THE SOUND SYSTEM
OF
SOUTHERN SOTHO

by

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INTRODUCTION

(a) Southern Sotho: Habitat, approximate number of speakers, and a brief phonetic comparison with Northern Sotho and Tswana.

0.1 Southern Sotho1 is spoken mainly in Basutoland and its immediate surroundings, but is also found sporadically, because of the migration of its speakers, in other parts of the Republic of South Africa. Together with Northern Sotho and Tswana, it belongs to the Sotho group of Bantu languages, which is one of five such groups, together constituting the south-eastern Bantu language zone.2 According to van Warmelo3 who based his calculations partly on the 1946 census figures, the total number of S.Sotheo speakers in 1952 was 1,391,000 in round figures. The figures for N.Sotheo and Tswana are given as 772,000 and 816,000 respectively. Of the total of 2,979,000 Sotho speakers, therefore, S.Sotheo has 47 p.c. as against 27 p.c. for Tswana and 26 p.c. for N.Sotheo.

0.2 A detailed study of the sound system of Southern Sotho forms the body of this thesis. With the main purpose of focussing attention on my approach to the subject treated, a more specific introduction to the subject matter is given in part (c) of this introduction. Here I only want to draw attention to some of the phonetic differences which exist between S.Sotheo and the other members of the Sotho group. One such difference is the

1 Unsophisticated speakers of this language know it simply as Sesotho or, where they seek to distinguish between it and other forms of Sotheo, as Sesotho seMotheo (i.e. Motheo's Sotho). In academic circles the term Sesotho saBorwa, a literal translation of Southern Sotho, has comparatively recently been adopted.
2 For further information on this point, and also for definitions of "zone" and "group" as used in this context, see Doke, The Southern Bantu Languages, Oxford 1954, Chap.III.
3 Language map of South Africa, Ethnological Publications No. 27, Pretoria 1952.
existence, in S. Sotho, of the so-called click consonants, which are not found to any appreciable extent in N. Sotho and Tswana. The presence of these sounds in this language is due largely to the influence of Zulu (spoken mainly in Natal) and Xhosa (mainly in the Cape Province). The possibility that these implosives were acquired direct from the languages of the Twa (i.e., Abatwa) people seems to be discredited by the parallelism in the vocabularies of implosive-containing words in S. Sotho on the one hand, and in Xhosa and Zulu on the other. There are, however, a few words containing these sounds (all place-names), which may have resulted from direct contact with the Twa. These are Senou (Orange River), Cutthing, Qacha (Qacha's Nek). Zulu and Xhosa have three species of implosive each, viz., dental $\zeta$, palatal $\zeta$, and lateral $\zeta$. However, whenever an implosive-containing word is acquired from them by S. Sotho, the implosive is invariably resolved into the palatal type (or its diaphonemic variant, the dental type) irrespective of whether it is dental, palatal, or lateral in the original Nguni word.

0.5 The occurrence of the voiced bilabial explosive $\zeta$, coupled with the entire absence of the voiced bilabial fricative $\rho$, marks S. Sotho off sharply from N. Sotho where the position is exactly the reverse. The distinction, in this regard, between S. Sotho and Tswana is not so absolute, since, in the latter, both the voiced bilabial explosive and the voiced bilabial fricative are recorded, although

1 The term implosive is advocated in the relevant section of this thesis, on the basis of the arguments advanced in that section. In the present context, unless otherwise stated, implosive must be understood not to include the bilabial implosive, which is also found in both Zulu and Xhosa.
2 Cf. Tucker, Comparative Phonetics, §192.
3 See Cole, Tswana Grammar, §§1.41 and 1.51, and also consonant chart on p. 21.
although with but infrequent occurrence of the latter, and that only as a variant of the otherwise completely dominant voiced bilabial explosive. Of these two sounds, $\ell_p$ has been shown by Meinhof to be the older, and to have given rise to the $\ell_b$ of S. Sotho and Tswana. The close relationship between these two sounds is illustrated by the fact that, in situations of strengthening, each is replaced by $\ell_p$.

0.4 Again, while S. Sotho uses the voiceless dentilabial fricative $\ell_f$ regularly, all N. Sotho, and many Tswana, dialects employ the voiceless bilabial fricative $\ell_p$ in parallel situations. There are, however, Tswana dialects which employ the dentilabial fricative and not the bilabial one. Here also, in strengthening, both sounds are replaced by the same sound, viz. $\ell_p$.

0.5 The voiced glottal fricative $\ell_h$ is exclusive to S. Sotho. N. Sotho and Tswana employ $\ell_p$ and $\ell_x$, respectively, in parallel situations. Once again, all three sounds are replaced by only one sound in strengthening, viz. $\ell_kxh$. A close relationship is thus indicated here as well.

0.6 Finally, S. Sotho employs the voiced alveolar-medial explosive $\ell_d$ in situations where N. Sotho and Tswana use the voiced alveolar-lateral flap $\ell_l$. In S. Sotho $\ell_d$ occurs immediately before $\ell_i$ or $\ell_u$, provided it (i.e., $\ell_d$) is not immediately preceded by $\ell_1$. The condition for the use of $\ell_l$ in N. Sotho and Tswana is simply that the immediately following sound must be either $\ell_i$ or $\ell_u$. When, in S. Sotho, $\ell_i$ or $\ell_u$ immediately follows, and $\ell_1$ immediately precedes, the phoneme

1 Meinhof-van Warmelo, Bantu Phonology, Dietrich Reimer, Berlin 1932.
2 Cole states (Tswana Grammar, §1.54) that in these situations $\ell_f$ is being superseded by $\ell_d$. 
phoneme [l - j - d], the phonemic variant used is [d]. Each one of the members of this phoneme is replaced by [t] in situations of strengthening.¹

(b) Previous writers on aspects of the subject treated in this thesis.

Most grammars of S. Sotho begin with a sketch of the sounds of the language. This is a legacy from the days of the early missionaries whose first grammars were often intended for later generations of missionaries or other Europeans who might find themselves in the area where this language was spoken. In those days, such descriptions of the sounds of the language being studied were intended more as aids to pronunciation than as phonetic studies with any claim to scientific accuracy. F.H. Kruger's Steps to learn the Sesuto language (1878), which is among the earliest of such works, is a good example of such a grammar. Unfortunately, the results of such a superficial study of the sounds of a non-literary language often lead to inaccuracies of spelling improvements upon which may, in later years, be difficult of acceptance; and of this Kruger was sharply aware.² If the spelling errors in Kruger's book, reference is made here to the use of the symbols g at one moment and h the next, to represent the voiced glottal fricative [h]. To complicate things further, Kruger says of the symbol g that it "is pronounced like h", and sometimes like g in Dutch. The reason for this

¹ The fullest treatment of this subject so far is by Tucker in his Comparative Phonetics. Cole gives a relatively short phonetic sketch of Tswana in his Tswana Grammar. Both Cole and N. Sotho, in their Textbook of Southern Sotho Grammar, give a sketch of Southern Sotho phonetics in §81-96, and a highly condensed comparative study of the phonetic structures of S. Sotho, N. Sotho, and Tswana in Appendix II of the same book.

² See 1.140 in this work.
this inconsistency was probably that Kruger regarded Pedi (Sepeli in his own spelling) as a dialect of S.Sotho (his Sesuto); and when one considers that N.Sotho contains the voiceless prevelar fricative $\text{h}'$, as well as the voiced velar fricative $\text{h}$, which latter is the equivalent of S.Sotho $\text{h}$ in words of common origin; and again the extent to which S.Sotho, N.Sotho, and Tswana were often mixed up by the early writers on Sotho grammar, as witness Casalis' *Etudes sur la langue Sechuana*, which, in spite of its title, gives an exposition of S.Sotho and not Tswana, then one must regard as then possible, if not indeed highly likely, such errors as that committed by Kruger. Jacottet, in his *Elementary Sketch of Sesuto Grammar* (1892), improved upon the orthography used by Kruger. But even more important still, Jacottet was more consistent in his employment of symbols. Both Kruger's and Jacottet's phonetical expositions were greatly handicapped by the fact that these writers employed symbols whose phonetic values were ill-defined.  

8 In more recent grammars, introductory phonetical sketches have become more elaborate and also more scientifically accurate. Doke and Mofokeng have devoted the first thirty-six pages of their grammar to phonetics, without, however, using phonetic symbols; Khaketla, in his *Sebopeto se Sesotho*, has given sixteen pages to the study of phonetics, using phonetic symbols; and von Eeden has also filled the first sixteen pages of his *Inleiding tot die studie van Suid-Sotho* with a description of the sounds of S.Sotho. Like Doke and Mofokeng, he does not use phonetic symbols.  

9 The study of the sound system, for its own sake and within its own right, of Sotho in general, and S.Sotho in particular

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1 See 1.140 and 1.141 below.
particular was undertaken only comparatively recently. In September 1907 Jacottet published an article entitled *Bantu Phonetics* as a supplement to the *Christian Express*. This contains not only a brief evaluation of Meinhof's *Grundriss einer Lautlehre der Bantu-Sprachen*, but also a comparative study of Sotho and Xhosa phonology on the basis established by Meinhof in that book. In 1916 Jones and Plaatje published their *Sechuana Reader* which, though very short, was of a high standard, and was devoted entirely to the phonetics of Tswana. But the most complete of such works was published in 1929 by A.N. Tucker, entitled *Comparative Phonetics of the Suto-Chuana Group of Bantu Languages*. The value of this book lies not only in its completeness, but also in its employment of phonetic symbols with constant values to describe the sounds of S. Sotho, N. Sotho, and Tswana. The book is divided into three parts, one on the phonetics of the three languages, the next on sound changes, and the third on length, stress, and tone, all these aspects being treated on a descriptive-comparative basis.

0.10 The aspects of the sound system of Sotho which have received little or no attention in the past are the prosodic features of length, stress, and tone, for even Tucker gives one the impression that his major section is the phonetics. For instance, length and stress together occupy only one page of his approximately 130-page treatise, and tone about 28 pages. Some Bantu grammarians have made only passing references to these prosodic features, as if they were of no importance at all. Others, having due regard to their importance, have yet declined to make a thorough study of them either because they found them (the tonal structure in particular) too intricate, or because /... such
such a study was not immediately relevant to their grammatical expositions, or for both reasons. To establish a proper balance in the picture, however, one must refer to Doke's writings, and in particular (as being of relevance in this connection) his study of stress in the Bantu languages in general, to the extent that stress became the foundation upon which he based his definition of a word, which latter, in turn, established the logic for his new approach to the grammatical analysis of the Bantu languages.

0.11 Jones, with the help of Plaatje, was the first linguist to attempt a study, for its own sake, of tone in a Sotho language, viz. Tswana. Small though they be (and understandably so, since they were only a beginning) the publications *Tones of Sechuana Nouns* and *Words distinguished by tone in Sechuana*,1 made their mark, and have not lost their usefulness even in the presence of more recent studies of this problem. The greatest contribution, to date, towards an understanding of the tonal structure of Sotho (S. Sotho in this case) is that of Letele's in the publication, in 1956, of his *Role of tone in the Southern Sotho language*. Thus, for the first time, broadly speaking, the study of tone has come into its own.

(c)

0.12 Since the subject-matter of this thesis is voluminous, I have thought it best to give a general conspectus of what is coming, in order to give the reader a preview of the contents of this work.

(i) **Phonetic study.**

(1) The vowels.

0.13 My treatment of the vowels is along the same lines as

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1 See Bibliography.
as that of Cole, with additional arguments to clinch his case. Although Cole's phonemic grouping was prompted by his study of Tswana only, yet it is my conviction that his findings are applicable to S. Sotho as well, for the reasons given in the section on the vowels. Tucker and van Beden, who wrote before Cole, failed to establish proper phonemic relationships of the Sotho vowels partly because the higher members of the two higher mid vowel phonemes (one front, one back) escaped their notice, but also because of an alleged lack of consistency among Sotho speakers in their employment of the vowel pairs \( [e] \) and \( [i] \) in the front, and \( [o] \) and \( [o'] \) in the back. Doke and Nofokeng simply ignored Cole's findings in this respect.

A feature of the vowel not found in Cole's treatment, and which I believe to be newly discovered here, is the diphthongal articulation of vowels in certain situations.

(2) The nasals.

On the strength of my conviction that the term nasal is not to be contrasted with terms of auditory description such as explosive, fricative, etc., but should rather be understood as being the opposite of oral, I have rearranged the classification of consonants in this respect, using nasal to refer to a series contrasting with the oral series.

(3) The laterals.

