *liwá* would be

(64) $\begin{array}{c} \text{H} \\ | \\ \text{li-wa} \end{array}$

My principal informant, however, gives me the forms *líwá* and *báfó* but *ṁfó*. I am unable to explain these forms with a H-tone on the basic prefix when there is no initial vowel. I have not been able to obtain these forms from any other informant so far. Since he has given them to me consistently over a long period of time, I do believe they are genuine forms and need to be accounted for.

16. *líwá* could possibly have some relationship to the verb *úkú-wa* 'to fall'. If so one would need to explain the difference in tone. I know of no other irregular disyllabic prefix noun stem which could possibly relate to a verb stem in this way.

4.4.2 Prefixes of class 10 nouns

Class 10 nouns are generally plurals of class 9: *ínqwélo* ‘waggon’ *ĩínqwélo* ‘waggon’.

With monosyllabic stems, the prefix is disyllabic, e.g. *izin-* as in *ízintó* ‘things’. With stems of more than one syllable, the prefix is monosyllabic: *iin-*, *iim-* or *ii-*. According to most grammars (for example, Riordan *et al.* 1969:40) this prefix has a long vowel and is generally said to have a F-tone. In my work with informants, the monosyllabic prefix has always been given with a F-tone, and Professor Mtuze (personal communication) denies the possibility of this class prefix having a H-tone.

Lanham, however, (1958:68fn and 1963:41) claims that for many nouns the singular in class 9 and the plural in class 10 are identical in pronunciation, and that where there is a difference it is caused by the H-tone of the prefix in the singular being replaced by a F-tone in the plural and that the difference in length, where present, is the natural concomitant of the F-tone. According to him there is a substantial correlation though not a complete one between the tone pattern of the stem and the tone-pattern of the prefix: If the stem begins with a H or a F then the prefix of the plural will have a F-tone but if the stem begins with a L-tone then the prefix of the plural will have a H-tone and the singular and plural forms of the noun will be identical in pronunciation. The word for ‘bird’, for instance, will be *íntaka* in both singular and plural with a short vowel in the first syllable in both cases. Likewise with *íncwadi* ‘book’. On the other hand, *ínqwélo* ‘waggon’ has the plural *ĩínqwélo* and *ínkâbi* ‘ox’ has the plural *ĩínkâbi*. Lanham implies that there are exceptions but does not give any examples.

While I have not come across such forms in my own work, in newspapers one occasionally sees forms like *íntaka ezimbini* ‘two birds’, which could indicate that the writer does not always distinguish singular and plural forms of nouns in his pronunciation.

Let us assume that the underlying forms for monosyllabic prefixes of class 10 are parallel to those of class 5 and that the underlying forms of *ĩínqwélo* ‘waggon’ and *ĩíntaka* ‘birds’ are

(65) $\begin{array}{c} \text{H} \quad \text{H} \\ | \quad | \\ \text{i-zi-nqwelo} \end{array}$ $\begin{array}{c} \text{H} \\ | \\ \text{i-zi-ntaka} \end{array}$

We can assume that prefix spreading will occur giving

(66) $\begin{array}{c} \text{H} \quad \text{H} \\ | \quad | \\ \text{izinqwelo} \end{array}$ $\begin{array}{c} \text{H} \\ | \diagdown \\ \text{izintaka} \end{array}$

The L-default rule will apply to give

(67) $\begin{array}{c} \text{HL} \quad \text{HL} \\ | \quad | \\ \text{izinqwelo} \end{array}$ $\begin{array}{c} \text{H} \quad \text{L} \quad \text{L} \\ | \quad | \quad | \\ \text{izintaka} \end{array}$

Let us assume that in the case of class 10 we delete the *-z-* rather than *-zi-* (corresponding to *-li-* in class 5). This deletion will produce

(68) $\begin{array}{c} \text{HL} \quad \text{HL} \\ | \quad | \\ \text{i} \quad \text{i} \quad \text{nqwelo} \end{array}$ $\begin{array}{c} \text{H} \quad \text{L} \quad \text{L} \\ | \quad | \quad | \\ \text{iintaka} \end{array}$

With the exception of some demonstratives as in *láá mádoda*¹⁷ ‘those men over there’, length does not occur in Xhosa except as concomitant length with the F-tone and as a phrasal feature on the penultimate syllable of phrases. When two vowels coalesce, as when *ba-índoda* ‘of the man’ becomes *béndoda* as in *ábántwana béndoda* ‘the children of the man’, the resultant *e* is a short vowel of the same length as each of the two original vowels.

When the vowels coalesce the result will be a single vowel with a F-tone on the one hand and a H-tone in the other case. This will give:

(69) $\begin{array}{c} \text{HL} \quad \text{HL} \\ | \quad | \\ \text{i-nqwelo} \end{array}$ and $\begin{array}{c} \text{H} \quad \text{L} \quad \text{L} \\ | \quad | \quad | \\ \text{i-ntaka} \end{array}$ i.e. *ĩnqwélo* and *íntaka*

17. Compare *lá mádoda* ‘these men’ where the *lá* has a short vowel. I owe this contrast to Lanham (1958: 81). Both *láá mádoda* and *lá mádoda* although written as two words are really one word. See page 7fn.

The prefix with the F-tone would appear to have a long vowel while the one with the H-tone would have a short vowel and be identical with the singular. These are the forms that Lanham gives.

It may be that the forms like *ĩntaka* for the plural of *ıntaka* and similar words are artificial forms produced under the influence of the spelling.¹⁸

It is possible that this form has now become part of the spoken language. This process may have been beginning when Lanham was doing his research and this may be why he found only a partial correlation between tone patterns of prefix and stem.

In my discussion of *ĩséla* in 4.2.1, I omitted to mention another form *íséla* quoted by other writers such as Jordan (1966),¹⁹ who gives the forms *ĩKápa* ‘Cape Town’, *ĩcĩko* ‘orator’ and *ĩcêbo* ‘plan’ but *ĩlanga* ‘sun’ and *ĩphepha* ‘paper’ though all five nouns belong to class 5.

This implies a similar derivation for monosyllabic prefixes in class 5 to that proposed above for class 10.²⁰

It may be that the discussion in 4.2.1 is historically incorrect and that the correct sequence of forms is **ĩliséla*, which became *íséla* and then *ĩséla*.

18. The spelling with a double *i* probably arose from the assumption that the plural should always be distinct from the singular.

19. I have interpreted Jordan’s markings into my own system. All the examples quoted come from the vocabulary at the end of the book. There appears to be a misprint with regard to *íséla*, which is given as *ĩsel₁a* instead of *ĩsel₁a*.

20. On the other hand he gives *ĩdzédze* ‘flea’ and *ĩgâma* ‘name’ showing that a fall preceding a depressor and a H-tone or a F-tone becomes replaced by H followed by downstep, which I can parallel elsewhere in my informant’s speech.

4.5 Stems and the HH-to-FL rule

We may make the assumption that underlyingly there are only two sorts of vowels in Xhosa as far as tone is concerned, H-toned vowels, (those linked to a H-tone) and L-toned vowels (those not linked to a H-tone i.e. those that are toneless) and that a F-tone on the surface always arises by the application of rules to an underlying form containing H-toned or L-toned vowels.

If so, we can see that there are two possible tone patterns for monosyllabic stems (H and L), four possible patterns for stems of two syllables (HH, HL, LH and LL). There will be eight possible patterns for stems of three syllables and in general 2^n possible patterns for a stem n syllables in length. Let us confine ourselves to disyllabic stems. If we take nouns with disyllabic stems in the form which occurs in isolation we find actually five groups of stems.

H L	L L
í'séla 'thief'	ílanga 'sun'
F L	L H
í'sêle 'frog'	íchibí 'lake'
H H	
í'cící 'earring'	

The HH pattern is fairly rare and only occurs in a small number of stems. Those stems with the tone pattern FL become HH or occasionally LH²¹ when not in phrase final or word final position; e.g. *í'sêle* 'frog' but *í'sélé* *lákho* 'your frog'.

Those stems which have HH in isolation, and phrase-finally are a very small group. Many of them are reduplications or in other ways morphologically complex, for example, *í'cící* 'earring', *ú'mthá'ndwá* 'one beloved'.

The larger group of stems which become FL when final but are HH when medial are best explained as being HH underlyingly, probably

21. The LH form seems to occur in my principal informant's speech when there is a very slight pause.

(70) $\begin{array}{c} \text{H} \\ \swarrow \quad \searrow \\ \text{V} \quad \text{V} \end{array}$ in autosegmental terms.

These are then subject to the following rule:

The HH-to-FL Rule: a structure like

(71) $\begin{array}{c} \text{H} \\ \swarrow \quad \searrow \\ \text{V} \quad \text{V} \end{array}$ becomes $\begin{array}{c} \text{H} \quad \text{L} \\ \swarrow \quad \searrow \\ \text{V} \quad \text{V} \end{array}$ in phrase final position.

The small group of stems where HH remains when final will have to be marked as exceptions to the HH-to-FL rule (see also 6.8).

The alternative would be to assume that F could also be underlying and that forms like *ʔcɪcɪ* are underlyingly HH but that stems like *ʔsɛle* are underlyingly FL, and subject to a rule which converts non-final FL to HH.

I think that most investigators would feel that the complications of accepting underlying F's would outweigh the complexity of having to mark certain forms as exceptions to the HH-to-FL rule.

There are other F's which do not result from this rule such as the *ɔo* of class 2a or the F in certain participial forms of the copulative such as *ɛbomvú* 'being red'. These will also have to be shown to be derivable from underlying H's and L's. I think this is possible.

4.6 Other nominal inflections

4.6.1 Forms with formatives like *na-*, *nga-*, etc.

We have explained the forms of nouns when they occur with and without the initial vowel. Nouns have a locative form with a special initial vowel and a suffix *-ini* and can also occur

with the formatives *kú-*, *ngá-*, *na-* and the copulative prefix. The latter have the same form as the form without the prefix; e.g. from

(72) *ǎmǎtʃkiti* ‘tickets’ comes

(73) *kǔmǎtʃkiti* ‘to the tickets’

(74) *ngǎmǎtʃkiti* ‘by means of the tickets’ or ‘they are tickets’

(75) *nǎmǎtʃkiti* ‘and tickets’

kú- has a H-tone (see 8.2) but displaces the initial vowel of the noun to give the following derivation²²:

(76) $\begin{array}{c} \text{H} \\ | \\ \text{kú-matʃkiti} \end{array}$ which after the antepenultimate rule has applied will give the form

(77) $\begin{array}{c} \text{H} \\ / \quad \backslash \\ \text{kú-matʃkiti} \end{array}$ to which the left-delinking rule may optionally apply. Hence (73) *kǔmǎtʃkiti*.

na- has no tone so the underlying form will be

(78) $\begin{array}{c} \text{H} \\ | \\ \text{na-amatʃkiti} \end{array}$

which will eventually produce the form

(79) $\begin{array}{c} \text{H} \\ / \quad \backslash \\ \text{namatʃkiti} \end{array}$ to give us (75) *nǎmǎtʃkiti*, as the left-delinking rule may apply.

The formative *ngá-* is a bit more problematic. A consideration of forms like *ngǎmhlákulo* ‘with a spade’ from underlying **ngá-úmhlakulo*, where the /o/ arises from the coalescence of /a/ and /u/, shows that the initial vowel is still present. So we will have the underlying form:

22. Forms like *kwísithêthi* from **kú+ísithêthi* ‘to the spokesman’ raise some doubt as to whether it is right to talk of displacing the initial vowel.

(80) $\begin{array}{c} \text{HH} \\ | \quad | \\ \text{nga-a-ma-tikiti} \end{array}$

One H will have been lost by high coalescence (see 5.3).

After the spreading rules have applied, the surface form will be

(81) $\begin{array}{c} \text{H} \\ / \quad \backslash \\ \text{ngamatikiti} \end{array}$

or if the left-delinking rule applies

(82) $\begin{array}{c} \text{H} \\ | \\ \text{ngamatikiti.} \end{array}$

4.6.2 Locatives beginning with *e-* and ending in *-ini*.

The tones of these forms are predictable from the HH-to-FL and the antepenultimate rules we have already discussed.

I will illustrate with the two forms

(83) *emadódeni* 'among the men' from

(84) *ámádoda* 'men' and

(85) *émhlábéni* 'on the earth' from

(86) *úmhlâba* 'earth'.

(83) *emadódeni* is derived from an underlying


(87) $\begin{array}{c} \text{H} \\ | \\ \text{e-madodeni} \end{array}$ (the locative prefix has a H-tone and the basic prefix and the stem do not have any tones).

The antepenultimate rule applies to give

(88) $\begin{array}{c} \text{H} \\ / \quad \backslash \\ \text{e-madodeni} \end{array}$


Because of the presence of the first depressor *d*, the left-delinking rule will apply to produce:

(89) e-madodeni



(85) *émhlábéni* and (86) *úmhlâba* must be derived from a HH stem probably represented as

(90) hlâba

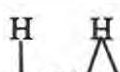


in autosegmental terms. In *úmhlâba* the HH-to-FL rule applies. In *émhlábéni* since the stem is no longer final, the HH surfaces as such. Many speakers pronounce this as *émhlabéni*,²³ applying the left-delinking rule to give a L-tone on the *-hla-*.

Notice that the underlying form HH is still required to explain the non-application of the prefix-spread rule, since if the stem began with a L-tone when the prefix-spread rule applied, we would expect **émhlabéni* rather than the actually occurring *émhlabéni*. This form consequently helps us to establish the ordering of the rules by showing that the left-delinking rule must apply after the prefix-spread rule.

So both *émhlábéni* and *émhlabéni* must be derived from an underlying representation

(91) emhlábéni²⁴



by the application of the prefix-spread rule and then the left-delinking rule even if for some speakers *-hlábá* is never pronounced on the surface with a H-tone on the first syllable of the stem.

23. All speakers will pronounce *úmhlâba* phrase finally but *úmhlábá* or occasionally *úmhlabá* in non-final position.

24. Strictly speaking, the underlying representation is more likely to be *emuhlabeni* on the segmental tier.

4.7 Summary

We have set up underlying forms and postulated a set of rules which relate these underlying forms to the surface forms we actually hear. (Though notice that the surface forms, expressed in terms of H's L's and F's, are actually an abstract interpretation of the gross acoustic signal - but the surface forms are available to the native speaker - he can be made conscious of the tones he uses.) The underlying tones are however something the **linguist** discovers or constructs. They are in no sense observable, nor can the native speaker be made conscious of the underlying forms he uses.

It is interesting to note that it never seems necessary to postulate a form as underlying that does not occur on the surface somewhere.

CHAPTER FIVE

VERBS: GENERAL OUTLINE

5 General introduction

The verb in Xhosa as in most Bantu languages represents the most morphologically complex part of speech. Because of the large number of formatives with different tones that can occur before and after the stem and the consequent changes brought about by their interaction, the tonology of the verb is also complex.

The following account is an attempt to describe the broad general principles that occur together with some indication of the low-level irregularities that occur. Somewhat paradoxically, although the canonical form of the verb in Xhosa is disyllabic, the general features of the verb appear more clearly in longer stems. In this chapter the general features of the tonal system of the verb will be set out in so far as they are manifested by stems of four syllables. In the following chapter we will consider some of the characteristics of less regular stems particularly those with fewer syllables.

With the exception of a few reduplicated stems to be considered later, stems of four syllables or longer can be considered either L-toned¹ or H-toned as can be seen if we look at the infinitive without the initial vowel:

1. As mentioned in the previous chapter I have used L-tone as a loose equivalent for 'toneless' on many occasions and I would want to maintain that L-tones do not occur underlyingly.

Table [1]

L stems		H stems	
kushukumisa	'shake'	kub [̃] ōn [̃] ísisa	'show thoroughly'
kugibisela	'throw'	kuf [̃] ūnd [̃] ísisa	'teach thoroughly'
kuhlangabeza	'meet'	kub [̃] ēth [̃] ísisa	'hit thoroughly'
kuncamathela	'stick close to'	kuth [̃] ānd [̃] ábuza	'hesitate'

We will assume that H-toned stems have a H-tone on the first syllable of the stem, while L-toned stems lack such a tone.²

The forms we will be considering in the first section of this chapter are given in the following table:

Table [2]

	L stems	H stems
infinitive without initial vowel	kushukumisa 'to shake'	kub [̃] ōn [̃] ísisa 'to demonstrate'
infinitive without initial vowel with object concord	kuwash [̃] úkúmis [̃] a 'to shake them'	kuwab [̃] ōn [̃] ísisa 'to demonstrate them'

2. Since *b[̃]ōn[̃]ísisa* is derived from *b[̃]ōna* 'see' and

f[̃]ūnd[̃]ísisa from *f[̃]ūnda* 'learn', at the deepest level, the underlying tonal structure of these two stems will be different

being *b[̃]ōn[̃]ísisa* and *f[̃]ūnd[̃]ísisa* but the operation of either the antepenultimate rule, if there is no H in the final suffix, or the high-stem-adjustment rule (5.8) if there is a H in the final suffix, ensure that there is never any contrast on the surface between the tones of the forms derived from these two stems. We will therefore adopt the simplifying assumption that high-toned stems of four syllables are marked by a H-tone linked to the first syllable of the stem.

short form of present tense with 1st or 2nd person subject concord	nishukumisa 'you shake'	nibõńńsisa 'you demonstrate'
short form of present tense with 3rd person subject concord	bãshũkũmisa 'they shake'	bãbõńńsisa 'they demonstrate'
short form of present tense with 1st or 2nd person subject concord with object concord	niwashũkũmisa 'you shake them'	niwabõńńsisa 'you demonstrate them'
short form of present tense with 3rd person subject concord with object concord	lĩwãshũkũmisa 'he shakes them'	lĩwãbõńńsisa 'he demonstrates them'
long form of present tense with 1st or 2nd person subject concord	niyashukumisa 'you shake'	niyabõńńsisa 'you demonstrate'
long form of present tense with 3rd person subject concord	bãyaşhũkũmisa 'they shake'	bãyabõńńsisa 'they demonstrate'
long form of present tense with 1st or 2nd person subject concord with object concord	niyawashũkũmisa 'you shake them'	niyawabõńńsisa 'you demonstrate them'
long form of present tense with 3rd person subject concord with object concord	lĩyawashũkũmisa 'he shakes them'	lĩyawabõńńsisa 'he demonstrates them'
long form of perfect tense with 1st or 2nd person subject concord	nishukumisile 'you shook'	nibõńńńńsile 'you demonstrated'
long form of perfect tense with 3rd person subject concord	lĩshũkũńńsile 'he shook'	lĩbõńńńńsile 'he demonstrated'
long form of perfect tense with 1st or 2nd person subject concord with object concord	niwashũkũńńsile 'you shook them'	niwabõńńńńsile 'you demonstrated them'
long form of perfect tense with 3rd person subject concord with object concord	lĩwãshũkũńńsile 'he shook them'	lĩwãbõńńńńsile 'he demonstrated them'
infinitive with initial vowel	ũkũshũkũmisa 'to shake'	ũkubõńńsisa 'to demonstrate'

infinitive with initial vowel with object
concord

úkuwashúkúmisá
'to shake them'

úkuwabõnísisa
'to demonstrate
them'

5.1 L-toned stems

Let us consider first an infinitive without the initial vowel such as

(1) *kushukumisa* 'to cause to move, shake (transitive)'

the underlying structure will be

(2) *ku-shukumisa* with nothing on the tonal tier³

The *ku-* is the basic prefix of a class 15 noun and as we saw in the previous chapter the basic prefix has underlyingly a L-tone. There are no underlying H-tones to spread so the surface form will be

(3) $\begin{array}{cccc} L & L & L & LL \\ | & | & | & | \\ ku-shukumisa \end{array}$

with the L-tones supplied by the L-default rule (4.2.2).

Let us now consider

(4) *nishukumisa* 'you shake'

Since the surface tones are the same as in (1) we can assume a similar underlying structure with nothing on the tonal tier and on the surface simply L-tones.

3. With a couple of exceptions like *nitya* 'you eat' from *ni-tyá*^H, there appear to be no cases where H-tones are deleted, as distinct from being subject to a partial delinking process which still leaves them linked to at least one syllable. So it would seem a valid heuristic principle that if a surface form has only L-tones then the underlying forms of the morphemes that occur in it are very likely to be all L-toned.

We now turn to

(5) *bǎshúkúmisa* ‘they shake’

with an X-sequence (see 2.3).

Since the only change between (4) and (5) is the replacement of *ni-* by *ba-*, it seems reasonable to assume that it is the difference in underlying tone between the two subject concords which is the cause of the difference in surface tones. Since *ni-* has a L-tone, then if the underlying tone of *ba-* is different it must have a H-tone. Let us assume the following underlying structure for (5):

(6) $\begin{array}{c} \text{H} \\ | \\ \text{ba-shukumisa} \end{array}$

Then the antepenultimate rule and the left-delinking rule, which we established in the previous chapter, will apply as follows:

(7) $\begin{array}{c} \text{H} \\ / \quad \backslash \\ \text{ba-shukumisa} \end{array}$ (by the antepenultimate rule)

(8) $\begin{array}{c} \text{H} \\ | \\ \text{ba-shukumisa} \end{array}$ (if the left-delinking rule is applied)


A similar consideration of other forms will lead to the conclusion that underlyingly first and second person subject concords are underlyingly toneless while third person subject concords have an underlying H-tone. For a fuller discussion see 8.1.

If we now take (4) *nishukumisa* and insert the object concord *-wá-* we get the form

(9) *niwashúkúmisa* ‘you shake them’


In *nishukumisa* all the formatives have no tone. In (9) the only change has been the introduction of the OC. As with (5) *bāshūkúmisá* we therefore make the inference that the source of the one or possibly two surface H-tones has been the formative that has changed, in this case, the OC. If we assume that the underlying tone of the *-wa-* is L, there is no reason to assume that the tone pattern should be anything other than a series of L's. If we assume that the underlying tone of *-wa-* is H, then the antepenultimate rule will apply to produce:

(10) niwashukumisa




Since the *-wa-* is always L, the left-delinking rule must, in this instance, obligatorily apply to give

(11) niwashukumisa



and may optionally apply to give

(12) niwashukumisa



We therefore deduce that the underlying tone of the OC must be H.

An interesting feature of the analysis just presented is that we are able to infer an underlying H on a morpheme even though we are only considering forms where the OC surfaces with a L-tone.

We will see that in many instances the OC must have a L-tone on the surface or an X as in

(13) *ñwāshūkúmisá* 'he shakes them'

but there are a few instances where the underlying H-tone on the OC remains on the surface as in

(14) *lɥawálwa* ‘he fights them’

An interesting feature of the above is that in a form like (5) *bāshākúmisa* the underlying H-tones become X, that is to say they are optionally subject to the left-delinking rule. In the case of (9) *niwashākúmisa* the OC although underlyingly H must appear as L on the surface, in other words, it is obligatorily subject to the left-delinking rule. A consideration of other forms shows that the OC is obligatorily subject to the left-delinking rule when it is preceded by a L-tone.⁴

The SC is also generally obligatorily subject to the left-delinking rule when it is preceded by

a L-tone as in *akabéthi* ‘he does not hit’, from underlying *akabéthi*. The first H will be lost

by high coalescence to give *akabéthi*. The left-delinking rule then applies to give the surface

form *akabéthi*.

There are exceptions. For instance in the present indicative negative, the rule applies obligatorily to HL stems and for most speakers to LL stems beginning with a non-depressor but for LL stems beginning with a depressor the left-delinking rule cannot apply as in *aká'váli* ‘he does not close’ from *vala*. Compare *akavúki* ‘he does not wake’ from *vúka*. Most speakers only accept *akálmi* ‘he does not plough’ from *lima* but my principal informant does accept *akálmi* as a less usual variant.

4. There are a couple of exceptions, for example, the present participial negative as in *nɥngawábónsísí* ‘you not seeing them’ and the perfect participial negative as in *nɥngawábõñsánga* ‘you not having seen them’. There is also one exception the other way, where the OC must be L though it is preceded by a H-tone and that is in the present subjunctive with a H-tone as in *níwabõñsísse*.

Other formatives such as *-sá-* ‘still’ and *-ngá-* ‘can’ which occur between the SC and the stem are optionally rather than obligatorily subject to the left-delinking rule. This leads to contrasts like:

(15) *ndiwashǎkúmisa* ‘I shake them’ and

(16) *ndisǎshǎkúmisa* ‘I still shake’

where the *-wá-* must be L while the *-sá-* can be H or L. In both cases the antepenultimate rule applies, but the left-delinking rule must apply to the *-wá-* whereas it may or may not apply to the *-sá-*. We will see later that there are other differences between the two formatives.

We will consider here two other formatives that can occur between the SC and the stem: *-ya-* and *-kwa-*. Both these formatives are L-toned, as is shown by the forms:

(17) *ndiyashukumisa* ‘I shake’

(18) *ndikwashukumisa* ‘I also shake’

-ya- obeys the normal operation of the antepenultimate rule and the left delinking rule to give us forms like:

(19) *bǎyǎshǎkúmisa* ‘they shake’

where the H-tone on the *bá-* is subject to the antepenultimate rule and then optionally to the left-delinking rule.

-kwa- has the unusual property of not allowing a H-tone to its left to spread onto it or to its right.⁵

So an underlying

(20) $\begin{array}{c} \text{H} \\ | \\ \text{bá-kwa-shukumisa} \end{array}$ ‘they also shake’

5. The formative *-yawa-* ‘always’ with a pejorative sense behaves in a similar fashion. *báyawashukumisa* ‘they are always shaking’.

does not give us the expected

(21) **bǎkwǎshǎkúmisa* but rather

(22) *bákwashukumisa*

with the operation of the antepenultimate rule being blocked in some way. As was said earlier (4.1.5) the antepenultimate rule is a very general rule that is seldom blocked.

5.2 High-toned stems

We turn now to the forms for high-toned verbs and start with the forms of the infinitive without the initial vowel as in

(23) *kubǎnǎsisa* ‘to show’

The underlying form will be

(24) $\begin{array}{c} \text{H} \\ | \\ \text{kubonisisa} \end{array}$

and the antepenultimate rule and left-delinking rule will apply to give us the surface form with an X-sequence.

A similar derivation will apply to

(25) *nibǎnǎsisa* ‘you show’

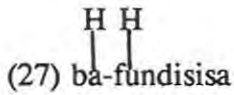
5.3 High coalescence and high splitting

When we turn to

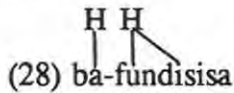
(26) *bǎfǎndǎsisa* ‘they teach thoroughly’

with a H-tone on the SC there is a problem.

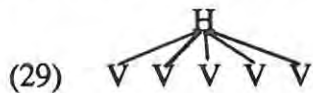
The underlying form will be



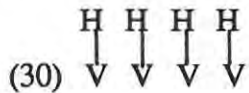
The antepenultimate rule applies to give



The left-delinking rule is not applicable to a configuration like this since the *-ba-* is linked to a different H-tone to that to which the *-fu-* is linked, and the left-delinking rule applies to the left branches of a configurations such as:



not to a configuration like



There are two approaches to the problem. One approach would be to write a new rule that would apply to a configuration like (30). A second approach would be to add a rule which changes the configuration so that the left-delinking rule will now apply to it.

In part our decision as to which approach to adopt will be motivated by whether we feel that the process that produces L-tones that applies to (26) *bǎffúndísisá* is the same as the process that applies to (5) *bǎshǎkúmísisá* and (23) *kubǎntísisá*. We must remember that there are three processes that are closely interrelated: the process of left-delinking, the downstep- depressor rule and the process of converting Xs into H or L.

These three processes apply in exactly the same way to forms like (26) as they do to forms like (5) or (23). For example in both groups the lowering of the OC is obligatory while in the case of *-sá-* it is optional. It therefore would be desirable to say that the same high-

lowering rule, the left-delinking rule, applies in each case rather than postulate an additional rule that applies to a configuration like (30) but has exactly the same effects as the left-delinking rule. We therefore need to postulate some rule or process that changes a configuration like (30) into a configuration like (29) so that the left-delinking rule can apply to it too.

It also seems intuitively more natural for a H in a configuration like (29) to lose one of the association lines associated with it than for a H in a configuration like (30) to drop out with its association line.

I would postulate such a rule, which I will call the high coalescence rule. This rule is somewhat similar to what Goldsmith calls Meeussen's rule (Goldsmith 1984:29).⁶

The High Coalescence Rule: a sequence of two or more H's in certain morphologically defined contexts coalesce to become one H and any syllables which are linked to any of the H's become linked to the remaining H.

One of the contexts where this process regularly takes place is the present indicative.

For example

(31) $\begin{array}{c} \text{H} \ \text{H} \ \text{H} \\ | \ | \ | \\ \text{li-ni-bethisisa} \end{array}$ 'he causes you to hit thoroughly'

will become

(32) $\begin{array}{c} \text{H} \ \text{H} \ \text{H} \\ | \ | \ / \\ \text{li-ni-bethisisa} \end{array}$ by the antepenultimate rule.

6. There is a major difference. In Meeussen's rule as defined by Goldsmith where two or more *s (accents) occur, all but the last is deleted and as a result certain syllables that would otherwise be accented become unaccented. In high coalescence, as stated in this chapter, when two or more H's occur, all H's but one are deleted but the syllables to which the deleted H's were linked become linked to the remaining H, so the number of H syllables on the surface is not reduced. It is also not possible to tell which H is deleted.

By high coalescence this will be converted into



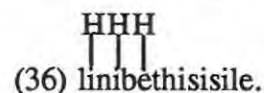
which is a configuration to which the left-delinking rule may apply, and so the surface form will be

(34) $\acute{\text{lí}}\acute{\text{n}}\acute{\text{í}}\acute{\text{b}}\acute{\text{é}}\acute{\text{th}}\acute{\text{í}}\text{sisa}$

Not all sequences like (34) are subject to high coalescence. A form like

(35) lí-ní-béthísisile 'he hit you thoroughly'

is very similar in morphological structure to (34) except that it ends in *-ile*, which marks the perfect tense, instead of *-isa*, a derivational extension.⁷ It has an underlying structure



This by the application of the antepenultimate rule becomes



The tone-pattern of (35) lí-ní-béthísisile is always HHHHLL and cannot be LLLLHLL. The fact that the first two syllables of (37) are linked to separate H's means that they do not form a configuration to which the left-delinking rule can apply, that is high coalescence does not apply.

We need to explain the non-applicability of the left-delinking rule to the three syllables that are all linked to the final H.

7. lí-ní-béthísisile 'he caused you to hit' is an even closer parallel to (34) $\acute{\text{lí}}\acute{\text{n}}\acute{\text{í}}\acute{\text{b}}\acute{\text{é}}\acute{\text{th}}\acute{\text{í}}\text{sisa}$ and shows the same contrast.

We might rephrase the left-delinking rule such that it could only operate at the beginning of a word or after a syllable without a tone.

In this case the fact that the next three syllables were all linked to one H would not trigger the left-delinking rule since they were preceded by syllables linked to separate H-tones.

But this move will not work if we consider forms containing depressors. Take, for instance,

(38) *lifú'ndísísile* 'he taught thoroughly'

According to our discussion so far, the underlying structure should be

(39) $\begin{array}{c} \text{HH} \\ | \quad | \\ \text{lifundisísile} \end{array}$

This will become

(40) $\begin{array}{c} \text{HH} \\ | \quad / \quad \backslash \\ \text{lifundisísile} \end{array}$

after the antepenultimate rule has applied. This regularly has a downstep before the [nd]. But (40) according to the buoyancy principle (4.2.3) should not have a downstep since the inherent L in the depressor [d] is prevented from reaching the tonal tier as there are association lines linking the vowels on either side of it to the same H on the tonal tier.

In order to explain on the one hand the fact that the left-delinking rule does not apply and on the other hand the fact that the depressor-downstep rule does, I propose that where high coalescence does not take place, we get a contrary process whereby when we have a series of syllables linked to the same H, each syllable becomes linked to a separate H-tone. I will call this process **high splitting**.

In terms of high splitting (40) will become

(41) $\begin{array}{c} \text{HH} \quad \text{HH} \\ | \quad | \quad | \quad | \\ \text{lifundisísile} \end{array}$

We now have a configuration where the L in the [d] can rise to the tonal tier to produce downstep.

5.3.1 Resistant and non-resistant sequences

We see now that we have sequences which must be all high and which cannot undergo the left-delinking rule and sequences which can be all high but which can undergo the left-delinking rule. I have called the former sequences H-sequences or resistant sequences and the latter sequences X-sequences or non-resistant sequences.

In order for a sequence to be resistant, there must be at least two underlying H's. As we saw

(38) *lfú'ndí'sísile* 'he has taught thoroughly' from

HH
| |
(39) *lfú'ndí'sísile*

is resistant. On the other hand,

(42) *l̥shúk̥ú'mísile* 'he shook'

from

H
|
(43) *l̥shúk̥ú'mísile*

is non-resistant. (39) and (43) are parallel except that the stem of the former has a H-tone that the latter lacks and consequently has two H-tones, one from the SC and one from the stem.

But

(44) *l̥wáshúk̥ú'mísile* 'he shook them' from

H H
| |
(45) *l̥wáshúk̥ú'mísile*

is also resistant unlike (42) *l̥shúk̥ú'mísile* because now that there is an OC present there are two H's in the underlying structure.

On the other hand, where a form is subject to high coalescence, the presence of three underlying H's is not sufficient to make a form resistant, as was shown by (34) *ñmběhtsisa*.

It would seem that certain tenses or moods are subject to high coalescence, in which case no matter how many underlying tones there are, the forms will be non-resistant. Other tenses and moods are not subject to high coalescence. These will be resistant if the form contains two or more underlying H's but non-resistant if only one H occurs.

It would be desirable to predict by general rule which sequences of H's are subject to high coalescence but so far I have been unable to find one. One has simply to list those tenses and moods where high coalescence occurs, or those where it does not. It is not clear whether high coalescence should be regarded as the regular case, or the exceptional case as high coalescence seems to occur in about half the tenses and moods. In Appendix 3 the each paradigm is marked as being resistant or non-resistant.

5.3.2 The perfect indicative

An interesting case is the perfect indicative. As we have seen in our examples above, the perfect indicative is resistant if there are the necessary two or more H's. There is one exception. If the subject concord is 1st or 2nd person and therefore L-toned the form will be non-resistant. In a form like

(46) *nifñdñstisile* 'you taught thoroughly'

there is only one H, that contributed by the stem. So the resultant form is non-resistant, as we would expect. But in

(47) *niwafñdñstisile* 'you taught them thoroughly'

there are two underlying H's, one from the OC and one from the stem. Nevertheless the resultant form is still non-resistant.

Compare

(38) *lífú'ndí'sísile* 'he has taught thoroughly'

where there are also two underlying H's.

Compare also (42) *líshúkú'mísile* and (44) *líwáshúkú'mísile*. In (44) the addition of the OC with an underlying H-tone makes the form resistant rather than non-resistant.

Compare also the imperative plural with OC

(48) *wáfú'ndí'síséni* 'teach them thoroughly'. Once again the OC contributes one of the two H's required to make the form resistant.⁸

It would seem that the extra unattached syllable at the beginning of the word as in (47) *niwafú'ndí'sísile* seems to prevent high splitting and allows high coalescence to occur. The fact that an unattached syllable has this effect might seem to count against Pulleyblank's hypothesis, which I have been advocating, that only H-tones occur in the deep structure since it is easier to conceive of a L-tone having this effect of preventing high splitting rather than a toneless vowel.

5.4 High-toned stems resumed

Having discussed high coalescence, high splitting, and resistant and non-resistant sequences we return to our discussion of H-stem forms.

We start by considering some forms with the OC, beginning with the short form of the present tense with a L-toned SC.

(49) *niwabò'ntísisa* 'you thoroughly show them'

The underlying form is

8. Contrast *fú'ndí'sísáni* 'teach thoroughly'. The tones of the final suffix do not count towards the two underlying H's needed to make the sequence non-resistant as is shown by the present tense negative participial where *níngabò'ntísisi* is non-resistant but *níngawábò'ntísisi* with the H-tone on the OC is resistant.

(50) $\begin{array}{c} H H \\ | | \\ niwabonisisa \end{array}$

We need once again to invoke the process of high coalescence so that left-delinking can occur. So (50) will become

(51) $\begin{array}{c} H \\ | \\ niwabonisisa \end{array}$

As in (9) *niwashūkūmisa*, the left-delinking rule applies obligatorily to the OC.

We now take the corresponding form with a high-toned SC as in

(52) *liwābōnīsisa*

Here we have an underlying form

(53) $\begin{array}{c} H H H \\ | | | \\ liwabonisisa \end{array}$

After the antepenultimate rule and high coalescence have applied we get

(54) $\begin{array}{c} H \\ | \diagdown \diagup \\ liwabonisisa \end{array}$

The left-delinking rule can optionally apply to (54) and if it applies to the SC then it must apply to the OC because the OC will then be preceded by a L-tone. However, because the OC is not necessarily preceded by a L-tone as it is in (49) *niwabōnīsisa*, the left-delinking rule does not obligatorily have to apply to the OC and it may surface with a H-tone.

5.5 Long form of the present tense with -ya-

Let us now look at the long form of the present tense, that with the formative -ya-, which we looked briefly at earlier (5.1).

We saw that in a form like

(17) *ndiyashukumisa* ‘I shake’

because all the surface tones are low, it is reasonable to assume that the underlying tones of all the formatives are low.

If we replace *-ndi-* with a third person subject concord we get a form like

(55) $\begin{array}{c} \text{H} \\ | \\ \text{liyashukumisa} \end{array}$

The H-tone on the *-li-* is affected by the antepenultimate rule which gives us

(56) $\begin{array}{c} \text{H} \\ / \quad \backslash \\ \text{liyashukumisa} \end{array}$

(56) is then optionally subject to the left-delinking rule to give us the surface form:

(57) *liyāshūkúmisa*.

If we take corresponding forms with a H-toned stem,

(58) *ndiyabēthísisa* ‘I cause to hit thoroughly’ and

(59) *llyabēthísisa* ‘he causes to hit thoroughly’

In (58) there are no tones before the stem to spread. In (59) the H-tone on the SC is not subject to the antepenultimate rule because of the H-tone on the stem and so remains on the SC.

Let us now consider the corresponding forms with the OC as in

(60) *ndiyawabēthísisa* ‘I cause them to hit thoroughly’

(61) *llyawabēthísisa* ‘he causes them to hit thoroughly’

In both forms the underlying H-tone on the OC will be subject to high coalescence and to the left-delinking rule. In (61) the H-tone on the SC will not be subject to the antepenultimate rule because of the H-tones on the OC and the stem.

If we look at the corresponding forms with L-toned stems

(62) *ndiyawashǎkúmisá* ‘I shake them’

(63) *lǎyawashǎkúmisá* ‘he shakes them’

we see that they have the same surface tones as those with H-toned stems. Let us look more closely at (63) to see how this has come about. The underlying structure will be

(64) $\begin{array}{c} \text{H} \quad \text{H} \\ | \quad | \\ \text{liyawashukumisa} \end{array}$

The antepenultimate rule will be blocked from applying to the first H-tone but will apply to the H-tone on the OC. The left-delinking rule will apply in the same way as it did in (61) *lǎyawabǎthǎsisá*. The effect of the rules has been to remove the differences between the two stems. In effect, high coalescence has removed the difference between a L-toned stem preceded by an OC and a high-toned stem preceded by an OC. Analogy has not played any part.

We close off this section with a look at the full forms of the infinitive.

5.6 Infinitive forms

The infinitive in Xhosa is a verbal noun belonging to class 15 as in

(65) *ǎkǎshǎkúmisá* ‘to shake’

or

(66) *úkubǎnǎsisá* ‘to show thoroughly’

with a noun-prefix *úku-*, with initial vowel *ú-* and basic prefix *-ku-*. As we saw in the previous chapter, the initial vowel has a H-tone and the basic prefix a L-tone.