Like nasal, lateral is not to be contrasted with terms of auditory description. It refers to air-stream direction in the mouth, and is opposed to medial or central. This distinction is found to apply in the case of alveolars... mainly

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1 See 1.7, 1.18, 1.32 - 1.37, and 1.59, below.
2 See 1.66, n.1.
3 See 1.11 - 1.13.
4 See 1.61.
mainly, but also, in the case of one sound, to velar consonants. Alveolars and velars are thus subdivided into two subsections each, viz. alveolar-medials and alveolar-laterals, and velar-medials and velar-laterals.¹

(4) Affricates.

0.16 The usual definition of an affricate: an explosive followed by its homorganic fricative² is reversed. An affricate is defined as a momentary fricative preceded by its homorganic explosive. The reason for this is that an affricate is always articulated at the point of articulation of the fricative element and not that of the explosive element.

0.17 The question arises, in this connection, whether there is justification in regarding affricates as combinations rather than as single sounds. While it is felt that it may, perhaps, be premature to say categorically, at this stage, that they are in fact single sounds, the arguments upon which the new definition is based would seem to encourage such a view. Attention is also drawn to the contradiction in the expression "momentary fricative" in our definition.⁶ In the light of these questions, a re-examination of the composition of affricates may be a rewarding exercise.⁴

(5) The "clicks".

0.18 The so-called clicks, better described as suction sounds, which at least suggests the manner of their articulation, are compared with the implosive consonants of other Bantu languages, and the only difference found is in the extent of the vacuum-range, a term introduced here /... to

¹ See 1.62 - 1.64. ² e.g. Doke in Comparative Study of Shona Phonetics, §167.
³ Normally a fricative is characterized by the fact that it is capable of indefinite prolongation, limited only by the supply of air from the lungs.
⁴ See 1.69 and 1.70.
to refer to the area of rarefaction, i.e. the space between the two-closures in the articulation of both "clicks" and implosives. The conclusion reached is that the term implosive is more suitable than click in naming these sounds.1

(6) Labialized non-labial consonant + w.

0.19 Arguments are advanced to support the view held here that, contrary to Tucker's suggestion, a labialized non-labial consonant or consonant-combination may be followed by w as a separate phoneme, resulting in a compound phoneme.2

(7) Strengthening.

0.20 Strengthening, like assimilation, is a blanket term covering a number of specific sound changes. It does not say what those sound changes are, but rather it suggests an underlying unity of behaviour in the individual sounds. In all cases of strengthening, a sound with a relatively lax articulation is replaced by one with a more energetic or tense articulation,3 that is to say a "stronger" sound. Conversely, one might refer to such changes as /t/ > /mh/, /p/ > /mb/, etc., as in Shona, as cases of "weakening".

0.21 In my treatment, the main tendency, viz. DEVOICING, is emphasized, and the individual changes are described purely as being illustrative of this tendency. Even the aspiration accompanying some of the resultant sounds is regarded as being contributory to the achievement of devoicing. For this reason, devoicing is subdivided into objective and subjective, with aspiration seen as giving the feeling of greater voicelessness (subjective devoicing). It has been found necessary to give special definitions to the terms devoicing and aspiration as used in this context. Details such as ejection are left out since

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1 See 1.114. 2 See 2.42 - 2.47. 3 See under Stress.
ejection, for example, is described in another context as always accompanying voiceless unaspirated consonants consisting of, or containing, an explosive element. The substitution of such a consonant for some other one, therefore, automatically implies the substitution of an ejective consonant.

0.22 On the strength of the argument that a new sound does not simply arise out of nothing, but results from the modification of an already existing sound, I have, following the analogy of b and d which, in strengthening, are replaced by p and t respectively, suggested that Ur-Bantu *r* has, in initial word positions in Sotho, become latent *s*, which always emerges only under conditions of strengthening as k. This *s* may be regarded as being always latent before a vowel occurring initially.2

(8) Devoicing of final vowel.

0.23 The term devoicing is used here to indicate, not the substitution of any voiceless sound for any voiced one (as in the case of strengthening), but rather the omission of voicing from an originally voiced sound. It was discovered also that this devoicing of the final vowel (in the circumstances described in the text) is accompanied by a devoicing of any voiced consonant or consonant-combination, or any semivowel, occurring in the same syllable as the affected vowel.3

(9) Vowel anticipation.

0.24 This term is introduced to describe the anticipation, in a preceding syllable, of a vowel occurring in an immediately following syllable, as in the words lerwele < lerole (dust), and rwabala < r6bala (sleep). As all

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1 Sounds taken over from other languages excepted.
2 Strengthening is discussed in §§2.30 - 2.40.
3 See 2.20 - 2.25.
all the words so affected contain a back vowel in the syllable into which the anticipated vowel (which is always either mid-front or low) is introduced, semi consonantalization of this back vowel to w necessarily accompanies this anticipation.¹

(10) Affrication.

Affrication refers to the changes l > ts, d > ts, hl > tah, and r > tah, which Doke and Mofokeng describe as alveolar transference, and Cole as palatalization.²

(ii) Tonal study.

(1) Inherent tone patterns.

It has been found useful to determine what are here called inherent tone patterns of the forms under investigation. Tones of words in natural occurrences (contextual forms) are often unsuitable for use in tonal comparisons. In fact, as shown in the text, sometimes contextual occurrences obliterate useful distinctive features of tone which could be preserved in a carefully selected and controlled pattern.³

(2) Relation of tone to grammar.

The guiding principle throughout the study of tone is that tone is a part of grammar of S.Sotho. It is inextricably interwoven with the whole fabric of the morphology and syntax of this language. Some grammatical distinctions are achieved solely through tonal contrasts, others partly by this means. An example of this relationship is provided by down-stepping (i.e. the periodic lowering of the voice-key within a sense-group or phrase) which was found to be not only essential to good pronunciation, but also (and more important) indispensable to

¹ See 2.18. ² See 2.61 – 2.64. ³ For method of determining inherent tone patterns see 4.8 – 4.10.
the full understanding of the syntax of S. Sootha. As amply shown in the text, no study of the syntax of this language can claim completeness or accuracy in all respects without due recognition of the part played by this tonal transition in that aspect of its grammar. It has seemed to me inevitable (indeed necessary) in these circumstances to keep the attention of the reader constantly focussed on this relationship. And in pursuance of this, I have, as far as possible, followed grammatical divisions, relating tone to individual aspects of grammar, and using full grammatical nomenclature to refer to them.

Concerning down-stepping itself, 35 situations where this may be expected to occur, have been enumerated and classified.

(3) Tucker's high-falling toneme.

The existence of this toneme, referred to by Tucker in his Sotho-Nguni, is here disputed.1

(4) Tonal behaviour of the noun.

Certain words which are syntactically related to the noun, and which come immediately before or after it, are found to affect it tonally. These are termed influencing elements, which are subdivided into preceding and succeeding. The whole study of the noun is summed up by arranging nouns into five tone declension groups.

(5) Tonal behaviour of the adjective.

The behaviour of strong adjectives is closely parallel to that of nouns. Strong adjectives are thus also divided into five tone declension groups which mostly correspond to those of nouns.

Weak adjectives are also treated, and being mostly nouns used in qualifying clauses, situations where their

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1 See 4.28–4.29.
employment in qualifying expressions is characterized by a difference in tonal behaviour are brought to light.

(6) Tonal behaviour of the verb.

0.31 The verb displays one of the greatest varieties of tonal behaviour patterns found in any single grammatical category. Two Syntax Contexts, each comprising a number of verbal adjuncts, are defined, and referred to as Context 1 and Context 2 respectively. An adjunct belonging to one of these Contexts, operates in conjunction with one or more grammatical situations such as tense, mood, conjugation, etc. to affect the tone of the final syllable of the verb stem immediately preceding it. Where such a relationship between the tonal behaviour of the verb stem and its adjunct is established, the correspondences are that a Context 1 adjunct coincides with H on the final syllable of the stem, while a Context 2 adjunct coincides with L on this syllable. This coincidence is always associated with, inter alia, the occurrence of H on the prefinal syllable of the stem, or of the verb as a whole in the case of monosyllabic stems. A verb in a situation where the tone of its final syllable is affected as indicated here is said to have H-L alternation on this syllable in this situation. While these tonal modifications of the verb stem seem to arise from the grammatical relationship between it and its adjunct, an attempt is made to show a possible (even likely) relationship on a purely tonal level between these two forms. The case is not conclusively established, but it is nevertheless a strong one.

Verbs are now taken through their various grammatical situations, and their tonal behaviour observed. The full discussion of each mood is followed by a summary of the main tonal features noted. These summaries finally

/... lead
lead to seven tone conjugation groups of non-relative verbs, of which groups three have two subdivisions each. The relative modality is, for various reasons, treated separately from the primary and participial modalities, yielding a further three tone conjugation groups -- a total of ten.

0.32 The tonal behaviour of primary deficient verbs is treated separately, and so is that of copulative verbs. The random distribution of deficient verbs (and also, to a lesser extent, of copulative verbs) in the various moods and tenses etc. makes it difficult (in fact impossible) to formulate general basic rules for their tonal behaviour in the various grammatical situations. No tone conjugation groups of these are therefore attempted.

(7) Ideophones, adverbs, conjunctives, and interjectives.

0.33 These are also described tonally, and their place in the tonal structure of the language determined.

(8) Note on abstracted tones.

0.34 When a word occurs finally in an ordinary statement, the dynamic tone on the prefinal syllable makes tonal comparison unnecessarily cumbersome. For that reason, except where attention is specifically drawn to tonal behaviour in final occurrence, if it happens that the word under observation is placed in final position, a slight adjustment is effected by giving the prefinal syllable a level tone pitched at the point of commencement of the fall.

Examples:

- ūnē ăbăpala → HLLL, instead of HHL\LmLm (He was playing)
- ūnē ăbăpala → HHL\LmLm (He was talking) /...As
As the above examples show, a low-minus (Im) tone on the final syllable in these circumstances is also adjusted to ordinary low (L).

0.36 The above procedure is not quite the same as that followed in the determination of a tonal norm or inherent tone pattern. There is here no control of the context. Thus the word may be preceded by an influencing element (as bapala above whose first syllable is raised from L to H by the immediately preceding high-toned participial subject concord), whereas in determining inherent tone patterns, contexts with influencing elements are excluded. Thus the inherent tone pattern of bapala is LLL, but the abstracted tone pattern in the above context is HLL. In this way we spotlight the difference between, for example, the inherent tone pattern of a word and its contextual patterns without a complicating factor in the nature of a falling tone on the prefinal syllable, as well as other tonal modifications associated with final occurrence.

Abbreviations and other signs

1. Level tones are represented as follows :-
   \( H = \) high tone
   \( L = \) low tone
   \( M = \) mid tone
   \( LM = \) low-minus tone

2. Dynamic tones are represented as follows :-
   \( H\mid L = \) High-falling-to-low tone
   \( H\mid M = \) high-falling-to-mid tone
   \( L\mid LM = \) low-falling-to-low-minus tone
   \( L\mid H = \) low-rising-to-high tone

3. Where it is sought to focus attention on the tones of a specific element in a tonal sequence, the tones of this element are separated from those of any accompanying element(s) by means of a vertical line, as in the following /... illustrations
Illustrations:

- Obūa hānṭlē (He speaks well) H|HL
- Sērābēng pōtā (Do not answer the question) L|HH|L

4. Other signs and abbreviations are described in the text as and when they occur.
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CHAPTER I

THE SOUNDS OF SOUTHERN SOTODO

Introductory

1.1 Speech sounds are, as a rule, described mainly according to the organs of speech employed in their articulation. This is referred to as the physiological or articulatory method of description. There are also other methods: The acoustic (which may be termed the physicist's approach to the description of speech sounds) involving a description of the sound-waves set into motion by a displacement beginning in the mouth and extending to the external air etc.; and the auditory, which is based on the impression made on the hearer when the air waves strike his tympanum. The physiological method is employed here partly because it is the one most commonly used in phonetic analyses, but also (and mainly) because its use requires little specialized training that is not directly relevant to linguistics as such, yet its reliability compares favourably with that of any other method.

1.2 The accompanying diagram shows some of the organs normally employed in the production of speech sounds.

Diagram showing some of the organs employed in the production of speech sounds.

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2Cf. Bloch and Trager, Outline, pp.11-12. It is obvious from Heffner's chapter on "The Physics of Speech" that a phonetician who used the acoustic method would have to be an expert physicist as well.
Key to diagram: LL = lips; TR = teeth; TR = teeth-ridge, also phonetician's alveolus; HP = hard palate; SP = soft palate or velum; U = uvula; NP = nasal pharynx; F = pharynx; Bl. = blade of tongue, including tip; F = front of tongue; B = back of tongue; R = root of tongue; E = epiglottis; FP = food passage or gullet; VC = vocal chords; WP = wind passage; Lar. = larynx.

The lungs, constituting a very important speech organ (the singular here seems inevitable), do not normally appear in diagrams of speech organs. This does not mean that they are less important than other organs of speech; on the contrary they are among the most important, seeing that breath, either in-going or out-going (mainly the latter) is an indispensable medium of most speech sounds. 1

1.3 Where possible a distinction will be made between articulators and points of articulation. 2

1.4 The phonetic symbols employed here are those of the International Phonetic Association, supplemented, where necessary, by others.

1.6 Broadly speaking, speech sounds divide themselves into two main groups: These are vowels and consonants. A third group, usually small in comparison with the other two, is that of semivowels — sounds which are, in quality, midway between vowels and consonants. We do not here attempt to define or even to describe these various categories of sounds, for the simple reason that such an attempt would draw us into a protracted argument on a point of general phonetics. Our immediate concern here is

Herfner gives a diagram of the lungs, but he goes to the other extreme by giving a detailed description of their structure and primary function. He does the same with other groups of muscles as well as bone-structures which would seem to be only remotely related to the immediate act of speech production.

2Cf. K.L. Pike, Phonetics, Univ. of Michigan Press, pp. 120-121; Bloch and Trager, Outline, p. 13, where an articulator is defined as an organ "which can be moved more or less freely and can thus be made to assume a variety of positions", while points of articulation are "fixed points or areas lying above the articulators, which these may touch or approach".
is a description of Southern Sotho speech sounds, and we prefer, as far as possible, to use the terms vowel and consonant in the sense in which they are commonly understood in school grammars. The term semivowel, the hitherto unconvincing arguments in favour of the separation of nasals from vowels and their classification as consonants, the "frictionless lateral" which has so far defied positive description and therefore satisfactory placing in the vowel-consonant scheme -- all these go to show that anything near a satisfactory classification of speech sounds along the lines indicated above, must be as yet remote. And it would seem, therefore, that a book devoted to the study of the sound system of a particular language must do no more than to comment in passing on some of the more provocative points in this discussion. With this point clear, we may now go on to examine the Southern Sotho speech sounds.

The Southern Sotho speech sounds

1.6 Southern Sotho sounds are, like those of most languages, divided into two main categories, viz. vowels and consonants. A third, but very much smaller group than the other two, is that of semivowels. These sounds are described in this work in the following order: - First the vowels, then the consonants, and finally the semivowels.

The Vowels

1.7 Southern Sotho employs eleven vowel sounds\(^1\) which may be represented phonetically as follows: - a, e, e, i, "..." -

\(^1\)D.T.Cole isolated eleven vowel sounds for Tswana in his article, "Notes on the Phonological Relationships of Tswana Vowels", See also his Introduction to Tswana Grammar, p. 4. It is necessary here to point out how closely parallel the vowel systems of the members of the Sotho group are.
1.0, o, ±, u, u.1 These vowels are arranged in a balanced, harmonic scheme, there being an equal number of front and back vowels which correspond as regards the extent to which the tongue is raised in their articulation. There are five front and five back vowels, plus one low vowel, viz. [a] which is articulated at a point between Cardinal Vowels Nos. 4 and 5, being approximately twice as far from No. 5 as it is from No. 4.

1.8 Southern Sotho vowels are peripheral, i.e. they occur only on the outer limits of the Cardinal Vowel Chart.2 Further, they are primarily oral, even though slight nasality may be imparted to a vowel by a neighbouring nasal consonant.

There are no diphthongs as such in S. Sotho, but diphthongal articulation of juxtaposed vowels does occur under certain conditions, as will be shown below.

Vowel juxtaposition and division into syllables.

1.9 almost any two vowels may occur in juxtaposition within one morphological unit.3 Some examples are [e+i] as in [kxhaits'edi], [o+i] as in [boi], [i+u] as in [iu], [e+t] as in [p'olae], [u+2] as in [p'uc], [e+z] as in [dikt'za], [±+a] as in [mogp'ar]. Where organically /... identical

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1E. Jacottet, Grammar of the Sesuto Language; A. N. Tucker, Comparative Phonetics of the Suto-Chuana Group of Bantu Languages; B. I. C. van Eeden, Inleiding tot die Studie van Suid-Sotho; and R. A. Paroz, Elements of Southern Sotho -- all these writers recognized only nine vowel sounds in S. Sotho. So also did Doke and Mofokeng even though they wrote their Textbook of Southern Sotho Grammar after Cole had come to the conclusions indicated above for Tswana.


3With this reservation that, where the presence of a vowel in a combination would preclude certain variants of a given vowel phoneme from occurring next to it, the type of combination which would include such variant is ruled out. So, for instance, the combinations [ε+ i]; [ε+ u]; [o+ u]; [ɔ+ u], are not possible.
identical vowels are juxtaposed, in many cases the two vowels constitute one syllable, and not two.\textsuperscript{1} This is especially the case where the two vowels have the same tone height, but also in many instances where the tone levels of the two vowels are different. In the latter case, it often happens that the tendency to vowel merging is accompanied by a tonal assimilation in which the rule is that a high-toned vowel attracts a low-toned one. Where such tonal assimilation is complete, it will almost always be found that the process of vowel merging is also complete.

**Examples:**

- [1u:ba] (dove)
- [ff:le] (only, but)
- [bu:wa] (be spoken)
- [ba:twasi] (judges)

In many cases the juxtaposition of vowels is a result of the dropping out of a consonant between them, particularly the voiced glottal fricative [h].

**Examples:**

- [tña]<[tnña] (give)
- [sura]<[suña] (tan)
- [ña; (i.e. ña)<[nsña] (build)
- [matshana]<[matshana] (day time)

\textbf{1.10} It is convenient to discuss at this stage the division into syllables of S.Sotho speech sequences, in order to complete the picture presented by the juxtaposition of vowels.

A S.Sotho syllable may consist of

(a) a vowel;
(b) a nasal consonant;
(c) the frictionless consonant [l];

\textsuperscript{1}See Vowel merging, §2.19 below.
(a) the trill [r] or its disphonemic variant [R];
(e) any consonant or consonant combination followed by a vowel.

N.B. A consonant is always non-syllabic when it occurs immediately before a vowel in the same syllable.

All the above types of syllable may occur medially; types (a), (b), (c), and (e) may also occur initially; while types (a) and (e), and the nasal consonant [ŋ] may occur finally as well.

Examples:

[ŋ - a - o - ts'c - ba]  (He knows you)
[m - p'o - n-tshɛ - n - tʃ'wa-jə - ha - o] (Show me your house)
[a - l - ła - a - 1 - la - e - ba - ʃwə - kə]  (He cried bitterly)

N.B. A long r-syllable may occur finally in some ideophones.

Examples:

[fi - rrrr]  (throw)

Diphthongal articulation.

1.11 When organically unidentical vowels are juxtaposed, diphthongal articulation often results when these vowels occur away from penultimate and ultimate positions in the sequence, particularly in rapid speech. Doke and Mofokeng (§16) suggest that S.Sotho syllables consisting of combinations of semivowel and vowel "may be considered to be diphthongs".¹ I go further and point to the existence of diphthongal articulation in many cases of low-high vowel combinations, i.e. where there is no intervening semivowel between the two vowels. Most of these are rising diphthongs.²

¹Some of Doke and Mofokeng's examples are wrong in detail. These are töba and shōa. The syllables töa and shoə obviously consist of more than just ö and ø.
²Tucker, Comparative Phonetics, §73, refers only to combinations with e and o as first elements in high-low vowel combinations. See also §200.

/... Examples
Examples:

- [kʰɪts'edi] (sister (to man) brother (to woman))
- [mæbanˈ] (yesterday)
- [būtsˈeर] (behaviour)
- [aˈCri] (person’s name)
- [mætˈi ˈɛnwa] (this visitor)

The first four examples are articulated each as a three-syllabled rather than a four-syllabled word, and the last one as four syllables, not five.

N.B. Speech that is deliberately slow and/or emphatic, may result in the articulation of the additional syllable in each case.

Diphthongization of a low-high vowel combination takes place only when such a combination is so placed that neither of its constituent vowels occurs in penultimate position in a non-exclamatory, non-interrogative sequence. When either of these vowels occurs in this position, the two vowels are then articulated as two separate syllables.

Examples:

- [mæˈba] (day before yesterday), as 3 syllables;
  cf. [mæbanˈ] (yesterday), as 3 syllables.
- [tʃəˈou] (elephant), as 2 syllables;
  cf. [tʃəˈou jaˈkə] (my elephant), and
  [kʰɪtɪˈouʔ?] (Is it an elephant?), [tʃəˈou] as one syllable in each.
- [həufˈa] (be moved to pity), as 3 syllables;
  cf. [həufˈtə] (pity someone), as 3 syllables.
- [məˈhau] (mercy, pity), as 3 syllables;
  cf. [məˈhau waˈha] (his kindness), [məˈhau] as 2 sylls.
- [boi] (cowardice), as 2 syllables;
  cf. [oˈboi həˈha] (He is very cowardly), [boi] as one syllable.

1.12 When syntactical or other considerations require

... that
juxtaposed vowels be articulated as two separate syllables, then in the case of organically identical vowels originally separated by [h], the [h] may be retained.¹

Examples:

- [hθhθ], [hθhθ], [θhθ], which are Subjunctive present positive forms of
- [hθhθ] or [θhθ] (put)
- [hθhθ] or [θhθ] (give)
- [θhθ] or [θhθ] (cut)

N.B. The above Subjunctive forms could, of course, also be [θθ], [θθ], and [θθ] respectively.

1.13 From the above data we come to the conclusion that, while diphthongs as such do not constitute a category of sounds distinct from single vowels, yet, given certain conditions, diphthongal articulation is realizable in speech.

Semiconsonantalization and semivowel intrusion.

1.14 Where the combination of vowels consists of a relatively high vowel followed by a relatively low one, and semiconsonantalization of the first of these vowels takes place (as against the introduction of an intervocalic glide), the resulting semivowel is permanent in the sense that it is not affected by the position it occupies in the sequence, except that when the second element occurs in penultimate position in an ordinary statement, it is lengthened. Needless to say that all these will therefore be historical cases of semiconsonantalization.

Examples:

- [θθθθ: θθ] (He is not present)
- [θθθθθθ: θθ] (it) /... [θθθθθθθθ]

¹One must constantly bear in mind, though, that the S.Sotho [h] is so fully voiced, particularly when it occurs between vowels, that voice is often more in evidence than aspiration.
Where the high vowels [i] and [u] constitute the first elements in combinations with lower vowels than themselves, semivowels may develop within such combinations, or the [i] or [u] semiconsonantalized, as a result of the breaking of the tension of the articulating organs in articulating these high vowels, and the speed with which this detensing takes place. Further, where the high back vowel is followed by another back vowel, or the high front vowel by another front vowel, the lower the vowel following the high one (in other words the greater the drop from the high vowel) the more pronounced the semiconsonantization of the preceding high vowel, as may be noticed in the articulation of the syllable pairs

\[
\begin{align*}
\text{[wu} & \text{ (< uu )]} \text{and [wo ( < uo )]} \\
\text{[ji} & \text{ (< ii )]} \text{and [je ( < ie )]} \\
\end{align*}
\]

The drop is greatest where the following vowel in either case is the low vowel [a]. Compare

\[
\begin{align*}
\text{[wu]} & \text{ and [wa ( < ua )]} \\
\text{[ji]} & \text{ and [ja ( < ia )]} \\
\end{align*}
\]

Compare also the English word pairs

\[
\begin{align*}
\text{woo and wet} \\
\text{yield and yet} \\
\end{align*}
\]

Examples:

\[
\begin{align*}
\text{[t'ija]} & \text{(be firm) [t'isa]} \\
\text{[buwa]} & \text{(speak) [bua]} \\
\text{[fijila]} & \text{(sweep) [fitila]} \\
\text{[lirurw]} & \text{(wealth) [liru]} \\
\end{align*}
\]

The

\footnote{Cf. Pike, Phonetics, p. 110.}
The same tendency is observed, with a difference in degree only, where the higher mid vowels [υ] and [ο] are likewise followed by vowels pronounced at a lower height than themselves.

Cf. [t'ʌjana] (meet)  
[to'awɔ] (a rising)

On the other hand, when the high back vowel is followed by the high front vowel, semivowel articulation of the first vowel in this combination is possible, in spite of the fact that both vowels are high.

i.e. [u: > w:]

This is obviously due to the fact that the full lip-rounding in the pronunciation of [u] is immediately followed by full lip-spreading in the pronunciation of the following [i]. The movement of the lips involved in this quick reversal of positions inevitably leads to a semiconsonantalization of the preceding [u].

Examples:

[buile > bûile ² > bwile] (has/have spoken)  
[suisa > saïsaa > swisa] (tan well)

All back vowels are semiconsonantalized to w whenever they occur as first elements in vowel juxtapositions where /...the

1 It is important to bear in mind that there is no dividing line between mere intervocalic glides and semivowels. As indicated above, the detensening of the tongue muscle (and of the rounded lips in the case of back vowels) seems to play an important part in the articulation of semivowels. The more tensely these organs are held at the beginning of the articulation, the more likely it is that a semi-vowel will result from the release of such tension.