In (65), the only underlying H-tone is that on the initial vowel and the surface tones could be explained by the operation of the antepenultimate rule and the left-delinking rule. The

initial vowel is also subject to the prefix-spread rule. Whether the prefix-spread rule applies first and then the antepenultimate rule or whether just the antepenultimate rule will depend on how we order the two rules. See Chapter 4 fn 9.

In (66), the high tone on the stem blocks the operation of the antepenultimate rule on the initial vowel. The initial vowel is subject to the prefix-spread rule. If the left-delinking rule is ordered prior to the prefix-spread rule then at the time prefix-spread rule applies, the first syllable of the stem would be L, and the H-tone would spread onto the *-ku-*, which would give us a surface form **úkúbonísisa*. So we have some evidence for ordering of rules.⁹

Similar considerations will apply to the forms of the infinitive with OCs as in

(67) *úkuwashúkúmisá* 'to shake them' (68) *úkuwabòthísisa* 'to show them thoroughly'

The derivations will be similar to that for (63) *láyawashúkúmisá* and (61) *láyawabèthísisa*. Once again the distinction between high and low stems has been eliminated.

5.7 The final suffix

So far we have been discussing the tonology of prefixal morphemes in the verb. We see that once the underlying tones of such morphemes have been determined the main change is the rightward spread of tones followed by possible left-delinking. This can result in H-tones spreading onto the stem. These patterns of rightward spreading we have been considering seem to be widespread in African languages (Hyman and Schuh 1974:87). The tonal phenomena we shall be considering now where tones seem to spread to the left seem less typical.

9. On grounds of simplicity it would seem better to order all spreading rules (antepenultimate rule, penultimate rule, prefix-spread rule) before the left-delinking rule so that rule can then apply to any X-sequence produced by any of the above rules at once rather than have to apply at separate times.

Xhosa verbs not only have prefixal inflectional morphemes but also suffixal inflectional morphemes as is shown by the following forms of the verb *shukumisa* 'shake'.¹⁰ It would seem that with the exception of passive forms there is only one inflectional suffix allowed after the stem.¹¹ We shall refer to this form as the final suffix.

Consider the following forms:

- (69) *ndiyashukumisa* 'I shake' (present indicative)
- (70) *ndishukumisile* 'I shook' (perfect indicative long form)
- (71) *ndíshukumisile* 'I having shaken' (perfect participial long form)
- (72) *ndishukumisê* 'I shook' (perfect indicative short form)
- (73) *ndíshúkúmisé* 'that I shake' (present subjunctive)
- (74) *andíshukumísi* 'I do not shake' (present indicative negative)
- (75) *andíshukumisánga* 'I did not shake' (past indicative negative)
- (76) *ndâshukumísa* 'and I shook' (past subjunctive)
- (77) *élingashukumísi* 'who does not shake' (present relative negative)
- (78) *úkúngashukumísi* 'not to shake' (infinitive negative)

We see that the suffixes are characterized not only by segmental material but also by suprasegmental material. Moreover in some cases tones introduced by the final suffix become linked to the stem as in (74) and (78).¹²

Let us consider (78) *úkúngashukumísi*, with its non-final form *úkúngashukumísi* as an example of how the tone of the final suffix become linked to the stem.

10. The underlying tones of *shukumisa* are all low.

11. This is assuming that verbal extensions like *-el-*, *-is-*, and *-an-* are derivational. The passive morpheme, *-w-*, is followed by the normal final suffixes but in at least one case the passive has a different form from the active (cf *ndiyabóna* 'I see' and *ndiyabônwa* 'I am seen')

12. The parallel phenomenon in Zulu has been discussed by Khumalo (1989).

Since the underlying tones of *shukumisa* are all L, any H-tone or F-tone that occurs on the surface of a form derived from this must come from the final suffix.

The underlying representation must be something like

(79) $\begin{array}{c} \text{H} \qquad \qquad \qquad \text{H} \\ | \qquad \qquad \qquad | \\ \text{u-ku-nga-shukumis-i} \end{array}$

with the final suffix having at least one H-tone, possibly linked to the *-i*.

The surface representation before the application of the HH-to-FL rule must be something like

(80) $\begin{array}{c} \text{H} \quad \text{L} \quad \text{L} \quad \text{L} \quad \text{H} \\ \wedge \quad | \quad | \quad | \quad \wedge \\ \text{ukungashukumisi} \end{array}$

The H-tone of the final suffix has become linked to the final vowel of the stem. In other words, the H-tone has become linked to the left rather than to the right unlike the previous cases of tone-spreading that we have considered.¹³

5.8 High-stem adjustment rule

We have suggested that high stems of four syllables have a H-tone linked to the first syllable and that low stems lack this tone. If the form being considered has no H-tones in the final suffix, the antepenultimate rule will act to link the H-tone to the third syllable from the end and any syllables in between. So as we saw earlier

(23) $\begin{array}{c} \text{H} \\ | \\ \text{kubonisisa} \end{array}$

will become

(81) $\begin{array}{c} \text{H} \\ \wedge \\ \text{kubonisisa} \end{array}$

13. There will be an alternative form where the left-delinking rule deletes the association line linking the first vowel to the first H-tone.

In general for high stems of four or more syllables the H-tone becomes linked to all but the last two syllables. In the low stems there are of course no H-tones on the stem to spread.

In the cases of L-toned final suffix where there is a H-toned formative preceding the stem, the H-tone will be affected by the antepenultimate rule and spread to the third syllable from the end, and then may be subsequently delinked as seen in items (5) to (8).

With H-toned stems if a H-toned formative immediately precedes the stem as in (26) *bǎfǎndǎsisa* then, as we saw before, high coalescence will occur with the consequent applicability of the left-delinking rule to give us an X-sequence similar to that of low stems. See table [2]. The same will apply if more than one H-toned formative precedes the stem. Compare *ńwǎshúkúmisá* and *ńwǎfǎndǎsisa*.

If the H-toned prefixal formative is separated from the stem by one or more L's, then the H-tone of the stem blocks the tone of the prefixal formative from spreading, thus giving rise to contrasts such as

(82) *ńyǎgǎbǎsela* 'he throws' from

(83) $\begin{array}{c} \text{H} \\ | \\ \text{l} \text{yagibisela} \end{array}$

as compared with

(84) *lǎyǎfǎndǎsisa* 'he teaches thoroughly'

from

(85) $\begin{array}{c} \text{H} \quad \text{H} \\ | \quad | \\ \text{l} \text{yafundisisa} \end{array}$

When there is a H-tone in the final suffix, then the antepenultimate rule is blocked. We can compare forms

(86) *ńgǎbǎsela* 'he throws'

where the original H-tone on the SC spreads, and

(87) *lígibiselê* 'he has thrown'

where the H-tone on the SC is prevented from spreading by the final F-tone on the final suffix and as a result the stem remains L.

We saw above that in a high stem before a L-toned final suffix, the antepenultimate rule operates to make all but the last two syllables H. Before a H-toned final suffix, the antepenultimate rule cannot apply but in fact in a form from a H-toned stem all the syllables of the stem have the possibility of being H. For instance, a corresponding form to

(87) *lígibiselê* with a H-toned stem is

(88) *lɪbõñsĩsê* 'he showed thoroughly'

We can describe this by postulating the following rule:

High-stem Adjustment Rule: a H-tone underlyingly linked to a vowel in the verb stem becomes linked to each vowel in the stem when the stem occurs before a H-toned final suffix.

This will operate to link the H-tone on the first syllable of the stem to the remaining syllables of the stem before a final-suffix containing a H-tone.¹⁴

So that in the perfect participial from an underlying

(89) $\begin{array}{ccc} \text{H} & & \text{H} \\ | & & / \\ \text{H} & & \text{H} \end{array}$ *lifundisisile* 'he taught thoroughly'

we get a surface

(90) *lĩfũndĩsĩsĩle*.

14. It may of course subsequently be affected by the left-delinking rule.

It is true that in most of these cases when the H-stem adjustment rule applies, the resultant sequence is an X-sequence and is today pronounced by most speakers as a series of L's. My principal informant does, however, recognize a clear possibility of H-tones unlike the parallel sequences with L-stems, which he gives as L only.

There are, moreover, a few cases where the resultant sequence is not subject to the left-delinking rule, that is, is resistant, as in the remote past indicative with an OC, for example,

(91) *nâlfû'ndîsîsa* 'you taught him thoroughly'

and the negative of the past subjunctive with an OC as in

(92) *alâyîfû'ndîsîsá* 'and he did not teach him'

In these cases, the H-stem adjustment rule operates and there is no possibility of the left-delinking rule operating and so for all speakers there will be clear evidence of the operation of this rule.

We have the somewhat paradoxical fact that the presence of H-tones at the end of the form on the one hand prevents H-tones before a L-toned stem from spreading and therefore produces more syllables with L-tones, on the other hand also triggers the H-stem adjustment rule and thus also produces more H-tones with high stems.

Compare

(93) *alâyîshukumîsá* 'and he did not shake it' with

(94) *alâyîbónîsîsá* 'and he did not show it thoroughly' and

(95) *nâlfshukumîsa* 'you shook him' with

(96) *nâlfû'ndîsîsa* 'you taught him thoroughly'.

CHAPTER SIX

VERBS: TYPES OF STEMS AND THEIR TONAL CHARACTERISTICS

6 Introduction

In the previous chapter I endeavoured to explain the main principles of the tonology of the verb as far as these could be seen from stems of four syllables, where we saw there were two main types of stems: high and low. I now want to cover this to shorter stems, where we find several subgroups and several irregularities. This account will also help the reader to make use of the paradigms in Appendix 3.

6.1 L-toned stems

In Appendix 3 I have given examples of stems from one to five syllables though longer stems are possible. From three syllables up the stems are regular. Disyllabic and monosyllabic stems have a number of irregularities and disyllabic stems divide into two groups:

- a. LL stems with infinitive LLL and imperative LH as for instance *kubala* 'to count' and *balá* 'count.'
- b. LL stems with infinitive LLL but imperative HL as, for instance, *kuwisa* 'to drop' and *wísa* 'drop'. These will be distinguished from the former type by being referred to as LL+ stems. There are only a very small number of LL+ stems in the language.

6.2 H-toned stems

As with L-toned stems, I have given examples of stems of from one to five syllables and longer stems are possible. As with L-toned stems, monosyllabic stems have a number of peculiarities. Disyllabic stems divide into two groups, those whose underlying tone pattern is HL like *bétha* ‘hit’ and those whose underlying tone pattern is HH like *bôna* ‘see’. Unlike L-toned stems, trisyllabic stems are also divided into two groups, those whose underlying tone pattern is HLL like *béthisa* ‘cause to strike’ and those whose underlying tone pattern is HHL like *bónisa* ‘cause to see’.

Among H-toned stems of five syllables there are a small group of reduplicated stems like *ncãmãncãméza* ‘to smile continuously’. These have the same tones as HL stems with the preceding extra syllables being X.

6.3 Vowel-commencing stems

Stems beginning with a vowel have a number of different forms and are given separately. Generally, vowel-commencing stems have the tone patterns of a consonant stem with one less syllable but vowel stems of three syllables have the tone pattern of LL+ stems and not LL stems.

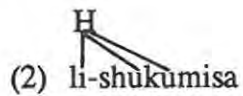
6.4 Rightward-spreading rules in short stems

Before dealing with some of these groups of verbs further I will deal with a general rightward-spreading rule that applies to shorter verb stems.

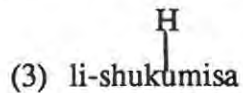
We have seen (4.1.4) how the antepenultimate rule spreads a H-tone to the right up to the third syllable from the end provided none of the syllables to the right is linked to a H-tone, so that, for example,

H
|
(1) li-shukumisa

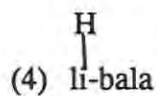
becomes



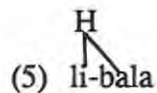
Subsequently the left-delinking rule may operate to produce



If we take the LL stem *bala*, underlying



becomes



even though the antepenultimate rule is not applicable here.

Likewise, just as underlying *lʏashukumisa* becomes *ʎyǎshǔkúmisá* so while underlying *lʏabala* becomes *ʎyábala* by the antepenultimate rule so *lʏalwa* ‘he fights’ becomes *ʎyálwa* even though once again the antepenultimate rule is not applicable.

We therefore need an additional rule, which I shall call the penultimate rule, which links up the tone on the antepenultimate syllable to the vowel of the penultimate syllable in certain circumstances. This rule can be stated in the following terms:

Penultimate Rule: A H-tone on a SC or OC three syllables from the end of the word spreads onto the following syllable provided that the stem is a verb but not a verb which is a LL+ stem.

This rule is far more restricted than the antepenultimate rule since it applies

1. only to verbs and not to other parts of speech
2. only if the H-tone is on the SC or OC and not on an infix like *-sá-* 'still'
3. only if the verb is not a LL+ verb

So for instance it does not apply to *flanga* 'sun', where *í-* is an initial vowel and *-langa* a noun stem nor to *ínzima* 'it is heavy', where *í-* is a SC, but *nzima* a relative stem.

It will apply to *ndiwábala* 'I count them', where *-wá-* is an OC to produce *ndiwabála*, but not to *ndisábala* 'I still count' where *sá* is a verbal infix and not a SC or OC.

It will apply to

- (6) *bǎbála* 'they count' from *bala* a normal LL verb but not to
- (7) *báhlala* 'they sit' from *hlala* a LL+ verb.

The antepenultimate rule is a rule which applies generally in the language and is only barred from applying in a few specific contexts and will apply to *itłkiti* 'ticket' to give *ítłkiti*, to *í-dikidiki* 'it is lukewarm' to give *idikídiki* after the left-delinking rule has applied, to both *ndiwábalisa* 'I cause them to count' and *ndisábalisa* 'I still cause to count' to give *ndiwabálisa* and *ndisǎbálisa*.¹

Nevertheless there is some sense in which one feels that the penultimate rule ought to be an extension of the antepenultimate rule applying to disyllabic and monosyllabic verb stems in certain circumstances. In Chapter 10 I will discuss attempts by Khumalo and Goldsmith, Peterson and Drogo to unify these rules. We will see that this feeling is probably illusory and that the penultimate rule is best regarded as a separate rule from the antepenultimate rule and that both are rightward spreading rules.

1. For the difference in the last two tone patterns where the OC is L but the infix X, see Chapter 5 page 72.

6.5 LL+ Stems

As we saw above there is this small group of disyllabic verbs whose stems appear to be LL and whose infinitive is XHLL but whose imperative is HL rather than LH as is the case with the vast majority of LL verbs. Although the underlying tone pattern of these roots would appear to be LL, they have remarkably different tone patterns in their inflections from other LL verbs.

I have discovered seven LL+ stems. These are:

hlala 'sit'

hlika 'descend' *luka* 'plait, weave'

suka 'go away'

susa 'remove'

wisa 'drop'

zisa 'bring'

In a corpus of about 720 disyllabic verbs, about 430 were normal LL verbs and six were LL+ stems. So these are very few in number although *hlala*, *suka*, and *susa* have a very high frequency of occurrence.

wisa and *zisa* are clearly causatives from the L-toned verbs, *wa* 'fall' and *za* 'come'. *hlika* seems to involve the addition of a less regular suffix *-ka* to *hla* 'descend'. *suka* seems to involve the same suffix added to a monosyllabic stem that is no longer extant. *susa* seems to be a causative from the same stem. Historically *hlala* may be derived from a monosyllabic stem.

luka has a variant *aluka* (not given in Kropf or McLaren) and is said by Pahl (1978b:258) to have a variant *oluka* in other dialects and since LL+ and L-toned trisyllabic vowel verbs share the same tone patterns, if *luka* is derived from *aluka* this might explain the variant pattern.

It would seem that all LL+ stems with the exception of *luka* are derived either synchronically or historically from monosyllabic L-toned stems by the addition of an extension. H-toned stems which are derived from H-toned monosyllabic stems do not show similar peculiarities and behave exactly like underived HL stems, for instance, *tylsa* 'feed' from *tya* 'eat' has exactly the same tone patterns as *bétha* 'strike'.

6.6 Chief characteristics of LL+ stems

There seem to be two characteristics of the tonal patterns of LL+ verbs:

1. In those forms where there is no H-toned suffix, no H-tone can spread onto the penultimate syllable (i.e. LL+ verbs must be marked as exceptions to the penultimate rule).

Compare

(8) *l̄yawabála* 'he counts them' but

(9) *l̄yawáwisa* 'he drops them'

This may possibly be related to the fact that in Xhosa tones are never spread to the right onto the last syllable of a word and for instance in a form like

(10) *l̄yawálwa* 'he fights them'

the H-tone on the OC remains and one does not get **l̄yawalwá*. cf (8) *l̄yawabála*.

We might assume that in *wisa* the underlying *wa* is still felt as being a monosyllabic stem (Davey, 1973). There does not seem to be any rule in Xhosa which spreads a H-tone onto the final syllable of a word and we might possibly consider that there is a general prohibition

on spreading a H-tone onto the final syllable.² Apparent exceptions like *lá mádoda* ‘these men’ result from faulty orthographic word division. See Chapter 1, page 7fn.

If so, then the H-tone would be prevented from spreading onto the first syllable of *-wisa* by virtue of the fact that *wisa* is derived from a monosyllabic root. But, this would not explain the peculiarities mentioned in the next paragraph.

2. Where there is a final suffix with a H-tone then a LL+ verb behaves like a H-toned stem and not like a L-stem.

Compare *ũkúngabalí* ‘not to count’ with *ũkúngawísi* ‘not to fall’ and *ũkúngabêthi* ‘not to hit’ and *anâbalá* ‘and you did not count’ with *anâwísá* and *anâbéthá* ‘and you did not hit’, where *bala* is a LL stem, *wisa* a LL+ stem and *bétha* a HL stem.

The problem is to explain why these forms behave as if they had a H-tone in them since in other respects they seem to behave like L-stems and there seems to be no evidence for associating a H-tone with them.

I do not have any possible solution to offer but would remark that the derivation from monosyllabic verbs put forward above to explain why these stems are exceptions to the penultimate rule does not appear to offer any explanation here.

HH and HL stems normally have the same tone patterns when a H-toned final suffix occurs - so it is difficult to say whether a LL+ stem is behaving like a HL or a HH stem. If the imperative is regarded as having a H-toned final suffix cf

(11) *limá* ‘plough’ from *lima* and

(12) *shukumisáni* ‘shake’ from *shukumisa*

2. One might like to speculate whether this prohibition is related to the fact that, unlike the situation in many Bantu languages, a H-tone is never shifted or spread from one word to another. For instance, in Northern Sotho, *ditaba* ‘mountains’ is LLL but in the phrase *bábóná ditaba* ‘they see mountains’ the first syllable has acquired a H-tone from the preceding *bábóná*. (I owe this example to Professor E.B. van Wyk.)

then the imperative of a HH stem is HH and a HL stem is HL, cf

(13) *thêtha* 'speak' from *théthá* and

(14) *bétha* 'hit' from *bétha*

and the LL+ stems behave like HL rather than HH stems as in

(15) *wísa* 'drop'

But while (12) *shukumisáni* definitely seems to have a HL final suffix,

(16) *thêtha* and

(17) *bétha* might well have the simple form of the verb stem. In this case the argument in the previous paragraph would not hold.

6.7 HL vs HH verbs

We assume that the underlying representations of the stems of *bétha* and *bóna* are

(18) $\begin{array}{c} \text{H} \\ | \\ \text{bethV} \end{array}$ and

(19) $\begin{array}{c} \text{H} \\ | \quad \backslash \\ \text{bonV}^3 \end{array}$

Note how the distinction between (12) and (19) lies not in the number of tones but in the association lines.

Historically, HL stems are derived from Proto-Bantu stems with long vowels, while HH stems are derived from Proto-Bantu stems with short vowels. Meeussen (1955) has proposed the following derivation:

bétha *bóna*

3. Where V represents an unspecified final vowel.

The high tone on the first mora of the word then spreads one mora to the right. In the case of long vowels the H-tone then spreads onto the second mora of the vowel (presumably changing a falling tone into a high level tone). In the case of short vowels, the next mora is the second syllable. The resultant forms will be:

béétha bóná

At a later stage, long vowels lose their second mora, resulting in:

bétha bóná

It is somewhat paradoxical that in modern Xhosa, the vowel which is historically derived from a short vowel, is normally pronounced with a longer vowel after the application of the HH-to-FL rule than the vowel which is derived from a long vowel. cf *bétha* and *bóna*

The distinction between the two types of stems manifests itself when there is a L-toned final suffix, as in the following examples.

Table [1]

Infinitive	úkubétha	úkubóna
	'to hit'	'to see'
Present participial	ndíbétha	ndibóna
	'I hitting'	'I seeing'
Perfect indicative	ndibéthile	ndibóníle
	'I hit'	'I saw'

In all cases, the final syllable of a HL stem seems to have a L-tone while the final stem of a HH stem has a H-tone and in autosegmental terms I would follow Khumalo (1989) in postulating that the final syllable of a HH verb is linked to the same H-tone that is linked to the first syllable of the stem while in HL stems the final syllable is not so linked.

When there is a H-toned final suffix, the H-tone is normally mapped onto the second syllable of the stem and thus the distinction between the two types is eliminated.

Table [2]

Present indicative negative	andibé̃thi 'I do not hit'	andibóni 'I do not see'
Perfect participial	ndĩbē̃thĩle 'I hit'	ndĩbõ̃nĩle 'I saw'
Past indicative negative	andibē̃thánga 'I did not hit'	andibõ̃nánga 'I did not see'
Imperative plural	bē̃tháni 'hit'	bõ̃náni 'see'

In the following forms, even though there is a L-toned final suffix, the final syllable becomes delinked from the final H in HH stems and so once again there is no difference in tone⁴.

4. In a form like *úkubõna* 'to see' the underlying representation will be

H H
úkubõna

The L-default rule and the HH-to-FL rule will apply to produce the surface form:

H L H L
úkubõna

In the case of *ndiyabõna* the underlying form will be

H
ndiyabõna

A rule applying only in the contexts mentioned in Table [3] delinks the H to the final vowel to produce

Table [3]

Present indicative positive long form	ndiyabétha 'I hit'	ndiyabóna 'I see'
Present indicative positive short form	ndibétha 'I hit'	ndibóna 'I see'
Past subjunctive	ndábétha 'and I hit'	ndábóna 'and I saw'
Present potential	ndingábétha 'I can hit'	ndingábóna 'I can see'

The distinction remains in the imperative singular as in

(20) *bétha* and

(21) *bóna*

even though the imperative singular is said by Khumalo (1989) to have a HL tone pattern on the final suffix in the imperative and certainly does with longer forms as in

(22) *běthĩsáni* 'cause to hit'

(23) *bõnĩsáni* 'show' or

(24) *shukumisáni* 'shake' from the L-toned stem *shukumisa*.

H
|
ndiyabóna

The L-default rule will apply to produce the surface form

L L H L
| | | |
ndiyabóna

6.8 Exceptions to the HH-to-FL rule

As we saw in Chapter 4, one of the general rules of Xhosa is that a sequence HH becomes FL when phrase-final. So we have

(25) *úkubóná ízintó* 'to see things' but

(26) *ndifúna úkubóna* 'I want to see'

Even among nouns there are a few HH stems, which do not become FL, for example:

(27) *t'cící* 'earring'

(28) *úThixo* 'God'

In the verbs there are several cases where the rule fails to apply. These are the following:

1. In the past subjunctive negative

(29) *anâshukumísá* 'and you did not shake'

The following cases all affect monosyllabic verbs.

2. Where the final H is on an underlying L stem

(30) *anllwí* 'you do not fight'

(31) *nâwálwá* 'and you fought them' cf

(32) *nâwâtya* 'and you ate them'

3. When the final H is an underlying H and the preceding H not an OC or *si* in the participial

(33) *ningátyá* 'you can eat'

(34) *nisátyá* 'you still eat'

(35) *nátyá* 'and you ate' cf

(36) *ningáwâtya* 'you can eat it'

(37) *nîsîtya* 'you eating'

4. In the imperative singular of monosyllabic stems with an OC.

(38) *wálwé* 'fight them'

(39) *wátyé* 'eat them'. The more usual form of this is *watyé*, where the rule is inapplicable.

Note how in the case of nouns like *í'séle* 'frog' it makes sense to postulate one underlying H-tone and in *í'cící*, where there is reduplication to postulate two underlying H's. In the cases mentioned above in 2-4, there are many cases of two underlying H's, to which the HH-to-FL rule fails to apply.

In fact with the exception of the participial as in (37) *nǎsǎtya*, the only case where the HH-to-FL rule applies to monosyllabic verbs is where the monosyllabic stem is underlyingly H and is preceded by an OC and the OC is always underlyingly H. In other words, the HH-to-FL rule only applies to monosyllabic verbs when there are two underlying H's (apart from a H-tone contributed by the final suffix).

Kisseberth (personal communication) in connection with another point has pointed out to me the close connection between the OC and the verb stem (for instance nothing can be inserted between them) and it might be that some form of Meeussen's law applies here.

If this were the case it would be possible to maintain that the HH-to-FL rule applied to those cases where after the application of this version of Meeussen's law there was one underlying tone left but did not apply to those where there were two underlying H-tones. *í'cící* clearly has two underlying H-tones. The borrowed word *úThíxó* could be assumed to have two underlying tones. We would have to postulate a rule that deleted one of the tones in the sequence OC+H-toned monosyllabic stem.

The difference in the status of formatives like *-sa-*, and OCs could be explained in lexical phonology by assuming that the former were added at a later cycle than the OCs (See Goldsmith, Peterson and Drogo 1989).

CHAPTER SEVEN

ADJECTIVES AND RELATIVES

In this chapter I will be exploring some of the tone patterns shown by what are known in Dokean grammar as adjective and relative stems.

We will not be discussing any new general tonological principles or rules as we did with the antepenultimate rule in Chapter 4 or with variation as we did in Chapter 5 but we will be demonstrating another set of interesting and intricate patterns and more importantly we will see how tonal evidence is sometimes relevant for syntactic analysis.

7.1 Classification and terminology

Doke classified parts of speech in functional terms. The adjective as exemplified by *ámakhûlu* in

(1) *ámaháshe ámakhûlu* ‘big horses’

and the relative as exemplified by *ámhlophe* in

(2) *ámaháshe ámhlophe* ‘white horses’

are regarded together with the possessive and the enumerative as subdivisions of the qualificative.

Doke¹ defines an adjective as ‘a word which qualifies a substantive, and is brought into concordial agreement therewith by the adjectival concord.’ (1961:100) and a relative as ‘a word which qualifies a substantive, and is brought into concordial agreement therewith by the relative concord.’(1961:105) In other words, adjectives and relatives are only regarded as such when they occur in attributive position.

He states that ‘when adjectives, for instance, are used "predicatively", they become copulatives in Zulu.’(1961:215) and defines a copulative as a word ‘which is formed directly from some other part of speech by a modification of the prefix or concord.’(1961:215)

So in each of the following sentences the second word would be regarded as a copulative formed from an adjectival or relative stem rather than as an adjective or relative.

(3) *ámaháshe mákhúlu* ‘the horses are big’

(4) *ámaháshe ámhlophe* ‘the horses are white’

I would prefer to follow other authors and regard *mákhúlu* as an adjective and *ámhlophe* as a relative and say that adjectives and relatives can be used attributively and predicatively.

Doke’s treatment of adjectives and relatives as separate parts of speech has the defect of not recognizing that adjectives and relatives are much closer in their syntactic behaviour than the other qualificatives (possessives and enumeratives). For instance, both can be made directly into copulatives, whereas possessives have to become pronouns before they can become copulatives.

In many ways it would be better to regard them as variations of a single word class. Jordan (1966) refers to adjectives as strong adjectives and relatives as weak adjectives. J.C. Oosthuysen (1967:64) refers to adjectives as variable-prefix adjectives

1. I will be referring to Doke’s *Textbook of Zulu grammar*, (1961) as this provides a clear statement of Doke’s model of grammar. Zulu and Xhosa are sufficiently similar for most of his statements to apply to Xhosa.

(wisselvoorvoegsel byvoeglike naamwoorde) and relatives as adjectives with fixed prefixes (vaste voorvoegsels).

I will, however, still continue to use the generally accepted terms, adjective and relative rather than adopt the terminology of Jordan or Oosthuysen in this respect.

Although Doke would regard

(5) *ǃbántwana ábakhûlu* ‘the big children’

as an adjective construction but

(6) *ǃbántwana ábámhlôphe* ‘the white children’

and

(7) *ǃbántwana ábáculayó* ‘the children who are singing’

as relative constructions, I will refer to all three as relative constructions.

I will, however, use the term adjective concord and relative concord in their Dokean sense, and say that in (5) we have an adjective concord and in (6) and (7) we have relative concords.

7.2 Derivation of adjectives and relatives in generative grammar.

In *Syntactic Structures* (1957), Chomsky generated prenominal adjectives in English by transformations from predicate formations. For instance, *The tall boy* was derived from *the boy is tall*. In effect, the preposed adjective is derived from *the boy is tall* via the intermediate stage of a relative clause, *who is tall*. In English such preposing is only possible when the tense of the copula *be* is present tense or has the same tense as the main clause, is positive and has no modals. *I saw the boy who is tall* can become *I saw the tall boy*, but *I saw the boy who was not tall* cannot become *I saw the not-tall boy*, neither can *I saw a boy who will be tall* become *I saw the will-be-tall boy*.

In later transformational work,² however, adjectives occurring before the noun are introduced by phrase structure rules of the form:

(8) NP → Det+Adj+Noun

The other cases mentioned in the preceding paragraph will still be derived from relative clauses.

Lanham (1971) derives relative constructions based on adjective and relative stems from relative clauses. In this chapter I will accept his analysis as a basis and consider how far tonal evidence offers evidence for or against this hypothesis. I will in fact suggest in 7.7.1 that in Xhosa simple adjective and relative constructions as in (1) and (2) are also introduced by phrase-structure rules though forms like

(9) *ǎbántwana ábábêbakhúlu* 'children who were big' or

(10) *ǎbántwana ábáńgebakhulú* 'children who are not big'

are derived from relative clauses.

7.3 Morphological structure of adjective and relative stems

The number of adjective and relative stems in Xhosa is restricted. Adjectives form a closed set of about eighteen items (Du Plessis 1978:186). The number of relative stems is limited. Du Plessis (1978:189) gives a list of about sixty. This is not quite complete. For the most part the equivalent of an English adjective is expressed by means of a verb in Xhosa, very often in the perfect tense, for instance,

(11) *ńdoda ílúńkile* 'the man is wise' where *ńlúńkile* is the perfect of *ńlúńka* 'be wise'.

Adjective stems consist of from one to three syllables and appear to be monomorphemic. An exception is the reduplicated *ńcńńcń* 'small' (compare *ńńcń* 'little one' and possibly also

2. For some discussion of the merits of the two analyses, see Baker 1978:308-323.

ncínáne (compare *íncí* ‘little’ and *-ana* ‘diminutive suffix’) and *fútsháne* ‘short’ (compare *fúphi* ‘short’ and *-ana* ‘diminutive suffix’).

Relative stems can consist of from one to four syllables. Those of one or two syllables are monomorphemic; possible exceptions are *shushú* ‘hot’ and *krakrá* ‘bitter’ which look like reduplications.

Relative stems of three syllables are usually analysable into a fixed basic prefix (FBP) and a disyllabic stem,³ for instance:

(12) *m-daka* ‘dirty’ cf *údaka* ‘mud’

(13) *lu-hlâza* ‘green, blue’ cf *ú’hlâza* ‘green grass’

(14) *bu-hlûngu* ‘painful’ cf *úbuhlûngu* ‘pain’

The basic prefix may be identified with that of classes 2, 11 and 14. There are difficulties with class 7, that we will come to later. It may also be identified with class 9 as in *n-zima* ‘heavy’ but here it is not a separate syllable and does not have a tone. About half of the relative stems given by Du Plessis have a FBP.

Stems of four syllables are all reduplications⁴ of two syllable stems all of which are L-toned, for instance:

(15) *dikidiki* ‘lukewarm’

(16) *tofotofo* ‘soft’

(17) *bhetyebhetye* ‘pliable’

3. One exception is *ncangathi* ‘sticky’. There are a few other exceptions.

4. With the exception of *ukuthi bhetye* ‘bend as from weakness’ the non-reduplicated forms do not appear to occur in the language.

7.4. Tone patterns of adjective and relative concords

7.4.1 Tone patterns of concords with the initial vowel

We begin by considering the tonal shape of the disyllabic concord which occurs with relative or attributive constructions with adjective and relative stems, the so-called adjective and relative concords.

Let us begin by looking at the following phrases:

- (18) *ábantu ábane* ‘four persons’
- (19) *ábantu ábahlânu* ‘five persons’
- (20) *tsicáká ésidála* ‘an old servant’
- (21) *t’háshe élincíncl* ‘a small horse’
- (22) *tzintó ézimbiní* ‘two things’ cf the noun *ĩsibiní* ‘two’

The second word in each case consists of an adjective concord and an adjective stem. We see that regardless of the tones of the stem or the tones of the word being modified the tone pattern of the adjective concord is always HL. This is different from the case of nouns, where the prefix rule operates as can be seen by comparing *ézimbiní* and *ĩsibiní*.

Let us assume that the adjective concord consists of the initial vowel⁵ and the basic prefix. This is reasonable as the first vowel is dropped when the initial vowel of the noun is dropped, and the next syllable has the same shape as the full form of the basic prefix with nouns. We saw in Chapter 4 that the initial vowel has a H-tone and the basic prefix a L-tone.

We would therefore expect the underlying tone pattern for the adjective concord to be HL. So in (19), a form like *ábahlânu* is what we would expect. But when we look at the form

5. In origin this probably has a different origin from the initial vowel of the noun and would actually be derived from something like *lâ-, which is related to the demonstrative *ló*, *lé*, *lá*.

ábane in (18), we have the question of why the prefix-spread rule does not operate to give us **ǎbáne*, as in the noun *ǎsíne*. Since in both cases we have an initial vowel and a basic prefix. Compare also the adjective *ézimbini* and the noun *ǎsibini* in (22).

We will see later (7.7.3) that the antepenultimate rule does not apply to relatives and adjectives used attributively though it does apply to relatives when used predicatively.⁶ This would seem to imply that there may be something about the relative construction which prevents spreading rules from applying.

Let us now look at the following phrases which contain relative stems:

- (23) *ábantu ábámdaka* ‘dirty persons’
- (24) *ábantu ábáṅgcwêle* ‘holy persons’
- (25) *ísicáká ésíthlé* ‘a certain servant’
- (26) *ǎháshe élmfúsá* ‘a dark-brown horse’
- (27) *ízintó éʼzkrakrá* ‘bitter things’
- (28) *ízintó éʼzlnzima* ‘heavy things’

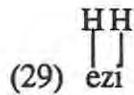
The second word consists of a relative concord and a relative stem. Although the segmental forms for non-nasal classes are the same for relative concords and adjective concords, the tone patterns are different and we see that the tone pattern for relative concords is HH regardless of the tone pattern of the noun preceding or the tone pattern of the stem following.

Informants do not accept an alternative of L-tone for the first syllable of the relative concord. This implies that the concord is HH rather than XH, which, as we saw in our discussion in the first part of Chapter 5, in turn implies two underlying H’s rather than one H which has spread.

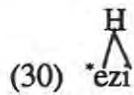
If we look at *éʼzkrakrá* in (28), we see that the depressor has given rise to downstep, which again implies two underlying H’s rather than one.

6. There are no cases where an adjective stem is used predicatively to which the antepenultimate rule could apply.

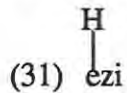
This leads us to be fairly confident that the autosegmental structure of the relative concord prior to the application of the L-default rule is



and not



The autosegmental structure for the adjective concord, on the other hand, would seem to be



I will assume that the relative concord consists of an initial vowel plus subject concord.

The initial-vowel has a H-tone and the subject concord for the third person has an underlying H-tone.⁷ This would account for the underlying HH tone pattern of the relative concord.

These reasons will only be applicable if the relative construction is derived from a predicate structure. If it is introduced directly via the phrase structure rules there seems no reason to assume that the structure contains a subject concord.

7.4.2 Tone patterns of concords without the initial vowel

In Chapter 4 we saw that the noun drops its initial vowel in certain syntactic environments, for instance, after a negative verb or after a demonstrative. When a noun drops its initial vowel, a relative construction in agreement with it also drops its initial vowel.

7. The subject concord for first and second person becomes H at an early stage in the derivation in non-indicative moods. See 8.1.

Consider the following examples:

(18) *ábántu ábane* ‘four persons’ and

(32) *âba bantu bane* ‘these four persons’

(23) *ábántu ábárndaka* ‘dirty persons’ and

(33) *âba bantu baṁdaka* ‘these dirty persons’

(34) *î séla éllima kakhûlu* ‘the thief who ploughs a lot’ and

(35) *êli séla lílima kakhûlu* ‘this thief who ploughs a lot’ or *êli séla lílima kakhûlu*⁸

We see that in such circumstances the second syllable is low when the relative construction contains an adjective or relative;⁹ while, when it contains a verb, the second syllable is H or L.

Since the underlying tonal structure for the adjective concord is that given in (31) one would expect the second syllable to be L. This is what occurs. Since, however, the underlying tonal structure for the relative concord is that given in (29) with two underlying H’s, we would expect that if we drop the first syllable, the second syllable should still surface with a H-tone. This may happen with relative constructions based on verbs as in (35) but in the case of constructions based on relative stems, in place of the expected H, we get a L-tone on the surface as in (33). This requires explanation, but before discussing a possible explanation I will turn to the predicative forms.

8. In all these sentences there is a variant form with a H on the last syllable of the relative form of *-lima*.

9. One informant has occasional relative forms with a H-tone when the initial vowel is dropped, for instance, *lá má`nzí* and *ádikidiki* ‘this lukewarm water’

7.5 Predicative or copulative forms

In the present tense indicative the copulative forms of relative stems are quite straight forward and consist of the SC plus the stem. The SC is L-toned for the first and second person and H-toned for the third person:

- (36) *si-mánzi* 'we are wet'
- (37) *ndi-ṁ-súlwá* 'I am innocent'
- (38) *bámánzi* 'they are wet'
- (39) *l̄shushú* 'it is hot'

Adjective stems have a basic prefix of class 1 or 2 in the first or second person following the SC. The SC is L, as we would expect for SCs of the first or second person. The basic prefix has its underlying L-tone.

- (40) *sibakhúlu* 'we are big'
- (41) *ndiṁfútsháne* 'I am short'
- (42) *nibanínzi* 'you are many'

In the third person the copulative consists of the basic prefix plus stem except that the basic prefix has a H-tone.

- (43) *ṁkhúlu* 'he is big'
- (44) *bákhúlu* 'they are big'
- (45) *bá'dála* 'they are old'

We need to explain the H-tone on the basic prefix instead of the expected L-tone.

7.6 Derivation of attributive and predicative forms

Here we will start by examining the explanation put forward by Lanham (1971). As we saw earlier Lanham sees attributive adjectives and relatives as being embedded clauses.

He assumes that in the deep-structure of a sentence with a copulative there is either the copula verb *-li-* implying the feature [+stative] or the copula verb *-ba-* implying the feature

[-stative]. In their simple forms adjective and relative stems will be stative and therefore have the copula *-li-*. This *-li-* is normally deleted without trace but, when it is preceded by *-nga-* and *-sa-*, its presence is seen because the *i* of the *-li-* coalesces with the preceding *a* to change *-nga-* and *-sa-* to *-nge-* and *-se-*. This change takes place in adjectives and relatives, but not in verbs where no *-li-* is postulated by Lanham. Compare

(46) *tsəbomvú* 'it is still red' and

(47) *tsákhála* 'he still cries'

7.6.1 Predicative forms

We can illustrate Lanham's derivation with the following examples from Xhosa.