² The inverted circumflex (') indicates that the vowel above which it is placed has lost its syllabic value.
the following vowel is either lower than themselves or is a front vowel. The most outstanding examples are found in vowel anticipation (§2.18), where a vowel occurring in a following syllable is anticipated in the pronunciation of the preceding syllable. The vowel in the preceding syllable is usually a back vowel and the one in the following syllable (the anticipated one) either a front vowel or the low vowel [a]. The result of this intrusion, by anticipation, of the front or the low vowel in the syllable containing the back one, is that this back vowel is semi-consonantalized to w.

Examples:

\[ \text{iHwibi} < \text{iHubi} \] (a Hlubi) \( \rightarrow [w < u] \)
\[ \text{iUweli} < \text{iUrile} \] (dust) \( \rightarrow [w < a] \)
\[ \text{kJxwele} < \text{kJxde} \] (thong) \( \rightarrow [w < o] \)

1.18 Following is a chart showing the positions of the S.Sotho vowels relative to the Cardinal Vowels. Dots indicate the positions of the Cardinal Vowels which are numbered from one to eight, while circles indicate the positions occupied by the S.Sotho vowels.
Description of the Southern Sotho vowels

1.19 -- [i]: The high front vowel. This vowel is pronounced with the lips moderately spread, and the front of the tongue raised as high as possible towards the hard palate, but within the vowel range. That is to say, its tongue position is practically the same as that of Cardinal Vowel No. 1.

Examples:

- [muːi] (smoke)
- [biːtʰaː] (call)
- [taːipʰaː] (pinch)

1.20 -- [ɪ]: A front higher mid vowel. Its tongue position is between Cardinal Vowels 1 and 2, being much closer to 1 than to 2.

Examples:

- [lɪrbiːtʰaː] (name)
- [leːʃidiːsa] (comfort, console)
- [sɪmumu] (dumb person)

1.21 -- [ɛ]: A front higher mid vowel. Its tongue position is between Cardinal Vowels 1 and 2, being about twice as far from 1 as it is from 2.

Examples:

- [lɪfatsʰi] (country, land, earth, world)
- [sɪfʰo] (storm)
- [liːbiːsi] (milk)

1.22 -- [e]: A front lower mid vowel. Its tongue position is slightly lower than that of Cardinal Vowel No. 2.

/... Examples:

The question as to which consonants and consonant combinations occur with which vowels had better be omitted here, and be dealt with in reverse in the section devoted to consonants. One obvious advantage of this will be to avoid unnecessary repetition of the same information. Even more important, however, is the avoidance of a cumbersome method whereby forty-four illustrations of the occurrence of the same vowel might have to be given in certain cases, and not much fewer in others.
Examples:
[sleedu] (chin)
[phlets'o] (an end)
[mebebets'i] (work, n.)

1.23 -- [ɛ]: A front lower mid vowel. Its tongue position is about the same as that of Cardinal Vowel No.3.

Examples:
[tslebs] (er)
[mime] (invite)
[kekhttil] (Choose for yourself)

1.24 -- [a]: The low vowel. It is pronounced with the lips more or less neutral. Its tongue position is between Cardinal Vowels 4 and 5, being about twice as far from 5 as it is from 4.

Examples:
[rat'a] (love)
[nsma] (meat)
[baa'ala] (play)

1.25 -- [ɔ]: A back lower mid vowel. Its tongue position is about the same as that of Cardinal Vowel No.6.

Examples:
[bols] (to rot)
[gols] (write)
[aidʒ] (food)

1.26 -- [ɔ]: A back lower mid vowel. Its tongue position is slightly lower than that of Cardinal Vowel No.7.

Examples:
[loris'a] (cause to dream)
[bodile] (rotten)
[ik'ok'obets'a] (humble oneself)

1.27 -- [ɔ]: A back higher mid vowel. Its tongue position is between Cardinal Vowels 7 and 8, being about twice as far from 8 as it is from 7.

/*... Examples:
**Examples:**

[a] (person)
[baxak'a] (pain, sickness)
[maqana] (ascend)

1.28 -- [u]: A back higher mid vowel. Its tongue position is between Cardinal Vowels 7 and 8, being much closer to 8 than to 7.

**Examples:**

[mati] (teacher, minister)
[kaxupfisa] (hurt someone's feelings, annoy)
[busula] (tastelessness; tasteless)

1.29 -- [u]: The high back vowel. Its tongue position is practically the same as that of Cardinal Vowel No.8.

**Examples:**

[ruruha] (swell)
[liufa] (jealousy, envy)
[mukxhubu] (navel)

**Phonemic Distribution of the Southern Sotho vowels**

1.30 The basic vowels [a], [i], and [u] constitute each a one-member phoneme. Examples in which they distinguish between basic meanings of words are:

[lala] (spend the night), [dila] (plaster), and [dula] (sit)
[fala] (scrape) and [fula] (graze)
[kxhita] (prod) and [kxhita] (return from)
[ala] (spread) and [ila] (avoid, dislike)

1.31 With regard to the mid vowels, certain relationships exist which determine the phonemic grouping of these vowels.

**In order to make sure that lexical distinctions in these examples are brought about solely by vowel substitution, only words with the same inherent tone patterns have been selected to illustrate this point. There will be found to be, in some examples, a change of consonant as well (cf. [lala] and [dila]). This, however, is a non-significant difference since [l] and [d] are members of the same consonantal phoneme.**
The Relationship of [t] and [u] to [c] and [o] respectively

1.32 The higher mid vowels [c] and [o] are replaced by [t] and [u] respectively when [i] or [u] follows in the next syllable.¹

Examples:

[tʃidisa] (comfort, console)
[miutəwə] (thorns)
[musi] (smoke)
[budut'u] (loneliness)

1.33 The raising of [c] and [o] affects all preceding vowels of this type until a break occurs.

Examples: (i) Where no break occurs in the series
[muqubisi] (owl)
[muqudi] (mist)
[mulifi] (payer)
[tʃk'disa] (make dizzy)
[muliliri] (vagabond)

(ii) Where a break occurs in the series
[matsu'udi] (judge)

1.34 Several cases are found where [c] and [o] are raised to [t] and [u] by a preceding, rather than a following, high vowel, where the general rule seems to be that [c] is raised by preceding [i], and [o] by preceding [u]. This

¹In Tswana, the locative suffix [q] also causes the raising of [c] and [o] to [t] and [u] respectively. Cf. Cole, Tswana Grammar §1.12. Except as possibly illustrated by the word [tʃu], locative of [ntt'a] (house), I have not found that the locative suffix exerts any influence on preceding [c]-s and [o]-s in S. Sotho. Again, it must be observed that raising is often more pronounced, and therefore more easily observable, where [c] is followed in the next syllable by [i], and [o] by [u], than in cases where [c] is followed by [u] and [o] by [i]. The reason for this is most probably that between the members of each of the pairs [t-i] and [o-u] there is a common characteristic, [c] and [i] both having lip-spreading, while [o] and [u] both have lip-rounding.
phenomenon is more fully dealt with in the section devoted to progressive assimilation. Only a few examples are, therefore, given here.

Examples:

- [si:ja] (negative of [si:ja], leave behind)
- [ut:w+tIIsa] (negative of [ut:w+tIIsa], understand)
- [buditsa] (hair at end of horse's tail)
- [rumula] (tease, provoke)
- [phumula] (erase, wipe off)
- [phuthulla] (become unfolded)

Raising in these cases does not beyond the syllable immediately following the one containing the influencing agent.

1.35 Sometimes [t] and [c] are raised to such a degree that they are acoustically almost indistinguishable from [l] and [u] respectively. For this reason, many people often mis-spell words in which these raised varieties occur, employing the symbols /i/ and /u/ instead of (according to the present orthography) /e/ and /o/. In fact, in some cases, there have come to be recognized two distinct pronunciations (and therefore two distinct orthographic representations) of one and the same word.

Examples:

- [tshidisa] (comfort) often heard as [tshidisa]
- [mulifi] (payer) often heard as [mulifi]
- [tstibis] (notice) often heard as [tstibis]
- [masumu] (rinkhals) often heard as [masumu]
- [phuthulla] (unfold) often heard as [phuthulla]

1.36 A few words in which there is an alternation of this nature in their pronunciation are spelt in two... different
different ways in Paroz's *Southern Sotho-English Dictionary*. Here are some of them, given in phonetic script:

[kfubula] (rise) alternative [kfubula]

[sirumula] (burning ember) alt. [sirumula]

[siruha] (stand aside) alt. [siruha]

There is also a third alternative to the last example, viz. [siruha], in which complete assimilation of preceding [i] by the following [u] (pronounced [u]) has taken place. Conversely, in the alternatives [phubula - phubula - phobula] (slap), we see that in the last alternative the [o] of the suffix [ola] has exerted a lowering influence upon the [u] of the first syllable [phu].

1.37. Next we find words in which [u] is written, in the present orthography, to the entire exclusion of [v]. The most outstanding of these are:

[busi] (night) spelt with final /u/ and not /o/

[tshi] (day) 

[sisiu] (large grain basket) — as above.

The Northern Sotho and Tswana forms corresponding to S.Sotho [busi] are [pa/i-] and [busi] respectively. [tshi] is derived from the same stem as [busi]. Again, the N.Sotho and Tswana forms corresponding to S.Sotho [sisiu] are [s/i-i-] and [sisi] respectively. This goes to show that the S.Sotho examples just quoted have, as their final vowel, a very much raised variety of [o] (viz. [u]), and not [u] as the present spelling of these words would seem to suggest.

What is of importance and immediate relevance to the problem here, however, is the fact that [o] has been raised to such an extent by immediately preceding [i] that it is... practically
practically indistinguishable from [u].

Relationship of [e] and [o] to [t] and [ã] respectively

1.39 Occurrences of [t] and [ã]: Many of the situations enumerated below, in which [e] and [o] occur, imply the occurrence of [t] and [ã] in reverse situations.

Occurrences of [e] and [o].

1.39 [e] and [o] are used to the exclusion of [t] and [ã]

1. When the immediately following syllable contains
   (a) [ŋ] from original *[ini],¹ as in locatives of nouns whose non-locative forms end in [t], [ã], or [ã].

Examples:

- [thebeŋ] < thabe] (shield)
- [pʰepʰeneneŋ] < pʰepʰe̥nɛnɛ] (open place)
- [kʰotsʰoŋ] < kʰo̥tsʰo] (peace)
- [phoːfoːoŋ] < phoːfoːo] (animal)
- [thaben] < thaba] (mountain)
- [maʃaʃeŋ] < maʃaʃa] (caves)

(b) [ŋ] from original *[ni], as in the following words:

Examples:

- [beŋ] (masters) cf. Xhosa /a6eyini/
- [mœŋ] (obs. visitor) cf. Xhosa /umyeni/
- [dɪŋ] (shame) cf. Xhosa /intloni/
- [luŋ] (vulture) cf. Zulu /inyoni/ (bird)
- [kxholöŋ] (gnu)

1.40 -- 2. Where the following syllable contains, or consists of, [i]. This includes

(a) Perfect forms of verb stems derived by means of

¹ Cole's suggestion that the ur-Bantu form of the locative suffix is more likely to have been ìni than ini (Weinhof-van Warmelo's script) is accepted here as the only way of explaining the change [a] to [e]. See "Tswana Vowels", §17.
² Suffix [its'ẽ] is not included here since stems to which it is suffixed are ones already containing [e] and [o].
Examples:

[feferile < fefera] (winnow)
[k'olobile < k'oloba] (become wet)

(b) Causatives of verb stems with suffix [isa].

Examples:

[lelek'isa < lëlk'a] (chases away)
[fok'odisa < fok'ola] (be weak)

(c) Intensive forms of verb stems with suffix [isa].

Examples:

[feferisisa] (winnow thoroughly) cf. [fefera]
[omisisa] (become bone dry) cf. [ama]

(d) Deverbative nouns with final [i].

Examples:

[moe't'ì] (traveller) [ëtt'a] (go visiting)
[bafok'odi] (weakness) [fok'ola] (be weak)

(e) Miscellaneous occurrences.

Examples:

[bedi] (two)
[ësisdi] (light)
[mo'odi] (source)
[sok'oti] (ditch)

1.41 -- 3. Where the following syllable contains, or consists of, [u]. This includes

(a) Passives of verb stems with suffix [uwa].

Examples:

[tshëfuwa < tshefu] (laughs)
[otì'lua < otì'a] (strike)

(b) Miscellaneous occurrences.