(48) *bákhúlu* 'they are big' formed from an adjective stem and

(49) *bábomvú* 'they are red' formed from a relative stem

will have the following deep structures:

(50) Adjective stems Relative stems

SC+li+BP+stem	SC+li+	stem
bá+li+ba+khúlu	bá+li+	bomvú
$\begin{array}{c} \text{H} \\ \\ \text{ba} + \text{li} + \text{ba} + \text{khúlu} \end{array}$	$\begin{array}{c} \text{H} \\ \\ \text{ba} + \text{li} + \end{array}$	$\begin{array}{c} \text{H} \\ \\ \text{bomvú} \end{array}$

What Lanham calls '*li* deletion' will then apply.

"*li* deletion" seems to occur in two stages:

- (a) Delete *li* except when a tense or aspect morpheme, or negative prefix *nga*, immediately precedes it.
- (b) Delete the first of two agreement morphemes identical in gender except when negative prefix *a* immediately precedes it.' (Lanham 1971:308)

We will therefore delete the *-li-* in both cases and the first agreement morpheme¹⁰ in the adjective construction. This will give us

$$(51) \quad \begin{array}{c} \text{H} \\ | \\ \text{ba} + \text{khulu} \end{array} \text{ i.e. } *bakhúlu^{11} \quad \begin{array}{c} \text{H} \quad \text{H} \\ | \quad | \\ \text{ba} + \text{bomvu} \end{array} \text{ i.e. } bábomvú$$

In the case of the relative we get the correct tones. In the case of the adjective, if we interpret the phrase ‘delete the first of two agreement morphemes’ to mean deleting both the consonants on the segmental tier and the tones on the tonal tier, we end up with **bakhúlu* rather than the actually occurring *bákhulu*.

There are two ways to get the actually occurring forms. The one is to adopt a principle of interpretation of rules that allows us to interpret ‘deleting a morpheme’ as meaning deleting the material on the segmental tier only. The other is to postulate a rule that links the H of the SC to the BP before the SC is deleted.

7.6.2 Attributive forms

In the case of the attributive forms, Lanham sets up the following underlying forms.

(52) Adjective stems	Relative stems
A + SC + li + BP + stem	A + SC + li + stem
á + bá + li + ba + khúlu	á + bá + li + bomvú
$\begin{array}{c} \text{H} \quad \text{H} \quad \quad \quad \text{H} \\ \quad \quad \quad \quad \\ \text{a} + \text{ba} + \text{li} + \text{ba} + \text{khulu} \end{array}$	$\begin{array}{c} \text{H} \quad \text{H} \quad \quad \quad \text{H} \\ \quad \quad \quad \quad \\ \text{a} + \text{ba} + \text{li} + \quad \text{bomvu} \end{array}$

10. Note that the two agreement morphemes, although identical in gender, are not identical in phonological shape since they differ in the presence or absence of tone.

11. The change of *-khúlu* to *khúlu* will be dealt with in section 7.7.1

We delete the *-li-* and the first of the two agreement morphemes. But here the principle of interpreting deletion of a morpheme as meaning deleting the material on the segmental tier and not that on the tonal tier will give us

(53) $\begin{array}{c} \text{H} \quad \text{H} \quad \text{H} \quad \text{H} \quad \text{H} \\ | \quad | \quad / \quad | \quad | \\ \text{a} + \text{ba} + \text{khulu} \quad \text{a} + \text{ba} + \quad \text{bomvu} \end{array}$

which we would expect to produce:

(54) **ábákhûlu* and *ábábomvú*

which is the wrong result for adjectives. If we allow the rule to apply so that it deletes not only the segmental phonemes but also the associated H-tones then we get the correct surface tones:

(55) $\begin{array}{c} \text{H} \quad \quad \text{H} \quad \text{H} \quad \text{H} \\ | \quad \quad / \quad | \quad | \\ \text{a} + \text{ba} + \text{khulu} \quad \text{a} + \text{ba} + \quad \text{bomvu} \end{array}$

(56) *ábakhûlu* and *ábábomvú*

So we see that if we adopt the principle of interpretation that deleting a morpheme means deleting the material on the segmental tier but not the material on the tonal tier then we get the correct forms for the predicative forms but incorrect forms for the attributive forms. If we interpret the rule as deleting the material on both tiers, which would seem *a priori* to be the more plausible interpretation, then we get the correct forms for the attributive forms but the incorrect forms for the predicative forms.

It seems therefore that the best move to get the correct forms is to adopt the second principle of interpretation and get the correct forms for the predicative forms by means of the rule proposed in the final paragraph of the previous section, which will link the H of the SC to the BP before the SC is deleted.

Such a rule might seem *ad hoc*, especially as it would apply in the predicative forms and not in the attributive forms. It also involves linking a tone to a vowel immediately preceding

another H-tone, whereas in many rules the presence of a H-tone immediately following or later in the word actually inhibits such a move.

We will see later that, with the exception of the prefix-spread rule spreading the H onto the FBP of relative stems, no spreading rule appears to operate in an attributive construction - neither the antepenultimate rule nor the prefix-spread rule(except in the case just mentioned), while there seems to be no bar to spreading rules operating in the predicative.

I therefore propose a rule that spreads a H-tone on the SC onto a following BP before adjective stems. This rule would then apply in predicative constructions like that mentioned above, but would be blocked by a general prohibition of spreading rules operating in attributive constructions. The worth of this proposal is somewhat diminished by the fact that the prefix-spread rule does operate in attributive constructions when it spreads a tone onto the FBP.

7.6.3 Attributive forms without the initial vowel

Let us now consider the forms without the initial vowel. These will be derived in the following way:

<p>(57) Adjective stems</p> <p>SC̄+li+BP+stem</p> <p>bá+li+ba+khûlu</p> <p style="margin-left: 2em;"> $\begin{matrix} H & & H \\ & & / \backslash \\ ba+li+ba+khulu \end{matrix}$ </p>	<p>Relative stems</p> <p>SC+li+ stem</p> <p>bá+li+ bomvú</p> <p style="margin-left: 2em;"> $\begin{matrix} H & & H \\ & & \\ ba+li+ bomvu \end{matrix}$ </p>
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The deletion rule will apply to give us

<p>(58) ba+khulu</p> <p style="margin-left: 2em;"> $\begin{matrix} H \\ / \backslash \\ ba+khulu \end{matrix}$ </p>	<p style="margin-left: 2em;"> $\begin{matrix} H & & H \\ & & \\ ba+ & & bomvu \end{matrix}$ </p>
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These will become

(59) *bakhûlu* **bábomvú*

In fact the last form will normally be *babomvú*

Here, once again, the deletion of the first agreement morpheme gives us the desired result with adjective stems but the wrong one with relative stems. Note how attributive constructions with verb stems may have a H-tone and one informant gives *ádikidiki* as the form after a noun preceded by a demonstrative as in:

(60) *lá má'nzɪ ádikidiki* 'this warm water'

My principal informant gives this as the more expected

(61) *lá má'nzɪ adikidiki*

The difficulty seems to be how to explain the form with the L-tone which is the general case for relatives with my informants. We could achieve observational adequacy by writing a rule deleting the unwanted H-tone. For my principal informant the rule would be obligatory with relative but optional in the case of verb stems. For another informant the rule would be obligatory for most relative stems, optional for some, and not applicable to verb stems. This rule seems in itself to be unmotivated.

A better explanation would seem to me to be analogy. I am aware that currently analogy is not considered a satisfactory explanation. But consider: Adjectives are very similar to relative stems in their morphological and syntactic behaviour and in the type of meanings they express. Morphologically and semantically verbs are distinct. Generally they end in -*a*, adjectives and relatives very often do not. Adjectives and relatives do not inflect for tense, verbs do. Negatives of adjectives and relatives are similar. Many grammarians would regard adjective stems as distinct from relative stems mainly in that relative stems have a FBP while adjectives have a basic prefix that agrees with the noun with which it is in

agreement. Semantically adjectives and relative stems both express qualities while verbs more frequently express actions or occurrences.

It seems therefore that, since in the noun the dropping of the initial vowel leads to a L-tone in the basic prefix and this is true of adjectives, relative stems should behave likewise and the SC in relative constructions be reinterpreted as a BP and therefore as having a L-tone when the initial vowel is dropped.

A possible objection to this might be that there are more relative stems than adjective stems, but since adjective stems express more basic qualities than relative stems it might well be that adjective stems are more frequent in texts than relatives. Unfortunately I do not have statistics of the relative frequency of the two parts of speech.

7.7 Topics affecting attributive and predicative use of adjectives and relatives

There are three topics that affect both the attributive and predicative use of adjectives and relatives.

These are:

1. The alternation in certain adjectives and relative stems between HH when they occur attributively and HL when they occur predicatively
2. The tonal behaviour of FBPs
3. The non-applicability of certain spreading rules or rightward linking rules in the attributive use of both types of stem

7.7.1 Alternation between HH and HL

Let us consider the following eight sentences, the first four with the adjective stem *-khûlu* 'big' and the second four with the adjective stem *-dála* 'old'

(62) *ǎbántu ábakhûlu* 'big people'

(63) *âba bantu bakhûlu* 'these big people'

- (64) *âba bantu bâkhûlu* ‘these people are big’
 (65) *âbântu bâkhûlu* ‘the people are big’
 (66) *âbântu âbadâla* ‘old people’
 (67) *âba bantu badâla* ‘these old people’
 (68) *âba bantu bâ’dâla* ‘these people are old’
 (69) *âbântu bâ’dâla* ‘the people are old’

We see that when the adjective stem *khûlu* occurs predicatively the tone pattern is FL but when it is used attributively the tone pattern is HL. On the other hand the adjective stem *dâla* has the tone pattern HL in both contexts.

- Similarly
- (70) *í'láphu élimânzi* ‘the wet cloth’
 (71) *êli láphu limânzi* ‘this wet cloth’
 (72) *éli láphu límânzi* ‘this cloth is wet’
 (73) *í'láphu límânzi* ‘the cloth is wet’
 (74) *í'láphu élítyhéli* ‘the yellow cloth’
 (75) *êli láphu lítyhéli* ‘this yellow cloth’
 (76) *êli láphu lítyhéli* ‘this cloth is yellow’
 (77) *í'láphu lítyhéli* ‘the cloth is yellow’

We see that when the relative stem *mânzi* occurs predicatively, the tone pattern is FL but when it is used attributively the tone pattern is HL. On the other hand the relative stem *lúla* has the tone pattern HL in both contexts.

A similar variation occurs with relative stems with a fixed prefix e.g. *lu-hlâza* ‘blue, green’ alternates between FL in attributive use and HL in predicative use, while *m-nyâma* ‘black’ has HL in both cases.

In fact, the FL forms we have been citing are the prepausal or phrase final forms. In non-final position we would have HH and this is in fact the underlying form and the FL forms

are due to the application of the HH-to-FL rule. I will cite forms when in isolation or final as FL, but will regard them as being underlyingly HH.¹²

If we choose as the underlying form that form which will enable us to predict the other forms, then we must set up the form in the relative construction as the underlying form rather than the copulative form.

Further confirmation that the underlying tone pattern is HH is shown if we compare the corresponding nouns:

(78) *úbukhûlu* 'size' and

(79) *úbudála* 'age'

If the attributive form is derived from a relative clause which has a predicative form, it is strange that the underlying form occurs in the attributive form which has undergone an extra transformation. If the attributive form is provided directly by the phrase-structure rules, then it is not surprising that it should show the underlying form. This then provides some small evidence for suggesting that simple attributive adjectives and relatives are produced by the phrase-structure rules.

In disyllabic verbs a similar variation occurs affecting FL stems. The underlying tones of

(80) *úkubôna* 'to see'

are HH, while the underlying tones of

(81) *úkubétha* 'to hit'

are HL.

In the long and short forms of the present indicative, the HH stems become HL and the difference disappears. Compare

12. In autosegmental terms $\begin{array}{c} \text{H} \\ \text{V} \text{V} \end{array}$. Notice how *ncínclí* 'small', which is presumably $\begin{array}{c} \text{H} \text{H} \\ \text{ncl} \text{ncl} \end{array}$ underlyingly, is an exception to the HH-to-FL rule.

- (82) *ndiyabóna* ‘I see’
 (83) *ndiyabétha* ‘I strike’
 (84) *bǎbóna* ‘they see’
 (85) *bǎbétha* ‘they strike’

We see therefore that both verbs and adjectives and relatives are subject to a rule whereby HH becomes HL in the present indicative positive.

It would be nice if we could generalize and assume for verbs and adjective and relative stems with an underlying HH, relative constructions were characterized by HH and predicative constructions by HL, but unfortunately this is not true. We get forms for verbs like

- (86) *wáyébóna* ‘he was seeing’ and
 (87) *ówáyébóna* ‘who was seeing’

and for adjectives forms like

- (88) *wáyềm̀khúlu* ‘he was big’
 (89) *ówáyềm̀khúlu* ‘who was big’

and for relatives like

- (90) *wáyềm̀ánzi* ‘he was wet’
 (91) *ówáyềm̀ánzi* ‘who was wet’

It is true that adjective and relative stems with underlying HH only surface with these tones in simple attributive constructions. Where in attributive constructions they show other tone patterns there always seems to be evidence for the copula *ba* or *li* postulated by Lanham.

Compare:

- (92) *ǎmádoda ámakhúlu* ‘big men’ or ‘men who are big’
 (93) *ǎmádoda ábêmakhúlu* ‘men who were big’
 (94) *ǎmádoda ásêmakhúlu* ‘men who are still big’
 (95) *ǎmádoda ángemakhulú* ‘men who are not big’
 (96) *ǎmádoda á`zá kuba makhúlu* ‘men who will be big’

In the latter four sentences the English equivalent has a relative clause and in (96) there is a clear copula *ba*, whereas in (94) and (95) the change from *-sá-* to *-sê-* and of *-ngá-* to *-ngê-* is cited by Lanham as evidence for the presence of *li* (see 7.6). In (93) and (94) the falling tone as against the high tone in the corresponding forms with verbs (for instance, *ábécúla* ‘who were singing’ and *ásácula* ‘who are still singing’) may be evidence for a L-toned *li*, which has been deleted.

In Xhosa no distinction is made between ‘big men’ and ‘men who are big’. It is interesting that those cases where the noun cannot be preposed but a relative clause has to be used in English correspond very closely to those cases in Xhosa where adjective or relative stems with underlying HH surface with HH. One divergence is the case where the stem is followed by an adverb as in

(97) *í láphu élmá'nzí ngóku* ‘the cloth which is wet now’

It should be noted that while the participial of HH verbs retains the HH, HH relative and adjective stems become HL in the participial:

(98) *ěbôna* ‘seeing’

(99) *êmkhúlu* ‘he being big’

(100) *êmhlóphe* ‘he being white’

The falling tone may possibly be a remnant of *li*.

This tonal evidence about the variation between HH and HL offers further support for simple adjectives and relatives being introduced by means of phrase structure rules rather than transformationally.

7.7.2 Fixed basic prefix (FBP)

We saw that J.C. Oosthuysen (1967:64) refers to adjectives as variable-prefix adjectives (*wisselvoorvoegsel byvoeglike naamwoorde*) and relatives as adjectives with fixed prefixes

(vaste voorvoegsels). Not all relative stems have a FBP but in those that do the fixed prefix often parallels the variable prefix of the adjective. Compare, for instance,

(101) *ámaháshe a-ka-ma-khulú* ‘the horses are not big’ with

(102) *ámaháshe a-ka-lu-bhelú* ‘the horses are not yellow’.

The only difference is that in (101) the *-ma-* agrees in class with the noun *ámaháshe* while in (102) the *-lu-* remains the same whatever the noun with which it is in agreement. Compare

(103) *ǎbántwana a-ba-ba-khulú* ‘the children are not big’ and

(104) *ǎbántwana a-ba-lu-bhelú* ‘the children are not yellow’.

In other cases the parallel is closer if the FBP is not regarded as a separate element.

(105) *ǎbántwana bá-khúlu* ‘the children are big’

(106) *ǎbántwana bá-lúbhelú* ‘the children are yellow’

In this case, if the FBP is regarded as being a separate element, the relative copulative has one more element than the adjectival copulative

7.7.2.1 Application of the prefix-spread rule to the FBP

This syllable is low-toned underlyingly but if the first syllable of the stem is L and the FBP is preceded by a H-tone, then both predicatively and attributively the H-tone spreads onto the FBP. This is in fact the prefix-spread rule we encountered in Chapter 4. Consider

(107) *si-m-daka* ‘we are dirty’ but

(108) *bá-r-daka* ‘they are dirty’ and

(109) *ǎbántwana ábá-r-daka* ‘dirty children’ but

(110) *ába bantwana ba-m-daka* ‘these dirty children’

Similarly

- (111) *ni-lu-bhelú* 'you are yellow'
 (112) *bá-lú-bhelú* 'they are yellow'
 (113) *ísikólo ést-lú-bhelú* 'the yellow school'
 (114) *êsi sikólo si-lu-bhelú* 'this yellow school'

Compare

- (115) *ni-m-hlóphe* 'you are white'
 (116) *bá-m-hlóphe* 'they are white'
 (117) *ísikólo sí-m-hlóphe* 'the school is white'
 (118) *ísikólo ést-m-hlóphe* 'the white school'
 (119) *êsi sikólo si-m-hlóphe* 'this white school'

Here the FBP remains L because the next syllable has a non-low tone.

7.7.2.2 Evidence that the FBP is still a separate morpheme

I would now like to show that this rule applies to a stem, whose structure is FBP+root beginning with a L-tone and not simply to any stem of three syllables, all of which are low. *m-daka* 'muddy' has a FBP plus a root of two L-toned syllables. There is also the stem *ncangathi* 'sticky' which is a root of three low-toned syllables.

Compare now

- (120) *íqandá ñncángathi* 'the egg is sticky' with
 (121) *íqandá élnçangathi* 'the sticky egg' and
 (122) *íqandá ñndaka* 'the egg is dirty' with
 (123) *íqandá élnçdaka* 'the dirty egg'

In (120) and (122) the high tone on the *-li-* spreads onto the following syllable through the antepenultimate rule. In (121) it does not spread because the antepenultimate rule does not operate in attributive constructions. In (123) the prefix-spread rule operates to spread the

H-tone of the *-li-* onto the basic prefix. This shows that in order to get the correct tones in the surface it is necessary to mark *m̄-daka* as containing a FBP as its initial syllable and not simply to enter it in the lexicon as a stem with three L tones. In other words, tonal behaviour shows that the FBP is synchronically functioning as a separate morpheme.

7.7.2.3 Apparent FBP with an underlying H-tone

With *sí-xhenxe* ‘seven’, *sí-bhozó* ‘eight’, *lí-thobá* ‘nine’, there is a complication. For my principal informant and others the FBP has a H-tone. As a result even when a low tone precedes they pronounce:

- (124) *âba bantu bas̄xhenxe* ‘these seven people’ and
- (125) *âba bantu b̄as̄xhenxe* ‘these people are seven’ and also
- (126) *nis̄xhenxe* ‘you are seven’

There are other speakers who treat these three numerals as parallel to other relative stems with a fixed prefix and will treat *sí-xhenxe* exactly as they would treat *m̄daka* and will pronounce (125) and (126) as

- (127) *âba bantu basixhenxe* ‘these seven people’ and
- (128) *nisixhenxe* ‘you are seven’

but (124) will be pronounced the same by both groups of speakers.

The reason for these three words having different forms seems difficult to explain. If we assume that the older form is that used by my principal informant, then the variant forms in (127) and (128) would represent a process of regularization, whereby these three forms are made identical with the other forms with FBP’s.

Synchronically forms like *s̄xhenxe* could be treated as being entered in the lexicon as trisyllabic stems with a tone pattern HLL, whatever their historical origin. The variant form would represent a reinterpretation of the first syllable as a FBP and then its being treated like a normal FBP with a L-tone. This would achieve observational adequacy but does not seem to be a very motivated analysis.

A slightly better analysis would be to assume that these numeral stems are derived from nouns. For example, *-síxhenxe* could be derived from *ísixhenxe* which is underlyingly

(129) $\begin{array}{c} \text{H} \\ | \\ \text{i-si-xhenxe} \end{array}$

We need to assume that the prefix-spread rule applies before the initial vowel is deleted.

7.7.3 Operation of spreading rules

We saw in Chapters 4 and 5 that the rules that spread tones to the right, in particular the antepenultimate rule, produced some of the most striking features of Xhosa tonology. One of the features of relative constructions is the non-applicability of these rules, with one exception, in these constructions.

The antepenultimate rule does not operate in the attributive form unlike the predicative form.

(130) *ámá'nzǐ ádikídiki* 'warm water' Compare

(131) *ámá'nzǐ adikídiki* 'the water is warm'¹³

Similarly the prefix-spread rule does not apply to the high tones of the relative concord or adjective concord. e.g.

(132) *ípolǐsa éǐǐbalisa ǐbalǐ* 'the policeman who is telling a story'

(18) *ábántu ábane* 'four persons'

The only case of right-ward linking is that which spreads a preceding H-tone onto the FBP, as in 7.7.2.1.

13. *adikídiki* is XXHLL in (131) but because of the depressors normally is realised as LLHLL. See 4.3.2.

7.8 Conclusion

We have explored some of the tone patterns of adjectives and relatives. We have seen that in many cases the effect of considering tone is to make the grammatical patterns more complicated. For instance, if tonal data is ignored, adjective and relative concords of strong classes seem identical; if tonal data is considered they are always different.

We provided two cases where tonal data provided evidence for one analysis over another. One was the alternation of HH with HL in adjective and relative stems, which provided some evidence for suggesting that attributive constructions are generated by the phrase structure rules rather than derived from predicative structures through transformations. The other was the tonal behaviour of the FBP, which showed that it had to be recognized synchronically as a separate morpheme.

In the case of the derivation of the predicative and attributive forms considered in section 7.6, taking tonal data into account made the derivation more complex, though it did not offer crucial evidence for or against the analysis.

CHAPTER EIGHT

SOME INTERESTING TONE PATTERNS

In Chapter 2 we considered pitch-realisation rules of the surface tones of Xhosa, and in Chapters 4, 5 and 6 the main tonal features of the noun and verb and at the same time looked at some of the more salient features of Xhosa tonology and the major tonological rules. In Chapter 7 we considered the main features of the tonology of adjectives and relatives and saw how tonal data could be relevant to syntactic analysis. The detailed presentation of the tonal morphology of Xhosa will be put forward in Appendix 3. In this chapter I wish to describe certain tonal phenomena which are of interest, and deserve explanation even if at present I cannot put forward such an explanation.

The first section explores how underlying tonal distinctions between 1st and 2nd person subject concords on the one hand, and 3rd person subject concords only sometimes show up on the subject concords on the surface and sometimes are manifested elsewhere in the verbal form.

The second section shows how these underlying tonal distinctions between subject concords are actually present in the surface in another part of speech.

The third section discusses a process that leads to wide-spread tonal neutralization and the imposition of a tonal melody on certain negative forms.

The final section discusses a striking difference in reduplication between nouns and verbs.

8.1 Surface manifestation of differences in underlying tones of subject concords

One of the first contrasts anyone studying the tone of Xhosa is likely to be told is that the subject concord for the second person singular 'you' is *u-* with a L-tone while the subject concord for class 1 nouns is *ú-* with a H-tone and that, for instance, *ubétha* means 'you hit' but *úbétha* 'he or she hits' and more generally that the SCs for first and second person have a L-tone but that SCs for the third person have a H-tone.

For forms from LL+ verbs, this is clearly the case as we see from

- (1) *wená uhlala kude* 'you live far away' and
 (2) *yená úhlala kude* 'he lives far away'

It is also certainly true that the underlying tone for first and second person SCs is L or no tone and that the underlying tone for third person is H-tone, but even at a fairly deep level in all cases other than the present and perfect positive indicative, the distinction is eliminated, the two classes of SC both becoming H except in the potential where both become L.

Compare:

- (3) *úbethé* 'that you hit' and *ábethé* 'that he hit' and
 (4) *ungábétha* 'you may hit' and *angábétha* 'he may hit'

In such situations no speaker of Xhosa will make a distinction between second and third person by means of tone.

On the other hand, even in the present and perfect positive indicative the distinction will not always be made.

Even the distinction between 'you hit' and 'he hits' will not always be distinct in my principal informant's speech. 'You hit' will always be *ubétha*. But 'he hits' can either be *ubétha*, or *úbétha*. In other words, 'you hit' is LHL but 'he hits' is XHL.

This is because of the operation of the left-delinking rule which can optionally apply to

(5) $\begin{array}{c} \text{H} \\ | \quad \diagdown \\ \text{ub}\beta\text{etha} \end{array}$

which is derived from an underlying

(6) $\begin{array}{c} \text{H H} \\ | \quad | \\ \text{ub}\beta\text{etha} \end{array}$

by high coalescence.

For speakers from the Transkei the left-delinking rule is obligatory and the distinction will never be made. For Rharhabe speakers like my principal informant, the third-person form can either be LHL or HHL. For such speakers, however, the left-delinking rule is obligatory or all but obligatory before a depressor, so the second and third person present indicative forms formed from the HL stem *vúka* will both be *uvúka*; that is *uvúka* can mean both 'you wake up' or 'he wakes up' and for these forms, no speaker will make a distinction between second and third person unlike the parallel forms from the HL stem *bétha*, which begins with a non-depressor.

But in the corresponding forms from a LL verb like *vula* 'open' for which the underlying forms are *uvula* 'you open' and *úvula* 'he opens' the operation of the penultimate rule will produce the surface forms, *uvula* and *uvúla*, respectively. In the latter case the left-delinking rule, which will again be obligatory before the depressor, must apply. In this case all speakers will make a distinction between second and third person even though the tone on the SC will always be pronounced with a L-tone, the difference between the two subject concords showing up on the tone of the first syllable of the stem.

In other words, although underlyingly the second person singular SC and the third person singular SCs are tonally distinct the distinction is not always present on the surface and when it is, the difference may be manifested elsewhere in the word than on the SC itself.

To an English speaker there is the feeling that a second person and third person should be distinct and that, if a language does not regularly use personal pronouns to mark the difference when there is no other subject present, then the verbal forms should be distinct. In many languages this is not the case. In Japanese, for instance, *hanashimasu* can mean 'I speak', 'you speak', 'he speaks', 'they speak' and so on and normally no pronoun or other word is used to mark the difference in person or number. So there is no reason why the distinction between second and third person should always be made in Xhosa.

Similar considerations will apply to the distinction between the first person plural subject concord *si-* and the third person class 7 subject concord *si-*.

It is worth noting that in Xhosa object concords are always underlyingly H-toned regardless of the person or class, and consequently, although often having a L-tone on the surface, never show a distinction between first and second person on the one hand and third person on the other.

8.2 Tones of subject concords and pronominal formatives

Pronominal formatives can occur with the suffix *-na* to form absolute pronouns as in

(7) *boná báfúnda kákuhlé* 'THEY are studying well' or

(8) *boná andibatháandi* 'those people I don't like'

They can also occur in locatives as in

(9) *kúwe* 'to you'

or other adverbs as in

(10) *náwe* 'and you'

or the copulative

(11) *ngúwe* 'it is you'

Consider the following table

Table [1]

̀nná	kú̀m	ngá̀m	ndí̀m	ná̀m
'me'	'to me'	'by me'	'it is me'	'and me'
wená	kúwe	ngáwe	ngúwe	náwe
'you'	'to you'	'by you'	'it is you'	'and you'
yená	kúye	ngáye	ngúye	nayé
'him'	'to him'	'by him'	'it is him'	'and him'
boná	kúbo	ngábo	ngábo	nabó
'them'	'to them'	'by them'	'it is them'	'and them'

For the form with *-na* the tone-pattern is LH whatever the class or person. For *kú-*, *ngá-*, and the copulative, the tone-pattern is HL whatever the class or person. For *na-* on the other hand there is an interesting variation in tone. If the pronoun is first or second person then the tone-pattern is HL. If the pronoun is third person then the tone pattern is LH. In Transkeian Xhosa this alternation does not occur and the HL pattern has been generalized.

In the previous section we saw that the underlying tone of the subject concord was L-tone for first and second person but H-tone for third person.

We now see that the tone on the pronominal part of the associative pronoun is the same as the tone of the related SC. In other words, a tonal difference in the SC which does not always manifest itself on the surface in the SC and which does not occur in the morphologically more closely related OC (which is always underlyingly H-toned, regardless of the person to which it refers) occurs in certain forms of the pronominal formatives.

The underlying tone of *na-* would seem to be L as is seen in forms like

- (12) *nalé ndoda* 'and this man'
 (13) *andínandoda* 'I don't have a husband'
 (14) *andínapétroli* 'I don't have petrol'

If the underlying tone of *na-* is L then we seem to have a principle of polarity operating. If the pronominal formative is L, then the *na-* is H, but if the pronominal formative is H, then the pronominal formative is L.

Elsewhere we do not seem to have a polarity principle operating with SCs, for instance:

- nilwa* 'you fight' *nitya* or *nityá* 'you eat'
bálwa 'they fight' *bátya* 'they eat'

Here the rule seems to be that the SCs retain their tone and the H-tone of the stem has a strong tendency to be lowered. These verbal forms are of course not completely parallel to the associative forms since here the SCs are prefixes to stems, whereas in the associative forms the *na-* seems peripheral relative to the pronominal formative.

There is at least one other clear case of polarity in Xhosa and that is the tone of the final *-yo* that occurs with verbs in relative clauses. This seems to have the opposite tone to that of the preceding syllable as in

- (15) *élibalisayó* 'who recounts' and
 (16) *élibańsńléyo* 'who recounted'

8.3 Tones of negatives of copulatives

Negatives of copulatives are interesting as there is the widespread replacement of the inherent tones of the stem by a standard negative tone pattern. The rule for this negative tone pattern is: Make all the syllables L, except for the last syllable, which will be H. Optionally the penultimate syllable may also be H. In this case the HH-to-FL rule does not normally apply.

In the case of adjectives and relatives from stems like *nzima* 'heavy', *bomvú* 'red', *lúla* 'easy', *mânzi* 'wet' we get

- (17) *ayinzimá* 'it is not heavy'
- (18) *ayibomvú* 'it is not red'
- (19) *ayilulá* 'it is not easy'
- (20) *ayimanzí* 'it is not wet'

Similarly for adjectives like *bi* 'ugly', *de* 'long', *dála* 'long', *nânzi* 'many' we get

- (21) *akamabí* 'they are not ugly'
- (22) *akamadé* 'they are not long'
- (23) *akamadalá* 'they are not old'
- (24) *akamaninzí* 'they are not many'

For both adjectives and relatives there is an alternative form in *-anga*, which is the normal form in the spoken language but has only recently become accepted in the written language and is not generally referred to in grammars.¹ This likewise has the last tone high or the last two tones high. The commonest form in the spoken language appears to be that where the HH-to-FL rule has applied.

- (25) *akamaninzangá* 'they are not many'
- (26) *akamaninzá'ngá*
- (27) *akamaninzânga*

This negative form also occurs in relative constructions.

- (28) *íthanga éllngenzimá* 'a pumpkin which is not heavy'

Here the relative concord has its normal tones and the special negative pattern occurs on the rest of the word.

1. The only reference I have come across is by Pahl (1978b:47), who mentions such forms for adjective stems but not relative stems but says that they are not accepted. Such forms are ignored by Satyo (1983).

Similarly with copulatives of nouns, there is a possible form with 'all the low tones except the last which is high. For example the negative of

(29) *ngúrhfâzi* 'it is a woman' can be

(30) *asimfazí* 'that is no woman'

This form has an axiomatic meaning and is infrequent. The more normal form is

así+normal copulative of the noun

except that the first vowel is replaced by an *-o-* with a L-tone. This means that the tone of the initial vowel falls away and thus can no longer spread.

(31) *asíngomfâzi* 'it is not a woman'

(32) *asíngobafâzi* 'they are not women'

(33) *asíngomadodana* 'they are not little men'²

Note how the last example shows that in this form of the copulative the H-tone on the second syllable is not subject to the antepenultimate rule.

One of the features of this axiomatic negative is that the original tones are lost. If lexical tone carries any functional load, negative forms must be less distinctive than their positive forms. We saw in (2.1) that tonal minimal pairs are rare in Xhosa. Nevertheless, *ithanga* 'pumpkin', *í thangá* 'thigh' and *í' thânga* 'cattle-post' for instance become identical in the axiomatic negative:

(34) *asíthangá* 'that is no pumpkin, thigh, cattle-post'

The preference for (31) *asíngomfâzi* over (30) *asimfazí* may in part be due to the loss of tones in the latter form.

2. Compare *ngãmãdódana* 'they are little men'.

A similar form is possible with locatives. A possible negative of

(35) *úséKápa* 'he is in Cape Town' is

(36) *akaseKapá* 'he is not in Cape Town'

Speakers, however, tend to prefer periphrastic constructions in the negative, again possibly because it avoids the removal of tonal distinctions.

(37) *akákho éKápa* 'he is not in Cape Town' rather than (36).

This form occurs with other copulatives. The negative of

(38) *ngúye* 'it is him' is

(39) *asínguyé* 'it is not him'

and the negative of

(40) *ninónke* 'you are all' is

(41) *anínonké* 'you are not all'

In the case of a form like (17) *ayinzimá*, (30) *asimfazí* or (36) *akaseKapá*, the whole word has this negative tone pattern, whereas in (28) *íthanga élíngenzimá* or (39) *asínguyé* or (41) *anínonké* only the latter part of the word does.

There are two points of theoretical interest here. The first is the functional load of tones. If lexical tones have some functional load then the loss of tones should cause problems in understanding and the loss of tones in the negative should potentially make communication less efficient.

The second is that there seems to be a tonal melody imposed on negative forms, a sequence of L's followed by a final H.³

3. From now on I shall for the most part for the sake of simplicity in discussion ignore the possibility of the penultimate syllable also being H.

In autosegmental theory there has been a great deal of discussion about the interpretation of tone languages as accentual languages with each accent introducing a tonal melody (for instance, Goldsmith 1984). Most of these cases seem to me to be unconvincing but here we seem to have a case where in a portion of the language we have a definite tonal melody: a succession of L's followed by a H. We probably do not need to postulate accents since the tonal melody is always added with the H linking to the last vowel in the word.

8.4 Tones of reduplications

There are a large number of quadrisyllabic stems which appear to be reduplications of disyllabic stems although in most cases the simplex form does not occur in the present-day language. For instance there is the form *ísíbhakabháka* 'heaven' but no root **bhaka* from which it is derived. There is an active process whereby virtually any verb stem can be reduplicated to show intensification etc. but there are very many quadrisyllabic verb stems where the simple form does not appear to exist.

As we saw in Chapter 5, verb stems of four syllables fall into two tonal classes, L-toned and H-toned. Both classes contain reduplications, for instance:

(42) *ǎkǎǎkájika* 'to twist and turn' from *ǎkájika* 'to turn'

(43) *úkuhambáhamba* 'to go around' from *úkuhámba* 'to go'

There are a large number of different tone patterns with nouns of four syllables but in a corpus of about 200 quadrisyllabic stems about half were L-toned, about 15 per cent HLHL, about 10 per cent HHLL and the remaining 25 per cent other patterns. In my corpus of reduplicated noun stems from dictionaries, there were many reduplications with the pattern HLHL but none with the pattern HHLL, although there were many non-reduplicated stems with this latter pattern.⁴

4. The majority of quadrisyllabic noun stems are either L-toned or HLHL. There are a few other tone patterns: LLHL, LHLH, HLHH, HHHH. Except for the deverbatives dealt with below, there are no HHLL noun stems.

In other words, there is a significant difference between nouns and verbs. H-toned verb stems when reduplicated have a HHLL tone pattern while H-toned noun stems generally have HLHL.

There is one exception. There is as said above a regular process of reduplication of disyllabic verbs to form quadrisyllabic stems. It is possible to form agentive nouns from these reduplications. These agentive nouns in *-i* keep their verbal tone pattern. For instance from *úkuthêtha* 'to talk' can be formed *úkuthêtháthetha* 'keep on talking', and from this can be formed *úmthêtháthethi* 'one who keeps on talking'. From *úkuhámba* 'travel' can be formed *úkuhambáhamba* 'roam about' and from this can be formed *úrnhambíhambi* 'one who roams about'.

L-toned stems simply reduplicate to form L-toned stems. For instance, from *úkújika* 'turn' can be formed *ukujikájika* 'turn constantly' and from this can be formed *umjikájiki* 'one who keeps on turning'.

Apart from these regular productive cases of reduplication of verb stems and the formation of agentive nouns from the reduplication, I only have one clear example of a quadrisyllabic reduplication formed from an independently existing H-toned root. Kropf (1915) cites the noun, *ísilénga* 'curtain'. This form does not seem to be current today. It is significant that the entry reads:

isi-LENGA, n. 4. = isi-Lengalenga

implying that even in his time the non-reduplicated form was less frequent. From this comes the verb *úkulé'ngalenga* 'to hang; to dangle in the air' with the tone pattern HHLL. There also exist the nouns, *l'léngalénga*, *ísiléngalénga*, and *úm'léngalénga*, all meaning 'curtain', with the tone pattern HLHL. It is possible to form an agentive noun, *úm'léngalengi* 'one who dangles' with the HHLL tone pattern.⁵

5. The LHLL pattern marked on *úm'léngalengi* and is due to the operation of the left-delinking rule.

One might perhaps try to explain it in the following way. The natural reduplication of a HL stem will be HLHL. This is seen in the majority of H-toned noun stems.⁶

In verbs, the number of tonal patterns is severely restricted, and in quadrisyllabic stems there are just two, those with a H-tone, and those without. If reduplication produced a form like *úkuléngalénga with a tone pattern HLHL, it would introduce an entirely new pattern into the language.

There is one other case where reduplication introduces a new pattern into the language. Verb stems of five syllables are normally L-toned as in *ncamathelisa* 'make to stick' or H-toned as in *nyínyithékisa* 'make soft'. In the latter case the underlying H-tone will spread at least to the second and third syllables through the application of the antepenultimate rule or the High-stem adjustment rule. Where there is no H-toned final suffix the last two syllables will be low as in *úkunyínyíthékisa*.

There are some five syllable reduplications from two syllable stems. For instance, from *ncúma* 'smile' comes *ncúmánncúméza* 'smile continuously'. The tonal inflection of such forms is identical to HL stems with the addition of three XXX syllables before the last two syllables of the stem.

6. This, however, does not explain the minority patterns occurring with quadrisyllabic reduplications such as LLHL as in *ĩsĩbhakabháka* 'heaven' or HLHH as in *ámankéntenkénté* 'continuous tinkling'. Forms like *ungciléngcilé* 'hopping' and *ú'gógó'gógó* 'rattling' can be explained as being derived from **ngcilé* and *gógó*, with a simple reduplication of the underlying tonal pattern.

CHAPTER NINE

LOAN WORDS

In this chapter I shall be considering the rules governing the assignment of tones to words borrowed from English and Afrikaans.¹ Partly I hope this will throw some light on the dynamics of the Xhosa tonal system. I will precede this by an account of my principal informant's attempt to tonemark some passages of English. This will show how a Xhosa speaker responds to English and tries to interpret the English stress system in terms of the Xhosa tonal system.

9.1 Tonemarking of English passages

In Appendix 1 I have described how I set my principal informant the task of marking the tones of connected passages. Some of these happened to contain odd sentences in English and in one case some quotations of a few lines in English. Of his own accord, he marked these passages with the same tone marks as he applied to the Xhosa passages, namely ´ for high-tone, ^ for falling tone and ˘ for downstep.

In general an examination of these passages shows the following: short words that are not normally accented in English such as *is*, *and*, *the*, are normally left unmarked (i.e. are

1. I am using Afrikaans as a cover form for Afrikaans and Dutch. By the end of the eighteenth century, the form of the language used at the Cape was closer to present-day Afrikaans than to Dutch. Some Xhosa words are clearly borrowed from forms that differ from present-day standard Afrikaans. For instance, *ʼdyókhwe* 'yoke' is not derived from *juk* beginning with [j] but rather from a form beginning with a [dʒ]. This form is not at the present time recognized in standard Afrikaans but does occur in the speech of many so-called Coloured people and was probably more wide-spread during the nineteenth century.

assigned a L-tone) while other monosyllables are assigned a H-tone or a F-tone. The general rule here seems to be that if it has a long vowel or diphthong and is final or is followed by a voiced consonant then it is assigned a F-tone as in *crôwn*; otherwise it is assigned a H-tone as in *státe* or *dúst*. In words of more than one syllable the stressed syllable is assigned a H-tone or F-tone and the other syllables are normally assigned a L-tone, though sometimes there is more than one H-tone.

These are general tendencies and the treatment of unstressed syllables has many anomalies. There are some cases where he has marked the downstep. These are all associated with a voiced consonant, for instance:

né'vér, Jé'rúsale'm.

I give here two short passages which he tonemarked:

The glóries óf óur blôod and státe
 Are shádowns, nó substántial thîngs;
 There is nô ármour agáinst fáte;
 Déath lâys hîs ícý hánd ón kîngs:
 Scéptre and crôwn
 Must túmble dôwn
 And ín the dúst be équal máde
 Wíth the póor cróoked scýthe and spáde.

James Shirley as quoted by Tamsanqa (1979:104)

Í wánt to be réady,
 Í want to be réady,
 Í want to be réady,
 To wálk in Jé'rúsalém júst like Jóhn.

(Tamsanqa 1979:25)

One thing that seems to be clear is that my principal informant perceives a clear association between a stressed syllable in English and a H-tone or F-tone in Xhosa. The difference between a H-tone and a F-tone can be ascribed to a difference in English intonation. If the utterance *Sit* is pronounced with a neutral unmarked falling intonation, the fall will be very slight possibly something like [˘] but the utterance *Go*, pronounced with a similar

intonation, will have a clearly perceptible fall, something like [↘]. Of course, in English the same two utterances could be pronounced with other intonation patterns, for instance, with a rising intonation, in which case the pitch contours would be different.

We will see that loan words derived from English or Afrikaans generally contain H-tones and only very occasionally F-tones. My informant on the other hand, although he most often identifies English stress with Xhosa H-tone, also regularly identifies it with a F-tone. So that his identification of stress and tone is not identical with that made by speakers of the language when adopting loan words into the language. Nevertheless, there is in both cases a clear identification of stress with a non-low tone.

9.2 Variation in rules

This study is based on a collection of Xhosa disyllabic nouns and on the lists of loan words in Kent 1948. These lists were tonemarked by my principal informant on two occasions and remarks on Xhosa words of more than one syllable are largely based on a study of this corpus.

There are exceptions to all the rules given in this chapter. Partly this may be because I have failed to observe certain regularities and that further work would enable these exceptions to be covered by additions to the rules stated here. Partly this may be because the adaptation of loan words from one language to another may be subject to factors other than the original sound and grammar of the source language and the sound system and grammar of the borrowing language. Some of the variability is due to the fact that Afrikaans and English words have been borrowed into Xhosa for nearly two hundred years and during that time the rules have changed particularly as Xhosa-speakers have become more familiar with English and Afrikaans.

Let us take an example from the non-tonal phonology of loan words. Originally Xhosa did not have the cluster [br]. The early borrowing of Afrikaans *broek* 'trousers' is *í'bhúlúkhwe* and this is still the standard form in the written language. In this form [r] has been replaced

by [l] and the sequence [bru], which is one sequence in Afrikaans, broken up into two syllables to avoid the inadmissible consonant cluster [br]. In the spoken language in and around Grahamstown the normal form is *ǀbrúkhwe*,² showing that Xhosa has now developed the cluster [br] and even in the standard language the English word *brush* has been borrowed as *ǀbráshi*, and a form like **ǀbháláshi* does not occur.

Similar changes may have occurred in the rules assigning tone to borrowed words, except that here we do not have any historical written record to help us discover such changes.

9.3 Epenthetic vowels

I will ignore problems of segmental phonology except for one item, which affects the assignment of tones.

When words are borrowed into Xhosa extra vowels are added to make them conform to the syllabic structure of the Xhosa language. Xhosa syllables conform to the following formula:³

$$(1) ((N)C(w))V$$

where N represents a nasal homorganic to the following consonant, C represents a consonant and V a vowel. There are restrictions on the way the various elements can combine, which I will not indicate here. The important point is that all syllables in Xhosa end in a vowel and most of the consonant clusters of English and Afrikaans do not occur in Xhosa.⁴

2. *br* in the current orthography represents the sequence [br] and not [βr].

3. There is an additional possibility not covered by this formula, and that is that the syllable may consist of the syllabic consonant [m] as in *wám* 'my' or *úmthí* 'tree' and in some borrowed names syllabic [n] occurs as in *úRúbhen*

4. It would be more accurate to say that the formula (1) represents the syllabic structure of Xhosa prior to contact with English and Afrikaans. While English and Afrikaans words have largely been adapted to conform to that formula, certain clusters have come into the language as we have seen with [br].

These extra vowels occur in the following circumstances:

- a. When an English or Afrikaans word has a syllable ending in a consonant, a vowel is added after the consonant so that the syllable is broken into two open syllables: *t'bhédi* from English *bed*; *t'bhókuvá* from Afrikaans *bokwa* 'buck-waggon'.
- b. Where an English or Afrikaans word contains a consonant cluster which does not occur in Xhosa, the cluster is broken up by the insertion of an extra vowel: *ísitúlo* from Afrikaans *stoel* 'chair'.
- c. Diphthongs in the source language are often replaced by a sequence of vowel, semivowel and vowel: *t'géyími* from English *game*; *tóyile* from English 'oil'.

These extra vowels naturally have tones assigned to them and I will attempt to describe the rules governing these tones below.

9.4 Rules for tone-assignment to borrowed words⁵

We will now proceed to discuss the general rules. We will proceed from monosyllables ending in a vowel in the source language and then proceed to longer forms. After that we will discuss the rules associated with the extra vowels.

There is a general tendency for stressed vowels in the source language to be assigned high tones in Xhosa. Unstressed syllables tend to be assigned L-tones but there are exceptions.

5. Most borrowed words are nouns both in the source language and in Xhosa. There are two or three relative stems, for instance, *tshíphu* 'cheap' and *dúru* 'expensive' from Afrikaans *duur*, which conform to the rules to be put forward. There are very few verbs. Most of these conform to the same rules as nouns but some monosyllabic verbs in English and Afrikaans become LL in Xhosa, e.g. *úkúmosha* 'to waste' from Afrikaans 'mors' and *úkúluza* 'to lose' but compare *úkudípha* 'to dip', *úkupéta* 'dig', *úkusetsha* 'search'. Most trisyllabic roots in Xhosa which are derived from English or Afrikaans verbs are HLL as *úkufráyisha* 'to fry' but some are LLL as *úkúbedesha* 'to pray' from Afrikaans *bid* 'to pray', possibly influenced by *gebed* 'prayer'.

a. Monosyllables ending in a vowel⁶

I have four examples in my corpus. In two cases the word is assigned a high tone:

tʃʃ 'tea'

ʃsityú 'stew'

It is noteworthy that although in both English and Afrikaans a stressed monosyllable will be most frequently pronounced with a falling glide, and my principal informant assigns falling tones to equivalent English words, these examples have been assigned a H-tone. There are, however, no clear examples of noun stems with a final fall in Xhosa.⁷

The third case *tʃbhíya* 'beer' is one where the diphthong has been resolved into two syllables and here we find the tone pattern HL which can be explained as a representation of this falling glide.

In the fourth case, *ʃBhayi* 'Port Elizabeth' from Afrikaans *die Baai* (literally 'the Bay'), the anomalous LL tone pattern may possibly reflect the tendency for depressors to be associated with L-tones, but there are many cases like *tʃbhíya* 'beer' and *tʃBhúlu* 'Afrikaner' where a depressor is associated with a H or F.

b. Monosyllables ending in a consonant

These acquire an additional vowel at the end in Xhosa. For instance, *cent* becomes *ʃsénti*; Afrikaans *kat* 'cat' becomes *ʃkáti*. The normal tone pattern is HL. The assignment of a H-tone to the first syllable is explained by the principle stated above that stress gets replaced by H-tone. One might assume that inserted vowels would be felt as less prominent and be assigned a L-tone. There are a few aberrant cases mainly where the Xhosa word has a FL tone pattern as in *tʃBhúlu* 'Afrikaner' from Afrikaans *Boer* or *ʃsikêpe* 'ship' from Afrikaans *skip*. There are two examples in my corpus of stems with a LL tone pattern: *ʃphepha*

6. In each case from a to e, the description refers to the form of the word in the source language, not the form of the word in Xhosa.

7. But see Pahl (1977:33) who cites *údo* 'nothing' and *úbubhá* 'great extent'.

'paper', and *ikhitshi* 'kitchen'. *iphepha* is probably not a loan word but originally meant 'anything light like the leaf of a book or a leaf of tobacco' (Kropf 1915:330). There is even one example, *ifani* 'surname' from Afrikaans *van*, where the tone pattern is LH.⁸

c. Disyllabic words ending in a vowel

In my corpus all examples are stressed on the first syllable in the original language. These acquire the tone pattern LH. Examples are *lori* 'lorry' and *idonki* 'donkey'. There are a very few exceptions like *ipeni* 'penny' where the tone pattern is HL.

These examples assign a L-tone to the stressed syllable and a H-tone to the unstressed syllable. This seems difficult to explain. It can perhaps be explained by contrast with the preceding group. In the preceding group the final vowel in the Xhosa word corresponds to nothing in the source language; in group c the final vowel in the Xhosa word corresponds to a vowel in the source language. If in group b the final vowel gets a L-tone, then one might wish to give the final vowel in group c something more prominent. This can only be a H-tone.

But then why not assign a H-tone to the first syllable? Possibly because underlying HH stems normally become FL in isolation and thus lose their final prominence, and underlying HH stems that remain HH in isolation are very rare. If one wishes to differentiate this group from the preceding by giving a H-tone to the final syllable, the only pattern left is LH.⁹

Tim Guile pointed out to me that it is possible to analyse the last two groups from a slightly different point of view and set up the following rule:

8. So my principal informant. Other speakers pronounce with the expected HL. The LH form may be due to the influence of the surname *Fani*, which has a LH pattern.

9. These last two paragraphs are extremely speculative, and the arguments in them are put forward very tentatively.

Guile's Rule: A disyllabic stem in Xhosa which is borrowed from English and Afrikaans will have the tone pattern LH, if the final vowel exists in the source language; if the final vowel has been added in Xhosa then the tone pattern will be HL.

There are very few exceptions to this rule. There seems a general tendency for final vowels of stems of more than two syllables to have a H-tone if they represent a vowel in the source language but a L-tone if they represent an additional vowel. But unlike the case of disyllabic stems there are many exceptions. See section e on the next page.

d. Disyllabic words ending in a consonant with the stress on the first syllable

These normally become HLL, with the stressed syllable becoming H:

t'ápile 'apple'

ípókotho 'pocket'

iféstile 'window' from Afrikaans 'venster'

There are a few words where the tone is LLL.

ítikiti 'ticket'.

That the stem is low is shown by the form after negatives: *andifúni tikiti*.

Since in most cases the noun occurs with the prefix, and the high tone of the prefix spreads onto the first syllable of the stem, the stem will generally be pronounced with a H-tone on the syllable which is stressed in the source language even if this H-tone is lacking in the underlying form. This seems to imply that the shape of borrowed words is more affected by the surface form than the underlying form. The words with LLL are few in number and seem to be older borrowings. New borrowings are likely to be underlyingly HLL.

One form *ídólophu* 'town' from Afrikaans *dorp* is interesting in that the absence of downstep in the form implies a LLL stem as does the form used after negatives, which is LLL. The plural, however, is *íidólophu* which implies a HLL stem.

Once again there are anomalous forms like *ibhaskíti* 'basket'

e. Other forms of two or more syllables

Normally these follow the rules with the stressed vowel becoming H and the other vowels are L. A final vowel in Xhosa which represents a vowel in the source word may have a high tone but more often than not has a L-tone.¹⁰ Sometimes when the final vowel has a H-tone the remaining vowels are L.

flas̄ti 'receipt'

ʔÁfriká or *ʔÁfrika* 'Africa'

ʔAmériká 'America' or

ʔMeliká 'America' but

ʔÍndiya 'India'

ʔPéshiyá 'Persia'

ʔbhanána 'banana'

ʔkhománda 'commando'

ʔsoldáti 'soldier' from Afrikaans *soldaat*'

ʔkomití 'committee'

ʔsosayití 'society'

f. Forms involving epenthetic vowels

We have seen that for Xhosa stems of two syllables, if the final vowel is epenthetic then it has a L-tone while if it existed in the source language it has a H-tone. We have also seen that for stems of more than two syllables, for some speakers the same rule holds while for other speakers a final vowel which existed in the original language may still have a L-tone. Nevertheless, the exceptions concern the tone to be assigned to vowels that existed in the original language, and for all speakers the rule is that final epenthetic vowels have a L-tone.

For medial epenthetic vowels, the situation is far less clear. Sometimes they have a L-tone but very often they seem to have a H-tone taken from the syllable to the left. For instance:

10. There is also a variation among speakers. My principal informant for instance prefers *ʔÁfrika* while another speaker only accepts *ʔÁfriká*. My principal informant has many words of more than one syllable where an original final vowel has a L-tone while for another speaker virtually all such vowels have a H-tone, i.e. for this second speaker Guile's rule applies to final vowels of words of more than two syllables.

ímárlke ‘market’ from Afrikaans *mark*

ínálti ‘needle’ from Afrikaans *naald*

Compare *úmatilóshe* ‘sailor’ from Afrikaans *matroos* where the epenthetic *i* after the *t* possibly takes its L-tone from the preceding syllable.

On the other hand, *ísipélti* ‘pin’ from Afrikaans *speld* is HLL and not HHL. In *íperlle* from *pêrel* ‘pearl’, the accented syllable in Afrikaans acquires a L-tone in Xhosa, and the epenthetic vowel a H-tone.

An interesting case is *ígólde* from English ‘gold’. One may hypothesize that the *o* acquired a high tone because of the stress, then this high tone spread to the epenthetic vowel and finally the depressor *g* caused the *o* to be lowered.

g. Words with diphthongs in the source language

Stressed diphthongs are often resolved into two syllables, each with a high tone.

íbháyíbhile ‘Bible’

ítáwúni ‘town’

ítáyískrím ‘ice cream’

9.5 Summary

The behaviour of my principal informant in interpreting stress in English as tone in Xhosa and the assignment of a H-tone to vowels that are stressed in English and Afrikaans seems to imply some connection between stress in stress languages and H-tone in Xhosa.

The assignment of a H-tone to a vowel which existed in the original language but a L-tone to an epenthetic vowel seems to imply an association of tone and emphasis or importance but the fact that this rule does not apply medially seems to imply that there are other factors. Nevertheless, a more careful consideration of the assignment of tones to loan words might provide greater insight into the dynamics of tone in Xhosa.

CHAPTER TEN

TONOLOGY

10.1 Introduction

In earlier chapters I sketched out the tonology of Xhosa. In 2.2 I sketched out the surface structure of the tonology and then in Chapters 4 and 5 I sketched out the autosegmental representation and rules necessary to explain the morphology and morphological alternations. In this chapter I want to discuss certain more general problems of Xhosa tonology.

10.2 Classical phonemic or taxonomic level of representation

In section 2.2 we sketched out a taxonomic level of representation of the tonology. The raw material of tonology is basically the pitch contours which occur when words or sentences are pronounced. We also need certain information about the segmental phonemes (mainly whether the consonants are depressors or nondepressors). We also need information about word and possibly morpheme boundaries.

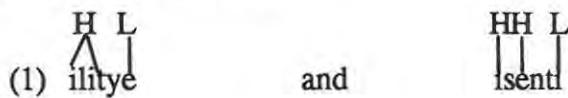
The pitch contour of an utterance is determined by the surface tones of the words, the intonation contours and to a lesser extent its segmental makeup (mainly whether the consonants are depressors or not). In this account we shall be mainly working with individual words, pronounced in isolation. Let us assume that each word is pronounced with a neutral statement intonation. We can set up a taxonomic phonemic representation of the tones of a word, using three phonemes H, F, and L and the juncture-like phonological entity, downstep \downarrow . We can describe the **tone pattern** of the word by means of these four entities. In terms of our model, two words having the same tone pattern and the same sequence of depressor and non-depressors will have the same pitch contour, assuming a constant

intonation pattern. The tone-pattern can be converted into the pitch contour by the set of rules set out in section 2.2.1.¹

There is an element of simplification here. There will for instance be differences in pitch height between syllables beginning with different non-depressor consonants and even between syllables beginning with the same consonant but different vowels (Ohala 1978).

In terms of our model a pitch contour for a word of which the consonants are known should be unambiguous as to the tone pattern it represents. In other words tone pattern and pitch contour stand in a relationship of bi-uniqueness.

When we consider the autosegmental representation of a word (including the tone pattern) the relation is not so simple as the same tone pattern can have more than one autosegmental representation as we saw in Chapter 4 with regard to *ilítye* and *ísénti* which have the autosegmental representations



Note that the relationship between tone pattern and autosegmental representation is different from that between surface representation and underlying representation. Both surface and underlying forms will have autosegmental representations, and both can be described by tone patterns, e.g. *ilítye* can have the underlying tone pattern HLL and the surface tone pattern HHL (see Chapter 4, examples 6 and 7).

10.3 Underlying surface representation

We saw in 2.3 that if we ask an informant to repeat a word several times, we will find that some words are pronounced with a constant tone pattern but in others there is a variation in certain syllables between H and L tone. For instance, the first vowel of *nibéthisa* 'you cause

1. For examples of attempts at formalizing a similar set of rules see Clements 1979 and Schachter and Fromkin 1968.

to strike' is always L; the first vowel of *libéthile* 'he struck' is always H; but the first vowel of *ñbéthisa* 'he causes to strike' is sometimes H and sometimes L.

Since this type of variation is systematic and occurs frequently it seems desirable to set up a level of representation where vowels that can be either H or L are indicated by a special symbol. There is also the fact that a depressor between two H's that do not alternate with L generally gives rise to downstep, whereas a depressor between two syllables that do so alternate does not give rise to downstep. In citing tone patterns, I have used the symbol X and with actual words I have used a small x over the vowel. When this level of representation is used, which we can tentatively call the *underlying surface representation*, note that H means H only and L means L only. Secondly, a form like *libéthile* if marked with an underlying surface representation implies that the same inflection with a similar stem beginning with a depressor (as *l'hámBILE* from *hámba* 'go') will have a depressor between the two H's, whereas a form like *ñbéthisa* implies that the same inflection with a similar stem beginning with a depressor (as *ñhámBISA* also from *hámba*) will not have a downstep between the first two syllables, even when the vowel marked with the ^x is pronounced as a H-tone.

I have used the underlying surface representation to provide a compact representation of data in much of the thesis particularly in the appendices, and makes it possible to present a large mass of data in a compact form, since in most cases parallel morphological constructions with different patterns of depressors reduce to one underlying surface form. There are, however, certain forms where one underlying form is not possible. For instance, the quantitative pronoun 'all five' is *zozíhlânu* or *zó'zhlânu* but not **zózíhlânu*.

There are certain problems with the model of variation I have presented. My informant will occasionally produce forms like *ámádódana* for *ãmădódana* which according to my rules should not occur.

The underlying surface representation has therefore a certain practical value. The questions of whether it has any psychological reality and whether it should be accorded any theoretical status remain to be explored.

We have also set up an autosegmental representation of both the surface and underlying forms. Here we see that the occurrence of X corresponds to a syllable to which the left-delinking rule can optionally apply. If we have a syllable to which the left-delinking rule must apply, then it will be marked L. So X notation will not occur wherever the left-delinking rule has applied but only where it is optional.

10.4 Underlying tones

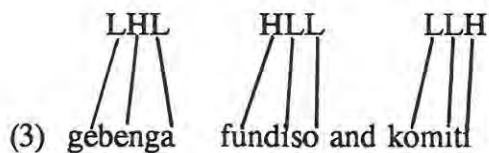
One of the questions to be considered is what units we postulate for the tonal tier in the underlying representation. Conventionally one has assumed H-tone and L-tone. This is also assumed by Goldsmith (1976:25). Stevick (1969:330) was the first to suggest that actually this contrast was better thought of as one of tone vs no-tone. The reasons for this are that the H-tone seems to be a positive entity that can shift around, affect other tones, while the L-tone seems to be a negative entity, simply characterized by the absence of tone.

This proposal was accepted by Pulleyblank (1983:41 and 1986:16), who postulated that for many tone languages only H occurred underlyingly and that L-tones were introduced at a later stage in the derivation through a L-tone default rule. In order to prevent a third value being surreptitiously introduced, Pulleyblank maintains that in the underlying structure only H-tones occur on the tonal tier and no L-tones. After the introduction of L-tones by the L-default rule all vowels must be linked to either a H-tone or a L-tone and one cannot have toneless syllables. This means that at one stage there is a contrast between tone and no-tone, at a later stage there is a contrast between H-tone and L-tone, but at no stage is there a three-way contrast between H-tone, L-tone and no-tone, as this would mean that one feature was being used to distinguish three values.

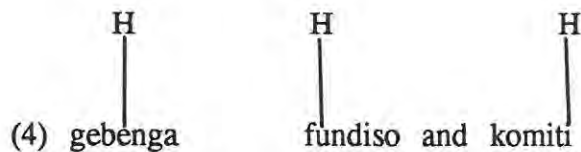
I think it is also true that if one postulates only H-tones on the tonal tier then one is *ipso facto* committed to the idea that tones are underlyingly linked to vowels. If one has tonal melodies like LHL it is possible to set up



as the underlying forms of the stems *gebénga* ‘giant’, *fúndiso* ‘teaching’ and *komiti* ‘committee’ and set up an initial association rule and well-formedness conditions to supply the association lines to produce



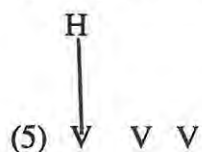
but if only H can occur in the tonal tier underlyingly one needs association lines underlyingly in order to distinguish



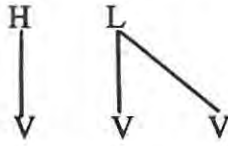
as the tone melodies in each case will simply be H.

Part of the reasoning for setting up tone vs no-tone instead of H-tone vs L-tone will be the arguments advanced by Stevick. It seems to me that there may be an argument based on simplicity.

If underlyingly one has

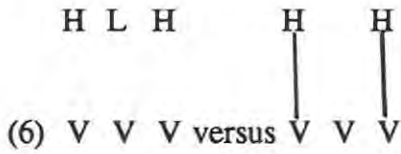


it is easier for spreading to occur than if one has



In the first case one has simply to add two association lines whereas in the second case one has to delete two association lines and then add two association lines. I would suggest that spreading rules and delinking rules are simpler if only H-tones are present. On the other hand an underlying representation involving linked H-tones may be more complex than an underlying representation involving H-tones and L-tones but no linking.

Compare



In the first representation there are three tones and no association lines making a total of three elements involving tone. In the second there are two tones but also two association lines making a total of four elements involving tone. In this case the representation involving H-tones only is actually more complex. The trade-off comes when we have to talk about tone spreading where the absence of L-tones makes the application of the rules simpler.²

10.4.1 A note on terminology

In spite of the above I have often used L-toned rather than toneless or L-tone rather than no tone when talking about the underlying structure. I do not think this practice leads to misunderstanding provided it is borne in mind that in the underlying structure and at points

2. Although I have put forward this argument and think it has some weight, I realise that it is questionable whether counting notational symbols is the best way of determining simplicity.

in a derivation prior to the application of L-tone default rule, *L-tone* and *L-toned* refer to what in autosegmental terms are *no tone* or *toneless*.

The distinction between *no tone* or *toneless* would be important if it were to emerge that there were two types of languages with two surface tones, H-tone and L-tone:³

- a. those for which there are strong reasons for representing them as having only H-tones in the underlying structure and whose underlying structure is best described in terms of syllables with a tone and syllables without a tone.
- b. those for which there are strong reasons for representing them as having H-tones and L-tones in the underlying structure and whose underlying structure is best described in terms of syllables with a H-tone and syllables with a L-tone.

If this were to prove to be the case, then the difference between talking about L-tones or toneless syllables in the underlying structure would be very important. However, the existence of these two sorts of two-toned languages remains to be established. I would put forward the hypothesis that in fact all two-toned languages will turn out to be of type a.

It would of course even be more important to make the distinction if one postulated in the underlying structure three types of tones: those that were linked to a H-tone, those that were linked to a L-tone and those that were not linked to any tone. In such a case there would in fact be L-toned syllables and toneless syllables underlyingly. Pulleyblank (1986) gives reasons for suggesting that postulating this type of structure is undesirable as it involves using one feature to make a three-way distinction.

3. The fact that Xhosa also has a F-tone will be ignored in the present discussion.

10.5 Falling tones

Xhosa and Zulu are different from other Bantu languages of which autosegmental descriptions have been produced. Most Bantu languages have a surface tonology of H and L. Languages of West Africa may have additional level tones. Xhosa and Zulu have a H-tone and a L-tone but in addition they have on the surface a falling tone. Whatever the underlying status of this tone, it clearly is on the surface a phonemic tone, at least in accordance with the generally accepted procedures of classical phonemic theory. In this it differs, for instance, from Southern Sotho, where fairly marked falling glides occur on penultimate and final syllables but these are allophonic realisations of phonemic H-tones (Doke and Mofokeng 1957:41).

Most cases of F occur on penultimate syllables through the operation of the HH-to-FL rule. Compare *bónisa* vs *bôna*. In the first case the stem is non-final and so HH occurs while in the latter the word is final so FL occurs. If *bôna* occurs non-finally in a phrase then it will surface as HH. There has been some discussion as to whether stems with the alternation of HH vs FL should be regarded as HH or FL underlyingly. The choice is essentially between setting up HH underlyingly and deriving FL by a HH-to-FL rule which converts a phrase-final HH to a FL and setting up falling tones underlyingly and deriving medial HH by a reverse rule. The latter has been argued for on the grounds that there are cases where HH remains when final as in *t'cící*. But it can also be argued that both forms can be set up as HH underlyingly and forms like *t'cící* marked as exceptions to the HH-to-FL rule (Lanham personal communication).

There are also cases where a F occurs which is not produced through the operation of the HH-to-FL rule. In final position there is the short form of the perfect as in *ndibèthê* 'I hit'.

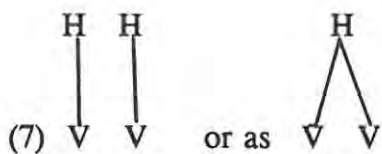
In initial position there are the following forms:

1. The prefix of 2a nouns: *ôomamá* 'mothers'
2. The prefix of 10 nouns: *îintaka* 'birds'
3. In the speech of some speakers but not of my main informant: The prefix of class 5 and class 11 nouns where the stem begins with a H or F: *îséla* 'thief', *ûsána* 'child'. In these examples my informant gives *t'séla* and *û'sána* (see 4.4.2).

There are cases where my principal informant has forms which vary between F and H^r. See, for instance, Appendix 3 section 7.8.

In these cases where the F does not arise from the operation of the HH-to-FL rule one might wish to postulate a H and a L linked to one vowel. But if there are no L's underlyingly we must do something else. Some of these forms are clearly not underlying. For instance, the class 5 noun prefix *î-* clearly alternates with the full form *îli-* and presumably is derived from it. In fact most cases of F alternate with other forms with a disyllabic structure, for example, *lôwo* and *lôo*. The short form of the perfect *ê* as in *lîbêthê* could possibly be derived from *ile* but note that the indicative form of that is LL not HL as in *lîbêthile*, but could be derived from the participial form *lîbêthile*, which is often not final.

We then have the question: if the underlying form is some sort of HH, do we set up the underlying form as



As Pulleyblank (1986) points out in general terms, simplicity favours the latter.

10.6 Rightward-spread rules.

I have given a number of rules which have the effect of linking a tone to vowels to the right: the antepenultimate rule, the penultimate rule, the prefix spread rule and the high-stem adjustment rule. Scholars, like Khumalo (1987) and Goldsmith, Peterson and Drogo (1989), who have discussed these rules or similar rules in Zulu have had two concerns. The one has been to give formal expression to the similarity between the rules by combining them into one or possibly two rules; the second has been to reinterpret them as rules involving accent.

Let us consider the antepenultimate rule first. In this rule a H-tone more than three syllables from the end becomes linked to all the syllables to the right up until the third syllable from the end of the word. As a tone rule this is very unusual, though Kisseberth reports a similar shift in Digo (1984). The unusualness is that tone rules normally apply to adjacent syllables and operate over short distances, i.e. they are local rules. Here the effect of the rule can be to spread a tone over as many as six syllables. Furthermore, a tone can have an effect over a large distance.⁴

Take for instance:

(8) *bǎnǎmǎthǐsela* ‘they make to stick together’

from an underlying

H
|
(9) ba namathisela.

Here the antepenultimate rule has applied to spread the tone to the antepenultimate syllable. It is possible to construct forms that spread a tone even further, for instance:

(10) *bǎyǎnǎmǎthǐsǐlǐsana* ‘they are making to stick together for each other’

On the other hand in

(11) *bǎnamathiselanê* ‘they made to stick together for each other’

the effect of the falling tone on the final syllable is to prevent the antepenultimate rule from applying even once. In other words, the falling tone has an effect on a tone more than four syllables away. The antepenultimate rule, as I have stated it, has two features which are

4. It is possible to state the rule in the form of an iterative rule, so that it can reapply as many times as necessary until the tone is linked to the antepenultimate syllable. In this case the rule would only apply to adjacent syllables but would still be blocked by a H-tone several syllables away.

unusual in tone languages: it requires the rule to **count** that there are three syllables to the right of the tone, it requires the rule to see that there are no H-tones to the right of the tone in the same word even though these may be some distance away.

These features of **counting** and **action at a distance** are felt by some scholars to be unsatisfactory in tone rules. Action at a distance is held to be a feature of accent rather than tone and counting syllables to be the province of metrical rules.

This has led to Goldsmith, Peterson and Drogo (1989) postulating a metrical accent generally on the antepenultimate syllable, though sometimes on other syllables. The antepenultimate then becomes a rule of attraction to accent. This also has the advantage that in the case of the penultimate rule, if the accent is placed on the penultimate syllable then the penultimate rule can also be the result of attraction to accent.

The first difficulty about these proposals is the complexity of the rules for the establishment of this metrical accent. It involves postulating that in certain tenses the final syllable is extrametrical but not in others, and certain stems have to be marked as subject to an accent-hopping rule, which moves the accent one syllable to the right.

In addition, there are more cogent reasons for doubting the desirability of introducing accent to account for tonal phenomena.

However, before considering accent in Xhosa, I will first look at English stress-accent and then compare it with the accent that Goldsmith (1984) postulates for Tonga.

English stress accent is often regarded as something abstract since it lacks a clear acoustic correlate (see Fry:1960). English stress-accent can be invoked to explain vowel reduction, for instance: *telegraphy* [tə legr ə fi] vs *telegraphic* [tel ə græ fik]. But although English stress-accent may lack a definite physical correlate it is not a purely abstract feature.

English speakers recognize that one syllable of a word is stressed and will show a high measure of agreement as to which syllable in a word is stressed. Furthermore, when presented with a member of a minimal pair distinguished only by stress, for example, *súbject* (noun) and *subjéct* (verb) or *belów* and *billow*, they will be able to say which word has been said - hence there is something in the speech signal which enables speakers of English to recognize stress. Stress seems to be the basis of English versification. There is a measure of agreement between stress in English words and stress in cognate words in other Germanic languages, and between the stress of words borrowed from Latin and the stress of the original Latin word.

For Tonga, Goldsmith (1984) postulates an accent that places a H-tone on the preceding syllable, for example, *íkúbona* is interpreted as being derived from *ikubō*na* (Goldsmith 1984:28).⁵

In contrast to English, there is no evidence that speakers of Tonga recognize this accent. There are no minimal pairs distinguished solely by accent, which speakers can tell apart (There will always be a corresponding difference in tone). It does not seem to have independent correlates (except that it does seem to correlate with tone in an earlier stage of the language).

The only evidence for its location seems to be tone and general arguments for the placement of accent.

This means that accent in Tonga is something far more abstract and problematic than stress accent in English. This does not mean that it is illegitimate to do what Goldsmith does but it does mean that it needs far more justification than making use of stress accent in English, which is independently justified.⁶

5. The H-tone will also link to preceding vowels.

6. It seems to me, however, that in his account of Tonga, the postulation of accent is an attempt to encode a tone which has undergone a shift of one syllable to the left and that a better account would be obtained by simply postulating lexical tone where he postulates

If we now come back to Xhosa, we find that the only evidence for this accent is the behaviour of tone. Goldsmith, Peterson and Drogo (1989) do not put forward any non-tonal evidence for this metrical accent. There is no evidence that speakers of Xhosa feel that there is an accent on the syllable where Goldsmith, Peterson and Drogo (1989) postulate an accent. Speakers of the language are more aware of some sort of prominence on the penultimate syllable - corresponding to the extra length on that syllable. It would thus seem that this metrical accent is in synchronic terms completely abstract. Now while I would not want to exclude abstract features completely from a linguistic description, it does seem to be desirable to avoid them unless there are extremely powerful arguments in favour of using them.

While we are dealing with the synchronic description of Xhosa, I would feel more comfortable with an abstract feature if it could be shown that at some earlier period in the language it had definite phonetic content. In fact, I would like to suggest that where a completely abstract feature can be justifiably postulated for some stage of a language on synchronic grounds it will be found to be derived from a non-abstract feature existing at an earlier stage of the language.

For instance, if at some future time all phonetic correlates of stress like intensity, pitch variation and length were to disappear in English, one might still wish to postulate an abstract accent occurring in English words in order to explain variation in vowels as that between *telegraphy* and *telegraphic*. In such a case, the existence of a physically realised stress at some earlier period in the history of English would be powerful external evidence for this now completely abstract accent.⁷ Similarly, evidence that no such physically realised stress or accent had existed at any earlier period would count against the postulation of such an accent.

accent and adding a rule shifting the tone one syllable to the left.

7. One would still have to show that there were sufficient forms showing alternations in vowels to justify the postulation of such an accent.

In a similar way, if one could show that some physically realised accent had occurred in the prehistory of Xhosa, this would be strong support for the position of Goldsmith, Peterson and Drogo. There does not seem to be any evidence for such a realisation; on the contrary, there seem to be good reasons for doubting whether such an accent could have existed. Such an accent could not have been identified with H-tone since it is being postulated in many cases to explain the movement of H-tones to this syllable and H-tones seem to be etymologically inherited from similar tones in Proto-Bantu.

Could it have been some feature of length or stress? Present day Xhosa is characterized by a feature of penultimate length and this is recognized by many researchers. In most Bantu languages there is a phenomenon of penultimate length or stress (Doke 1935:17). This is attested in Southern Bantu languages and also in Swahili where penultimate length is interpreted as stress (Ashton:1947).

There are a number of reports⁸ of stem initial stress in Bantu languages. While I do not think these accounts are true of present-day Southern Bantu languages, phenomena such as the alternation of [kh] in stem initial position with [k] in non-stem initial position in Xhosa and Zulu seem to imply that it may well have existed in the past. If then there was some form of penultimate prominence and some form of stem-initial form of prominence it seems unlikely that there was a third form of prominence which fell on the antepenultimate syllable.

If the above argument is correct, then it would seem that it is unlikely that there could have existed a prosodic feature from which Goldsmith, Peterson and Drogo's accent could have been derived historically, and therefore that it is unlikely that an analysis to postulate such an accent is a correct analysis for present-day Xhosa.

It seems to me that the strongest general argument for Goldsmith, Peterson and Drogo's position (and also that of Downing (1988), mentioned below) is the claim that tones cannot act at a distance and that tone rules cannot count. But do we have enough examples of tone

8. For instance, Doke (1954:43), (who disputes that it actually occurs in Southern Bantu), Ziervogel (1959:21) and references given by Ziervogel.

languages to make such a statement? Should we not accept the examples from Xhosa and other Nguni languages and from Digo as evidence that occasionally tone does act at a distance and that tone rules can sometimes count?

Downing (1988) postulates two rules: a local rule which shifts tone one syllable to the right (which appears to act generally but not within stems) and an attraction to accent. Unfortunately there does not seem to be a general rule which spreads or shifts tones one syllable to the right. In verbs there are many cases like

(12) *ndisábala* 'I still count'

where the H-tone does not spread or shift, and in nouns a H-tone on the initial vowel does not spread or shift onto the stem, e.g. *íyeza* 'medicine'.

The fact is rather that there are a few special cases where a tone spreads or shifts one syllable to the right.

If we examine the rightward-spread rules of Xhosa we find that there is on the one hand a very general rule, the antepenultimate rule, which spreads tones to the antepenultimate syllable, which applies to nouns, verbs, relative stems with a few exceptions and on the other hand two very specific rules which apply in very restricted circumstances and which spread tones one syllable to the right.

I would rather view the matter in the following way:

There is a widespread tendency in African languages for tones to spread or shift to the right. This can be explained by the reasons put forward by Hyman and Schuh (1974). This tendency is manifested in Xhosa in three rules.

The first is a very general rule, the antepenultimate rule which applies to a H-tone on any syllable provided there are only L-tones to the right and there are at least three syllables to the right of the H-tone. This rule applies to nouns, verbs and relatives. There are a very few forms to which it does not apply and these are mainly explainable in terms of the

presence of syntactic boundaries (for example, *íphephandaba* ‘newspaper’, which is a compound of *íphepha* ‘paper’ and *índaba* ‘news’). The non-application to attributive relative stems is a bit more problematic.

The two other rules are very specific rules - local in application and applying in each case to a very restricted set of morphemes. These rules are:

1. The penultimate rule. This rule applies only to a H-tone on a subject or object concord. The H-tone spreads onto the following syllable provided:
 - a. the subject or object concord is the third syllable from the end of the word
 - b. the next syllable is L but is not part of a LL+ stem
 - c. the final syllable is L.

In effect the rule applies to the following structures:

H-toned SC+LL-verb, e.g. *báítma*

H- or L-toned SC+ya+OC+LL-verb, e.g. *báyayíítma*

L-toned SC+OC+LL-verb, e.g. *siyíítma*

H-toned SC+ya+L-toned monosyllabic verb, e.g. *báyáítwa*

It does not apply to a verbal structure like

SC+verbal infix+LL-verb, e.g. *ndisábala* or *ndingábala*

or to a nominal structure like

initial vowel+noun stem, e.g. *íbala*

2. The prefix-spread rule. This applies to the H-tone on the initial vowel and spreads it onto the following syllable provided that syllable is a basic prefix (which is always

low) and the next syllable (which will be the first syllable of the stem)⁹ is L, for example, *ílítye* but not *íbala*

It also applies to a H-tone in a relative construction immediately preceding the fixed basic prefix of a relative stem under similar conditions as in *éííndaka*. See 7.7.2.

Note how the prefix-spread rule applies to noun forms like *ámáXhosa* but not to adjectival forms like *ámáne*.