Examples:

[techek'u] (old man)
[sweu] (white)
[kwëebu] (roan)
[otì'ou] (elephant)
[lifodu] (thief)  
[boultla] (be jealous)

1.42 -- 4. Where the following syllable contains, or consists of, [l]. This includes
(a) Some negative verb stems.
Examples:
[sebelכ < stblal] (whisper to)
[k'ok'otlכ < k'ok'otla] (knock)
(b) Some perfect verb stems.
Examples:
[setstכ < stla] (hunt for food)
[bonכ < bona] (see)
(c) Verb stems in the habitual tense.
Examples:
[emכ < ema] (stand)
[kxhonכ < kxhona] (be able)

1.43 -- 5. Where the following syllable contains, or consists of, [o]. This includes
(a) Reversive forms of verb stems.
Examples:
[kxhethalla] (differentiate) < [kxhetha] (choose)
[k'obolla] (unbend) < [k'obu] (bend)
(b) Neuter forms with suffix [oHa].
Examples:
[feswHa] (be blown away)
[omswHa] (become warm)
(c) Miscellaneous occurrences.
Examples:
[k'adjemо] (today)
[kxhoomо] (head of cattle)
[molomо] (mouth)

1.44 -- 6. Where the following syllable contains [tsl]. This includes
/... (a)
(a) [e] in the applicative suffix [ets'a].

Examples:
[bits'ets'a < bits'a] (call)
[t'iset'sa < t'icwa] (bring)

(b) Both [e] and [o] in perfect verb stems with ending [ts'a].

Examples:
[kxhathets'a < kxhathala] (become tired)
[robets'a < robala] (sleep)

(c) Miscellaneous occurrences.

Examples:
[ek'ets'a] (increase, trans.)
[sebets'a] (to work)
[elets'a] (advise)
[r'ots'a] (take only a little quantity)
[kxhote'sa] (exclaim)
[kxhot'sa] (limp)

1.45 -- 7. Where the following syllable consists of [n] immediately followed by a syllable containing [tsh]. Verbs ending in the sequence [n]+[tsh]+vowel are all of causative significance.

Examples:
[ts'wentsha] (show)
[norntsha] (fatten) < [nona] (become fat)

1.46 -- 8. Where the following syllable contains [t'la].

It is difficult to say whether [e] and [o] are occasioned here by [ts] or by [t]. Both elements probably exert an influence.

Verb stems ending in [nts'a] which are causatives of stems ending in [tsa], e.g. [bontsha < bopa] (flirt); [bentsha < bena] (shine), are not included here since they are derived from stems already containing [e] and [o].

Sotho [t'la] comes from ur-Bantu palatalized [r] and palatalized [k], written by Meinhoef-van Warmelo [r] and [k], and which, in terms of the system followed here may be transcribed [ts] and [ks] (The tie shows that /j/ is a palatalization indicator rather than a separate phoneme.) There are instances, however, where [e] and [o] (particularly [o]) occur before [t'la], e.g. [bets'ta] (carve), [ikxot'sa] (have an easy time), [t'le] (strike), [kxhot'sa] (prod).
These are a miscellaneous collection.

Examples:

[\textsuperscript{1}l\textsuperscript{1}t\textsuperscript{1}et\textsuperscript{1}a'] (shoulder)
[l\textsuperscript{1}ek\textsuperscript{1}et\textsuperscript{1}a'] (hang, dangle)
[r\textsuperscript{1}ek\textsuperscript{1}et\textsuperscript{1}a'] (tremble)
[m\textsuperscript{1}ok\textsuperscript{1}ot\textsuperscript{1}a'] (sack)

1.47 -- 9. Where the following syllable contains [\textsuperscript{1}a\textsuperscript{1}] of causative significance resulting from [\textsuperscript{1}a\textsuperscript{1}] + [\textsuperscript{1}y\textsuperscript{1}].

Examples:

[\textsuperscript{1}be\textsuperscript{1}le\textsuperscript{1}se\textsuperscript{1}] (put load on pack animal) cf. [\textsuperscript{1}b\textsuperscript{1}el\textsuperscript{1}h\textsuperscript{1}a\textsuperscript{1}](carry)
[b\textsuperscript{1}e\textsuperscript{1}sa\textsuperscript{1}] (roast)
[f\textsuperscript{1}o\textsuperscript{1}sa\textsuperscript{1}] (err)

1.48 -- 10. Where the following syllable contains [\textsuperscript{1}p\textsuperscript{1}].

This includes

(a) Causatives of verb stems.

Example:

[k\textsuperscript{1}ep\textsuperscript{1}a\textsuperscript{1}'] (put in) < [k\textsuperscript{1}e\textsuperscript{1}n\textsuperscript{1}a\textsuperscript{1}'] (go in)

(b) A few miscellaneous occurrences.

Examples:

[b\textsuperscript{1}e\textsuperscript{1}na\textsuperscript{1}] (shine)
[f\textsuperscript{1}e\textsuperscript{1}na\textsuperscript{1}] (conquer)
[t\textsuperscript{1}aw\textsuperscript{1}e\textsuperscript{1}na\textsuperscript{1}] (disturb, worry)
[n\textsuperscript{1}o\textsuperscript{1}p\textsuperscript{1}a\textsuperscript{1}'] (try strength of stick or opponent)
[k\textsuperscript{1}xo\textsuperscript{1}pa\textsuperscript{1}'] (bellow)
[k\textsuperscript{1}opa\textsuperscript{1}'] (flirt)

1.49 -- 11. In diminutives of nouns formed by means of diminutive suffix [\textsuperscript{1}a\textsuperscript{1}n\textsuperscript{1}a\textsuperscript{1}], where the non-diminutive noun contains [\textsuperscript{1}e\textsuperscript{1}] or [\textsuperscript{1}o\textsuperscript{1}] in its prefinal syllable. Raising here occurs only where the consonant of the final syllable /... is

\textsuperscript{1}The [\textsuperscript{1}p\textsuperscript{1}] in the diminutive suffix [\textsuperscript{1}p\textsuperscript{1}a\textsuperscript{1}na\textsuperscript{1}] does not normally occasion the use of [\textsuperscript{1}e\textsuperscript{1}] and [\textsuperscript{1}o\textsuperscript{1}] in immediately preceding syllables, but, among others, the exceptions [m\textsuperscript{1}o\textsuperscript{1}k\textsuperscript{1}x\textsuperscript{1}w\textsuperscript{1}e\textsuperscript{1}g\textsuperscript{1}n\textsuperscript{1}a\textsuperscript{1}na\textsuperscript{1}'] (son-in-law) (cf. [m\textsuperscript{1}o\textsuperscript{1}x\textsuperscript{1}w\textsuperscript{1}t\textsuperscript{1}], man's father-in-law), and [k\textsuperscript{1}op\textsuperscript{1}a\textsuperscript{1}'] (lamb) may be noted.
is changed to an alveolar or a prepalatal consonant when [ana] is suffixed.

**Examples:**

[a*letsw'ana] < [sulp'ε] (axe)
[a*otsw'hana] < [sιp'pha] (group)
[the'd'ana] < [the'ε] (shield)
[dits'ed'ana] < [dits'εbt'] (ears)
[kxhod'ana] < [kxhɔls] (string, thong)
[lirod'ana] < [lirɔlɛ] (calf)
[k'oʃ'f'ana] < [k'ʃt'œ] (club)

1.50 -- 12. [e] and [o] are further found in the following cases:

(a) Regularly in concordial elements of demonstratives containing, or consisting of, a mid vowel.

**Examples:**

[lε] (this one) Class 5
[lεɔ] (that one near you) Class 5
[lεla] (that one over there) Class 6
[boɔ] (this one) Class 14
[bonɔ] (that one near you) Class 14
[bo] (that one over there) Class 14

(b) Regularly in relative connectives containing, or consisting of, a mid vowel.\(^1\)

**Examples:**

[e] Classes 1, 4, and 9
[ts'e] Classes 8 and 10
[bo] Class 14
[ho] Class 15

(c) In the quantitative qualificative stem [oʃe], where both vowels are of the raised/lower mid variety.

(d) In demonstrative adverbs of manner, as follows:

\(^1\)Most of these are identical with the concordial elements of demonstratives just mentioned.
[tʃ'el, tʃ'ena] (thus)
[ʃəwəlo] (like that)
(e) In the demonstrative adverb of time
[ə3wəle] (now)
(f) [e] as final vowel of the perfect suffixes [ile] and [its'e], and some cases of contracted perfect endings, as in [omme], perf. of [ɔma] (dry up).
(g) [o] in the contraction of the Infinitive prefix with the vowel of a preceding verb stem.

Examples:
[tʃ'o: < tʃ'ć hə] (come for the purpose of)
< [tʃ'ć hə] (used in negative of the future.
[jo: < ʒə hə] (go for the purpose of)
< [ʒə hə] used in negative of the future.
[ʃəso: < ʃə tə hə] (not yet)
[no: < ʃə tə hə] (exhortation to do always)
(h) [e] in a number of deficient verbs.

Examples:
[se] (already)
[nts'e] (in the act of)
[k'e] (a little, ever)
[ne] used in past continuous constructions.
[je] used in habitual tense constructions.

Some deficient verbs which normally end in [a] in other tenses, replace this [a] with [e] when they occur in the future tense.

Examples:
[mp'e] (rather; please)
[ʃəe] (immediately, soon)
[be] (ultimately, until)
[tʃ'el used in future Subjunctives.

(i) [e] and [o] in most primitive interjections containing mid vowels.

Examples:
Examples:
[kxhele] (good gracious)
[hele:le] (greetings)
[e:] (yes)
[we:] (response to a call)
[bo] (will you', when used with imperatives)
[mmalo] (oh my)
[dyd:] (alas)

(i) [e] and [o] in a miscellaneous collection of words as shown in the following examples :-

Examples:
[lelele] (long, tall)
[aïték'ëték'e] (island)
[ttew'e] (besides)
[hodja] (if only)
[matonom̃'j] (perhaps)
[we/we] (type of wild flower)
[adik'adikwe'] (circle)
[malik'elle] (one who never gives up without trying)

\[\text{cf. } [lik'tlla] \text{ (try)}\]
[bo] prefix of Class 2a of nouns.
[me] obsolete pronominal possessive stem of the 1st person singular.

1.51 -- 13. [e] occurs, in the place of normal [ɛ], as the final vowel of the verb in the present Subjunctive positive, and in the Imperative Mood positive with an object concord, if the immediately preceding syllable contains, or consists of, [e] or [o]. In like manner, [o] occurs in place of the normal [ɔ], as the final vowel of non-personal deverbative nouns, if the immediately preceding syllable contains, or consists of, [e] or [o]. These are both \(\ldots\) cases

\[\text{1Actually, the [o] in this word is a relative connective, [matomɔŋ̃] being in fact a contraction of [mətə o məŋ].}\]
cases of progressive assimilation.

Examples: (1) final [e] in Subjunctives and Imperatives
[li:se:bta'le] (You must work)
[dik'pe] (Put them in)

(ii) final [o] in deverbative nouns
[k'e:ts'le] (deed)
[p'o:nt:laj] (showing, indication)

1.52 The raising of [e] and [o] to [e] and [o] affects all preceding [e]-s and [o]-s until there is a break in the series.

Examples: (1) where no break occurs
[le:lelaj] negative of [li:le:le] (glide along)
[t'et'le:le] causative of [t't'tle] (shake, tremble)
[fo:nt:] negative of [fo:nt:] (itch)
[pho:for:] locative of [pho:for:] (animal)

(ii) where a break occurs
[f'tbanets'le] perfect of [f'tbanal] (look at each other for)
[t'elalao] locative of [t'elalao] (mutual defiance)
[b'ala:lese] (be transparent)
[k'op'alo] locative of [k'op'alo] (meeting, assembly)

Recapitulation

1.53 From the rules given above, it is seen that besides the vowels [i, u, l, au], which occasion the use of [e - o] in place of the normal [l - o] in immediately preceding syllables, there are also the following sounds which have the same effect:--

1. [y], both locative and non-locative, which in both cases comes from original [ni] ([n1] in the case of the locative [y]).

2. [ts'le] of causative significance, as well as miscellaneous occurrences

Cf. however [pho:se] [fosa] (err) where, in direct contrast to the rule given here, preceding [o] in the original word has been assimilated to the lower final vowel [o].
occurrences of this sound, which comes about via the palatalization of [i].

3. [ntsh], in causative endings, which comes about as follows: - [n + isa] (as in *[bonisa]) > [n + sa], the [i] having dropped out, and finally [ntsha] (as in *[bontsha]), in accordance with the strengthening effect of [n].

4. [t'j] from palatalized *x and *k.

5. [s], in causative endings, which comes about via the palatalization of ur-Bantu k = S. Sotho [h].

6. [p], in causative and other endings, which comes from [h] + ur-Bantu y, i.e. via palatalization.

As shown in this summary, the consonants from which the influencing consonants and consonant combinations listed above have evolved, have all been subjected to the influence of an [i]-element, which in some cases has evidently simply fallen away, while in others it was semiconsonantalized to [j], which then merged with the preceding consonant, changing its character, often to a considerable extent. We must therefore assume that it is the effect of this latent or modified [i], rather than the consonant or consonant combination as such, which occasions the use of [e] and [o] before these consonants. It is possible, however, that this latent [i] has begun to lose its raising effect, as witness the number of cases where [e] and [o] are used before some of the above consonants and consonant combinations.

1.54 The above occurrences of [e] and [o] can be divided into

(a) cases where [e] and [o] demonstrably change places with [e] and [o] respectively according to the demands of the phonetic context.

Examples:

[ɛma] (stand up, come to a stop) [emɛ], [emisa], etc.

/...[thsɛ]
(b) cases where the phonetic context requiring [e] and [o] is fixed, and therefore [e]-[o] substitution does not occur.

[t'əŋ] (there)
[beŋ] (masters)
[mets'ı] (water)
[bedi] (two)
[nesə] (our)
[ets'a] (do, make)
[dugwentsha] (show)
[linett'a] (shoulder)
[besa] (roast)
[tswhepa] (disturb, worry)
[di'əŋ] (shame)
[xxhok'əŋ] (gnu)
[k'ots'ı] (accident, danger)
[xxhota'] (exclaim)
[mak'ots'ı] (sack)
[xxhopa] (bellow)

(c) cases where, while the phonetic context is fixed, yet evidence from etymologically related words in other Bantu languages indicates a historical [e]-[o] substitution. These include many of the occurrences of these vowels for which Tucker could find no explanation.¹

Examples:

[kxhomə] (head of cattle), where final [ə] occasions [o] in the immediately preceding syllable;

¹See Tucker, Comparative Phonetics, §67. Tucker uses Tswana examples; I use the S.Sotho equivalents of these.
cf. Nguni [ɪŋkˈɔmə] with final [ɔ] and therefore no raising of the [ɔ] in the immediately preceding syllable.

[malomo] (mouth) -- final [ɔ], with [ɔ] in the immediately preceding syllable; cf. Nguni [umalom] -- final [ɔ], with [ɔ] in the immediately preceding syllable.

[tswhenu] (baboon) -- final [e], with [e] in the immediately preceding syllable; cf. Nguni [ɪŋgɪrˈɛnɛ] -- final [ɛ], with [ɛ] in the immediately preceding syllable.

[leôtsˈa] (sharpen) -- [a] immediately preceded by [e], cf. Xhosa 1a:1a.2

(d) cases where phonetic context plays no part in determining the type of vowel to be employed, but where, nevertheless, the closer varieties are used to the exclusion of the opener varieties, as in the case of demonstrative concords, relative connectives, interjections, and all the occurrences of [a] and [o] mentioned in §1.50 above.

1.55 In the foregoing paragraph, Section (a) contains cases where [ɛ-e]-[ɔ-o] substitution occurs as a living /... process

1[ɛ-e]-[ɔ-o] substitution occurs in Nguni also, e.g. [ɛŋkˈɔmeni] loc. of [ɛŋkˈɔmo] (head of cattle), [pɛlɪlə] (perf. of [pɛla] (get finished)

2Tucker's list in §67 op.cit. includes the following words: [pheleʃˈɔ], [pɔˈtɔlɔxə], [tʃˈɔtsˈa], [tʃˈhɔmesɔ], [kxhosə], all from Tswana. But there are simpler forms of these words with [ɛ]-s and [ɔ]-s to which he makes no reference. These are respectively [hɛla] (get finished), from which [pheleʃˈɔ] is ultimately derived, as follows: [hɛla]+[ɛla] (applicative suffix) >[hɛlɛla]+*yə (causative suffix -- Meinhof) >[hɛletˈsə] from which the class 9 noun [pheleʃˈɔ] is immediately derived; [pɔˈtəʃə] (go round) + [ɔlɔxə] (reversive suffix) >[pɔˈtəɔlɔxə] (cf. 1.43 above); [tʃˈɔla] (anoint oneself)+*yə >[tʃˈɔtsˈa]; [tʃˈhɔxə] (plant, establish)+*ekɔya (neuter + causative -- Meinhof)>[tʃˈhɔmesə], from which the class 9 noun [tʃˈhɔmesə] is immediately derived; [xɔxə] (draw, lead) from which the class 9 noun [kxhosə] is derived. Concerning the latter word, Tucker says in a footnote that it is "probably derived from xɔxə (to draw), in which case the word should be discussed in relation with §63", where he demonstrates [ɛ-e]-[ɔ-o] substitution. Needless to say that all the examples in his §67 ought to have been discussed in that section.
process. Section (b) contains cases where, while substitution does not take place, yet the occurrence of [e] and [o] is compatible with the phonetic context. Section (c) contains cases where not only, as in Section (b), [e] and [o] occur in appropriate phonetic contexts even though there is no active substitution, but where evidence from Nguni words from the same parent-forms proves that the [e] and [o] varieties occur in these words if the immediately following syllable does not contain an influencing sound. Finally, Section (d) contains examples where [e] and [o] simply occur without any coincidence of phonetic context.

1.56 Cole has already shown that grammatical relationship as a criterion for determining phonemic relationship, is invalid. The fact that demonstratives, for instance, are morphologically related to the noun class prefixes, and that demonstratives which contain mid vowels employ [e] and [o] while the corresponding noun prefixes employ the mid vowels [ɛ] and [ɔ]; or the fact that [o] results from the interinfluence of [e] and [o] in some cases of deficient verbs followed by the Infinitive form of the complementary verb -- these are irrelevant considerations in our attempt to determine the phonemic relationship of the Sotho vowels.
31

One of the surest ways of determining whether the two sets of mid vowels (i.e. front and back) are to be considered as constituting one phoneme each (as Tucker and van Eeden seem to suggest), or whether [e-e] must be classified separately from [I-I], and [o-0] from [a-u], has been neglected so far. Normally, where a living relationship can be shown to exist between two members of the same vowel phoneme, as between the root vowels [e] and [e] in [kxhetha] and [kxhethile], certain definite phonetic contexts are associated with the occurrence of the one or the other, as already shown in the preceding paragraphs. Besides, it would seem that, in demonstrable relationships of the vowels under discussion, the more open variety of vowel occurs in the simpler form of the word, while the closer variety occurs in the derived form, in suffixal derivation, that is. So we cannot but speak in terms of 

van Eeden's theory in § 141, that the basic form of the S.Sotho demonstrative (i.e. the demonstrative concord) is probably derived from the corresponding subject concords, comes as no surprise. "Die ooreenkomme van hierdie prefikelemente [i.e. the demonstrative concords] met die subjekskakels is duidelik" he says. ... Maar wat opvallend is, is dat die vokule e en o in hierdie formatiewe elemente half-geslote is, en nie geslote, soos in die geval van die subjekskakels nie. As aangeneem word dat hierdie prefikelemente afgelei is van die subjekskakels, den la dit voor die hand om ook te aanvaar dat hulle ontstaan het as gevolg van 'n verbind- ing of samesmelting van 'n oop, of gedeeltelike oop, vokaal met die subjekskakels. Aan die invloed van hierdie vokaal -- waarskynlik demonstratief van aard -- sou die half- geslote vokale van die prefikeelement dan toegeskryf moet word."

The unmistakable relationship of [e] to [e] and [o] to [o] has been demonstrated above. As regards "lack of consistency and uniformity" among the S.Sotho speakers as to the variety of mid vowel used, a point also made by Tucker, and one upon which the conclusions of these writers are partly based, I must point out that this position is more imaginary than real. Sotho speakers consistently make a distinction between the "normal" and the raised varieties of the lower mid vowel phonemes, and they also distinguish consistently between the higher mid phoneme and the raised variety of the lower mid phoneme. It has been my experience, however, in many years of teaching S.Sotho to European students, that Europeans find it extremely difficult (almost impossible) to distinguish between [e] and [l] on the one hand, and [o] and [o] on the other. Cf. Cole, Tswana Grammar §1.29 (p.16).
the "raising" of a vowel to a higher (secondary) position. If [ɛ] and [ɔ] can be raised to [e] and [o], and [ɛ] and [ɔ] to [I] and [u], then, if the argument that the series [ɛ-e-ɛ-I] on the one hand, and the series [ɔ-o-ɔ-u] on the other, each constitute one phoneme, is valid, it must be reasonable to expect [e] and [o] to be subject to the same, or similar, influences, and to be raised to higher positions by them. In point of fact, however, [e] and [o] are never raised to higher positions. To illustrate, let us compare the following examples with those involving [ɛ-e] and [ɔ-o] above:

[ets'a] (do) > [ets'isa], [məets'i], [ets'ɪ], [ɛnts'e]
--- no raising of [e] to higher position by the influencing element in the immediately following syllable.

[fosa] (err) > [fosa][a], [fosits'e], [fosp] etc.
--- no raising of [o] to higher position.

It is clear from this that there is an upper limit for each mid vowel phoneme, beyond which limit no further raising of the vowel concerned can take place. [ɛ] and [ɔ] are the upper limits of the groups [ɛ-e] and [ɔ-o] respectively, and there is therefore a natural boundary between the groups [ɛ-e] and [ɛ-I] in the front, and between the groups [ɔ-o] and [ɔ-u] in the back. Each of these groups therefore constitutes a phoneme, there being thus two front and two back mid vowel phonemes.

1.58 While explanations have been given for the majority of the occurrences of [e] and [o], yet there remain the cases in group (d) in §1.54 (detailed in §1.50) above, for whose occurrence I do not pretend to be able to account. It may be that the explanation of these occurrences is to be found in the history of the words and formatives in which they are found. Whatever the cause or causes of the
employment of these varieties in these cases may be, however, the fact remains that if we subject them to the influences which cause raising, the results are negative -- they do not go beyond the upper limit of the group to which they belong.

1.59 We come to the conclusion, therefore, that the S.Sotho vowels may be divided into seven phonemes, as shown in the following chart:

![Chart showing the S.Sotho vowel phonemes](chart.png)

1.60 Following are some words lexically distinguished by the various vowel phonemes:

- \[a\] and \[u\] : \([t'aba]\) (affair) and \([t'ula]\) (sink)
- \[a\] and \[e\] : \([khxatha]\) (break new ground) and \([xhtha]\) (choose)
- \[a\] and \[o\] : \([bala]\) (read) and \([bola]\) (rot)
- \[a\] and \[o\] : \([th'a]\) (hard) and \([thot'a]\) (veld)
- \[i\] and \[v\] : \([mina]\) (fold) and \([mina]\) (blow the nose)
- \[i\] and \[e\] : \([mose]\) (dress) and \([mose]\) (side of river)
- \[i\] and \[u\] : \([bila]\) (boil) and \([bila]\) (rot)
- \[i\] and \[o\] : \([pila]\) (rock-rabbit) and \([pila]\) (thresh)
- \[i\] and \[t\] : \([bila]\) (boil) and \([bila]\) (open)
- \[e\] and \[l\] : \([siba]\) (back-bite) and \([siba]\) (stop up, block)
- \[t\] and \[a\] : \([tula]\) (get finished) and \([tula]\) (get well)
- \[e\] and \[o\] : \([mema]\) (invite) and \([mama]\) (hold in closed mouth)

---

1The use of the phonemes \[a\], \[i\], and \[u\] for this purpose has already been illustrated in §1.30.
[e] and [u]: [te'la] (give up) and [t'ula] (stamp, strike)
[ɔ] and [i]: [ola] (gather up) and [ila] (avoid, hate)
[j] and [ɔ]: [thɔla] (pick up) and [thɔla] (keep quiet)
[ɔ] and [u]: [bola] (rot) and [bula] (open)
[ɔ] and [i]: [botes'a] (ask question) and [botes'a] (call)
[ɔ] and [u]: [thɔla] (keep quiet) and [thula] (bump)

The members of each pair above are distinguished from each other solely by the vowel phonemes under discussion. The contrasted words in each case have the same tone pattern, the same length in their syllables, and the same stress pattern. Where verb stems are used, distinction is achieved through the root vowel rather than the suffixal one, to avoid such vowel changes as may result from change of mood, conjugation, etc. (as in [bọnɔ] (see) which is [bọnɔ] in the Subjunctive Mood present positive) clouding the issue.