Many investigators, including Khumalo (1987), have claimed that the penultimate rule is an extension of the antepenultimate rule. Khumalo, for instance, gives one rule which combines the antepenultimate rule, the penultimate rule and the prefix spread rule. I suggest this is not the case and rather all three rules are independent manifestations of the tendency for tones to move to the right.¹⁰

10.7 Restricted tone languages or accent languages

The claim has often been made that in a pure tone language any sequence of tones should be possible, whereas in a restricted tone language only certain sequences occur. Pure tone languages are taken to be languages like Yoruba or Igbo where it is claimed that any sequence of the permitted tones can occur. For instance, in a pure tone language with two tones H and L there should be 2^n possible tone patterns for words or stems of n syllables. Thus, for two syllable words or stems 2^2 , that is, 4 tonal sequences are possible. For three syllable words or stems 2^3 , that is, 8 sequences are possible. For pure tone languages with three tones, H, M, L, there will be 3^n possible sequences for words or stems of n syllables.

9. Except in the case of infinitives with object concords as in *úkuyilíma*, where the object concord is underlyingly H and is still H at the time the prefix-spread rule applies. At a later stage the penultimate rule applies to spread the H-tone to the following syllable. The left-delinking rule finally delinks the H-tone from the object concord.

10. The High-stem adjustment rule is also a manifestation of the same tendency.

For two syllable words 9 tone sequences are possible. For three syllable words 27 sequences are possible.

It should be noted that languages which are in these terms cited as pure or fully tonal languages are languages in which most words are short, consisting of one or two syllables.

Let us consider the surface tonology of Xhosa. We saw that there were three surface tones: H, F, and L.

The falling tone is of limited distribution. Most commonly it occurs on the penultimate syllable of a word before a pause, where final HH becomes FL. There are certain circumstances where this rule fails to apply and HH occurs in the surface. This is a property of certain stems. e.g. *ǀcǀcǀ* 'earring' where, unlike most disyllabic stems, HH remains. It is also a property of certain inflections. For instance, in the past subjunctive negative final HH remains as in *akâbéthá* 'and he did not hit' or certain inflections of monosyllabic verbs with OCs like *ǀkúngawáǀwǀ* 'not to fight them'.

The falling tone also occurs in a few inflections at the beginning of words: *ôomamá* 'mothers', *lôo ntó* 'this thing' *akâbéthá* 'and he did not hit' and in one at the end of words, e.g. *ndibéthê*.

If we ignore instances of the falling tone mentioned in the previous paragraph then the number of tonal patterns for a form of *n* syllables in length is 2^n .

In verb stems only a restricted subset of the theoretical patterns occur but if we look at nouns we find that most possibilities are attested. Monosyllabic stems can be H or L. For disyllabic noun stems all four possibilities occur: LL, LH, HL and HH. Likewise, with trisyllabic noun stems, all possibilities occur. For stems of four syllables, I have been able to find examples of 14 out of the 16 possible tone patterns and I believe the gaps are accidental.

Some prefixal morphemes in nouns and verbs are H and some are L. Some final suffixes are H-toned, others L-toned.

What I have said in the two previous paragraphs would seem to imply that Xhosa is a fully tonal language. There are two things that might lead us to say that Xhosa is a restricted language.

The first is that all verbal extensions and all regular noun suffixes are L-toned. All longer verb stems are made by the addition of extensions. Most nouns of more than three syllables are made by the addition of extensions and suffixes. This means that all longer stems will tend to end in L syllables. There are a minority of nouns formed by compounding. These show other possibilities.

The other is that there are a series of rightward-spreading rules of which the most important is the antepenultimate rule. This has the effect of making an underlying HLLLLL become HHHHLL.

The result of these facts is that although virtually all sequences of H and L are possible, particularly when we consider compounds, only a restricted subset of sequences are at all common, namely, those that occur with regular extensions.

This means that in reality Xhosa is best regarded as a fully tonal language, even if certain possibilities are less frequently exploited.

CHAPTER ELEVEN

CONCLUSIONS

In the latter part of Chapter 1 and in Appendix 1, I described how I had worked with Stanley Bentele and suggest that informants can be trained to take a more active role gathering tonal data.

In Chapter 2, it was shown that although words and forms distinguished only by tone are rare, tone is not a marginal feature in Xhosa and anecdotal evidence was adduced to show that speakers of Xhosa rely heavily on tone when processing spoken language.

In Chapters 4, 5 and 6 the main tonal patterns of nominal and verbal inflections were described and it was shown that much of the variation in the forms of morphemes as far as tone was concerned, was the result of a few powerful rules such as the antepenultimate rule and the left-delinking rule.

At the same time it was shown that the left-delinking rule, the processes of high coalescence and high splitting together with the depressor-downstep rule were responsible for a great deal of free variation in the speech of a single person.

In Chapter 7, it was shown that tone could produce crucial evidence for and against syntactic analyses. In particular it was shown that taking tone into account made the explanation of the forms of the adjective and relative concord more complex (but, also, more interesting). Tonal data offered evidence that simple adjective and relative constructions should be accounted for by phrase structure rules rather than by embedded relative clauses and also that

the fixed basic prefix in relative stems had to be regarded synchronically as a separate morpheme.

In Chapter 8, four examples were put forward of patterns existing in the language. First, the way in which a tonal distinction between 1st and 2nd person subject concords was sometimes obligatory, sometimes optional and sometimes not possible was explored. Next, we considered the way in which this distinction turned up in another part of speech. Third, we considered how certain tone distinctions were lost in certain negative forms. Finally we saw how the patterns of reduplication in quadrisyllabic stems were different in nouns and verbs. In none of these cases could these complex patterns be explained but they serve to show the complexity of tone in Xhosa and also material serve as awaiting further exploration.

In Chapter 9 on loan words, it was shown that there is an identification of H-tone in Xhosa with stress in English and Afrikaans and also a partial tendency for vowels that have been added in Xhosa to have a L-tone but for vowels which correspond to a vowel in the original language to have a H-tone. This lends support to the idea that H-tones are a positive entity and L-tones a negative entity and hence to the idea that H-toned syllables should be regarded as syllables with tones and L-toned syllables as toneless syllables.

In Chapter 10, certain general problems were considered. One question was whether H-tones and L-tones should be postulated in the underlying structure or whether one should simply postulate H-toned syllables and toneless syllables. Arguments were presented for favouring the latter course. Finally, attempts to unify the rightward-spread rules into one rule and also to reinterpret them as being in part metrical rules involving accents and attraction to accent were considered and found to be less convincing than the more conventional approach of considering them as separate tonal rules.

In general the picture of Xhosa tone that emerges is one of a system of considerable complexity but which though at first sight appearing to be random and almost chaotic is nevertheless a system governed by some very general principles and describable by a limited set of rules.

APPENDIX ONE

METHOD OF WORKING WITH MY PRINCIPAL INFORMANT

When I started work on tone I found it very difficult to go beyond impressionistic records of pitch, and difficult to interpret these in terms of tones. I soon started work with Stanley Bentele, who at that stage was an unemployed primary school teacher but is now in charge of the language laboratory at Rhodes University. I then tried following a procedure of Pike (1948) and produced a list of disyllabic stems with a monosyllabic prefix like *t'sèle* 'frog' and *ikhala* 'aloe'. Pike suggests that in such cases the linguist should be able to hear when the pattern changes if the informant pronounces one word after the other. Even working with these I found it difficult to sort them into consistent tonal groups.¹

I then decided to ask Stanley Bentele to do the sorting. Working together but using his judgement as to which words had similar tone patterns we sorted the words I had collected into eight groups, which we named a to g and about a week later he divided group a into a and j and group g into g and i.

In these two latter groups I could hear no distinction between the later groups and two earlier groups. But since he applied the labels consistently I had to accept that there was a distinction although I could not hear it. Only later did I realise that the basis of the distinction was the presence or absence of phonemic downstep.

1. I might have had more success had I made him pronounce them in a syntactic frame, rather than in isolation.

I was able to interpret these groups as follows:

Table [1]

The original seven groups²

- a. FL preceded by downdrift or downstep, or initial in word, e.g. *úkuthêtha* 'to speak', *t'gâma* 'name', *thêtha* 'speak'
- b. LL preceded by a non-depressor, e.g. *úkúlima* 'plough'
- c. HH preceded by downdrift or downstep, e.g. *âmacícf* 'earrings', *t'cícf* 'earring'
- e. LH preceded by a non-depressor, e.g. *tchibí* 'lake'
- f. LH preceded by a depressor, e.g. *thobé* 'dove'
- g. HL preceded by downdrift or downstep or initial in word, e.g. *úkubêtha* 'hit', *t'dyókhwe* 'yoke', *bêtha* 'hit'
- h. LL preceded by a depressor, e.g. *tdada* 'duck'

The two later groups

- i. HL preceded by H not followed by downstep, e.g. *ímíni* 'day'
- j. FL preceded by H not followed by downstep, e.g. *únyâna* 'son'

Two final groups added at a later date³

- k. HH preceded by H not followed by downstep, e.g. *úThíxó* 'God'
- l. HH with a depressor in the middle of the stem, e.g. *t'thá'ndá* 'lover'

Since there were complications with regard to phonemic downstep, I decided not to show him how to assign individual vowels to tones but rather to get him to assign words to these

2. I ignore group d, which contained HL stems preceded by a depressor, which Stanley Bentele merged with group g after about one session

3. Words belonging to these groups are comparatively rare.

groups designated by letters. He could also apply these letters to longer words, where he assigned them letters on the basis of the tones on the last two syllables and some information on the preceding syllables, e.g. *ísinámbuzáne* 'insect' was assigned to group **g** but *únópópi* 'doll' to group **i**.

This analysis looks curiously similar to that of Nauhaus (1924), who produces a very similar grouping of words into groups based on the tones of the last two syllables. I was unaware of his article at the time.⁴

The following remarks can be made about the above system of tone letters:

1. It covers all the phonemic tone contrasts for nouns of two syllables, though some of the contrasts it makes are allophonic, e.g. *íthanga* 'pumpkin' is assigned to group **b** while *ídada* 'duck' to **h**, although both have the tone pattern HLL. Their pitch contours, [$\sim \setminus _ _$] and [$\sim _ _$] respectively are very different but this is because [d] is a depressor and [t^h] a non-depressor.
2. In our early work, for some time I had to take on trust Bentele's distinguishing group **a** from **j** and group **g** from **i** since I could not hear a difference, and I found it difficult to hear the distinction between groups **b** and **a**, which to my English ear seemed to have very similar phonetic pitch contours, although no native Xhosa speaker will confuse the two groups. On the other hand my English language background made me sensitive to the distinction between a final LH and LL, a contrast which I found he would often confuse at the beginning and I would often have to prompt him and say "Are you sure that is **e** and not **b**?". So at the beginning there were cases where he could identify tonal differences easily which I completely failed to hear but on the other hand there were phonemic contrasts in tone which I could hear easily but which he would tend to confuse.

4. Nauhaus believed he had produced a complete description of the tones of any word in Xhosa. I was aware that this system of tone letters only described the tones of the citation form of disyllabic noun stems and the last two syllables of other words.

At a later stage I tried to see if he could help me sort trisyllabic stems into consistent tone groups as he had with the disyllabic stems. Here I found he would give inconsistent answers. I would ask him if word A had the same tone pattern as word B and he would answer yes. I would then ask him if word B had the same tone pattern as word C, and he again would answer yes. I would ask him if word C had the same pattern as word A and he would very often answer no, which was logically not possible. After some time I began to wonder whether the phonetic changes brought about by depressors were affecting his judgement of sameness of tone.

I then sorted my list of words with trisyllabic stems into those having the same pattern of depressors and non-depressors. When I repeated the exercise asking him only to compare words which had the same distribution of depressors and non-depressors, his answers immediately became consistent and with the help of his assignment of tone letters to the last two syllables I was able to work out the tones for stems of three syllables. I then gave each subgroup of words with the same tone letter a number. For instance, group **b** was divided into the following groups.

- b1** HHHLL or LLHLL e.g. *úkúbálela* 'count for'
- b2** HLHLL e.g. *úkubétheke* 'be fit for beating'
- b3** HHLL or LHLL e.g. *íkháphetshu* 'cabbage'
- b4** H^ˀHLL e.g. *íápíle* 'apple'
- b5** HHLLL e.g. *úbúndiyalwa* 'rebellion'
- b6** HLLL e.g. *úndiyalwa* 'rebel'

He learned to apply this system very well but of course it did not apply to longer stems or to other parts of speech.

I realised that this system would be too complicated to extend any further and then started showing him how to identify syllables as high, fall and low. This, however, meant that we were leaving out a phonemic contrast of downstep. For instance *í'séla* 'thief' and *ísénti* 'cent' would both be marked as HHL, although they had a different pitch contour (see 2.2.4).

After a couple of weeks I explained to him that although both words began with two high tones there was a difference and this could be marked by downstep. He became fairly excited. He said that he had been quite sure that the first two syllables of *ʔséla* were both high and was equally sure that the first two syllables of *ʔsénti* were both high, nevertheless he had been also sure there was a difference between the second syllables of the two words. Now that I had explained to him about downstep, he understood what the difference was and would be able to mark downstep in order to indicate the difference.⁵

Gradually Stanley Bentele became quite proficient in identifying tones and so in our elicitation sessions I would ask him to give me the tones and soon he became quite adept at writing the tones down on written words. I would then ask him to mark the tones of words on dictionaries or texts. In many cases I was able to ask him to mark the same text after the lapse of several months (or even years) and find that his responses were substantially the same.

I even went so far as to ask him to write out paradigms of verbs marking the tones. I would ask him write out the paradigms of two verbs with the same underlying tone and compare the two. The result was again agreement between the two paradigms. This might seem a rather questionable procedure but the results proved consistent and also consistent with the tones he produced when he marked the tones of continuous texts. The advantage of this procedure was that I was able to acquire a considerably greater coverage of data than I would have been able to had I had to elicit each form orally. In a couple of cases I asked him to write out a paradigm which I thought would have little interest, simply to keep him occupied, only to discover that there was something highly significant about the form.

Apart from checking material with Stanley Bentele after a considerable lapse of time, I also compared my data with the little previously published data by previous workers in the field

5. In the paradigms he wrote out and the texts he has tone-marked, he has indicated downstep by ʔ. There is a tendency for the downstep sometimes to be omitted in forms where he actually pronounces it. So when looking at a text, it is not possible to be sure that downstep does not occur in a form simply because he has omitted to mark it.

and found that there was general agreement between my data obtained from Stanley Bentele and their work. As stated in Chapter 1, I have been able to check my work with other speakers, at first to a limited extent but in the past few years with many other mother-tongue speakers of Xhosa who have been studying Xhosa tone with me as part of their degree course in Xhosa at Rhodes University, and over the past few years with Professor Peter Mtuze.

Stanley Bentele has tone-marked a large number of texts for me, including two copies of Kropf's dictionary. The total runs to several hundred pages of text. He has also marked the latest translation of St Mark's gospel four times, which has proved a useful corpus for the study of variation, to which I now turn.

As mentioned in 2.3, there is the phenomenon of the systematic variation of tones in certain circumstances and the occurrence of X-sequences.

When I became aware of this, I began marking sequences of syllables which could be either all H or all L as X and a form such as *linibethisa* as *l̃ñb̃éthisa*. When eliciting forms from my informant or going over paradigms that he had written out for me, I would ask him whether there were any other ways of pronouncing the word. For some words he would say no, while for others he would give alternatives.

While there were some inconsistencies (much greater than in his normal assignment of H and L in other contexts) I found that if I went back to him after a few days or even after a couple of years his replies as to what variation was possible showed a considerable degree of consistency.

Later when I asked him to write out paradigms I asked him to indicate such variant forms and when he had written them out I would check with him and prompt him for additional forms. Sometimes he would accept my prompt and other times he would reject it. Most often he would describe them as forms other people would use and sometimes even stigmatized them as forms that only a Fingo would use.

I felt confident that from the way he thought about them he was actually consulting his own *Sprachgefühl* rather than his memory of how other persons spoke.

This was subsequently borne out when he marked texts for me where many of the words that he had marked with Xs would have the Xs replaced by H-tones and sometimes by L-tones, whereas words which had H's would only have H's.

Not all the variation in Xhosa tone is due to X-sequences. Stanley Bentele would normally give *úkuva* 'hear' as HFL but would note that there was another possibility, HLH, which he disparagingly referred to as a Fingo pronunciation. At least on one occasion in a text which he has tonemarked, *ukuva* is marked as HLH.

APPENDIX TWO

TONE RULES STATED IN CHAPTERS FOUR, FIVE AND SIX.

1. **Prefix rule:** A disyllabic noun-prefix has the tone pattern HH if the first syllable of the stem is L but HL if the first syllable of the stem is H or F.

Chapter 4 page 36

This is superseded by

2. **Prefix-spread rule:** The high tone on the initial vowel spreads onto the basic prefix if the first syllable of the stem is L. e.g *llitye* becomes *llitye*.

Chapter 4 page 37

3. **Antepenultimate rule:** A H-tone more than three syllables from the end of a word becomes linked to all the vowels to the right up to and including the third vowel from the end provided none of the vowels to the right of the H-tone are linked to a H-tone.

Chapter 4 page 41

4. **The L-default rule:** At a certain point in the derivation all vowels which are not linked to a H-tone become linked to a L-tone by default.

Chapter 4 page 46

5. **The Depressor-downstep rule:**

$$\begin{array}{ccc} \text{H} & \text{H} & \text{H} \text{ (L) } \text{H} \\ | & | & | \text{ (L) } | \\ \text{V} & \text{d} & \text{V} & \text{d} & \text{V} \end{array}$$
 becomes

[where d represents a depressor]

Chapter 4 page 50

6. **Left-delinking Rule:** When two or more vowels are linked to a H, all but the rightmost association line may be deleted.

Chapter 4 page 52

7. **The HH-to-FL rule:** a structure like

$$\begin{array}{ccc} & \text{H} & \\ & / \quad \backslash & \\ \text{V} & & \text{V} \end{array}$$
 becomes

$$\begin{array}{ccc} & \text{H} & \text{L} \\ & / & \backslash \\ \text{V} & & \text{V} \end{array}$$
 in phrase final position.

Chapter 4 page 61

8. **The High Coalescence Rule:** a sequence of two or more H's in certain morphologically defined contexts coalesce to become one H and any syllables which are linked to any of the H's become linked to the remaining H.

Chapter 5 page 76

9. **High-stem Adjustment Rule:** a H-tone underlyingly linked to a vowel in the verb stem becomes linked to each vowel in the stem when the stem occurs before a H-toned final suffix.

Chapter 5 page 89

10. **Penultimate Rule:** A H-tone on a SC or OC three syllables from the end of the word spreads onto the following syllable provided that the stem is a verb but not a verb which is a LL+ stem.

This rule is far more restricted than the antepenultimate rule since it applies

1. only to verbs and not to other parts of speech
2. the H-tone is on the SC or OC concord and not on an infix like *-sá-* 'still'
3. only if the verb is not a LL+ verb

Chapter 6 page 93

APPENDIX THREE

PARADIGMS AND RULES FOR INFLECTIONS

1 INTRODUCTION

The following pages contain rules and examples showing how most of the inflections of Xhosa parts of speech are formed. For verbs paradigms have been given for most of the commonest forms.

I have given references to the Lumko Self-Instruction Course in Xhosa (Riordan *et al.* :1969) as an aid to those not familiar with the language. This is the only grammar of Xhosa which is currently in print and the only grammar of the language to indicate tone on any scale. Since the Lumko grammar may not always be available, I have added references to Doke 1961 as Zulu and Xhosa are very similar. In this appendix references to Riordan *et al.* 1969 have simply been given as Lumko followed by the page reference. Similarly references to Doke 1961 have been given as Doke followed by the page number.

2 BASIC TONE PATTERNS OF STEMS

In order to determine the tones of a form one must know the basic tones of the stem. I have used the term, *basic* rather than *underlying* as in some cases the form I have chosen is distinct from the form one would set up as the phonological or lexical representation of the stem, for example, I have taken the basic tones of *bõnisisa* 'show clearly' to be XHLL though the underlying tones are probably FLLL or HHLL. For each part of speech instructions are given for determining the basic tones. An interesting theoretical point is that the form chosen as the basic form is always an actually occurring form though often not the most frequent form. It seems never to be necessary to postulate a completely abstract form.

3 NOUNS

3.1 The basic tones of noun stems

The basic tones of the stem occur when the noun occurs in a frame such as:

akúkho _____ ‘there is/are no _____’.

For instance, the basic tones of *ámắdódana* 6 ‘little men’ are seen from *akúkho madodana* to be LLL.

3.2 Scheme of inflections

Nouns occur in four basic morphological sets of constructions:

- (a) with the full prefix, that is, with the preprefix and basic prefix *ámắdoda* ‘men’
- (b) without the preprefix *madoda* ‘O men’
- (c) in the locative *émắdódeni* ‘among the men’
- (d) with the prefixes *kú-*, *ngá-*, *na-* and the copulative prefix *kúmắdódana* ‘among the men’
ngámắdódana ‘by the men’
námắdódana ‘and the men’

These have the same tone pattern as the form with the full prefix and will not be dealt with separately.

3.3 The form with the full prefix (Doke: 36; Lumko: 39)

The following prefix forms occur.

<i>Singular</i>	<i>Plural</i>
1 <i>úm-</i>	2 <i>ába-</i>
1a <i>ú-</i>	2a <i>ôo-</i>
3 <i>úm-</i>	4 <i>ími-</i>

5	<i>li-</i> , <i>l'-</i>	6	<i>ama-</i>
7	<i>isi-</i>	8	<i>izi-</i>
9	<i>in-</i> , <i>l'-</i>	10	<i>izin-</i> , <i>iin-</i> , <i>ii-</i>
11	<i>ulu-</i> , <i>u'-</i>		
14	<i>ubu-</i>		
15	<i>uku-</i>		

It will be seen that full prefixes are either monosyllabic or disyllabic.

(a) Disyllabic prefixes

Disyllabic prefixes all have the same range of tone patterns, namely HL, XH or XX.

The general rule is:

If the first syllable of the stem is H or F or X, the prefix is HL.

If the first syllable of the stem is L, then the prefix is XH.

li-zwí 5 'voice' but *l'í-zwe* 5 'nation'

ama-séla 6 'thieves', *ama-sêle* 6 'frogs'

ámá-thanga 6 'pumpkins'

If the stem is entirely L-toned and trisyllabic or longer (ie LLL, LLLL, LLLLL etc) then the antepenultimate rule applies and the prefix becomes XX and the last three syllables of the stem become HLL and any preceding syllables become X.¹

ama- + *-dodana* 6 'little men' becomes *ámádódana*

but *ama-* + *-shishiní* 6 'factories' becomes *ámáshishiní*

There are a restricted number of stems which begin with a non-low tone, before which the prefix is nevertheless XH.

úrífó 1 'fellow'

l'íwá 5 'cliff'

ábákhwêtha 2 'boys undergoing circumcision'.

1. The antepenultimate does not apply to compounds. *íphephandaba* 5 'newspaper' and its plural *ámáphephandaba* and *úndiyalwa* 1a 'rebel'. *Ndiyálwa* means 'I fight'.

(b) Monosyllabic prefixes

- i. These have 3 underlying tonal patterns: H, H', F.
- ii. The downstep by a general rule is deleted from H' if the first syllable of the stem is L.

t'séla 'thief' but *flanga* 'sun'. Both nouns belong to class 5.

- iii. On the other hand, the depressor-downstep rule inserts a downstep after a H if the stem begins with a depressor and the first syllable is H or F.

t'dyókhwe 9 'yoke'

- iv. If the stem is entirely L-toned and trisyllabic or longer, then the antepenultimate rule applies and a H or H' prefix becomes X and the last three syllables of the stem become HLL and any preceding syllables become X.

t'- + -tikiti 5 'ticket' becomes *ʔtikiti*. In similar circumstances an F remains but the stem undergoes the same changes. *im- + -phendulo* 10 'replies' becomes *ĩmpéndulo*.

This is an irregularity as generally a F does not spread. Compare *lôo mpendulo* 'that reply'

(c) Tonal pattern of prefixes before vowel stems

Before vowel stems, the basic form of the prefix is always disyllabic but the second vowel is deleted. If the first syllable of the stem is L, the tone of the preprefix spreads to make it become H. *ába- + -âkhi* 2 'builders' becomes *ǎbâkhi*.

izi- + -andla 8 'hands' becomes *ǔzândla*.

3.4 Forms without the preprefix (initial vowel) (Doke: 300; Lumko: 378)

These forms occur in the vocative and in certain cases after negative verbs.

Madoda, sěběnzáni 'Work, men'

Andithándi kutyá 'I don't like food'

If the full prefix is disyllabic, then when the preprefix is deleted, the remaining syllable is always low toned.

Compare *ámádoda* 6 ‘men’ and *madoda* ‘O men’.

If the full prefix is monosyllabic, then, when the preprefix is deleted, the basic prefix disappears or in the case of class 9 does not have a syllabic element and thus does not have a tone.

séla from *í'séla* 5 ‘thief’

n-doda from *índoda* 9 ‘man’

In the case of entirely L-toned stems of three or more syllables because of the loss of the underlying H on the preprefix the stem remains L-toned.

índódana 9 ‘little man’ but *ndodana* ‘O little man’

In the case of those stems mentioned above where the full prefix is XH even though the stem begins with a H or F, when the preprefix is deleted the basic prefix is H in monosyllabic stems other than *-fó* 1 ‘fellow’ but L in disyllabic and trisyllabic stems. *líwá* 5 ‘cliff’ *bakhwêtha* 2 ‘youths being circumcized’. At least, this is the case for my principal informant. Other informants give the more expected low-toned basic prefix.

3.5 Locatives in *-ini* (Doke: 232; Lumko: 197)

The locatives are formed from the full prefix form by suffixing *-ini*.

The antepenultimate rule and the HH-to-FL rule bring the following changes about:

- (a) Stem final FL becomes XH.

úmhlâba 2 ‘earth’ has the locative *émhlâbéni*.

- (b) If the stem consists of two or more L-toned syllables then the final three syllables of the stem and suffix (*-ini*) become HLL and all preceding syllables in the word (including the prefix) become X.

ílanga 5 ‘sun’ has the locative *ělángeni*.

F never occurs on prefixes in the locative as class 1a nouns never occur with the *e-* *-ini* locative, and with class 10 nouns the monosyllabic prefix *ĩ(n)-* is replaced by the disyllabic *ézin-*.

3.6 Locative with initial *e-* but without final *-ini* (Doke: 232; Lumko 197)

These have identical tones to the normal form except for class 5 nouns where the class prefix has a downstep. In these cases the downstep does not occur. Downstep arising through the application of the depressor-downstep rule remains.

éntlóko ‘on the head’. Compare *íntlóko* 9 ‘head’.

ěṣĩbhédlele ‘in the hospital’. Compare *ĩṣĩbhédlele* 7 ‘hospital’.

éKápa ‘in the Cape’. Compare *íKápa* 5 ‘the Cape’.

é`zĩko ‘on the hearth’. Compare *í`zĩko* 5 ‘the hearth’.

4 PRONOUNS AND DETERMINERS

4.1 Absolute pronouns

- (a) with stabilizer-*na* (Doke: 88; Lumko: 159)

All absolute pronouns with *-na* have the tone pattern LH

wená ‘you’

mná ‘I’

boná ‘they’

yená ‘he, she’

woná ‘it’

- (b) with the proclitic *na-* ‘and’ (Doke: 245; Lumko: 306)

For first and second person pronouns, the tone pattern is HL, for third person pronouns, the tone pattern is LH.

nám ‘and me’

náwe ‘and you’

nayé 'and he'
nabó 'and they'
nazó 'and them'

(c) with the other proclitic formatives, *kú-* and *ngá-* (Doke:240; Lumko: 301)

These all have the tone pattern HL.

<i>kúwe</i> 'to you'	<i>ngúwe</i> 'by you'
<i>kúm</i> 'to me'	<i>ngám</i> 'by me'
<i>kúbo</i> 'to them'	<i>ngábo</i> 'by them'
<i>kúzo</i> 'to them'	<i>ngázo</i> 'by them'

4.2 Emphatic pronouns (These do not occur in Zulu; Lumko: 310)

These all have the pattern HLH.

ówoná
áboná
óyená
ézoná

4.3 Demonstratives (Doke: 90; Lumko: 254)

As far as tone is concerned, demonstratives can be grouped into the following intersecting categories: first, second and third position; strong or weak class; occurrence before the noun or after the noun.

The form used after the noun is the same that occurs when the demonstrative is used without an accompanying noun. Compare *êli háshe* 'this horse' with *í'háshe êlí* 'this horse' and *ndifúna êlí* 'I want this'.

<i>first position</i>		<i>second position</i>		<i>third position</i>	
before	after	before	after	before	after
the	the	the	the	the	the
noun	noun	noun	noun	noun	noun

Weak classes

H ²	H	F	HL	H ²	HF
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examples from class 9

<i>lé</i>	<i>lé</i>	<i>lôo</i>	<i>léyo</i>	<i>lâa</i>	<i>léyâ</i>
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strong classes

FL	FH	FL	FH	HH	FHF
----	----	----	----	----	-----

examples from class 5

<i>êli</i>	<i>êlɿ</i>	<i>êlo</i>	<i>êlɔ</i>	<i>êlâa</i>	<i>êlɿyâ</i>
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When a demonstrative occurs before a noun, it, in fact, forms one phonological word with the noun. This means that the depressor-downstep rule applies as in *lé ɿdyókhwe* ‘this yoke’. For the high tone on the basic prefix in *êli lɿwá*, see the section 3.4.. This also means that the normal rules of tone spread occur, with the high tone of the demonstrative spreading onto the basic prefix of the noun through the prefix spread rule and onto the stem through the operation of the antepenultimate rule. Where the demonstrative has a falling tone, the fall according to the normal rules does not spread and the basic prefix and the stem have their normal form without the preprefix.

lě ndódana ‘this little man’ and *lâa ndódana* ‘yonder little man’ but

lôo ndodana ‘that little man’

lě míphanda ‘these pots’ and

lâa míphanda ‘yonder pots’ but *lôo miphandá* ‘these pots’

2. Before L-toned stems of more than two syllables, the operation of the antepenultimate rule causes this to become X.

3. My informant occasionally has the tone patterns FL for these forms.

êzi zindlu ‘these houses’ but *é’záa ’zindlu* ‘yonder houses’
ló rífâzi ‘this woman’ but *âbo bafâzi* ‘these women’
êli líwá ‘this cliff’ *êlâa líwá* ‘yonder cliff’

For the high tone on the basic prefix in *êli líwá*, see section 3.4.

4.4 Locative demonstrative copulatives (Doke: 229; Lumko: 260)

There are two tone patterns for this form illustrated by the following:

A. *nánku* *nánko* *nánkúyâ*
 B. *nângú* *nângó* *nângúyâ*

Pattern A occurs with classes 1, 4, 9.

Pattern B occurs with the remainder. (Note that this distinction does not correspond to that between strong and weak classes.)

4.5 Quantitative pronouns (Doke: 93; Lumko: 273)

(a) Formed from the stems *-ónke* ‘all’ and *-ódwa* ‘only’. These all have the pattern HL.

sónke ‘we all’ *sódwa/sédwa* ‘we alone’
nónke ‘you all’ *nódwa* ‘you alone’
bónke ‘all of them’ *bódwa* ‘they alone’
 wédwa ‘you alone’

(b) Formed from adjectives and relative numeral stems. The first syllable is H, as is the basic prefix if present. The stem has its basic tones. The depressor-downstep rule applies.

There is an alternative form where the first syllable is L, if the basic prefix is present (which remains H).

yómíthâthu or *yomíthâthu* ‘all three’
zó’zhlânu or *zozhlânu* ‘all five’
zóntlânu ‘all five’

nóbáthándâthu or *nobáthándâthu* ‘all six of you’

zósíxhenxe or *zosíxhenxe* ‘all seven’

zólíshûmi or *zolíshûmi* or *zóshûmi* ‘all ten’

4.6 Possessive pronouns (Doke: 98; Lumko: 159)

These are formed from possessive qualificatives by placing a vowel in front of the possessive. The vowel is always high-toned. The depressor-downstep rule applies.

ówám ‘mine’ from *wám* ‘my’

é'zákho ‘yours’ from *zákho* ‘your’

ólwakhé ‘his’ from *lwakhé* ‘his’

ábabó ‘their’ from *babó* ‘their’

ézikáPíti ‘Peter’s’ from *zikáPíti* ‘Peter’s’

ówéndoda ‘the man’s’ from *wéndoda* ‘the man’s’

é'zéndoda ‘the man’s’ from *zéndoda* ‘the man’s’

4.7 Qualificative pronouns other than possessives (Doke: 97)

These have the same form as when they modify a noun and the tone pattern does not change.

Ábántu ábadála bãthétha kákuhlé ‘The old people speak nicely’

ÁAbadála bãthétha kákuhlé ‘The old ones speak nicely’

4.8 Enumeratives (Doke: 112; Luko: 275)

There are two enumerative stems in Xhosa, *-mbí* ‘other’ and *-phi* ‘which’. The tonal pattern of their associated concords, however, is different.

(a) *-mbí*

The concord is always high.

wá'mbí

wú'mbí

zí'mbí

(b) *-phí*

The concord is always low.

siphí

wuphí

Note the contrast with *phí* 'where'.

t'háshe líphí? 'where is the horse?'

t'háshe líphí? 'which horse?'

There is an alternative form where the enumerative begins with an extra vowel. This vowel always has a high tone.

éliphí

ówuphí

4.9 *-nye*

This can be used without the preprefix in which case we get a LL pattern.

Ndibóna háshe linye 'I see one horse'⁴

When it occurs with the full adjectival concord, it can have two patterns. When it means 'one' it has the pattern HLL.

Ndibóna úrhfāzi ómnye 'I see one woman'

When it means 'other' or 'some ... others' it has the tone pattern XHL.⁵

Orínye úrntu úyasěbénza, òrnye úyaphúm̀la 'The one works, the other rests'

Abánye báyasébénza, ǎbánye báyaphúm̀la 'Some work, others rest'

4.10 *-ní* 'which' (Doke: 113; Lumko: 276)

The concord is always L.

Noylka òsébé'nzí òní? 'what kind of work do you fear?'

4. This sentence occurs in Louw 1963:129 but is not fully acceptable to my informant.

5. When a depressor is present the tone pattern is H¹H as in *é'zínye*

4.11 Distributive pronouns (do not occur in Zulu; not treated in Lumko, du Plessis 1978:80)

1	<i>élówo, íngulówo</i>	2	<i>íngábo</i>
3	<i>élówo, íngulówo</i>	4	<i>íyíléyo</i>
5	<i>í'lêlo,</i>	6	<i>íngáwo</i>
7	<i>s'ésó, í'sésó</i>	8	<i>ízêzo</i>
9	<i>íléyo</i>	10	<i>ézêzo</i>
11	<i>lú'ôlo</i>		
14	<i>bú'ôbo</i>		
15	<i>kú'ôko</i>		

Elówo úrhntu únésíkó lakhé 'Each person has his customs'

5 QUALIFICATIVES

5.1 Adjectives and relatives (Doke: 100, 105; Lumko: 103)

Adjective and relative constructions where tense, aspect or negation are present or when the relative construction is not based on an adjective or a relative stem are regarded as being derived from copulatives or verbs and are properly dealt with in section 7. Simple attributive constructions with adjectives or relative stems in the positive, where no aspect or tense marker is present, with or without the preprefix are regarded as being directly produced by phrase structure rules and as not involving underlying copulatives.

The basic tone pattern of an adjective or relative stem is taken to be that which occurs when the stem is used attributively with a noun without a preprefix as in:

âba bantu bakhûlu 'these big people'

êzi zintó zilubhelú 'these yellow things'

From these phrases we see that the basic tone of *-khûlu* 'big' is FL and that of *-lubhelú* 'yellow' LLH. It should also be noted that many relative stems have a fixed basic prefix

with an underlying L tone, as for example, the *-lu-* in *-lubhelú*. This prefix behaves differently from an extra low syllable in the stem.

In the simple positive attributive form of adjectives, the initial syllable is high-toned and the basic prefix is low-toned.

<i>ǎbántu ábakhûlu</i>	'big people'
<i>ǎbántu ábane</i>	'four people'

If the preprefix of the noun is deleted, then the basic prefix remains low. *âba bantu bakhûlu* 'these big people'

Compare *âba bantu bákhûlu* 'these people are big', where *bákhûlu* is a copulative.

For class 9 the tone patterns are as follows:

<i>índoda énkûlu</i>	'the big man'
<i>íntó é'mbí</i>	'a bad thing'
<i>lé ndoda inkûlu</i>	'this big man'

For relatives, the relative concord is HH or H when the preprefix is present, and L when it is not. When a fixed basic prefix is preceded by a H tone and immediately followed by a L tone, it becomes H, but the antepenultimate rule does not operate to spread a H tone on the concord onto the stem.

<i>ísikólo ésílúbhelú</i>	'the yellow school'
<i>ési sikólo silubhelú</i>	'this yellow school'
<i>ǎsítshetshe ésíbukhâli</i>	'the sharp knife'
<i>íntó ébomvú</i>	'the red thing'
<i>lé ntó ibomvú</i>	'this red thing'
<i>íméla é-bú-thuntu</i>	'a blunt knife'
<i>íméla é-ncangathi</i>	'a sticky knife'
<i>ámá'nzí ádikidiki</i>	'warm water'

In *ébúthuntu* the H on the concord spreads onto the *-bu-* because it is a prefix, while in *éncangathi*, the H on the concord does not spread as *-nca-* is part of the stem. Note how the antepenultimate rule does operate to spread the H tone in the copulative:

íméla ḱncángathi 'the knife is sticky'
ámá'nzǎ adikídiki 'the water is warm'

5.2 The possessive qualificative (Doke: 115; Lumko: 157, 162)

The possessive concord always has an inherent L tone. It only shows a H tone when it coalesces with a vowel bearing a H tone, but has an L tone when it occurs before a form commencing in a consonant. Notice how the form of the possessive concord which occurs before 1a nouns in the strong classes also has a L tone on the first syllable.

ḱsónka sóḱfāzi 'the bread of the woman'
ḱsónka salóḱfāzi 'the bread of this woman'
ḱsónka sikámamá 'the bread of the mother'

- (a) the possessive qualificative formed from a noun other than class 1a: this always has the tone pattern of the simple noun.

<i>ḱzinjá zéndoda</i>	'the dogs of the man'	Compare <i>ḱndoda</i> 'man'
<i>úbusó bóḱfána</i>	'the face of the youth'	Compare <i>ḱḱfána</i> 'youth'
<i>ḱlizwǎ lēnkōsi</i>	'the voice of the chiefs'	Compare <i>ḱḱkōsi</i> 'chiefs'
<i>ḱndlu yé'shūmi</i>	'the tenth house'	Compare <i>ḱ'shūmi</i> 'ten'
<i>ḱndlu yēngónyama</i>	'the house of the lion'	Compare <i>ḱ ngónyama</i> 'lion'

- (b) the possessive qualificative formed from a noun in class 1a: the basic prefix where present has a L tone. *-ká-* always has a H tone.