The Consonants

1.51 The S. Sotho consonants are divided, in this treatise, into two main sections, viz. ORAL consonants and NASAL consonants, classified and treated separately from each other. This method of approach results from my conviction that the hitherto equation of the term nasal with such terms as explosive, fricative, affricative, and so on, is unjustifiable on the grounds that these latter terms refer to the nature of the sound produced, while nasal refers solely to the chamber through which the air passes, and which, being as well a resonance chamber, gives a particular timbre to voiced sounds in whose articulation it is mainly or exclusively involved. Nasal is a term which has reference to the physiology of speech production, and it is to nose as oral is to mouth. On the other hand, explosive, fricative, etc. are auditory terms, based on /

...what
what one hears rather than how or where it is produced.\footnote{1}

A further departure, in this treatment, from the usual classification of Sotho consonants is with regard to lateral sounds. Like nasals, laterals must not be placed on the same plane as explosives, fricatives, and so on. The term lateral has nothing to do with auditory impression, and to act as if it did must inevitably lead to the absurdities which occur with such regularity in the description and charting of consonants in Bantu languages that they are often overlooked. Thus, after the term lateral has been placed on a level with terms descriptive of the nature of the sound produced, such as explosive and fricative, it is found that laterals are themselves further classifiable into explosive, fricative, and frictionless laterals etc. This necessitates a repetition of the auditory terms as subdivisions of the section headed laterals. The absurdity is obvious. For here we find descriptive terms belonging to a primary order of description used again in a secondary order of description, in...

\footnote{1}I decided on this distinction independently, but found afterwards that Pike (Phonetics) makes a similar distinction which, however, he restricts to continuants. He says (p.140): "Orals include all continuants in which the air stream passes through the primary (i.e. oral) cavity ...; orals include, also, sounds in which the air is passing at the same time through the secondary (i.e. nasal) cavity (e.g. nasalized [a]). Nasals comprise all sounds wherein the air escape is limited to the nasal cavity ... that is, where there is a primary valvate stricture."

Cole (Tswana Grammar) realized the necessity for, at any rate, removing nasals from the plane of auditory description. But, since he places on the same level terms describing the two chambers (oral and nasal) and those describing local areas or directions within one and the same chamber, he inevitably commits an error similar to the one he seeks to rectify, for, in following the logic of his starting point, he proceeds to place nasals on the same plane as medial and lateral sounds (see p. 19 and also his chart on p. 21). The distinction to be made here is as between two chambers, viz. oral and nasal, and the part they play in the formation of speech sounds. Reference to medial and lateral directions of air stream, both of which occur within the oral chamber, is therefore irrelevant.
other words, subsidiary to themselves.

1.63 Laterals derive their name from the fact that the air stream escapes laterally, that is on the side or sides, and not along the central line, of the tongue, during their articulation. A contrastive term to lateral is medial or central. Experimenting on myself, I came to the conclusion that the only difference of formation involved in the articulation of [s] and [f] was that the former had a medial air escape, while the latter had a lateral air escape. It therefore seemed to me that the relationship (in manner of formation) between [s] and [f] could perfectly justifiably be oversimplified by saying that [f] is lateral [s]; or, reversing the order, that [s] is medial [f].

---

1Here again I must point out that, after arriving at this conclusion independently, I found that Pike makes the same distinction. On p. 141 of his Phonetics he says, "Some orals have central escape of the air in respect to the tongue or the lips, whereas others have a lateral air escape. ... The orals comprise central fricative orals (e.g. [s]); lateral fricative orals (e.g. fricative [f]); lateral resonant orals (e.g. frictionless [l]); and central resonant orals (e.g. [o], and [h])."

Cole makes this distinction (see Tswana Grammar p. 19, and chart on p. 21), although, unfortunately, his placing of the nasals on the same level as medials and laterals (cf. §1.61 f.n.1 in this work) clouds the real distinction to be made here.

I must refer here to an observation made by Cole which I find rather puzzling: "Tswana has four series of explosive consonants, ejective, aspirated, voiced, and lateral, the last including ejective and aspirated forms." (§1.3) (my own italics). That laterality is treated as if it were on the same level as ejection, aspiration, and voicing is very surprising. But even more surprising still is the fact that the necessity to repeat the attributes of ejection and aspiration under lateral, does not make Cole aware of the incorrectness of his classification of the consonants, which is clearly indicated by this repetition of these terms in a secondary order of description. The statement quoted above seems to contradict Cole's chart, for, as I interpret this chart, it does not place ejection, aspiration and voicing on the same level as lateral.

Farooq removed the term lateral from among the auditory terms, but failed to recognize it as being, at least for Sotho, a subdivision of the alveolar sounds.

Doke and Mofokeng completely ignored earlier attempts to rectify the classification of the laterals, and carried on in accordance with the old approach in this respect.
1.64 All the S. Sotho lateral sounds, with one exception, are articulated with the blade and tip of the tongue against the alveolus. They are, therefore, primarily alveolar consonants which may be fricative, explosive, etc. as the case may be. As in the distinction between nasal and oral sounds, so here too the direction of the air stream is an important distinctive criterion, but in this case the difference is as between directions within the same chamber, viz. the oral chamber. It is a distinction between two sets of alveolar sounds. These are alveolar MEDIALS and alveolar LATERALS.

1.65 A further division of consonants separates NON-CLICKED from CLICKED consonants. This distinction is also based partly on the criterion of air stream direction. All non-clicked sounds are made by modulating in some way or other the outgoing breath, while clicked sounds are produced "by closing the oral passage front and back, drawing the tongue downward to produce a vacuum, and releasing at some point". When this release takes place, the air rushes inwards, resulting in the plosion heard.

1.66 Three separate consonant charts are given below, and the sounds in them described. The first two charts set out groups of sounds which are subdivisions of the non-clicked consonants, which constitute the first main division. These subdivisions are into oral and nasal consonants. The second main division, viz. clicked consonants, comprises only oral consonants, which are further subdivided.

1The exception consists of a disphonemic variant of the voiceless alveolar lateral fricative [4], viz. [Q]. In the articulation of the latter consonant, the back of the tongue closes the medial line of the mouth cavity by maintaining contact with the velum, giving a velar, and not an alveolar, lateral.
subdivided into non-nasalized and nasalized.

A. NON-CLICKED CONSONANTS

ORAL Consonants.

<table>
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<tr>
<th>Explosives</th>
<th>VL</th>
<th>Bi-</th>
<th>Denti-</th>
<th>Alveolar</th>
<th>Pre-</th>
<th>Velar</th>
<th>Uvu</th>
<th>Glott.</th>
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<td>Ejectives</td>
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</table>

Table I

1.68 Ejection and Aspiration. From the table above it is seen that ejection and aspiration are mutually exclusive. The reason is probably that they are both controlled at the glottis, each one requiring a position of the vocal chords different from that assumed for the other. Ejective therefore implies unaspirated, and aspirated implies non-ejective. In S.Sotho, ejection and aspiration are restricted to voiceless consonants, the voiced ones having neither of these attributes.

1.69 The Affricates. The S.Sotho affricates may be conveniently divided into the T/D-group and the K-group. The basis for this grouping is the traditional way of representing such affricates phonetically with digraphs \([t'\alpha]\) (or \([d']\) in the corresponding voiced affricate) and \([k]\) respectively, as is also done...
here. These symbols represent the explosion heard in the articulation of these sounds. The momentary fricative sounds heard immediately after (almost simultaneously with) the explosion, are represented as the second constituents in the digraphs by the symbols for the fricative sounds involved, viz. [s], [ʃ], [ʂ], [tʃ], and [x]. All the fricative sounds represented by these symbols are found as separate phonemes in S.Sotho, as is shown in the table above. This is not the position as far as the explosive element is concerned. The nature of the explosive element in an affricative consonant is dependent upon the nature of the fricative which follows, and not the other way about. To illustrate this, let us take [ʃtʃ]. In this affricate we have the combination prepalatal [ʃ] preceded by prepalatal *[t], which is hypothetical. The fricative [ʃ] occurs separately in S.Sotho, but the explosive [t] does not. The prepalatal explosive [t] therefore owes its existence to the prepalatal fricative [ʃ] which it precedes.

e.g. [li mataʃ] (door) has diminutive [li matʃ'ana]
[ši fa tʃ] (tree) " " [ši fa tʃ'ana]

Similarly, prepalatal *[d], which is hypothetical, exists only in the affricate [dʒ], whereas [ʒ] occurs independently of this combination.

Again, [tʃ] is found independently of the affricate [tʃ'], but lateral *[t] is not. In all these cases the fricative element assimilates the preceding explosive element to its own organic position.

On the other hand [tʃ] and [a] both exist separately, being both alveolar consonants; and [kʃ] and [x] likewise exist separately, and are both velar consonants. In both cases, however, the fricative consonant is articulated farther back than the explosive one. The corresponding /... affricates
affricates [ts'] and [kxh] are articulated at the positions for [s] and [x] respectively. In these cases also, therefore, the fricatives are preceded by homorganic explosives, even though the interval between the point of articulation of the fricative and that of the explosive is, in each case, otherwise small enough to be non-significant.

1.70 Affricates have up to now been defined as explosives followed by their homorganic fricatives. Our definition, in the light of the observations made above, is the reverse of this, viz. that affricates are momentary fricatives preceded by their homorganic plosives. These plosives, if it ever becomes necessary to write them separately from their combinations, may be conveniently represented by capitals, as follows:

- **T** = the explosive element in the affricates [ts'], [tʃ'], and [tʃ'], and their aspirated counterparts.
- **D** = the explosive element in the affricate [dʒ].
- **K** = the explosive element in the affricate [kxh].

The time-interval between the release of the closure and the initiation of the friction is next to nil. Bloomfield refers to this interval as "close transition", as against "open transition" in which the interval is longer.¹

With regard to [tʃ'], it has long been realized and emphasized, that it is not a combination of [t'] and [ʃ], but rather a laterally exploded [tʃ'].²

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² Jones and Plaatje say "it strikes the ear as a single sound", and they accordingly classify it as a plosive. See their *Scehua Reader*, Intro. p.xviii.

Lestrade says "Sotho has ... tʃ, best described perhaps as a laterally exploded t". See "The Practical Orthography of the S.A. Bantu languages", *Bantu Studies*, V.3 No.3, 1929.

Tucker says the same thing. Van Eeden follows Tucker. Paroz (*Elements*, p.6) says that [tʃ'] "is not t plus ʃ".

Cole classifies it as an explosive (See *Tswana Grammar*, consonant chart on p.21.)
It may be that one day it will be said of the rest of the affricates treated above, that they are in fact /t's/, /d's/, and /k's/ articulated away from the organic positions where they occur as simple explosives. Thus

- [ts'] is T articulated at the position for [s]
- [ʃʃ'] is T articulated at the position for [ʃ]
- [dʒ'] is D articulated at the position for [ʒ]
- [kʃ'] is T articulated at the position for [ʃ]
- [kxb] is K articulated at the position for [x] and aspirated.

1.71 [l], [d] and [ɾ] are phonemically related. [l] occurs before all vowels except [i] and [u]; [d] occurs before [i] and [u] only; and [ɾ] occurs before [i] and [u] when it (i.e. [ɾ]) is preceded by [l].

1.72 [ɾ] is, in certain situations, replaced by its voiceless counterpart [h]. This occurs when it is in a stressed syllable, and sometimes simply when it is situated at the beginning of a word.¹

1.73 [ɾ] and [ɾ'] are diaphonemic variants.

1.74 [r] and [R] are also diaphonemic variants.

Examples of the occurrence, in words, of the consonants in Table I.

The Explosives.

1.75 -- [p']: The voiceless ejective bilabial explosive. It occurs before all vowels.

Examples:

- [p'its'ɔ] (pot)
- [p'idisets'ɔ] (brewing pot)
- [p'ulə] (rock-rabbit)
- [mp'æŋ] (on the belly)

¹Cf. Tucker, Comparative Phonetics, §122.
[p'tp'nt] (open place)
[p'alama] (ride)
[p'ont] (sight)
[p'ontaho] (a showing, indication)
[p'ats'o] (question)
[p'udi] (goat)
[mw'uts'o] (a reward)

1.76 -- ph: The voiceless aspirated bilabial explosive. It occurs before all vowels.

Examples:
[phiri] (hyena)
[phidisa] (caus. of [phula] (live))
[phula] (live)
[phek'ala] (cure)
[phëha] (cook)
[phak'isa] (hurry)
[phoes] (error)
[phodile] (cool)
[phamola] (rest)
[phuk'ile] (perf. of [phoka] (drink))
[iphumana] (find oneself)

1.77 -- [b]: The voiced bilabial explosive. It occurs before all vowels.

Examples:
[bits'a] (call)
[bidisa] (caus. of [bula] (boil))
[bula] (boil, intr.)
[beq] (masters)
[bës] (put)
[bala] (read)
[bola] (rot)
[subodu] (rotten thing)
[boots'as] (ask question)

//...[butsiisi]
1.78 -- [t']: The voiceless ejective alveolar medial explosive. It occurs before all vowels.