ḱzinjá zikáPíti 'the dogs of Peter'
ḱmǎlenze káTítshala 'teacher's legs'
ḱncwadǎ ká Zólile 'Zolile's book'
ámaháshe ká'Zódwa 'Zodwa's horses'

- (c) possessive qualificatives formed from absolute pronominal bases:
for forms from the first and second person singular, the resultant pattern is HL, for all other persons and classes the commonest pattern is LH, but there is an alternative, FL.
- | | |
|-------------------------------------|------------------|
| <i>flizwí lám</i> | 'my voice' |
| <i>t'gámá lakhé</i> or <i>lâkhe</i> | 'his name' |
| <i>t'gámá lenú</i> or <i>lênu</i> | 'your name' |
| <i>t'gámá lákho</i> | 'your name' |
| <i>ámacíci abó</i> or <i>âbo</i> | 'their earrings' |
- (d) possessive qualificatives formed from other bases: when these bases commence with a consonant, the base remains unchanged and the possessive concord has its underlying low tone.
- | | |
|--------------------------------|----------------------------|
| <i>tzinjá zalé ndoda</i> | 'the dogs of this man' |
| <i>índoda yaséKápa</i> | 'a man from Cape Town' |
| <i>ũrntwana wawú'mbí ũrñzi</i> | 'a child of another kraal' |
| <i>t'njá yawuphí ũrñtu</i> | 'whose dog' |

I have said that the tone of the possessive concord is always low, and this seems to be generally the case. My informant has, however, given some forms which seem to be exceptions. Possessives formed from enumeratives seem to be able to be HLH as well as LLH.

tínkúní záliphtí t'hlâthi 'wood from which forest'

But this can also be *zaliphí*. The H tone could be explained by analogy with the copulative of the enumerative with a secondary vowel *éliphtí* where *za-* + *éliphtí* would give *zéliphtí*.

According to my informant *zale ndoda* 'of this man' can also be *zale ndoda*. This high tone could also explain the variant pattern with possessives formed with a pronominal base. *babó* 'of them' would be from *ba-* + *bó* but *bâbo* would be from *bá-* + *bó-* giving *bábó*, which would become *bâbo* by the HH-to-FL rule. *bâbo* can also mean 'of those people' when it is derived from *ba* + *âbo*.

6. VERBS

6.1. Basic paradigms

I append a set of paradigms for the commonest forms. The names of the forms do not require comment except to explain the significance of the terms, *low subject concord* and *high subject concord*: subject concords of the first and second person (*ndi-* 'I', *u-* 'you (singular)', *si-* 'we' and *ni-* 'you (plural)') have an underlying low tone while the remaining subject concords have an underlying high tone. Where this distinction is maintained on the surface, the forms are distinguished by the above phrases. Where neither of these phrases occurs, this means that the contrast is eliminated on the surface and the surface tones are the same regardless of the subject concord. It should be noted that all object concords, unlike subject concords, are tonally identical and have an underlying high tone.⁶

Each of the paradigms given in section A contains a formula showing how the form is made and including an informal representation of the final suffix. It should be noted that with the exception of the imperative singular each paradigm which contains the same tonal representation of the final suffix will have the same set of tonal patterns at the end of the word for each type of verb. Compare paradigms 3 and 13. For a fuller discussion of the final suffix see 5.7.

Each paradigm is also marked as resistant or nonresistant. For an explanation see 5.3.1.

Examples are given of the various types of verb stems that occur for stems of up to five syllables. The basic tone pattern of a stem occurs in the infinitive without the preprefix as in the frame *ndiza ku* _____ 'I will _____'. The *ku-* becomes *kw-* before vowel stems. In this frame (F)L and VH2 have a variant form LH. *ndiza kwâkha* or *ndiza kwakhá* 'I will build'. I take the basic stem to be FL in either case.

6. See also the discussion in 8.1

The following table explains the type of stems that occur and gives the meanings of the verbs used as examples.

Low-toned consonant stems

Name of pattern	Basic tone pattern	Stem used as example
L	L	- <i>lwa</i> 'fight'
LL+	LL	- <i>wisa</i> 'drop' Note 1
LL	LL	- <i>bala</i> 'count'
3L	LLL	- <i>balisa</i> 'cause to count, narrate'
4L	LLLL	- <i>shukumisa</i> 'shake'
5L	LLLLL	- <i>namathelisa</i> 'cement'

Low-toned vowel stems

Name of pattern	Basic tone pattern	Stem used as example
VL2	LL	- <i>osa</i> 'bake' Note 2
VL3	LLL	- <i>olula</i> 'stretch'
VL4	LLLL	- <i>anelisa</i> 'satisfy'
VL5	LLLLL	- <i>alamanisa</i> 'connect with'

High-toned consonant stems

Name of pattern	Basic tone pattern	Stem used as example
H	H	- <i>tyá</i> 'eat'
HL	HL	- <i>béka</i> 'put'
FL	FL	- <i>mêma</i> 'invite'
HLL	HLL	- <i>búlisa</i> 'greet'
HHL	XHL	- <i>bǒńisa</i> 'show'
4H	XHLL	- <i>bǒńsisa</i> 'show clearly'
5H	XXHLL	- <i>nyńnyńthékisa</i> 'to make 'slippery' Note 3

High-toned vowel stems

Name of pattern	Basic tone pattern	Stem used as example
(F)L	(F)L	-(<i>í</i>) <i>ba</i> 'steal' Note 4
VH2	FL	- <i>ákha</i> 'build' Note 2
VH3	XHL	- <i>ǒyńka</i> 'fear'
VH4	XHLL	- <i>ǒńwábisa</i> 'make happy'
VH5	XXHLL	- <i>ǒńlúkánisa</i> 'disunite'

Note 1: LL+ stems are a small minority of LL stems whose tone patterns differ from the majority of LL stems. They can be distinguished from normal LL stems in that their imperative singular is HL while that of normal LL stems is LH. See 6.5.

Note 2: Vowel stems generally have the tone pattern of consonant stems with one fewer syllable except that VL3 stems have the tone patterns of LL+ stems and not LL. Vowel stems seem to have less stable patterns than consonant forms and in many cases low-toned vowel stems are being influenced by high-toned vowel stems. See, for instance, paradigm 19.

Note 3: There are a small group of reduplicated five-syllable stems like *ncãmãncãméza* ‘to smile continuously’. These have the same tones as HL stems with the preceding extra syllables being X.

Note 4: These stems are what are generally called latent-*i* stems. Overtly they appear to be monosyllabic stems but they are underlyingly disyllabic vowel stems whose initial *i* has disappeared on the surface except where it has coalesced with a preceding *a* to give *e*. Where these are low-toned, the tone pattern is identical to normal monosyllabic low-toned verbs but where they are high-toned, the falling tone on the *i* still affects the form. There are three such high-toned latent-*i* stems: *-(i)ba* ‘steal’, *-(i)ma* ‘stand’ and *-(i)va* ‘hear’. These verbs are being influenced by normal high-toned monosyllabic stems, so they present variant forms and do not form a tonally homogeneous group. The forms given for *-(i)ba* are illustrative of the forms this small group of verbs exhibits and do not necessarily apply to other stems in this group.

Note 5: The sign + after a form means that alternative tone patterns are possible or that the presence of a depressor consonant may have a special effect on the tone pattern. This sign has not been used after (F)L as these are very variable.

SECTION A

LIST OF PARADIGMS GIVEN IN FULL

- 1 Infinitive: without preprefix.
- 2 Infinitive: with preprefix.
- 3 Infinitive: with preprefix, negative.
- 4 Indicative: present, short form, low subject concord.
- 5 Indicative: present, short form, high subject concord.
- 6 Indicative: present, long form, low subject concord.
- 7 Indicative: present, long form, high subject concord.
- 8 Indicative: present, negative.
- 9 Indicative: perfect, short form, low subject concord.
- 10 Indicative: perfect, short form, high subject concord.
- 11 Indicative: perfect, long form, low subject concord.
- 12 Indicative: perfect, long form, high subject concord.
- 13 Indicative: remote past.
- 14 Indicative: past, negative.
- 15 Participial: present.
- 16 Participial: perfect, long form.
- 17 Participial: perfect, negative.
- 18 Subjunctive: present.
- 19 Subjunctive: past.
- 20 Subjunctive: past, negative.
- 21 Imperative: singular.
- 22 Imperative: plural.
- 23 Indicative: present, low subject concord with *sá*.
- 24 Indicative: present, high subject concord with *sá*.
- 25 Indicative: present, negative with *sá*.
- 26 Participial: present, with *sá*.
- 27 Indicative: potential present.
- 28 Indicative: potential present negative.

1. INFINITIVE: WITHOUT PREPREFIX 'TO FIGHT'

	H ku + stem + (OC) + Ø	non-resistant
	without object concord	with object concord
L	kulwa	kuwálwa
LL+	kuwisa	kuwáwisa
LL	kubala	kuwabála
3L	kubalisa	kuwabálisha
4L	kushukumisa	kuwashúkúmissha
5L	kunamathelisa	kuwanámáthélisha
VL2	kosa	kuwóssa
VL3	kolula	kuwólulsha
VL4	kwanelisa	kuwanélisha
VL5	kwalamanisa	kuwalámánishsha
H	kutyá	kuwátya
HL	kubéka	kuwabéka
FL	kumêma	kuwamêma
HLL	kubúlisha	kuwabúlisha
HHL	kubónísha	kuwabónísha
4H	kubóníshisha	kuwabóníshisha
5H	kunyinyíthékisha	kuwanyinyíthékishsha
(F)L	kubá	kuwêba
VH2	kwákha +	kuwákha
VH3	koyíka	kuwoyíka
VH4	konwábisha	kuwonwábisha
VH5	kwahlúkánisha	kuwahlúkánishsha

2. INFINITIVE: WITH PREPREFIX 'TO FIGHT'

$$\begin{array}{c} \text{H} \quad \quad \text{H} \\ | \quad \quad | \\ \text{u} + \text{ku} + (\text{OC}) + \text{stem} + \emptyset \end{array} \quad \text{nonresistant}$$

	without object concord	with object concord
L	úkú [̃] lwa	úkuwá [̃] lwa
LL+	úkú [̃] wisa	úkuwá [̃] wisa
LL	úkú [̃] bala	úkuwabá [̃] la
3L	úkú [̃] bá [̃] lisa	úkuwabá [̃] lisa
4L	úkú [̃] shúkú [̃] misa	úkuwashúkú [̃] misa
5L	úkú [̃] námá [̃] thélisa	úkuwanámá [̃] thélisa
VL2	úkó [̃] sa	úkuwó [̃] sa
VL3	úkólú [̃] la	úkuwólú [̃] la
VL4	úkwá [̃] nélisa	úkuwanélisa
VL5	úkwá [̃] lámánisa	úkuwalámánisa
H	úkutyá	úkuwátya
HL	úkubé [̃] ka	úkuwabé [̃] ka
FL	úkumê [̃] ma	úkuwamê [̃] ma
HLL	úkubúlisa	úkuwabúlisa
HHL	úkubõ [̃] nísisa	úkuwabõ [̃] nísisa
4H	úkubõ [̃] nísisa	úkuwabõ [̃] nísisa
5H	úkunyinyithékisa	úkuwanyinyithékisa
(F)L	úkû [̃] ba	úkuwê [̃] ba
VH2	úkwákha +	úkuwákha
VH3	úkóyí [̃] ka	úkuwoyí [̃] ka
VH4	úkõnwábisa	úkuwonwábisa
VH5	úkwáhlúkánisa	úkuwáhlúkánisa

3. INFINITIVE: WITH PREPREFIX, NEGATIVE 'NOT TO FIGHT'

$$\begin{array}{c} \text{H} \\ | \\ \text{u} + \text{ku} + \text{nga} + (\text{OC}) + \text{stem} + \begin{array}{c} \text{HH} \\ \vee \\ \text{i} \end{array} \end{array} \quad \text{nonresistant}$$

	without object concord	with object concord
L	ũkúngalwí	ũkúngawálwí
LL+	ũkúngawísi	ũkúngawáwísi
LL	ũkúngabalí	ũkúngawábalí
3L	ũkúngabalísi	ũkúngawábalísi
4L	ũkúngashukumísi	ũkúngawáshukumísi
5L	ũkúnganamathelísi	ũkúngawánamathelísi
VL2	ũkúngosí	ũkúngawósí
VL3	ũkúngolúli	ũkúngawólúli
VL4	ũkúnganelísi	ũkúngawánelísi
VL5	ũkúngalamanísi	ũkúngawálamánísi
H	ũkúngatyí	ũkúngawátyi
HL	ũkúngabêki	ũkúngawábêki
FL	ũkúngamêmi	ũkúngawámêmi
HLL	ũkúngabúlísi	ũkúngawábúlísi
HHL	ũkúngabónísi	ũkúngawábónísi
4H	ũkúngabónísi	ũkúngawábónísi
5H	ũkúnganyínyíthékísi	ũkúngawányínyíthékísi
(F)L	ũkúngebí	ũkúngawêbi
VH2	ũkúngakhí +	ũkúngawákhí
VH3	ũkúngoyíki	ũkúngawóyíki
VH4	ũkúngonwábísi	ũkúngawónwábísi
VH5	ũkúngahlúkánísi	ũkúngawáhlúkánísi

4. INDICATIVE: PRESENT, SHORT FORM, LOW SUBJECT CONCORD 'YOU FIGHT'

H
|
SC + (OC) + stem + Ø nonresistant

without object concord

with object concord

L	nilwa	niwálwa
LL+	niwisa	niwáwisa
LL	nibala	niwabála
3L	nibalisa	niwabálisa
4L	nishukumisa	niwashúkúmisá
5L	ninamathelisa	niwanámáthélisa
VL2	nosa	niwósa
VL3	nolula	niwólula
VL4	nelisa	niwanélisa
VL5	nalamanisa	niwalámánisa
H	nitya +	niwátya
HL	nibéka	niwabéka
FL	niméma	niwaméma
HLL	nibúlisa	niwabúlisa
HHL	nibõnísá	niwabõnísá
4H	nibõnísisa	niwabõnísisa
5H	ninyinyithékisa	niwanyinyithékisa
(F)L	niba	niwéba
VH2	nakha +	niwákha
VH3	noyíka	niwoyíka
VH4	nonwábisa	niwonwábisa
VH5	nahlúkánisa	niwahlúkánisa

5. INDICATIVE: PRESENT, SHORT FORM, HIGH SUBJECT CONCORD 'HE FIGHTS'

$\begin{array}{c} \text{H} \quad \text{H} \\ | \quad | \\ \text{SC} + (\text{OC}) + \text{stem} + \emptyset \end{array}$

nonresistant

	without object concord	with object concord
L	líwa	líwálwa
LL+	líwisa	líwáwisa
LL	líbála	líwábála
3L	líbálisa	líwábálisa
4L	líshúkúmisa	líwáshúkúmisa
5L	línámathélisa	líwánámathélisa
VL5	lósa	líwósa
VL3	lólula	líwólula
VL4	lánélisa	líwánélisa
VL5	lálámánisa	líwálámánisa
H	lítya	líwátya
HL	líbéka	líwábéka
FL	líméma	líwáméma
HLL	líbúlisa	líwábúlisa
HHL	líbónísa	líwábónísa
4H	líbónísisisa	líwábónísisisa
5H	línyinyíthékisa	líwányinyíthékisa
(F)L	líba	líwéba
VH2	lákha	líwákha
VH3	lòyíka	líwòyíka
VH4	lónwábisa	líwónwábisa
VH5	láhlúkánisa	líwáhlúkánisa

6. INDICATIVE: PRESENT, LONG FORM, LOW SUBJECT CONCORD 'YOU FIGHT'

H
|
SC + ya + (OC) + stem + Ø nonresistant

	without object concord	with object concord
L	niyalwa	niyawálwa
LL+	niyawisa	niyawáwisa
LL	niyabala	niyawabála
3L	Lniyabalisa	niyawabálisa
4L	Lniyashukumisa	niyawashúkúmisá
5L	Lniyanamathelisa	niyawaná ^x má ^x thélisa
VL2	niyosa	niyawósa
VL3	niyolula	niyawólula
VL4	niyanelisa	niyawanélisa
VL5	niyalamanisa	niyawalámánisa
H	niyatya	niyawátya
HL	niyabéka	niyawabéka
FL	niyaméma	niyawaméma
HLL	niyabúlisa	niyawabúlisa
HHL	niyabónísa	niyawabónísa
4H	niyabónísisa	niyawabónísisa
5H	niyanyinyíthékisa	niyawanyinyíthékisa
(F)L	niyéba	niyawéba
VH2	niyákha	niyawákha
VH3	niyoyíka	niyawoyíka
VH4	niyonwábisa	niyawonwábisa
VH5	niyahlúkánisa	niyawahlúkánisa

7. INDICATIVE: PRESENT, LONG FORM, HIGH SUBJECT CONCORD ‘HE FIGHTS’

$\begin{array}{c} \text{H} \\ | \\ \text{SC} + \text{ya} + (\text{OC}) + \text{stem} + \emptyset \end{array}$
 $\begin{array}{c} \text{H} \\ | \\ \text{OC} \end{array}$

nonresistant

	without object concord	with object concord
L	l̥yálwa	líyawálwa
LL+	l̥yáwisa	líyawáwisa
LL	l̥yábala	líyawabála
3L	l̥yábálisha	líyawabálisha
4L	l̥yáshúkúlisha	líyawashúkúlisha
5L	l̥yánámáthélisa	líyawanámáthélisa
VL2	l̥yósa	líyawósa
VL3	l̥yólula	líyawólula
VL4	l̥yánélisa	líyawanélisa
VL5	l̥yálámánisa	líyawalámánisa
H	líyatyá	líyawâtya
HL	líyabéka	líyawabéka
FL	líyaméma	líyawaméma
HLL	líyabúlisha	líyawabúlisha
HHL	líyabõnisha	líyawabõnisha
4H	líyabõnisha	líyawabõnisha
5H	líyanyinyithékisa	líyawanyinyithékisa
(F)L	l̥yéba	líyawéba
VH2	l̥yákha	líyawákha
VH3	l̥yõyíka	líyawoyíka
VH4	l̥yõnwábisa	líyawonwábisa
VH5	l̥yáhlúkánisa	líyawahlúkánisa

8. INDICATIVE: PRESENT, NEGATIVE 'YOU DO NOT FIGHT'

$$\begin{array}{c} \text{H} \quad \text{H} \quad \text{H} \\ | \quad | \quad | \\ \text{a} + \text{SC} + \text{OC} + \text{stem} + \text{i} \end{array}$$
 nonresistant

	without object concord	with object concord
L	anɪwɪ	anɪwɪwɪ +
LL+	anɪwɪsi	anɪwɪwɪsi
LL	anɪbáli +	anɪwɪbáli
3L	anɪbalɪsi	anɪwɪbalɪsi
4L	anɪʃhukumɪsi	anɪwɪʃhukumɪsi
5L	anɪnamathelɪsi	anɪwɪnamathelɪsi
VL2	anɔsɪ	anɪwɔsɪ
VL3	anɔlɪli	anɪwɔlɪli
VL4	ananelɪsi	anɪwanelɪsi
VL5	analamani	anɪwalamani
H	anɪtyi	anɪwɪtyi
HL	anɪbɛki	anɪwɪbɛki
FL	animɛmi	anɪwɪmɛmi
HLL	anɪbɔlɪsi	anɪwɪbɔlɪsi
HHL	anɪbɔnɪsi	anɪwɪbɔnɪsi
4H	anɪbɔnɪsɪsi	anɪwɪbɔnɪsɪsi
5H	anɪnyɪnyɪthɛkɪsi	anɪwɪnyɪnyɪthɛkɪsi
(F)L	anɪbi	anɪwɛbi
VH2	anɪkhi	anɪwɪkhi
VH3	anɪoyɪki	anɪwɪoyɪki
VH4	anɪwonwɔbɪsi	anɪwɪwonwɔbɪsi
VH5	anɪhlɔkɪnɪsi	anɪwɪhlɔkɪnɪsi

9. INDICATIVE: PERFECT, SHORT FORM, LOW SUBJECT CONCORD 'YOU FOUGHT'

	$\begin{array}{c} \text{H} \\ \\ \text{SC} + (\text{OC}) + \text{stem} + \text{e} \\ \\ \text{V} \\ \\ \text{HL} \end{array}$	resistant
	without object concord	with object concord
L	nilwê	niwǎlwê
LL+	niwisê	niwáwisê +
LL	nibalê	niwábalê
3L	nibalisê	niwábalisê
4L	nishukumisê	niwáshukumisê
5L	ninamathelisê	niwánamathelisê
VL2	nosê	niwôsê
VL3	nolulê	niwólulê
VL4	nanelisê	niwánelisê
VL5	nalamanisê	niwálamanisê
H	nityê	niwátyê
HL	nibêkê	niwabêkê
FL	nimêmê	niwamêmê
HLL	nibŭlisê	niwabŭlisê
HHL	nibõnisê	niwabõnisê
4H	nibõnisísê	niwabõnisísê
5H	ninyinyithêkísê	niwanyinyithêkísê
(F)L	nibê	niwebê
VH2	nakhê	niwákhê
VH3	noyíkê	niwoyíkê
VH4	nonwábísê	niwonwábísê
VH5	nahlúkánisê	niwahlúkánisê

10. INDICATIVE: PERFECT, SHORT FORM, HIGH SUBJECT CONCORD 'HE FOUGHT'

$\begin{array}{ccc} \text{H} & \text{H} & \text{HL} \\ | & | & / \backslash \\ \text{SC} + (\text{OC}) + \text{stem} + \text{e} & & \end{array}$

resistant

	without object concord	with object concord
L	l̄l̄wê	l̄w̄al̄wê
LL+	l̄w̄isê +	l̄w̄aw̄isê +
LL	l̄balê	l̄w̄abalê
3L	l̄balisê	l̄w̄abalisê
4L	l̄shukumisê	l̄w̄ashukumisê
5L	l̄namathelisê	l̄w̄anamathelisê
VL2	l̄osê	l̄w̄osê
VL3	l̄ól̄l̄ê	l̄w̄ól̄l̄ê +
VL4	l̄anelisê	l̄w̄anelisê
VL5	l̄alamanisê	l̄w̄alamanisê
H	l̄ityê	l̄w̄atyê
HL	l̄bêkê	l̄w̄abêkê
FL	l̄mêmê	l̄w̄amêmê
HLL	l̄b̄ul̄isê	l̄w̄ab̄ul̄isê
HHL	l̄b̄on̄isê	l̄w̄ab̄on̄isê
4H	l̄b̄on̄isisê	l̄w̄ab̄on̄isisê
5H	l̄nȳinȳithêk̄isê	l̄w̄anȳinȳithêk̄isê
(F)L	l̄bê	l̄w̄êbê
VH2	l̄akhê	l̄w̄akhê
VH3	l̄oȳikê	l̄w̄oȳikê
VH4	l̄on̄w̄abisê	l̄w̄on̄w̄abisê
VH5	l̄ahl̄uk̄anisê	l̄w̄ahl̄uk̄anis

11. INDICATIVE: PERFECT, LONG FORM, LOW SUBJECT CONCORD 'YOU FOUGHT'

H
|
SC+(OC)+stem+ile

resistant

	without object concord	with object concord
L	nilwile	niwálwile
LL+	niwisile	niwawísile
LL	nibalile	niwabálile
3L	nibalisile	niwabálsile
4L	nishukumisile	niwashúkúmsile
5L	ninamathelisile	niwanámáthělsile
VL2	nosile	niwósile
VL3	nolulile	niwolúlile
VL4	nanelisile	niwanělsile
VL5	nalamanisile	niwalámánsile
H	nityfle	niwatyfle
HL	nibékile	niwabékile
FL	niměmfle	niwaměmfle
HLL	nibŭlsile	niwabŭlsile
HHL	nibŏnsile	niwabŏnsile
4H	nibŏńsile	niwabŏńsile
5H	ninyinyithěksile	niwanyinyithěksile
(F)L	nibíle	niwebíle
VH2	nakhíle	niwakhíle
VH3	noyfkile	niwoyfkile
VH4	nonwábísile	niwonwábísile
VH5	nahlŭkánisile	niwahlŭkánisile

13. INDICATIVE: REMOTE PAST 'YOU FOUGHT'

$$\begin{array}{c} \text{HL} \quad \text{H} \\ \swarrow \quad \downarrow \\ \text{SCa} + (\text{OC}) + \text{stem} + \emptyset \end{array}$$

resistant

	without object concord	with object concord
L	nâlwá	nâwálwá
LL+	nâwísa	nâwáwísa
LL	nâbalá	nâwábalá
3L	nâbalísa	nâwábalísa
4L	nâshukumísa	nâwáshukumísa
5L	nânamathelísa	nâwánamathelísa
VL2	nôśá	nâwôśá
VL3	nôlûla	nâwólûla
VL4	nânêlîsa	nâwânêlîsa
VL5	nâlamânîsa	nâwâlamânîsa
H	nâtyá	nâwâtya
HL	nâbêka	nâwábêka
FL	nâmêma	nâwámêma
HLL	nâbûlîsa	nâwábûlîsa
HHL	nâbônîsa	nâwábônîsa
4H	nâbônîsîsa	nâwábônîsîsa
5H	nânyînyîthékîsa	nâwányînyîthékîsa
(F)L	nêbá	nâwêba
VH2	nâkhá	nâwákha
VH3	nôyîka	nâwôyîka
VH4	nônwábîsa	nâwónwábîsa
VH5	nâhlúkânîsa	nâwâhlúkânîsa

14. INDICATIVE: PAST, NEGATIVE 'YOU DID NOT FIGHT'

$$a + \overset{H}{\text{SC}} + (\overset{H}{\text{OC}}) + \text{stem} + \overset{H}{\text{anga}}$$
 nonresistant

	without object concord	with object concord
L	anilwánga +	aniwalwánga
LL	aniwísánga +	aniwáwisánga
LL	aníbalánga	aniwábalánga
3L	aníbalisánga	aniwábalisánga
4L	aníshukumisánga	aniwáshukumisánga
5L	anínamathelisánga	aniwánamathelisánga
VL2	an [̃] ósánga	aniwosánga
VL3	an [̃] ólulánga +	aniwólulánga
VL4	anánelisánga	aniwánelisánga
VL5	análamanisánga	aniwálamanisánga
H	anityánga	aniwatyánga
HL	anib [̃] ékánga	aniwab [̃] ékánga
FL	anim [̃] émánga	aniwam [̃] émánga
HLL	anib [̃] úlísánga	aniwab [̃] úlísánga
HHL	anib [̃] ónísánga	aniwab [̃] ónísánga
4H	anib [̃] ónísísánga	aniwab [̃] ónísísánga
5H	aninyinyith [̃] ékísánga	aniwanyinyith [̃] ékísánga
(F)L	anibánga	aniwebánga
VH2	anakhánga	aniwakhánga
VH3	anoyíkánga	aniwoyíkánga
VH4	anonwábísánga	aniwonwábísánga
VH5	anahlúk [̃] ánísánga	aniwahlúk [̃] ánísánga

15. PARTICIPIAL: PRESENT 'YOU FIGHTING'

$$\begin{array}{c} \text{H} \quad \text{H} \\ | \quad | \\ \text{SC} + (\text{OC}) + \text{stem} + \emptyset \end{array}$$

nonresistant

	without object concord	with object concord
L	nĩsĩlwa	nĩwálwa
LL+	nĩwisa	nĩwáwisa
LL	nĩbála	nĩwábála
3L	nĩbálisa	nĩwábálisa
4L	nĩshúkúmisá	nĩwáshúkúmisá
5L	nĩnámáthélisa	nĩwánámáthélisa
VL2	nĩsósá	nĩwósá
VL3	nĩsólulá	nĩwólulá
VL4	nĩsánélisa	nĩwánélisa
VL5	nĩsálámánisa	nĩwálámánisa
H	nĩsĩtyá	nĩwĩtyá
HL	nĩbéká	nĩwábéká
FL	nĩmémá	nĩwámémá
HLL	nĩbúlisa	nĩwábúlisa
HHL	nĩbónísá	nĩwábónísá
4H	nĩbónísisa	nĩwábónísisa
5H	nĩnyĩnyĩthékisa	nĩwányĩnyĩthékisa
(F)L	nĩsĩbá	nĩwēbá
VH2	nĩsākha	nĩwākha
VH3	nĩsōyíka	nĩwōyíka
VH4	nĩsōnwábisa	nĩwōnwábisa
VH5	nĩsāhlúkánisa	nĩwāhlúkánisa

16. PARTICIPIAL: PERFECT, LONG FORM 'YOU HAVING FOUGHT'

$$\begin{array}{c} \text{H} \quad \text{H} \quad \quad \text{H} \quad \text{H} \\ | \quad | \quad \quad \diagdown \quad | \\ \text{SC} + (\text{OC}) + \text{stem} + \text{ile} \end{array}$$

nonresistant

	without object concord	with object concord
L	nĩlwĩle	nĩwǎlwĩle
LL+	nĩwĩsĩle	nĩwǎwĩsĩle
LL	nĩbalĩle	nĩwǎbalĩle
3L	nĩbalisĩle	nĩwǎbalisĩle
4L	nĩshukumisĩle	nĩwǎshukumisĩle
5L	nĩnamathelisĩle	nĩwǎnamathelisĩle
VL2	nǔsĩle	nĩwǔsĩle
VL3	nǔlũlĩle	nĩwǔlũlĩle
VL4	nǎnǎlĩsĩle	nĩwǎnǎlĩsĩle
VL5	nǎlǎmǎnĩsĩle	nĩwǎlǎmǎnĩsĩle
H	nĩtyĩle	nĩwǎtyĩle
HL	nĩbǎkĩle	nĩwǎbǎkĩle
FL	nĩmǎmĩle	nĩwǎmǎmĩle
HLL	nĩbũlĩsĩle	nĩwǎbũlĩsĩle
HHL	nĩbǔnĩsĩle	nĩwǎbǔnĩsĩle
4H	nĩbǔnĩsĩsĩle	nĩwǎbǔnĩsĩsĩle
5H	nĩnyĩnyĩthǎkĩsĩle	nĩwǎnyĩnyĩthǎkĩsĩle
(F)L	nĩbĩle	nĩwǎbĩle
VH2	nǎkhĩle	nĩwǎkhĩle
VH3	nǔyĩkĩle	nĩwǔyĩkĩle
VH4	nǔnwǎbisĩle	nĩwǔnwǎbisĩle
VH5	nǎhlũkǎnĩsĩle	nĩwǎhlũkǎnĩsĩle

17. PARTICIPIAL: PERFECT, NEGATIVE ‘YOU NOT HAVING FOUGHT’

$\begin{array}{c} \text{H} \\ \\ \text{SC} + \text{nga} + \text{stem} + \text{anga} \end{array}$	$\begin{array}{c} \text{H} \\ \\ \text{anga} \end{array}$	nonresistant
	without object concord	with object concord
L	níngalwánga	níngawálwánga
LL+	níngawǎsánga	níngawáwǎsánga
LL	níngabalánga	níngawábalánga
3L	níngabalísánga	níngawábalísánga
4L	níngashukumisánga	níngawáshukumisánga
5L	nínganamathelísánga	níngawánamathelísánga
VL2	níngosánga	níngawósánga
VL3	níngolúlánga	níngawólúlánga
VL4	nínganělísánga	níngawánělísánga
VL5	níngalámǎnísánga	níngawálámǎnísánga
H	níngatyánga	níngawǎtyánga
HL	níngaběkánga	níngawǎběkánga
FL	níngaměmánga	níngawǎměmánga
HLL	níngabǔlísánga	níngawǎbǔlísánga
HHL	níngabǒnísánga	níngawǎbǒnísánga
4H	níngabǒnísísánga	níngawǎbǒnísísánga
5H	nínganyinyithěkísánga	níngawǎnyinyithěkísánga
(F)L	níngebánga	níngawěbánga
VH2	níngakhánga	níngawǎkhánga
VH3	níngoyíkánga	níngawǒyíkánga
VH4	níngonwǎbísánga	níngawǒnwǎbísánga
VH5	níngahlúkǎnísánga	níngawǎhlúkǎnísánga

18. SUBJUNCTIVE: PRESENT 'AND YOU FIGHT'

$$\begin{array}{c} \text{H} \quad \text{H} \quad \text{H L H} \\ | \quad | \quad / \backslash \\ \text{SC} + (\text{OC}) + \text{stem} + \text{e} \end{array}$$

nonresistant

	without object concord	with object concord
L	níwe	níwalwé
LL+	níwisé	níwawíse
LL	nǐbále	nǐwábalé
3L	nǐbálisé	nǐwábalíse
4L	nǐshúkúmisé	nǐwáshukumíse
5L	nǐnámáthélisé	nǐwánamathelíse
VL2	nóse	níwosé
VL3	nólulé	níwolúle
VL4	nǎnelisé	nǐwánelíse
VL5	nǎlámánisé	nǐwálamaníse
H	nítye	níwatyé
HL	nǐbeké	nǐwabêke
FL	nímémé	níwamême
HLL	nǐbúlisé	nǐwabúlíse
HHL	nǐbónisé	nǐwabôníse
4H	nǐbônísisé	nǐwabônísíse
5H	nǐnyinyíthékisé	nǐwanyinyíthékíse
(F)L	níbe	níwebé
VH2	nákhe	níwakhé
VH3	nóyiké	níwoyíke
VH4	nǎnwábisé	nǐwonwábíse
VH5	nǎhlúkánisé	nǐwahlúkáníse

19. SUBJUNCTIVE: PAST 'AND YOU FOUGHT'

$$\begin{array}{c} \text{H} \quad \text{H} \\ | \quad | \\ \text{SC(a)} + (\text{OC}) + \text{stem} + \emptyset \end{array}$$

resistant

	without object concord	with object concord
L	nálwa	náwálwa
LL+	náwisa	náwáwisa
LL	nábala	náwábála
3L	nábálisa	náwábálisa
4L	náshúkúmisá	náwáshúkúmisá
5L	nánámáthélisa	náwánámáthélisa
VL2	nósa	náwósa
VL3	nólula	náwólula
VL4	nánélisa	náwánélisa
VL5	nálámánisa	náwálámánisa
H	nátyá	náwátya
HL	nábéka	náwábéka
FL	náméma	náwáméma
HLL	nábúlisa	náwábúlisa
HHL	nábónísa	náwábónísa
4H	nábónísisa	náwábónísisa
5H	nányínyíthékisa	náwányínyíthékisa
(F)L	nébá	náwéba
VH2	nákhá	náwákha
VH3	nóyíka	náwóyíka
VH4	nónwábisa	náwónwábisa
VH5	náhlúkánisa	náwáhlúkánisa

20. SUBJUNCTIVE: PAST, NEGATIVE 'AND YOU DID NOT FIGHT'

$$a + SC \begin{matrix} HL \\ \swarrow \downarrow \end{matrix} (a) + (OC) \begin{matrix} H \\ | \end{matrix} + stem + a \begin{matrix} HH \\ \swarrow \downarrow \end{matrix}$$
nonresistant

	without object concord	with object concord
L	anâlwá	anâwálwá
LL+	anâwísá	anâwáwísá
LL	anâbalá	anâwábalá
3L	anâbalísá	anâwábalísá
4L	anâshukumísá	anâwáshukumísá
5L	anânamathelísá	anâwánamathelísá
VL2	anôsá	anâwósá
VL3	anôlúlá	anâwólúlá
VL4	anânêlísá	anâwânêlísá
VL5	anâlãmãnisá	anâwâlãmãnisá
H	anâtyá	anâwátyá
HL	anâbéká	anâwábéká
FL	anâmémá	anâwámémá
HLL	anâbúlísá	anâwábúlísá
HHL	anâbônísá	anâwábónísá
4H	anâbônísísá	anâwábónísísá
5H	anânyinyíthékísá	anâwányinyíthékísá
(F)L	anêbá	anâwébá
VH2	anâkhá	anâwákhá
VH3	anôyíká	anâwóyíká
VH4	anônwábísá	anâwónwábísá
VH5	anâhlúkánísá	anâwáhlúkánísá

21. IMPERATIVE: SINGULAR 'FIGHT'

$$\begin{array}{c} \text{H} \quad \text{L} \\ \diagdown \quad \diagup \\ \text{stem} + \text{a} \end{array} \quad \text{nonresistant}$$

$$\begin{array}{c} \text{H} \quad \quad \text{H} \quad \text{H} \\ \diagdown \quad \quad \diagup \quad \diagdown \\ \text{OC} + \text{stem} + \text{e} \end{array} \quad \text{resistant}$$

	without object concord	with object concord
L	yilwá	wálwé +
LL+	wísa	wáwíse
LL	balá	wábalé
3L	balísa	wábalíse
4L	shukumísa	wáshukumíse
5L	namathelísa	wánamathelíse
VL2	yosá	wǒsé
VL3	yolúla	wólùle
VL4	anelísa	wánèlíse
VL5	yalamanísa	wálmàníse
H	yityá	watyé +
HL	béka	wábêke
FL	mêma	wámême
HLL	bǔlísa	wábúlíse
HHL	bǒnísa	wábóníse
4H	bǒní́sisa	wábónísíse
5H	nyĩnyíthékísa	wányínyíthékíse
(F)L	yibá	webé
VH2	yakhá	wakhé +
VH3	yoyíka	wóyíke
VH4	yonwábísa	wónwábíse
VH5	yahlúkánísa	wáhlúkáníse

22. IMPERATIVE: PLURAL 'FIGHT'

H
|
stem + ani

nonresistant

	without object concord	with object concord
L	yilwáni	wálwéni
LL+	wísáni	wáwíséni
LL	baláni	wábaléni
3L	balísáni	wábaliséni
4L	shukumísáni	wáshukumiséni
5L	namathelísáni	wánamatheliséni
VL2	yosáni	wóséni
VL3	yolúláni	wólúléni
VL4	yanelísáni	wáneliséni
VL5	yalamanísáni	wálamaniséni
H	yityáni	wátyéni +
HL	běkáni	wábékéni
FL	měmáni	wáméméni
HLL	bŭlísáni	wábŭlíséni
HHL	bŏnísáni	wábŏníséni
4H	bŏnísísáni	wábŏnísíséni
5H	nyínyíthékísáni	wányínyíthékíséni
(F)L	yibáni	wěbéni +
VH2	yakháni	wákhéni +
VH3	yoyíkáni	wóyíkéni
VH4	yonwábísáni	wónwábíséni
VH5	yahlúkánísáni	wáhlúkáníséni

23. INDICATIVE: PRESENT, LOW SUBJECT CONCORD WITH **-SÁ-** 'YOU STILL FIGHT'

SC + $\overset{\text{H}}{\text{sa}}$ + $\overset{\text{H}}{(\text{OC})}$ + stem + \emptyset

resistant

	without object concord	with object concord
L	nisálwa	nisáwálwa
LL+	nisáwisa	nisáwáwisa
LL	nisábala	nisáwábála
3L	nisábálisha	nisáwábálisha
4L	nisáshúkúmisá	nisáwáshúkúmisá
5L	nisánámáthélisa	nisáwánámáthélisa
VL2	nisósa	nisáwósa
VL3	nisólula	nisáwólula
VL4	nisánélisa	nisáwánélisa
VL5	nisálámánisa	nisáwálámánisa
H	nisátyá	nisáwátya
HL	nisábéka	nisáwábéka
FL	nisáméma	nisáwáméma
HLL	nisábúlisa	nisáwábúlisa
HHL	nisábónísa	nisáwábónísa
4H	nisábónísisá	nisáwábónísisá
5H	nisányínyíthékisa	nisáwányínyíthékisa
(F)L	nisébá ^x	nisáwéba
VH2	nisákhá ^x	nisáwákha
VH3	nisóyíka	nisáwóyíka
VH4	nisónwábisa	nisáwónwábisa
VH5	nisáhlúkánisa	nisáwáhlúkánisa

24. INDICATIVE: PRESENT, HIGH SUBJECT CONCORD WITH -SÁ- 'HE STILL FIGHTS'

$\begin{array}{ccc} \text{H} & \text{H} & \text{H} \\ | & | & | \\ \text{SC} & + \text{sa} & + (\text{OC}) + \text{stem} + \emptyset \end{array}$
resistant

	without object concord	with object concord
L	lísálwa	lísáwálwa
LL+	lísáwisa	lísáwáwisa
LL	lísábala	lísáwábála
3L	lísábálisa	lísáwábálisa
4L	lísáshúkúmisa	lísáwáshúkúmisa
5L	lísánámáthélisa	lísáwánámáthélisa
VL2	lísósa	lísáwósa
VL3	lísólula	lísáwólula
VL4	lísánélisa	lísáwánélisa
VL5	lísálámánisa	lísáwánámáthélisa
H	lísátyá	lísáwátya
HL	lísábéka	lísáwábéka
FL	lísáméma	lísáwáméma
HLL	lísábúlisa	lísáwábúlisa
HHL	lísábónisa	lísáwábónisa
4H	lísábónísisa	lísáwábónísisa
5H	lísányínyíthékisa	lísáwányínyíthékisa
(F)L	lísébã	lísáwéba
VH2	lísákhã	lísáwákha
VH3	lísóyíka	lísóyíka
VH4	lísówábisa	lísónwábisa
VH5	lísáhlúkánisa	lísáhlúkánisa

25. INDICATIVE: PRESENT NEGATIVE WITH -SÁ- 'YOU ARE NOT STILL FIGHTING'

$$a + \overset{H}{SC} + (\overset{H}{OC}) + \overset{H}{stem} + \overset{L}{i}$$

nonresistant

	without object concord	with object concord
L	anísálwí	anísáwálwí
LL+	anísáwísi	anísáwáwísi
LL	anísábáli	anísáwábáli
3L	anísábalísi	anísáwábalísi
4L	anísáshukumísi	anísáwáshukumísi
5L	anísánamathelísi	anísáwánamathelísi
VL2	anísósí	anísáwósí
VL3	anísólúli	anísáwólúli
VL4	anísánělísi	anísáwánělísi
VL5	anísálámánísi	anísáwálámánísi
H	anísátyi	anísáwátyi
HL	anísábéki	anísáwábéki
FL	anísámémi	anísáwámémi
HLL	anísábúlísi	anísáwábúlísi
HHL	anísábónísi	anísáwábónísi
4H	anísábónísi	anísáwábónísi
5H	anísányinyithěkísi	anísáwányinyithěkísi
(F)L	anísébi	anísáwébi
VH2	anísákhí	anísáwákhí
VH3	anísóyíki	anísáwóyíki
VH4	anísónwábísi	anísáwónwábísi
VH5	anísáhlúkánísi	anísáwáhlúkánísi

26. PARTICIPIAL: PRESENT WITH SÁ 'YOU STILL FIGHTING'

$\begin{array}{cccc} \text{H} & \text{H} & \text{H} & \text{H} & \text{H} \\ | & | & | & / & \backslash \\ \text{SC} & + \text{sá} & + (\text{OC}) & + \text{stem} & + \emptyset \end{array}$

nonresistant

	without object concord	with object concord
L	nísálwá	nísáwálwá
LL+	nísáwísa	nísáwáwísa
LL	nísábalá	nísáwábalá
3L	nísábalísa	nísáwábalísa
4L	nísáshukumísa	nísáwáshukumísa
5L	nísánamathelísa	nísáwánamathelísa
VL2	nísósá	nísáwósá
VL3	nísólúla	nísáwólúla
VL4	nísánělísa	nísáwánělísa
VL5	nísálámánísa	nísáwálámánísa
H	nísátyá	nísáwátya
HL	nísábéka	nísáwábéka
FL	nísáméma	nísáwáméma
HLL	nísábúlísa	nísáwábúlísa
HHL	nísábónísa	nísáwábónísa
4H	nísábónísísa	nísáwábónísísa
5H	nísányínyíthékísa	nísáwányínyíthékísa
(F)L	nísêba	nísáwêba
VH2	nísákha	nísáwákha
VH3	nísóyíka	nísáwóyíka
VH4	nísónwábísa	nísáwónwábísa
VH5	nísáhlúkánísa	nísáwáhlúkánísa

27. INDICATIVE: POTENTIAL PRESENT 'YOU MAY FIGHT'

	$\begin{array}{c} \text{H} \quad \text{H} \\ \quad \\ \text{SC} + \text{ngá} + (\text{OC}) + \text{stem} + \emptyset \end{array}$	nonresistant
	without object concord	with object concord
L	ningálwa	ningáwálwa
LL+	ningáwisa	ningáwáwisa
LL	ningábala	ningáwábála
3L	ningábálisa	ningáwábálisa
4L	ningáshúkúmisa	ningáwáshúkúmisa
5L	ningánámáthélisa	ningáwánámáthélisa
VL2	ningósa	ningáwósa
VL3	ningólula	ningáwólula
VL4	ningánélisa	ningáwánélisa
VL5	ningálámánisa	ningáwálámánisa
H	ningátyá	ningáwátya
HL	ningábéka	ningáwábéka
FL	ningáméma	ningáwáméma
HLL	ningábúlisa	ningáwábúlisa
HHL	ningábónísa	ningáwábónísa
4H	ningábónísisá	ningáwábónísisá
5H	ningányínyíthékisa	ningáwányínyíthékisa
(F)L	ningéba	ningáwéba
VH2	ningákhá	ningáwákha
VH3	ningóyíka	ningáwóyíka
VH4	ningónwábisa	ningáwónwábisa
VH5	ningáhlúkánisa	ningáwáhlúkánisa

28. INDICATIVE: POTENTIAL PRESENT NEGATIVE 'YOU MAY NOT FIGHT'

$$\begin{array}{c} \text{HL} \quad \text{H} \quad \text{HL} \\ \vee \quad | \quad \vee \\ \text{a} + \text{SC} + \text{nge} + (\text{OC}) + \text{stem} + \text{i} \end{array}$$

resistant

	without object concord	with object concord
L	aningêlwí	aningêwálwí
LL+	aningêwísi	aningêwáwísi
LL	aningêbáli	aningêwábáli
3L	aningêbalísi	aningêwábalísi
4L	aningêshukumísi	aningêwáshukumísi
5L	aningênamathelísi	aningêwánamathelísi
VL2	aningôsí	aningêwósí
VL3	aningôlúli	aningêwólúli
VL4	aningênêlísí	aningêwánêlísí
VL5	aningêlãmãnísi	aningêwálãmãnísi
H	aningêtyí	aningêwátyi
HL	aningêbéki	aningêwábéki
FL	aningêmémi	aningêwámémi
HLL	aningêbũlísí	aningêwábũlísí
HHL	aningêbõnísí	aningêwábõnísí
4H	aningêbõnísísi	aningêwábõnísísi
5H	aningényínyíthékísi	aningêwányínyíthékísi
(F)L	aningêbí	aningêwébi
VH2	aningêkhí	aningêwákhi
VH3	aningôyíki	aningêwóyíki
VH4	aningônwábísi	aningêwónwábísi
VH5	aningêhlúkánísi	aningêwáhlúkánísi

SECTION B

The following forms have similar tone patterns to paradigms already given and the paradigms are presented in an abbreviated form. The forms on the left are those without the object concord and those on the right with object concord.

Although vowel verbs generally have the same tone pattern as the corresponding vowel verbs, there are cases where low-toned vowel stems are being influenced by high-toned vowel stems, as mentioned in note 2. These have not been indicated.

- 29 Participial: present, negative.
- 30 Participial: perfect, short form.
- 31 Temporal
- 32 Temporal: negative.
- 33 Near past continuous: low subject concord.
- 34 Near past continuous: high subject concord.
- 35 Near past continuous: negative, low subject concord.
- 36 Near past continuous: negative, high subject concord.
- 37 Remote past continuous
- 38 Remote past continuous: negative.
- 39 Participial: present negative with *-sá-*
- 40 Indicative: present negative with *-ká-*
- 41 Participial: present negative with *-ká-*
- 42 Participial: potential present.
- 43 Participial: potential negative.

29 Participial: present negative 'you not fighting'

This has the same pattern as paradigm 3 from *-nga-* onwards. The first syllable is H.

- | | | |
|----|----------------|------------------|
| L | níngalwí | níngawálwí |
| 4L | níngashukumîsi | níngawáshukumîsi |

H	níngatyí	níngawâtyi
4H	níngabõñísìsì	níngawábónísìsì

30 Participial: perfect, short form ‘you having fought’

This has the same tone pattern as paradigm 10. Unlike the indicative, the tone pattern is the same whether the subject concord is underlyingly H or L.

L	nǐlwê	nǐwǎlwê
4L	nǐshukumisê	nǐwáshukumisê
H	nǐtyê	nǐwǎtyê
4H	nǐbõñísìsê	nǐwábõñísìsê

31 Temporal: ‘while you are fighting’

This has the same tone pattern as paradigm 1 with the addition of a syllable at the beginning with a falling tone.

L	lâkulwa	lâkuwálwa
4L	lâkushukumisa	lâkuwashúkumisa
H	lâkutyá	lâkuwâtya
4H	lâkubõñísisa	lâkuwabõñísisa

32 Temporal: negative ‘when you are not fighting’

This has the same pattern as paradigm 3 from *-nga-* onwards. The first two syllables have the tone pattern FL.

L	lâkungalwí	lâkungawálwí
4L	lâkungashukumîsì	lâkungawáshukumîsì
H	lâkungatyí	lâkungawâtyi
4H	lâkungabõñísìsì	lâkungawábónísìsì

33 Near past continuous: low subject concord 'you were fighting'

This has the same tone pattern as paradigm 15 except that the additional syllable at the beginning is L and syllables preceding the stem which are marked X become L and that LL+ stems have the forms LHLL and LXHLL e.g. *benúwisa* and *beníwáwisa*. The tone pattern is the same whether it is of the type *bendi-* or the type *ubu-*.

L	benisíflwa	beniwálwa
4L	benishúkúmisa	beniwashúkúmisa
H	benisítya	beniwátya
4H	benibónísisa	beniwabónísisa
L	ubusíflwa	ubuwálwa
4L	ubushúkúmisa	ubuwashúkúmisa
H	ubusítya	ubuwátya
4H	ububónísisa	ubuwabónísisa

34 Near past continuous: high subject concord 'he was fighting'

This has the same tone pattern as paradigm 15 except that there is an additional syllable at the beginning, which is H, and any syllables which are marked X become H. The tone pattern is the same whether it is of the type *bélí-* or of the type *ébé-*.

L	bélísíflwa	bélíwálwa
4L	bélíshúkúmisa	bélíwáshúkúmisa
H	bélísítya	bélíwátya
4H	bélíbónísisa	bélíwábónísisa
L	ébé síflwa	ébéwálwa
4L	ébéshúkúmisa	ébéwáshúkúmisa
H	ébé sítya	ébéwátya
4H	ébébónísisa	ébéwábónísisa

35 Near past continuous: negative, low subject concord 'you were not fighting'

This has the same tone pattern as paradigm 3 from *-nga-* onwards. The first two syllables are LH. The tone pattern is the same whether it is of the type *bení-* or of the type *ubúl-*.

L	beníngalwí	beníngawálwí
4L	beníngashukumîsi	beníngawáshukumîsi
H	beníngatyí	beníngawâtyi
4H	beníngabõnîsîsi	beníngawábõnîsîsi

36 Recent past continuous: negative high subject concord 'you were not fighting'

This has the same tone pattern as paradigm 3 from *-nga-* onwards. The first two syllables are HH. The tone pattern is the same whether it is of the type *béll-* or *ébé-*.

L	béllíngalwí	béllíngawálwí
4L	béllíngashukumîsi	béllíngawáshukumîsi
H	béllíngatyí	béllíngawâtyi
4H	béllíngabõnîsîsi	béllíngawábõnîsîsi

37 Remote past continuous: 'you were fighting'

This has the same tone pattern as paradigm 15 except that there is an additional syllable at the beginning, which is marked H, and any syllables which are marked X become H. The tone pattern is the same whether it is of type *lálí-* or of the type *wáyé-* and whether the subject concord is underlyingly L or H.

L	nánísílwa	náníwálwa
4L	náníshúkúmisa	náníwáshúkúmisa
H	nánísîtya	náníwâtya
4H	náníbõnîsisa	náníwábõnîsisa

L	wáyésíłwa	wáyéwálwa
4H	wáyéshúkúmisa	wáyéwáshúkúmisa
H	wáyésítya	wáyéwâtya
4H	wáyébónísisa	wáyéwábónísisa

38 Remote past continuous: negative ‘you were not fighting’

This has the same pattern as paradigm 3 from *-nga-* onwards. The first two syllables are H. The tone pattern is the same whether it is of the type *nání* or *wáyé-*

L	náníngalwí	náníngawálwí
4L	náníngashukumîsi	náníngawáshukumîsi
H	náníngatyí	náníngawâtyi
4H	náníngabónísisi	náníngawábónísisi

39 Participial: negative with *-sá-* ‘you not still fighting’

This has the same pattern as paradigm 3 from *-nga-* onwards with the insertion of an extra H syllable after the *-nga-* and with any Xs in high-toned stems becoming H. The initial subject concord is H.

L	níngasálwí	níngasáwálwí
4L	níngasáshukumîsi	níngasáwáshukumîsi
H	níngasátyí	níngasáwâtyi
4H	níngasábónísisi	níngasáwábónísisi

40 Indicative: present, negative with *-ka-* ‘you do not yet fight’

This has the same tone pattern from *-ka-* onwards as paradigm 3 from *-nga-* onwards. The first two syllables are LH.

L	alíkalwí	alíkawálwí
4L	alíkashukumîsi	alíkawáshukumîsi

H	alíkatyí	alíkawâtyi
4H	alíkabõnîsîsi	alíkawábónîsîsi

41 Participial: present negative with -ka- ‘you not having yet fought’

This has the same tone pattern from *-ka-* onwards as the preceding. The first two syllables can be either FH or H¹H.

L	nîngékalwí	nîngékawálwí
4L	nîngékashukumîsi	nîngékawáshukumîsi
H	nîngékatyí	nîngékawâtyí
4H	nîngékabõnîsîsi	nîngékawábónîsîsi

42 Participial: present potential ‘you being able to fight’

This has the same tone pattern as paradigm 27 except that the first syllable is a F and all syllables marked X become H.

L	nîngálwa	nîngáwálwa
4L	nîngáshúkúmisa	nîngáwáshúkúmisa
H	nîngátyá	nîngáwâtya
4H	nîngábónîsisa	nîngáwábónîsisa

43 Participial: potential negative ‘not being able to fight’

This has the same tone pattern as paradigm 28 from *-ngê-* onwards. The first syllable is H and is followed by a downstep.

L	ní'ngêlwí	ní'ngêwálwí
4L	ní'ngêshukumîsi	ní'ngêwáshukumîsi

H	ní'ngêtyí	ní'ngêwátyi
4H	ní'ngêbõñsísí	ní'ngêwábónsísí

6.2 IRREGULAR PERFECTS

The long perfect forms of certain stems does not follow the patterns given in the preceding paradigms and instead *-ile* being added the final vowel changes to *e* and often the preceding vowel does so too.

In the short form of the these verbs the penultimate vowel also changes to *e* if the vowel changes in long form but the short form has the normal tone pattern of the short perfect.

For each form the long form of the indicative perfect is given first with low subject concord, then with high subject concord and then the participial perfect. The forms in the left hand column are without the object concord, those in the right-hand column with the object concord.

LL+	<i>-lwela</i>	'fight for'
	ndilwele	ndikulwele
	bálwele	bákulwele
	bêlwêle	bêkulwêle
LLL	<i>-libala</i>	'forget'
	ndilibele	ndikulfbele
	bálfbele	bákulfbele
	bélibêle	bêkulibêle
VL2	<i>-ozela</i>	'be drowsy'
	ndozele	
	bózele	
	bó'zêle	

HL	<i>-thwála</i>	'carry'
	ndithwéle	ndikuthwéle
	báthwéle	bákúthwéle
	běthwéle	běkúthwéle
HLL	<i>-búlela</i>	'thank'
	ndibúlele	ndikubúlele
	bábúlele	bákúbúlele
	běbŭléle	běkúbŭléle
XHL	<i>-fŭmána</i>	'obtain'
	ndifŭméne	ndilifŭméne
	báfŭméne	bálífŭméne
	běfŭméne	bělífŭméne

6.3 PASSIVES⁷

(a) Passives are generally formed by adding *-w-* to the stem. Where the passive, therefore, has the same number of syllables as the active the tone pattern is usually the same:

úkúngabongwá 'not to be praised'. Compare *úkúngabongí* 'not to praise'.

nâshukunyŭswa 'you were shaken'. Compare *nâshukumŭsa* 'you shook'.

There are two main exceptions.

(i) FL stems remain FL in the long form of the present tense indicative (but not the short form), in the indicative potential, and in the present tense indicative with *-sá-*.

niyabônwa 'you are seen'. Compare *niyabóna* 'you see'.

lŷabônwa 'he is seen'. Compare *lŷabóna* 'he sees'.

ñbônwa 'he is seen'. Compare *ñbóna* 'he sees'.

lingábônwa 'he can be seen'. Compare *lingábóna* 'he can see'.

nisábônwa 'you can still be seen'. Compare *nisábóna* 'you still see'.

7. Although not illustrated, passive forms do sometimes occur with object concords and, when they do, the tone patterns are in accordance with the following rules.

- (ii) The negative of the present indicative, present potential and present with *-sá-* is different.

The following is the paradigm for the present indicative negative.

L anĩlĩwa
 LL+ anĩwĩswa
 LL anĩbalwá
 3L anĩbalĩswa
 4L anĩshukunyĩswa
 5L anĩnamathelĩswa

VL2 anósĩwa
 VL3 anólũlwa
 VL4 anánelĩswa
 VL5 análamaniĩswa

H anityĩwa
 HL anibêkwa
 FL animénywa
 HLL anibũlĩswa
 HHL anibõnĩswa
 4L anibõnĩsĩswa
 5L aninyĩnyĩthêkĩswa

(F)L anibĩwa
 VH2 anakhĩwa
 VH3 anoyĩkwa
 VH4 anonwátyĩswa
 VH5 anahlũkãnĩswa

Similar forms occur in the negative of the present potential indicative and the present indicative with *-sá-*.

aningêbônwa 'you may not be seen'. Compare *aningêbóni* 'you may not see'.

anísábônwa 'you are not still seen'. Compare *anísábóni* 'you do not still see'.

(b) Monosyllabic verbs and disyllabic vowel verbs form their passive by adding *-iw-* and thus have one syllable more than in the active.

(i) The tone pattern of the passive of monosyllabic L stems is the same as that of LL+ stems in the passive.

lîliwa 'he is fought'. Compare *lîwisa* 'he drops'.

lîliwé 'and he is fought'. Compare *lîwisé* 'and he drops'.

(ii) The tone pattern of the passive of monosyllabic H stems is the same as that of HL stems in the passive.

lîyatîwa 'he is eaten'

anîtyîwa 'you are not eaten'

(iii) The tone pattern of the passive of VL2 stems is the same as that of VL3 stems in the passive:

lôsiwa 'it is being roasted'. Compare *lôlula* 'he stretches'.

alôsîwa 'it is not being roasted'. Compare *alôlûlwa* 'it is not being stretched'.

(iv) The tone pattern of the passive of VH2 stems is the same as that of VH3 stems in the passive:

úkwâkîwa 'to be built'. Compare *úkôyîka* 'to fear'.

alakhîwa 'it is not being built'. Compare *aloyîkwa* 'it is not feared'.

6.4 RELATIVES

The following does not attempt to be a comprehensive account of the tone patterns of relatives but merely to give some indication of the sort of patterns that occur.

For all tenses there are forms with and without the preprefix, and for many tenses a long form with the suffix *-yo* and a short form without this suffix. For instance, in the present tense the stem *-shukumisa* presents the following forms:

Short form with preprefix:	<i>éłshukumisa</i>
Long form with preprefix :	<i>éłshukumisayó</i>
Short form without preprefix:	<i>ńshúkũmisa</i>
Long form without preprefix :	<i>ńshukumisayó</i>

In general, the form with *-yo* is the same as the form without *-yo* except that the *-yo* has the opposite tone to that of the preceding syllable:

éłbónísayó ‘who shows’. Compare *éłbónısa*.

éłngabõńıstıyo ‘who does not show’. Compare *éłngabõ + ńıstı*.

The form without the preprefix generally has a low initial syllable but occasionally this is H. The absence of the high-toned preprefix sometimes has effects on the remainder of the form.

The following forms are illustrated:

1. Present, short form, with preprefix
2. Present, short form, without preprefix
3. Present, long form, with preprefix
4. Present, long form, without preprefix
5. Present, negative, short form, with preprefix
6. Perfect, short form, with preprefix
7. Perfect, long form, with preprefix

1. **RELATIVE: PRESENT, SHORT FORM, WITH PREPREFIX ‘who is fighting’**

	without object concord	with object concord
L	élfwa	élfwálwa
LL+	élfwisa	élfwáwisa
LL	élfbala	élfwábála
3L	élfbalisa	élfwábálisa
4L	élfshukumisa	élfwáshúkúmisa
5L	élfnamathelisa	élfwánámáthélisa
VL2	élfósa	élfwósa
VL3	élfólula	élfwólula
VL4	élfánelisa	élfwánélisa
VL5	élfáلمانisa	élfwálámánisa
H	élfitya	élfwátya
HL	élfíbeka	élfwábéka
FL	élfíméma	élfwáméma
HLL	élfíbúlisa	élfwábúlisa
HHL	élfíbónísa	élfwábónísa
4H	élfíbónísisisa	élfwábónísisisa
5H	élfínyínyíthékisa	élfwányínyíthékisa
(F)L	élfíba	élfwába
VH2	élfákha	élfwákha
VH3	élfóyíka	élfwóyíka
VH4	élfónwábisa	élfwónwábisa
VH5	élfáhlúkánisa	élfwáhlúkánisa

2. **RELATIVE: PRESENT, SHORT FORM, WITHOUT PREPREFIX** 'who is fighting'⁸

	without object concord	with object concord
L	lilwa	liwálwa
LL+	liwisa	liwáwisa
LL	libala	liwabála
3L	libalisa	liwabáalisa
4L	lishukumisa	liwashúkúmisá
5L	linamathelisa	liwanámáthélisa
VL2	losa	liwósa
VL3	lolula	liwólula
VL4	lanelisa	liwanélisa
VL5	lamanisa	liwalámánisa
H	litya	liwátya
HL	libéka	liwabéka
FL	liméma	liwaméma
HLL	libúlisa	liwabúlisa
HHL	libǒńfisa	liwabǒńfisa
4H	libǒńfisisa	liwabǒńfisisa
5H	linyinyíthékisa	liwanyinyíthékisa
(F)L	liba	liwéba
VH2	lakha	liwákha
VH3	loyíka	liwoyíka
VH4	lonwábisa	liwonwábisa
VH5	lahlúkánisa	liwahlúkánisa

8. This table shows the tones when the initial syllable is L. It is possible for the initial syllable to be high, in which case the remainder of the form sometimes has different tones.

3. RELATIVE: PRESENT, LONG FORM WITH PREPREFIX ‘who is fighting’

	without object concord	with object concord
L	élíwayó	élíwáwayó
LL+	élíwisayó	élíwáwisayó
LL	élíbalayó	élíwábálayó
3L	élíbalisayó	élíwábálisayó
4L	élíshukumisayó	élíwáshúkúmisayó
5L	élínamathelisayó	élíwánámáthélisayó
VL2	élòsayó	élíwósayó
VL3	élòlulayó	élíwólúlayó
VL4	élànèlisayó	élíwánélisayó
VL5	élàlãmànísayó	élíwálámánísayó
H	élítayó	élíwátayó
HL	élíbékayó	élíwábékayó
FL	élímémayó	élíwámémayó
HLL	élíbúlísayó	élíwábúlísayó
HHL	élíbónísayó	élíwábónísayó
4H	élíbónísísayó	élíwábónísísayó
5H	élínyínyíthékísayó	élíwányínyíthékísayó
(F)L	élíbáyo	élíwábayó
VH2	élàkháyo	élíwákhayó
VH3	élòyíkayó	élíwóyíkayó
VH4	élònwábísayó	élíwónwábísayó
VH5	élàhlúkánísayó	élíwáhlúkánísayó

4. **RELATIVE: PRESENT, LONG FORM, WITHOUT PREPREFIX** ‘who is fighting’

without object concord	with object concord
L l̃lwayó	l̃wálwayó
LL+ l̃wisayó	l̃wǎwísayó
LL l̃balayó	l̃wǎbálayó
3L l̃balisayó	l̃wǎbálísayó
4L l̃shukumisayó	l̃wǎshúkúmísayó
5L l̃namathelisayó	l̃wǎnámáthélísayó
VL2 l̃ôsáyó	l̃wósayó
VL3 l̃ólùlayó	l̃wǒlúlayó
VL4 l̃ǎnělísayó	l̃wǎnělísayó
VL5 l̃ǎlámǎnísayó	l̃wǎlámánísayó
H l̃ityáyo	l̃wátyayó
HL l̃ibékayó	l̃wǎbékayó
FL l̃ímémayó	l̃wǎmémayó
HLL l̃ibùlísayó	l̃wǎbùlísayó
HHL l̃ibǒnísayó	l̃wǎbǒnísayó
4H l̃ibǒnísísayó	l̃wǎbǒnísísayó
5H l̃inyinyìthékísayó	l̃wǎnyinyìthékísayó
(F)L l̃ibáyo	l̃wábayó
VH2 l̃ǎkháyo	l̃wákhayó
VH3 l̃oyíkayó	l̃wóyíkayó
VH4 l̃onwábísayó	l̃wǒnwábísayó
VH5 l̃ǎhlükǎnísayó	l̃wǒhlükǎnísayó

5. **RELATIVE: PRESENT, NEGATIVE SHORT FORM WITH PREPREFIX ‘who is fighting’**

	without object concord	with object concord
L	éíngalwí	éíngawálwí
LL+	éíngawísí	éíngawáwísí
LL	éíngabalí	éíngawábalí
3L	éíngabalísí	éíngawábalísí
4L	éíngashukumísí	éíngawáshukumísí
5L	éínganamathêlísí	éíngawánamathêlísí
VL2	éíngosí	éíngawósí
VL3	éíngolùlì	éíngawólùlì
VL4	éínganêlísí	éíngawánêlísí
VL5	éíngalãmãñísí	éíngawálãmãñísí
H	éíngatyí	éíngawátyí
HL	éíngabékí	éíngawábékí
FL	éíngamémí	éíngawámémí
HLL	éíngabùlísí	éíngawábùlísí
HHL	éíngabõnísí	éíngawábõnísí
4H	éíngabõnísísí	éíngawábõnísísí
5H	éínganyínyíthékísí	éíngawányínyíthékísí
(F)L	éíngebí	éíngawábí
VH2	éíngakhí	éíngawákhí
VH3	éíngoyíkí	éíngawóyíkí
VH4	éíngonwábísí	éíngawónwábísí
VH5	éíngahlúkãñísí	éíngawáhlúkãñísí

6. RELATIVE: PERFECT, SHORT FORM, WITH PREPREFIX

	without object concord	with object concord
L	éílwê	éíwǎlwê
LL+	éíwǎsê	éíwǎwǎsê
LL	éíbalê	éíwǎbalê
3L	éíbalísê	éíwǎbalísê
4L	éíshukumísê	éíwǎshukumísê
5L	éínamathêlísê	éíwǎnamathêlísê
VL2	éíòsê	éíwǎòsê
VL3	éíòlúlê	éíwǎòlúlê
VL4	éíǎnêlísê	éíwǎǎnêlísê
VL5	éíǎlǎmǎnísê	éíwǎǎlǎmǎnísê
H	éíityê	éíwǎityê
HL	éíibêkê	éíwǎibêkê
FL	éíimêmê	éíwǎimêmê
HLL	éíibúlísê	éíwǎibúlísê
HHL	éíibòníśê	éíwǎibòníśê
4H	éíibòníśísê	éíwǎibòníśísê
5H	éíinyinyithêkísê	éíwǎinyinyithêkísê
(F)L	éíibê	éíwǎibê
VH2	éíǎkhê	éíwǎǎkhê
VH3	éíòyíkê	éíwǎòyíkê
VH4	éíǎnwǎbísê	éíwǎǎnwǎbísê
VH5	éíǎhlúkǎnísê	éíwǎǎhlúkǎnísê

7. **RELATIVE: PERFECT, LONG FORM, WITH PREPREFIX 'who fought'**

	without object concord	with object concord
L	éílwíléyo	éíwálwíléyo
LL+	éíwísíléyo	éíwáwísíléyo
LL	éífbalíléyo	éíwábalíléyo
3L	éífbalísíléyo	éíwábalísíléyo
4L	éíshukumísíléyo	éíwáshukumísíléyo
5L	éínamathékísíléyo	éíwánamathékísíléyo
VL2	éíòsíléyo	éíwósíléyo
VL3	éíòlùlíléléyo	éíwólùlíléléyo
VL4	éíànèlísíléyo	éíwánèlísíléyo
VL5	éílàãmànísíléyo	éíwálàmànísíléyo
H	éíityíléyo	éíwátyíléyo
HL	éíibékíléyo	éíwábékíléyo
FL	éíimémíléyo	éíwámémíléyo
HLL	éíibùlísíléyo	éíwábùlísíléyo
HHL	éíibónísíléyo	éíwábónísíléyo
4H	éíibónísíléyo	éíwábónísísíléyo
5H	éíinyínyitíhékísíléyo	éíwányínyítíhékísíléyo
(F)L	éíibíléyo	éíwábíléyo
VH2	éíàkhíléyo	éíwàkhíléyo
VH3	éíòyíkíléyo	éíwòyíkíléyo
VH4	éíònwábísíléyo	éíìònwábísíléyo
VH5	éíàhlúkànísíléyo	éíwàhlúkànísíléyo

7 COPULATIVES (Doke 215; Lumko 54, 69)

Copulatives are those predicative forms which are formed from some part of speech other than verbs, eg. those formed from nouns, pronouns, adjectives, relatives.

7.1 Basic form

The basic form of the copulative is normally seen in a context such as *ú za kuba* _____ . ‘He will be _____’:

We can fill the space above by

- | | | |
|-------|-----------------------------------|---------------------------|
| i. | <i>ngúm̀fúndi</i> (noun) | ‘he will be a student’ |
| ii. | <i>m̀khúlu</i> (adjective) | ‘he will be big’ |
| iii. | <i>bomvú</i> (relative) | ‘he will be red’ |
| iv. | <i>séKápa</i> (locative) | ‘he will be in Cape Town’ |
| v. | <i>némalí</i> (associative) | ‘he will have money’ |
| vi. | <i>ngúye</i> (absolute pronoun) | ‘he will be him’ |
| vii. | <i>ngóyená</i> (emphatic pronoun) | ‘he will be the very one’ |
| viii. | <i>ngówám̀</i> (possessive) | ‘he will be mine’ |
| ix. | <i>yédwa</i> (quantitative) | ‘he will be alone’ |
| x. | <i>nguló</i> (demonstrative) | ‘he will be this one’ |

7.2 Description of the basic forms

- i. Nouns. The tone pattern is that of the noun with full prefix. See section 3.3.
- ii & iii. Adjective stems and relative stems. The basic form is that described in 5.1 except that in all copulative forms of adjectives and relatives a final FL becomes HL.
- iv. Locatives. The tone pattern is that of the simple locative. See sections 3.5 and 3.6.
- v. Associative copulatives. The *na-* has a low tone. If the following nominal expression begins with a vowel then the *na-* coalesces with it and the tone pattern of the whole is that of the following expression. *némalí* from *na-* + *ímálí*

When the following nominal expression begins with a consonant, the *na-* retains its low tone.

namalí from *na-* + *malí*

- vi. Absolute pronouns. The tone pattern is HL. *ngúye* ‘be him’, *ngúwe* ‘be you’
- vii. Emphatic pronouns. The tone pattern is HLH. *ngóyená*
- viii. Possessives. The pattern is that of the possessive form from which it is derived.
ngówám̀̀ from *ówám̀̀*.
- ix. Quantitatives. The tone pattern is HL. *yédwa*, *bónke*, *nónke*.
- x. Identificative copulatives formed from demonstratives. The copulative prefix, where it is a separate syllable has a low tone and the demonstrative has its normal tone.
nguló, *lélí*.
- xi. Enumeratives cannot occur in this frame but the basic tone pattern will be taken to be that which occurs in section 4.8: HH for *-mbí* as in *wúmbí* and LH for *-phí* as in *wuphí*.

7.3 Present Indicative

(a) Positive

- i. The tone pattern of copulatives formed from absolute pronouns, emphatic pronouns and possessives, is that of the basic form given above.

<i>ngúmfúndi</i>	‘he is a student’
<i>ngúye</i>	‘it is him’
<i>ngúwe</i>	‘it is you’
<i>ngóyená</i>	‘it is the very one’
<i>ngówám̀̀</i>	‘it is mine’

- ii. The present tense of copulatives formed from adjectives consists, in the first and second person, of a low-toned subject concord followed by the basic form of the copulative.

ndimkhúlu 'I am big'

sibade 'we are tall'

In the third person, it consists of the basic form of the copulative except that the basic prefix is H.

míkhúlu 'they are big'

zínde 'they are tall'

- iii. The present tense of relative stems consists of the subject concord and the basic form of the copulative. The subject concord is low for the first and second person and high for third person. After a high-toned subject concord a fixed basic prefix (see section 5 (a)) becomes H if the next syllable is L. The antepenultimate rule applies.

sibomvú 'we are red'

silubhelú 'we are yellow'

ísikólo sflúbhelú 'the school is yellow'

ámá'nzǎ áǎkídiki 'the water is lukewarm'

- iv. The present tense of associative copulatives and copulatives formed from locatives consists of the subject concord followed by the basic form of the copulative. The subject concord is L for the first and second person and H for the third person.

ndiséKápa 'I am in Cape Town'

báséKápa 'they are in Cape Town'

únémalǎ 'he has money'

nínémalǎ 'you have money'

ndindédwa 'I am alone'

úyédwa 'he is alone'

- v. In the present tense of copulatives formed from demonstratives, the copulative prefix where a separate syllable has a H tone.

ngúló 'it is it'

- vi. The present tense of enumeratives is HH'H for *-mbí* 'different' and HLH for *-phí* 'which'.

ngúwú mbí

ngúwuphí

(b) Negative

i. Nouns

The normal form is with *así-* or with *a* + negative form of the subject concord followed by the basic form of the copulative with the first vowel changed to *o*. This *o* has a low tone. The result is that the remainder of the noun has the tone pattern it has in the form without the preprefix. The first two syllables are LH. The antepenultimate rule does not apply.

asíngomadodana

'they are not little men'

asílolíwá

'it is not a cliff'

There is another form of a more axiomatic kind, where *asi-* occurs followed by the noun without the preprefix. This has a very unusual tone pattern in that all syllables become low except for the last, which is H. This means that all nouns lose their inherent tones.

asímfazí 'that is no woman'. Compare *úrífâzi* 'woman'.

Notice that this is the same tone pattern that occurs with adjectives and relatives and can also occur with locatives. See ii and iii below.

ii. Adjectives and relative stems

These all have the same tone pattern: everything is low except that the last syllable is high and the last but one may also be high.

ababakhulú or *ababakhúlú*

'they are not big'

akam̀hlé

'she is not beautiful'

asiluhlazá

'we are not green'

With the alternative form in *-anga* (which is the common form in the spoken language but not regarded correct) there is an alternative tone pattern: all syllables are low except that the last two syllables are HL:

asishushwangá or *asishushwánga* 'we are not hot'

iii. Locatives

If the form is *a* + negative form of the subject concord followed by the locative then the same pattern occurs as occurs with adjectives and relatives: everything is low except that the last syllable is high and the last syllable but one may also be high.

Once again all tonal distinctions between basic tones are removed.

akaseKapá 'he is not in Cape Town'

Speakers tend to prefer periphrastic constructions in the negative, possibly because it avoids the removal of tonal distinctions.

akákho éKápa rather than *akaseKapá*.

iv. Associatives

The first two syllables are LH. The remainder is the basic form.

andínamalí 'I do not have money'

akánandoda 'she does not have a husband'

v. Absolute pronouns and quantitatives

The tone pattern in LHLH. This is a complete reversal of the tone pattern of the positive form.

asínɡuyé 'it isn't him'

anínonké 'you are not all'

- vi. Possessives, emphatic pronouns, demonstratives and enumeratives
 These can all be *así*- followed by the positive. The downstep may be the remains of a copula *-*li*- which has dropped out.

<i>así lélará</i>	'it isn't mine' ⁹
<i>así sêst</i>	'it isn't this one' ⁹
<i>así lll' mbí</i>	'it isn't a different one' ⁹

There seem to be other forms possible for the negative.

<i>asíngowám</i>	'it is not mine'
<i>asízozésikólo</i>	'it is not those of the school'

Notice also the tone pattern with the axiomatic negative.

<i>asiwará</i>	'it is not mine'
----------------	------------------

7.4 Participial and relative forms

(a) Participial positive

This simply consists of the participial subject concord with a falling tone followed by the basic form of the copulative given in 7.2.

<i>êlhlwempú</i>	'being a poor man'
<i>êmkhúlu</i>	'being big'
<i>êngúye</i>	'being him'

There is a change with the demonstrative.

<i>êngúló</i>	'being this one'
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(b) Relative positive

For the simple positive of adjective and relative stems, see section 5.1. I do not regard these as copulatives, mainly because FL stems remain FL whereas in all indisputably copulative forms they become HL.

9. In all these cases, the H on the *-sí-* can be replaced by a fall. In this case, the downstep, where present, naturally falls away.

For other parts of speech the relative consists of the relative concord (H or HH if the preprefix is present or L if it is absent) followed by the basic form of the copulative given in section 7.2.

<i>ó`ngúmfúndi</i>	‘who is a student’
<i>ólíhlwempú</i>	‘who is a poor man’
<i>lé ndoda ilíhlwempú</i>	‘this poor man’

(c) Participial and relative negative

These have the same tone patterns except that the relative concord is H or HH if the preprefix is present, but L otherwise. The participial subject concord is H. The remainder of the tone pattern is the same for both. The *nge* which follows is H except in the case of adjective and relative stems where it is low. The remainder has the same form as it had in the negative indicative.

<i>ó`ngéngomfúndi</i>	‘who is not a student’
<i>ó`nge`mkhulú</i>	‘who is not big’
<i>ó`ngebomvú</i>	‘who is not red’
<i>ó`ngénguyé</i>	‘who is not him’

Note however

<i>ó`ngéngoyená</i>	‘who is not the very one’
<i>ó`ngénguló</i> or <i>ó`ngéngúló</i>	‘who is not this one’

All the above forms would have the same tone pattern in the participial.

<i>é`ngéngomfúndi</i>	‘not being a student’
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7.5 The forms of the copulative in the compound tenses

These forms contain either the basic form or the negative form. Note that when the copula means ‘becomes’ and the copulative is written as a separate word it always has the tone pattern of the positive. Compare

<i>ébêngéiyó</i>	'he was not it'
and	
<i>akabánga yíyo</i>	'he did not become it'.

(a) Near past positive

For the first and second person the tone pattern is:

LF + basic form.

For the third person the tone pattern is:

HF + basic form.

<i>ndibêngúm̀fúndi</i>	'I was a student'
<i>ébêngúm̀fúndi</i>	'he was a student'
<i>bábêbakhúlu</i>	'they were big'

(b) Near past negative

For the first and second person the tone pattern is:

LF + *nge* + negative form

or

LH + *nge* + negative form

For the third person the tone is HF + *nge* + negative form or

HH + *nge* + negative form.

nge is H except before relatives and adjectives where it is L.

<i>ébé`ngéngóm̀fúndi</i>	'he was not a student'
<i>bendí`ngéngóm̀fúndi</i>	'I was not a student'
<i>bendíngeshushú</i>	'I was not hot'
<i>bésíngélubhelú</i>	'it was not yellow'

(c) Remote past positive

Where the second syllable is *ye*, the pattern is HF + basic form.

Otherwise it is HH + basic form.

<i>wáyêlívila</i>	'he was a lazybones'
<i>sásísésakhé</i>	'it was his' (without downstep)

(d) Remote past negative

Except before adjective and relative stems the basic tones are HH + *ngé* + negative basic form.

The negative form of the adjective and relative is L until the last two syllables which are H.

<i>sásí'ngésosakhé</i>	'it was not hers'
<i>wáyé'ngélovila</i>	'he was not a lazy person'
<i>wáwúngelúlá</i>	'it was not easy'
<i>wáwúngemkhúlú</i>	'it was not strong'

7.6 The progressive *sá/sê* form

In all cases the copulative occurs in its regular positive or negative form. Examples are given of some of the forms.

Positive**Negative****Indicative***úsêngúm̀fúndi*

'he is still a student'

usêyédwá

'he is still alone'

akaséngom̀fúndi

'he is not still a student'

akaséyedwá

'he is not still alone'

Participial*ésêngúm̀fúndi*

'still being a student'

ésêyédwá

'still being alone'

éngaséngom̀fúndi

'not still being a student'

éngaséyedwá

'not still being alone'

Relative*ósêngúm̀fúndi*

'who is still a student'

ósêyédwa

'who is still alone'

óngaséngom̀fúndi

'who is not still a student'

óngaséyedwá

'who is not still alone'

The vowel of *sá* changes to *e* and its tone is F in the positive and H in the negative.

7.7 The potential form (-ngá-)

This only occurs in the positive with copulatives.

Copulatives have their basic form after *-ngá-*, the tone of which changes from H to F.

angâyítítshala

'he can be a teacher'.

7.8 Relative forms of compound tenses

These are generally the same as previously presented except that in longer forms, F's tend to be replaced by H's and often only the last F remains.

ébêl'ngénguyé

'who wasn't him'

This could also be

*ébêl'ngénguyé.***7.9 The form -kho**

Copulatives with *-kho* have not been dealt with so far. Examples are:

Present Indicative

ndikhó

'I am here'.

bákhó

'they are here'.

Present Indicative Negative

andíkho

'I am not here'

akákho

'he is not here'

Present Participial

úkhó

'being present'

Future Indicative

úza kuba khó 'he will be present'

Relative	<i>ókhóyo</i>	'who is present'
Relative Negative	<i>óngekhoyó</i>	'who is not present'

7.10 Summary of the major forms (adapted from Oosthuysen 1967)

	PRESENT	NEAR PAST	REMOTE PAST
Indicative	pos (ú)yíyo	ébêyíyo	wáyêyíyo
	neg akáyíyó	ébêngéyiyó	wáyêngéyiyó
Participial	pos êyíyo		
	neg êngéyiyó		
Relative	pos óyíyo	óbêyíyo	wáyêyíyo
	neg ó'ngéyiyó	óbé'ngéyiyó	wáyé'ngéyiyó
Subjunctive	pos ábe yíyo		wábá yíyo/wâyíyo
	negángabí yíyo		akábá yíyo
Imperative	pos yibá yíyo		
	neg músa úkúba yíyo		
Infinitive	pos úkúba yíyo		
	neg úkúngabí yíyo		
Future	pos úza kuba yíyo		
	neg aká'zí kuba yíyo		
Temporal	pos âkuba yíyo		
	neg âkungabí yíyo		

APPENDIX FOUR

COMMON AND TONALLY INTERESTING WORDS

This vocabulary contains many of the commonest words in Xhosa together with certain others mentioned on tonal grounds.

Abbreviations of parts of speech

adj	adjective
adv	adverb
conj	conjunction
enum	enumerative
ideo	ideophone
interj	interjection
rel	relative
v	verb

Nouns: The class number has been given. Nouns are given to show the normal pronunciation in isolation. Trisyllabic and longer stems where one or more H's is followed by two L's in the normal pronunciation with the full prefix are marked as HLL or LLL etc. to show what the underlying tones are. The difference in tone will show up when the initial vowel is dropped.

Verbs: Stems are generally given in the form they would take in the infinitive without the initial vowel. LL+ verbs are so marked. HHL stems (see 6.1) are marked HHL unless the penultimate syllable begins with a depressor in which case they are marked LHL. Longer H-toned stems are marked in a similar fashion as are H-toned vowel stems.

Adjectives and relatives: Stems are given in the form they would have in an attributive construction without an the initial vowel.

A

áhlúla	v	separate, divide, judge
áhlúlo, ís-	n 7	divided part
âkha	v	build
âkhi, úm-	n 1	builder
âkhíwo, ís-	n 7	structure, building
álátha	v	point out
áláthisa	v	show the way
ambréli, ís-	n 7	umbrella
árnkela	v	receive
anda	v	increase
andisa	v	increase
andí, ís-	n 7	sound
ándla, âm-	n 6	force, power
ándla, ís-	n 7	hand
ânzi, ám-	n 6	water
anela	v	suffice
ápha	adv	here
ápho	adv	there
áphúka	v	break
áphúla	v	break
ápile, í'-	n 5	apple
âzi	v	know
azíso, ís-	n 7	notice, advertisement
(úkú)ba	v	steal

B

bala	v	number, count
bâla, í'-	n 5	colour
báléka	v	run
bamba	v	touch, catch
bânda	v	be cold
bane, ûm-	n 3	lightning, electricity
bane, ís-	n 7	light, lamp
bání, ú-	n 1a	who
banjwá, ûm-	n 1	prisoner
banzí	rel	wide
basa	v	light
bawó, ú-	n 1	amy father

bâya, ísi-	n 7	cattle kraal
béka	v	place
béle, í'-	n 5	breast
béle, úbu-	n 14	kindness
bétha	v	hit, strike
bháfu, í'-	n 9	bath
bhála	v	write
bhási, í'-	n 9	bus
bhaskíti, í'-	n 9	basket
bhatala	v	pay
bhátyi, í'-	n 9	jacket
Bhayi, í'-	n 5	Port Elizabeth
bhayisékilé, í'-	n 9	bicycle
bhédi, í'-	n 9	bed
bhédlele, ísí- (LLL)	n 7	hospital
bheka	v	look at
bhîtya	v	be lean
bhókhwe, í'-	n 9	goat
bhókisi, í'- (HLL)	n 9	box
bhóla, í'-	n 9	ball
bhótile, í'- (HLL)	n 9	bottle
bhótolo, í'- (LLL)	n 9	butter
bhozó, ísí-	n 7	eight
bhubha	v	die
Bhûlú, í'-	n 5	Afrikaner
Bhûlu, ísi-	n 7	Afrikaans
bhúlúkhwe, í'-	n 9	trousers
bí	adj	bad, evil, wrong
bí, úbu-	n 14	evil
bila	v	boil
bilisa	v	boil
biní	adj	two
biní, ísí-	n 7	second
bîsi, ú'-	n 11	milk
bîza	v	call
boleka	v	lend
bômi, ú'-	n 14	life
bomvú	rel	red
bôna	v	see
bónisa	v	show
bráshi, í'-	n 9	brush
bréki, í'-	n 9	brakes
brórho, í'-	n 9	bridge
bûka	v	admire
bukhâli	rel	sharp (as of knife)
búlála	v	kill
búlela	v	thank

bumânzi	rel	liquid
buthatháka	rel	weak, feeble
buthuntu	rel	blunt
bûtho, úm-	n 3	society
buxôki	rel	false
bûya	v	return, return from
búyéla	v	return to
búza	v	ask, question
bûzi, í-	n 5	rat
búzo, úm-	n 3	question

C

caca	v	be clear
câka, ísi-	n 7	servant
cákázana, ísi- (HHLL)	n 7	servant
câla, í-	n 5	side
cámánga	v	think
cânda	v	chop
cango, ú-	n 11	door
Cáwa, í-	n 5	Port Alfrd
Cáwa, í-	n 9	Sunday, church
cébísa	v	suggest
cêbo, í-	n 5	purpose, plan
cêla	v	request
cêlo, ísi-	n 7	request
cephé, í-	n 5	spoon
chása	v	oppose
chaza	v	explain, comb
chitha	v	waste, spill, destroy
chóla	v	pick up
chopho, ùbú-	n 14	brain, mind
chukumisa	v	touch
cika	v	cover
ciko, ísí-	n 7	lid, cover
cinga	v	think
cingo, ú-	n 11	wire
coca	v	become clean
cotha	v	walk slowly
cothisa	v	be slow
cuba, í-	n 9	tobacco
cula	v	sing
culo, ùm-	n 3	singing, concert
culo, í-	n 5	song, hymn
cwaka, ùkúthi	ideo	still, quiet
cwecwé, í-	n 5	card, plate

D

dada	v	swim
dadé, ú-	n 1a	sister
daka, ú-	n 11	mud
dála	adj	old
dala	v	create, form
dángatye, ǐ- (LLL)	n 5	flame
danisa	v	dance (western style)
de	adj	tall, long
denge, ǐsí-	n 4	fool
dǐbána	v	join
dǐbánisa	v	mix
dikidiki	rel	lukewarm
dilíya, ǐsí-	n 4	vineyard
dinisa	v	tire
dinwa	v	be tired
dlá	v	eat
dlá, úm-	n 3	interest
dlála	v	play
dlálo, úm-	n 3	sport
dlísa	v	feed, poison
dló, ísi-	n 4	meal
dlúla	v	pass
dolo, í-	n 5	knee, curve
dólophu, ǐ-	n 9	town
dongá, ú- (LLL)	n 11	wall
duda	v	dance (tribal)
duduma	v	thunder
dúlu	rel	dear, expensive
dumbú, ǐsí-	n 4	corpse
dwe, ǔlú-	n 11	list
dwelisa	v	make a list
dyási, í-	n 9	coat (long)
dyókhwe, í-	n 9	yoke

E

ékhohló	adv	left
ékunêne	adv	right
émálanga	adv	noon
émele, í-	n 9	bucket
émvá	v	back, behind, after
enza	v	do make
enzakala	v	be hurt
enzakalisa	v	hurt

énzi, úm- ewé	n 1 interj	maker yes
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F

fá	v	die
fá, úku-	n 15	death
fâka	v	put in
fâma, í-	n 9	farm
fâma, úm-	n 3	farmer
fâna	v	be like
fânisa	v	compare
fâna, ùm-	n 1	young man
fânékiso, úm-	n 3	picture
fâzi, ùm-	n 1	woman, wife, female
feketha	v	trifle at work
féstile, í- (HLL)	n 9	window
fihla	v	hide
fika	v	arrive, come to
fó, ùm-	n 1	chap, Afr.kêrel
fó, ísi-	n 7	disease
fólókhwe, í-	n 9	fork
fóni, í-	n 9	telephone
fu, ílí-	n 5	cloud
fûba, ísi-	n 7	chest
fûdo, ú-	n 9	tortoise
fudúmala	v	heat
fudúmeza	v	heat
fúmána	v	get, obtain, discover
fûna	v	desire, want, need
fúnda	v	learn, read
fúndi, úm-	n 1	pupil, student
fúndisa	v	teach
fúndisi, úm- (HLL)	n 1	minister of religion
fúnéka	v	be needed
fûtha, áma-	n 6	fat
fúthi	adv	frequent, often
fútsháne	adj	short

G

gâba, í-	n 5	hoe
gádi, í-	n 9	garden
gáléla	v	pour
gâma, í-	n 5	name

gángatho, úm̃- (HLL)	n 3	floor
gáwúla	v	cut (chop) down
gazí, í-	n 5	blood
gca, úkúthi	ideo	be straight
gca, úm̃-	n 3	line
gcawu, ís̃f-	n 7	spider
gcina	v	keep
gidí, ís̃f-	n 7	million
glási, í'-	n 9	glass
goba	v	bend
godí, úm̃-	n 3	mine
godóla	v	feel cold
goduka	v	go home
golíde, í-	n 9	gold
gqabi, í-	n 5	leaf
gqiba	v	complete, decide
gûbo, úm̃-	n 3	meal
gula	v	be sick, ill
gumbí, í-	n 5	room
gûnya, í'-	n 5	authority
guqula	v	change, translate
guquka	v	turn
gusha, í-	n 9	sheep
gwalá, í-	n 5	coward
gweba	v	judge, sentence
gwebi, úm̃-	n 1	judge
gwégwe, í'-	n 5	hook
gxôtha	v	chase away

H

hágu, í-	n 9	pig
hámba	v	go, walk, travel
hámbo, ú'-	n 11	journey
hám̃bi, úm̃-	n 1	traveller
hám̃ile, í'- (HLL)	n 9	hammer
hás̃he, í'-	n 5	horse
háyi	interj	no
hém̃pe, í-	n 9	shirt
(i)hla latent i	v	go down
hlá, úm̃-	n 3	day (date)
hlába, úm̃-	n 3	earth, ground, land
hlábâthi, í'-	n 5	the earth, the world
hlakula	v	weed, hoe
hlákulo, úm̃- (LLL)	n 3	spade
hlala (LL+)	v	sit, stay, live

hlalo, ísí-	n 7	seat
hlamba	v	wash
hlaná, ũm-	n 3	back (of body)
hlangana	v	meet
hlanganisa	v	join hlangú, ísí-n 7 shoe
hlánti, ũbú	n 14	kraal
hlânu	adj	five
hlânu, ísi-	n 7	five, fifth
hlasela	v	attack
hlâthi, í-	n 5	wood, forest
hlazo, í-	n 5	shame
hlé	adj	beautiful
hleka	v	laugh
hlekisa	v	amuse
hlika (LL+)	v	descend
hlíkíhla	v	rub (skin)
hlînza	v	skin
hlobo, í-	n 5	summer
hlobo, ũm-	n 1	friend
hlobo, ú-	n 11	quality, sort
hlomela	v	add, join
hlónéla	v	respect
hlu, ũlú-	n 11	row
hlunú, ísí-	n 7	muscle
hlutha	v	rob
hlútha	v	be full
hluzí, ũm-	n 3	soup
hlwempú, í-	n 5	poor person
hobé, í-	n 5	dove
holoholo	rel	hollow
hómba	v	adorn oneself
hómbisa	v	adorn oneself

I

ínki, í-	n 9	ink
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J

jika	v	turn
joja	v	smell
jonga	v	look

K

kabiní	adv	twice
kahlé	adv	well
kakhûlu	adv	very
kákubí	adv	badly
kákuhlé	adv	well
kalóku	adv	and now
káma, í-	n 9	comb
káma	v	comb
kámnândi	adv	pleasantly, nicely
kámsinyáne	adv	quickly
kancíncí	adv	a little bit
kangaphí	adv	how often
kanínzi	adv	frequently
kanjáló	adv	thus
kantí	conj	but
Kápa, í-	n 5	Cape Town
káti, í-	n 9	cat
káwúsi, í-	n 9	sock
ké	interj	then
kére, ísi-	n 7	scissors
kéti, ísi-	n 7	skirt
kétile, í- (HLL)	n 9	kettle
kéyíki, í-	n 9	cake
khaba	v	kick
khâla	v	cry, cry out
khala, í-	n 5	aloe
khâla, í-	n 9	collar
khânda	v	hammer
khangéla	v	look, look at
khanya	v	light, shine
khanyisa	v	make to shine, polish
khapha	v	guide, accompany
khátháza	v	trouble
kháwúleza	v	hurry
khâya, í-	n 5	home
khazimla	v	be bright
khefí, í-	n 9	cafe
khênce, úm-	n 3	ice
khéphu, í'	n 5	snow (also íkhéphu cl 9)
khetha	v	choose, separate
khitshi, í-	n 5	kitchen
khohlakala	v	be cruel
khóhléla	v	cough
khókéla	v	lead, guide
khôlo, ú'	n 11	belief

khôlwa	v	believe
khónkwáne, ísi-	n 7	nail
khónto, úm-	n 3	spear
khônza	v	serve, attend
khuba, í-	n 5	plough
khûko, ú'-	n 11	sleeping mat
khûla	v	grow
khûlu	adj	large, big, great
khûlu, í'-	n 5	hundred
khûlu, úbu-	n 14	size
khúlúla	v	undress, free, loosen
khumba, ísí-	n 7	skin of animal
khumbúla	v	remember
khûni, ú'-	n 11	firewood
khupha	v	take out
khwá, ún-	n 3	way (method), habit
khwankqisa	v	hock, cause amazement
khwéla	v	ride, get on vehicle
klóko, í-	n 9	clock
kódwa	conj	but
kófu, í-	n 9	coffee
kólo, ísi-	n 7	school
komítí, í-	n 9	committee
komítyi, í-	n 9	cup
krakrá	rel	bitter
krúfu, ísi-; kúlúfu, ísi-	n 7	screw
kûbá	conj	because
kudála	adv	long ago
kude	adv	far
kufúphi	adv	near
kuṁkâni, ú-	n 1	king
kúnganí	adv	why
kunye	adv	together
kú'phêla	adv	only
kuqála	adv	first(ly)
kusásá	adv	early (in day)
kwakhoná	adv	again
kwére, ísi-	n 7	square
kwindlá, ú-	n 15	autumn

L

lâhla	v	lose
lâhléka	v	become lost
lâhléko, í-	n 9	loss
lâhle, áma-	n 6	coal

lála	v	sleep, lie down
lamba	v	be hungry
lambo, úm-	n 3	river
langa, í-	n 5	sun
láp̄hu, í-	n 5	cloth
las̄t̄i, í-	n 9	receipt
lêbe, úm-	n 3	lip
lenze, úm-	n 3	leg
lésa	v	read
levu, ís̄i-	n 7	chin
libala	v	forget
licwecwé	rel	thin and flat
lila	v	cry, weep
lilo, úm-	n 3	fire
lima	v	plough
linda	v	wait, watch
línga	v	attempt, try, test
lingana	v	be equal
linganisa	v	measure
língo, úm-	n 3	test
lo, ís̄i-	n 7	animal
lôba	v	fish
lók̄hwe, í-	n 9	dress
lola	v	sharpen
lól̄iwé, ú-	n 1	train, railway
lomo, úm-	n 3	mouth
londa, ís̄i-	n 7	sore
lôzi, úm-	n 3	whistle
lubhelú	rel	yellow
luhlâza	rel	blue, green
luka (LL+)	v	plait lukhûnirel hard, cruel
lúla	rel	simple, easy
lûma	v	bite
lúmk̄a,	v	beware, watch out for
lunga	v	be right
lungisa	v	adjust, put right, fix
lungu, úm-	n 1	European
lwa	v	fight
lwana, ís̄i-	n 7	small animal - insect
lwândle, ú-	n 11	sea
Lwés̄ibiní, ú-	n 11	Tuesday
lwés̄ihlânu, ú-	n 11	Friday
Lwés̄íne, ú-	n 11	Thursday
Lwés̄ithâthu, ú-	n 11	Wednesday
lwîmi, ú-	n 11	tongue, language

M

(úkú)ma	v	stand
malí, í-	n 9	money
málûme, ú-	n 1a	maternal uncle
mamá, ú-	n 1a	mother
mǎngálisho, ǔm̃- (LLLL)	n 3	marvel
mânzi	rel	wet
máríke, í-	n 9	market
mashíni, ú-	n 1a	engine
mátshisi, í- (HLL)	n 9	match
mázi, í-	n 9	cow
mba	v	dig
mbalí, í-	n 9	story
mbalwá	rel	few
mbêwu, í-	n 9	seed
mbí	enum	other, another
mbizá, í-	n 9	pot
mbola, í-	n 9	clay
mbombosholo	rel	thick
mbóna, ú-	n 3	maize, mealies
mbóvané, í-	n 9	ant
mdaka	rel	muddy, brown
méla	v	represent
méla, í-	n 9	knife
mélwâne, úm̃-	n 1	neighbour
mfázwe, í-	n 9	war
mféketho, í- (LLL)	n 9	trick
mfene, í-	n 9	baboon
mfihlo, í-	n 9	secret
M̃gq̃ibelo, ǔ-	n 3	Saturday
nhlávúmbí	adv	perhaps
nhlôphé	rel	white
míni, í-	n 9	day (as opposed to night)
rúka	v	move
mnândi	rel	sweet
mnyáma	rel	black, dark
mnyáma, ǔbú-	n 14	blackness, darkness
mólo	interj	Hello, Good morning
Mónti, í-	n 5	East London
motó, í-	n 9	motor car
môya, ú-	n 1	air, wind (breath)
mpahla, í-	n 9	clothes, material
mpéndulo, í- (LLL)	n 9	answer, reply
mpí, í-	n 9	army
mpíkíswano, í- (LLLL)	n 9	quarrel
mpilo, í-	n 9	health

mpómpa	v	pump
mpómpo, í-	n 9	pump
mpúkané, í-	n 9	fly
mpûku, í-	n 9	mouse
mpúhlo, í- (HLL)	n 9	nose
ñsúlwá	rel	innocent
Ñthâtha, ù-	n 3	Umtata
mûncu	rel	acid, sour
mvéliso, Ì-	n 9	product, proposal
mvó, í-	n 9	opinion, feeling
mvú, í-	n 9	sheep
mvûla, í	n 9	rain
Ñvulo, ù-	n 3	Monday
mvúme, í-	n 9	consent, will
ñxinwá	rel	narrow

N

na	v	rain
nálíti, í-	n 9	needle
námbuzáne, ísi-	n 7	insect
námhla'njé	adv	today
nâni, í-	n 5	number
nathá, ùm-	n 3	net
ncâh, í-	n 9	point, end
ncangathi	rel	sticky
nceda	v	help, please
ncedisa	v	help
ncedo, ú-	n 11	help
ncínáne	adj	little, small
ncíncí	adj	small
ncókóla	v	talk
ncûma	v	smile
ncwadí, í-	n 9	book, letter
ndaba, Ì-	n 10	news
ndâwo, í-	n 9	place
ndiyalwa, ú-	n 1a	rebel
ndlebé, í-	n 9	ear
ndlela, í-	n 9	road, way
ndlu, í-	n 9	house
ndoda, í-	n 9	man, husband (plural ãmádoda)
ndúdumo, Ì- (LLL)	n 9	thunder
nduku, í-	n 9	knobkerrie
ne	adj	four
ne, Ísì-	n 7	four
nêne, í-	n 5	gentleman

nêne, í	n 9	truth
netha	v	be come wet, rain
ngáka	adv	so much
ngákánaní	adj	how much
ngalo, í-	n 9	arm
nganíná	adv	how
ngasémvá	adv	behind
ngáthi	adv	perhaps
ngcá, í-	n 9	grass
ngcámángo, í-	n 9	thought
ngcâmbu, í-	n 9	root
ngcola	v	become dirty
ngcuká, í-	n 9	hyena
ngcwêle	rel	holy
ngéna	v	enter
Ngêsi, í-	n 5	Englishman
Ngêsi, ísi-	n 7	English (language)
ngôko	adv	then
ngóku	adv	now
ngókúhlwa	adv	at evening
ngókuyâ	adv	whence
ngoma, í-	n 9	song
ngómsó	adv	tomorrow
ngónyama, í- (LLL)	n 9	lion
ngozi, í-	n 9	danger
ngqele, í-	n 9	cold, frost
ngqo ngéndlela	adv	straight
ngqondo, í-	n 9	mind, sense
ngqukúva	rel	round (as ball)
ngqúsho, úm-	n 3	samp
ngubo, í-	n 9	blanket
ngwevu	rel	grey
ngxôlo, í-	n 9	noise
ngxowa, í-	n 9	sack
ngxuma, úm-	n 3	hole
ní	inter	what
níka	v	give
níkela	v	offer
nina, ú-	n 1a	his mother
níní	adv	when
nîni, úm-	n 1	owner
nîzi	adj	many, much
njá, í-	n 9	dog
njá, úbu-	n 14	rudeness
njáló	adv	thus
njaní	adv	how
njé	rel	such

njongo, í-	n 9	purpose, aim
nkátházo, í-	n 9	trouble
nkâwu, í-	n 9	monkey
nkcénkcéshela	v	water
nkciho, í-	n 9	waste
nkôlo, í-	n 9	religion
nkómó, í-	n 9	cow, beast
nkósázana, í- (HHLL)	n 9	Miss
nkôsi, í-	n 9	chief (plural ámakhôsi)
nkósíkazi, í- (HHLL)	n 9	chieftain's wife, madam, Mrs
nkûku, í-	n 9	fowl, chicken
nkúlúleko, í- (HHLL)	n 9	freedom
nkûngu, í-	n 9	mist
nkûni, í-	n 9	wood
nkwenkwé, í-	n 9	boy (plural âmákhwenkwé)
nkwénkwézi, í-	n 9	star
nó'bhála, ú-	n 1a	secretary
nôko	conj	however
Nómpunzi, ú-	n 1a	girl's name
Nómsá, ú-	n 1a	girl's name
Nóthémba, ú-	n 1a	girl's name
nqâba	v	be scarce
nqámíla	v	cut off
nqámílezo, úm- (HHLL)	n 3	cross
nqánáwa, í-	n 9	ship
nqáwa, í-	n 9	pipe (for smoking)
nqwazi úm-	n 3	hat
nqwélo, í-	n 9	waggon
nqwenela	v	desire
ntaba, í-	n 9	mountain
ntaka, í-	n 9	bird
ntamo, í-	n 9	neck
ntándo, í-	n 9	will
ntlá,, úm-	n 3	north
ntlábâthi, í-	n 9	sand
ntlákóhlâza, í-	n 9	spring
ntlanzi, í-	n 9	fish
ntôbóntlobo, í- (LLLL)	n 9	different kinds
ntlóko, í-	n 9	head
ntlonzé, í-	n 9	leather
ntlûngu, í-	n 9	pain
ntó, í-	n 9	thing
ntólóngo, í-	n 9	prison
ntombazâna, í-	n 9	daughter, young girl (plural âmántombazâna)
ntombí, í-	n 9	daughter, older girl
ntônga, í-	n 9	rod

ntóní	inter	what
ntsásá, í-	n 9	morning
ntshónálanga, í- (HLL)	n 9	west
ntshúkumo, í- (LLL)	n 9	movement
ntsímbe, í-	n 9	iron, bell
ntsîmi, í-	n 9	field (plural ámasîmi)
ntsî'ngîselo, í-	n 9	tendency
ntsûndu	rel	brown
ntu, ũm-	n 1	person
ntwana, ũm-	n 1	child
ntwána, í-	n 9	bit
ntyátyámbo, í-	n 9	flower
núka	v	smell
núrîzana, úm-	n 1	Mr
nwe, ũm-	n 3	finger
nwéle, ú-	n 11	hair
nxá	conj	while
nxânwa	v	be thirsty
nxeba, í-	n 5	wound
nxiba	v	dress
nxilá, í-	n 5	drunkard
nyâka, úm-	n 3	year
nyama, í-	n 9	meat
nyâna, ú-	n 1a	son
nyangá, í-	n 9	month, moon
nyango, ũm-	n 3	door, doorway
nyáthelo, í- (LLL)	n 9	step
nyawo, ú-	n 11	foot
nye	adj	other, one
nyé, ísí-	n 7	one, unit
nyôka, í-	n 9	snake
nyoko, ú-	n 1a	your mother
nyôsi, í-	n 9	bee
nyúka	v	go up
nyúsa	v	make to go up
nzima	rel	hard
nzima, ũbú-	n 14	weight
nzulú	rel	deep
nzúzo, í-	n 9	profit

O

ófisi, í- (HLL)	n 9	office
ohlwaya	v	punish
ókanye	conj	or
óli, í-	n 9	oil

olula	v	stretch
ôma	v	dry
ómísa	v	dry, wipe dry
ôna	v	sin
ónákala	v	be damaged
ónákálisa	v	damage, waste
ongeza	v	add
ôni, ùm-	n 1	sinner
ónka, ìs-	n 7	bread
ónke	enum	all, every
ôno, ìs-	n 7	sin, crime
ónti, í-	n 9	oven
ónwába	v	be fortunate
órenji, í'- (HLL)	n 5	orange
osa	v	roast, toast
oyá.úb-	n 14	hair (of animal), wool
óyíka	v	fear
óyíko, úl-	n 11	fear

P

pásile, í- (HLL)	n 9	parcel
pélití, ísi- (HLL)	n 7	pin
pénsile, í- (HLL)	n 9	pencil
phá	v	give
phahla, ú-	n 11	roof
phákáma	v	raise, lift
phákámisa	v	raise, lift
phákathí	adv	middle, between
phákathí, úm-	n 3	middle
phâko, úm-	n 3	padkos, food for journey
phámbili	adv	before, in front, forward
phámbili, úm-	n 3	front
phá'ndlé	adv	outside
phán'dlé, áma-	n 6	country(side)
phántsí	adv	down, below, bottom
phaphazela	v	fly in air
phaphú, í-	n 5	heart
phátha	v	rule
phawu, ú-	n 11	sign
phawula	v	mark, note, notice
phaxula	v	whip
pháyâ	adv	beyond
phefumla	v	breathe
pheka	v	cook
pheki, úm-	n 1	cook

phêla	v	finish
phendula	v	answer
phepha, í-	n 5	page, paper
phephandaba, í-	n 5	newspaper
phéshéyá	adv	over
phézulu	adv	up
phézulu, úm-	n 3	top
phí	adv	where
phiko, í-	n 5	wing
phila	v	live, be well
phondo, ú-	n 11	horn
phosisa	v	make a mistake, err
phósiso, ísǐ- (LLL)	n 7	mistake
phôtha	v	twist
phúláphula	v	listen
phúma	v	go out
phúm̃la	v	rest
phúm̃lo, ú'- (HLL)	n 11	rest
phunga	v	drink (tea coffee)
phunga, úm-	n 3	steam
phûnga, úm-	n 3	lung
phupha	v	dream
phuthaphutha	v	feel around
phúza	v	drink (beer), kiss
píli, ísi-	n 7	mirror, glass
Píti, ú-	n 1a	Peter
plánga, í'	n 5	plank, floor board
pléyíti, í-	n 9	plate
plíngi, ísi-	n 7	spring
pókotho, í-	n 9	pocket
polísa, í-	n 5	policeman
pólísha	v	polish
pólíshi, í- (HLL)	n 9	polish
pósi, í-	n 9	post
pú, úm-	n 3	gun

Q

qaba	v	paint
qâla	v	begin, start
qala, úm-	n 3	throat
qámelo, úm-	n 3	cushion
qandá, í-	n 5	egg
qéla, í'	n 5	club, group
qengqa	v	roll
qengqelesa	v	roll

qésha	v	employ, hire
qhamo, ísí-	n 7	fruit
qhekeka	v	crack (intransitive)
qhekeza	v	crack (transitive)
qhîna, í'-	n 5	knot
qhinga, í-	n 5	trick
qhosha, í-	n 5	button
qhuba	v	drive, go on, advance
qínísa	v	tighten, fix
qíníseka	v	be certain, sure
qithi, ísí-	n 7	island
qonda	v	understand
qumba	v	be angry
qwárha, í'-	n 5	zebra
R		
ránti, í'-	n 9	rand
ráyísi, í'-	n 9	rice
rhabaxa	rel	rough
rháfu, í-	n 9	tax
rháli, í-	n 9	cotton
rhamba, í-	n 5	the puffadder
rhuluménte, ú-	n 1	government
rhwebo, ú-	n 11	trade
S		
sála	v	be left behind
sána, ú'-	n 11	baby
sango, í-	n 5	entrance
sâpho, ú'-	n 11	family
sebe, í-	n 5	branch
sébénza	v	work
sébênzi, úm-	n 3	work
sébénzi, úm-	n 1	worker
sébénzisa	v	use
séla	v	drink (cold liquid)
séla, í'-	n 5	thief
sêle, í'-	n 5	frog
sénti, í-	n 9	cent
sépha, í-	n 9	soap
sésane, úm-	n 3	ring
séza	v	to give or cause to drink
shicilela	v	print

shishiní, í-	n 5	industry
shíya	v	to leave behind
shukuma	v	move (intransitive)
shukumisa	v	move (transitive)
shûmi, í'-	n 5	ten
shushú	rel	warm
shushú, úbú-	n 14	heat
si, úm-	n 3	smoke
si, áamá-	n 6	sour milk, maas
síba, ú'-	n 11	pen, feather
síbhózó	rel	eight
síka	v	cut
síka, úbu-	n 14	winter
síla, úm-	n 3	tail
sílívere, í-	n 9	silver
sinda	v	smear with cow-dung
sínda	v	overcome
sínda	v	escape
síndo, úm-	n 3	anger
sínga	v	go to
síquphé	rel	sudden
sizi, ú-	n 11	pity, regret
só, lí-	n 5	eye (plural áméhlo n 6)
só, úbu-	n 14	face
sondela	v	to come near
sônga	v	fold
sonto, úm-	n 3	thread
su, ísí-	n 7	stomach
sú, úlu-	n 11	skin
suka (LL+)	v	go from, move
súku, ú'-	n 11	day, 24 hours
súku, úbu-	n 14	night
súla	v	wipe, polish
súndu, úm-	n 3	worm
súphu, í-	n 9	soup
susa (LL+)	v	take, remove
Súthu, úm-	n 1	a Sotho
Súthu, ísí-	n 7	Sotho language
Swazi, í-	n 5	a Swazi
swazi, ú	n 11	rod
swékile, í- (HLL)	n 9	sugar

T

táfile, í- (HLL)	n 9	table
támpu, ísi-	n 7	stamp

tápíle, í'- (HLL)	n 5	potato
tatá, ú	n 1	my father
téna, ísi-	n 7	brick
tha, úm-	n 3	ray
thábátha	v	take
thafa, í-	n 5	plain
thâla, í'-	n 5	shelf
thâmbeká, í'-	n 5	slope
thamba	v	become soft
thâmbô, í'-	n 5	bone
thânda	v	like, love, approve
thânda, ú'-	n 11	crack
thândábuza	v	doubt, hesitate
thândâthu	adj	six
thândáthu, ísi-	n 7	six
thandaza	v	pray
thândo, ú'-	n 11	love
thanga, í-	n 5	pumpkin
thangá, í-	n 5	thigh
thânga, í'-	n 5	cattle post
thátha	v	take
thâthu	adj	three
thâthu, ísi-	n 7	three
thémba	v	hope
Thémba, ú-	n 1a	Themba
thémba, í'-	n 5	hope
thênga	v	buy
théngísa	v	sell
thêtha	v	speak, talk, discuss
thêtho, úm-	n 3	law
thi	v	say
thí, úm-	n 3	tree
thí, úlu-	n 11	stick
thíle	rel	a certain
thîya	v	hate
thobá, í-	n 5	nine
thókazi, í'- (LLL)	n 5	a young hen
thole, í-	n 5	a calf
thômbo, úm-	n 3	spring
thongo, úbú-	n 14	sleep
thontsí, í-	n 5	drop
thuba, í-	n 5	chance
thuba, ísí-	n 7	space
thúla	v	be quiet
thuli, ú-	n 11	dust
thûma	v	send
thûnga	v	sew

thûnzi, úm-	n 3	shade
thûnzi, ísi-	n 7	shadow
thupa, ísí-	n 7	thumb
thûtha	v	transport
thuthú, ú-	n 11	ash
thúthuthu, ísí- (LLL)	n 7	motor bike
thwála	v	carry
thwáli, úm-	n 1	porter
tí, í-	n 9	tea
tíkiti, í- (LLL)	n 5	ticket
tíni, í-	n 9	tin
tíshi, ísi-	n 7	station
títshala, í- (HLL)	n 9	teacher
tóvu, ísi-	n 7	stove
tráto, ísi-	n 7	street
tréyi, í-	n 9	tray
tsala	v	attract, draw, pull
tsé	rel	straight
tshá	adj	new, young
tshá	v	burn (transitive)
tshísa	v	burn (intransitive)
tshabalalisa	v	destroy
tshata	v	marry
tshato, úm-	n 3	marriage
tshaya	v	smoke
tshetshe, ísí-	n 7	knife
tshíphu	v	cheap
tshîxa	v	lock
tshíxéla	v	lock up
tshîxo, ísi-	n 7	key
tshîzi, í-	n 9	cheese
tsho	v	say
tshókwe, í-	n 9	chalk
tsîba	v	jump (forward), spring
tsólo	rel	sharp (as of needle)
Tswána, úm	n 1	a Tswana
túlo, ísi-	n 7	chair
twabuluka	v	be elastic
tyá, úku-	n 15	food
tyá, úm-	n 3	cord
tya, ísí-	n 7	fowl, dish, vessel
tyála	v	plant
tyala, í-	n 5	crime, debt
tyálo, ísi-	n 7	plant
tyânda	v	operate (surgically)
tyândo, ú-	n 11	operation
tyáthânga, í-	n 5	chain

tye, ʔí-	n 5	stone
tyeba	v	become fat, rich
tyebi, ʔsí-	n 7	rich person
tyebi, ʔbú-	n 14	property
tyhala	v	push
tyhéfu, í-	n 9	poison
tyibilika	v	slip
tyuṁza or cuṁza	v	smash, crush
tyuwa, í-	n 9	salt
tywalá, ú-	n 14	beer, liquor

U

úkúbá	conj	if, that
(úkû)va	v	hear, perceive, feel

V

vala	v	shut, close
vavanya	v	test
véki, í-	n 9	week
vela	v	come from
velisa	v	produce
vénkile, í-	n 9	store, shop
vési, í-	n 9	verse
ví, úṁ-	n 1	a hearer
vila, í-	n 5	a lazy person
víli, í-	n 5	wheel
vingco, ʔsí-	n 7	cork, stopper
vo, ʔlû-	n 11	feeling, view
vúka	v	wake up
vula	v	open
vuma	v	agree
vumelana	v	agree with
vumba, í-	n 5	smell, scent
vumela	v	let, allow
vûndla, úṁ-	n 3	hare
vúsa	v	(a)waken, wake up
vûya	v	be pleased
vûyo, ú-	n 11	pleasure, gladness
vuzo, ʔṁ	n 3	reward

W

wa	v	fall
wá, ǐlǐ-	n 5	cliff
wáka, í'-	n 5	a thousand
wáyálesi, í- (HHLL)	n 9	radio
wáyini, í- (HLL)	n 9	wine
wéphu, ísi-	n 7	whip
wisa (LL+)	v	drop
wótshi, í-	n 9	watch

X

xábiso, í'-	n 5	value, price
xelela	v	order
xésha, í'-	n 5	time, watch, clock
xhása	v	support
xhego, í-	n 5	old man
xhêla	v	to slaughter
xhenxe, ǐsí-	n 7	seven
xhoma	v	hang
Xhosa, úm	n 1	a Xhosa
Xhosa, ǐsí-	n 7	Xhosa language
xolo, ú-	n 11	peace
xoxa	v	discuss

Y

ya	v	go to
yala	v	order
yeza, í-	n 5	medicine
yihló, ú-	n 1a	your father
yisé, ú-	n 1a	his father
yúre, í-	n 9	hour

Z

za	v	come (to)
za, ǐlǐ-	n 5	wave
zála	v	give birth to
zála	v	fill
záli, úm-	n 1	parent
zálwána, úm-	n 1	brother
zántsi, úm-	n 3	south

zathú, ísí-	n 7	reason (cause)
zé	rel	empty, naked
zékéliso, úm̃- (HHLL)	n 3	example
zi, ũm̃-	n 3	homestead, group of huts
zí, úm̃-	n 3	reed
zibá, ísí-	n 7	a patch
zîmba, úm̃-	n 3	body
zînyo, í-	n 5	tooth
zipho, ú-	n 11	nail
zisa (LL+)	v	to bring
zôba	v	paint and draw
zola	v	become quiet, calm
zolo, í-	n 5	yesterday
Zulu, ũm̃	n 1	a Zulu
zulu, í-	n 5	sky, weather
Zulu, ísí-	n 7	Zulu language
zúza	v	get, obtain zuzú, ũm̃- n 3 minute
zuzwána, ũm̃-	n 3	second
zwane, ú-	n 11	toe
zwe, ílí-	n 5	country, land
zwe, ísí-	n 7	nation
zwí, íli-	n 5	voice, word

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