Examples:

[t'tima] (run)
[t'ba] (sink)
[dit'edu] (beard)
[t'tma] (tremble)
[t'at'a] (be in a hurry)
[t'oba] (go straight towards)
[t'obile] (perf. of [t'oba])
[t'ote] (lie exposed)
[t'uk isla] (prepare oneself)
[sit'ula] (chair)

1.79 -- [th]: The voiceless aspirated alveolar medial explosive. It occurs before all vowels.

Examples:

[thiba] (stop, prevent)
[thibile] (perf. of [thiba](dig))
[thiba] (dig)
[theθa] (slight)
[thbt] (shield)
[thabs] (mountain)
[thoba] (steal away)
[thobile] (perf. of thba)
[that'a] (veld)
[thudissa] (quiething, pacify)
[thusa] (help)

1.80 -- [d]: The voiced alveolar medial explosive. It occurs only before [i] and [u].

Examples:

disa] (to herd)
dula] (sit)
1.81 -- [kʰ]: The voiceless ejective velar explosive. It occurs before all vowels.

Examples:

[kʰit'ima] (run)
[kʰit'ile] (I have come)
[kʰu] (I, S.C. of 1st. pers. sing.)
[mak'eq] (at/to/from etc. the river)
[kʰa] (enter)
[k'haro] (an answer)
[k'ok't'a] (knock)
[makot'd'a] (sack)
[k'op'a] (beg)
[k'up'ile] (perf. of [k'op'a])
[k'ula] (be sick)

1.82 -- [kh]: The voiceless aspirated velar explosive. It occurs in very few words. The following is almost an exhaustive list:--

[akhona] (calabash)
[khoso] (string of beads worn round the loin)
[khu] (to rest -- ideophone)
[khafala] (grind finely)

The Fricatives.

1.83 -- [f]: The voiceless dentilabial fricative. It occurs before all vowels.

Examples:

[ffifi] (darkness)
[fit'ile] (perf. of [fit'a] (pass))
[fit'a] (pass)
[fa'sa] (bring to an end)
[fila] (get finished)
[fafa'sa] (sprinkle, drizzle)
[fok'ila] (be weak)
[bok'odi] (weakness)

/...[fok'ots'a]
[tsak'ɔte'a]  (decrease)
[tufisa]  (cause to fly)
[tufula]  (perspire)

1.84 -- [v]: The voiced denti-labial fricative. This sound occurs in words of Afrikaans origin. S. Sotho speakers often use the voiced bilabial explosive [b] in place of [v] in such words. But [v] is being used more and more. It occurs only in a few words.

Examples:
[vike'e]  (also [bek'e]) (week)
[veine]  (also [beine]) (wine)
[livelek'elɛ]  (also [lebelk'elɛ]) (shop)

1.85 -- [s]: The voiceless alveolar medial fricative.
It occurs before all vowels.

Examples:
[sisipa]  (shake, trans.)
[sit'ile]  (perf. of [sit'a] (stomp))
[sit'a]  (stomp)
[sebets'a]  (to work)
[sesɛfa]  (avoid)
[lisak'a]  (cattle-fold)
[sebsana]  (become wrinkled or creased)
[maloq]  (early dawn)
[sak'ɔlaʃa]  (turn about, be reformed)
[swak'uləhile]  (perf. of [sak'ɔlaʃa])
[susumets'a]  (push)

1.86 -- [ʃ]: The voiceless alveolar lateral fricative.
It occurs before all vowels.

Examples:
[lašile]  (perf. of [laʃa] (throw away, lose))
[dək'teši]  (perf. of [tək'etsa] (sob loudly))
[ʃək'ets'a]  (sob loudly)
[mətʃeŋ]  (days)

/... [ʃɛpha]
The voiceless velar lateral fricative. This is a diaphonemic variant of [ʃ]. It therefore occurs in all the situations in which [ʃ] occurs. No further examples are necessary.

The voiceless prepalatal fricative. It occurs before all vowels.

Examples:

- [ʃibitʃ'ąnant] (short, stout person)
- [ʃidik'ans] (pair of drawers)
- [məʃ'mant] (boy)
- [ʃebisisa] (inspect thoroughly)
- [ʃba] (look)
- [ʃpa'a] (chastise)
- [luʃkwha] (bitterwortel)
- [luʃodu] (thief)
- [ʃbedisa] (of man to elope with a woman)
- [ʃubile] (perf. of [ʃ̪əba] (carry many articles))
- [ʃubilant] (skipping rope game)

The voiced prepalatal fricative. This sound is used consistently by some people in place of the voiced prepalatal affricate [ʃʒ]. It therefore occurs in all the situations in which [ʃʒ] occurs, viz. before all vowels except [u] and [u].

Examples:

- [muʒi] (eater)
- [ʒiʃite'ele] (perf. of [ʒ̪esa] (feed))
[3isə] (feed)
[k'ægə] (today)
[3ela] (applicative of [3a] (eat))
[3ela] (sow)
[di3ə] (food)
[di3əy] (loc. of [di3ə])
[3əwa] (be eaten)

1.90 -- [x]: The voiceless velar fricative. It occurs before [e], [ɛ], and [a] only. It is found almost exclusively in loan words, notably those borrowed from Afrikaans. Apart from this, it occurs in comparatively few indigenous Sotho words.

Examples:
[xeu] (to form a file -- ideophone)
[sixeɛtɛ] (an incomplete thing, a gap)
[xaaxamp'ɛla] (drink quickly, gluttonously)

1.91 -- [ɦ]: The voiced glottal fricative. It occurs before all vowels. It tends to become less voiced (sometimes even completely voiceless) when it comes before [i] and [u], and also in strongly stressed syllables.

It is often elided, especially when it occurs between two vowels.

Examples:
[diʃiˈtʃi] (strange ways of a person)
[ʃingly] (perf. of [ʃinqu] (speak indistinctly))
[ʃena-ʃena] (fiddle about with)
[maheŋ] (in the veld)
[ʃala] (mow)
[ʃaʃa] (build)
[ʃɔlaʃala] (become crippled)
[ʃɔlaʃile] (perf. of [ʃɔlaʃala])
[ʃala] (grow)
[ʃudile] (perf. of [ʃala])
[hula] (pull, drag)

The Frictionless.
1.92 -- [l]: The voiced alveolar lateral frictionless.
It occurs before all vowels except [i] and [u].

Examples:
[limile] (perf. of [1lma] (plough))
[l1ma] (plough)
[lelele] (long, tall)
[saltp’e] (axe)
[məlala] (neck)
[larə] (to dream)
[lorisa] (cause to dream)
[lənə] (weave, plait)
[lufile] (perf. of [lənə])

The Flapped.
1.93 -- [d]: The voiced alveolar lateral flapped consonant.
It occurs only before [i] and [u], and then only when it is itself preceded by [l].

Examples:
[muldi] (one who cries, complainant)
[ludwe] (passive of [lla] (cry))

The Trills.
1.94 -- [r]: The voiced alveolar medial trill. It occurs before all vowels.

Examples:
[muriri] (human hair)
[rıble] (perf. of [rıba] (stupefy))
[rıba] (stupefy)
[remile] (perf. of [rema] (chop))
[rema] (chop)
[lırat’a] (noise)
[barok’t'] (sleep, noun)

/...[roble]
[robile] (perf. of [ɾ̥ba] (break))
[rəma] (send on errand)
[rəmile] (perf. of [ɾ̥ma])
[ruruña] (swell)

1.95 -- [R]: The voiced uvular trill. It is a diaphonemic variant of [r], and it therefore occurs in all the situations in which [r] occurs. No additional examples are necessary.

The Affricates.

1.96 -- [ts'): The voiceless ejective alveolar medial affricate. It occurs before all vowels.

Examples:
[ts'ip'a] (pinch)
[ts'ība] (notify)
[ts'tba] (know)
[ts'ebena] (in the ear)
[ts'etb] (ear)
[ts'ama] (walk)
[ts'ət'a] (express surprise or admiration)
[ts'oe] (everything)
[ts'om] (hunt)
[ts'um] (hunter)
[ts'uba] (to smoke)

1.97 -- [tsh]: The voiceless aspirated alveolar medial affricate. It occurs before all vowels.

Examples:
[itshire] (obstruct one's own view)
[tshidisa] (take across, comfort, console)
[tshela] (cross)
[tshep'issa] (to promise)
[tuhtla] (pour)
[tshaba] (fear)
[itshoma] (mock oneself)

/...[tshobots'1]
[tshobots'i] (appearance (i.e. looks) of a person)
[tshofa] (be startled)
[tshulile] (perf. of [tshofa])
[itshup'a] (point at oneself)

1.98 -- [tʃʰ]: The voiceless ejective alveolar lateral affricate. It occurs before all vowels.
Examples:
[tʃʰ'isa] (bring)
[tʃʰ'itʃʰ'isa] (give cause for complaint)
[tʃʰ'tʃʰ'ibas] (complain)
[matʃʰ'enj] (loc. of [matʃʰ'a] (strength))
[tʃʰ'la] (appl. of [tʃʰ'a] (come))
[tʃʰ'a] (come)
[tʃʰ'ola] (anoint oneself)
[tʃʰ'ote'sa] (anoint someone else)
[tʃʰ'ola] (jump)
[tʃʰ'ulile] (perf. of [tʃʰ'ofa] (move off))
[tʃʰ'uŋ] (loc. of [ntʃʰ'a] (house))

1.99 -- [tʃʰ]: The voiceless aspirated alveolar lateral affricate. It occurs before all vowels except [i] and [u].
Examples:
[ntʃʰ'uk'atʃʰ'uk'ile] (perf. of [ntʃʰ'uk'atʃʰ'uk's])
[ntʃʰ'uk'atʃʰ'uk'a] (handle me roughly)
[itʃʰ'ek'ile] (perf. of [itʃʰ'ek'a])
[itʃʰ'ek'a] (make oneself scarce)
[itʃʰ'apa] (stab or prick oneself)
[ntʃʰ'ok'a] (need me)
[itʃʰ'ok'isa] (make oneself go without)
[itʃʰ'ok'ara] (shake oneself)
[itʃʰ'udisa] (make oneself lose)

1.100 -- [ʃʰ']: The voiceless ejective prepalatal affricate. It occurs before all vowels except [i] and [u].

... Examples:
Examples:

\[ [\text{f}][\text{j}][\text{k}][\text{ile}] \] (perf. of \[ [\text{f}][\text{j}][\text{k}][\text{a}] \] (dance))

\[ [\text{f}][\text{j}][\text{k}][\text{a}] \] (dance)

\[ [\text{f}][\text{j}][\text{ena}] \] (like this)

\[ [\text{f}][\text{j}][\text{l}][\text{k}][\text{u}][\text{j}][\text{k}][\text{a}] \] (throw, hurl)

\[ [\text{f}][\text{j}][\text{om}][\text{la}] \] (look fiercely at)

\[ [\text{f}][\text{j}][\text{or}][\text{c}] \] (go out quickly -- iæo.)

\[ [\text{u}][\text{f}][\text{j}][\text{ci}] \] (stinkblaar)

\[ [\text{f}][\text{j}][\text{ol}][\text{oma}] \] (turn about restlessly in bed)

\[ [\text{f}][\text{j}][\text{v}][\text{u}][\text{m}][\text{isa}] \] (caus. of \[ [\text{f}][\text{j}][\text{ol}][\text{oma}] \])

1.101 -- \[ [\text{f}][\text{j}][\text{h}] \]: The voiceless aspirated prepalatal affricate. It occurs before all vowels.

Examples:

\[ [\text{f}][\text{j}][\text{h}][\text{f}][\text{j}][\text{a}] \] (round)

\[ [\text{f}][\text{j}][\text{h}][\text{bil}][\text{e}] \] (perf. of \[ [\text{f}][\text{j}][\text{h}][\text{ba}] \] (dig))

\[ [\text{f}][\text{j}][\text{h}][\text{ba}] \] (dig)

\[ [\text{ma}][\text{f}][\text{j}][\text{h}][\text{en}][\text{t}] \] (in youth)

\[ [\text{f}][\text{j}][\text{h}][\text{h}][\text{a}] \] (trap)

\[ [\text{f}][\text{j}][\text{h}][\text{a}] \] (burn, intr.)

\[ [\text{f}][\text{j}][\text{ho}][\text{c}] \] (say so)

\[ [\text{f}][\text{j}][\text{ho}][\text{ps}][\text{h}][\text{a}] \] (become freed)

\[ [\text{f}][\text{j}][\text{ho}][\text{k}][\text{a}][\text{j}][\text{o}][\text{f}][\text{j}][\text{h}][\text{a}] \] (drive hard)

\[ [\text{f}][\text{j}][\text{h}][\text{u}][\text{k}][\text{u}][\text{f}][\text{j}][\text{h}][\text{ile}] \] (perf. of \[ [\text{f}][\text{j}][\text{h}][\text{e}][\text{k}][\text{o}][\text{a}][\text{f}][\text{j}][\text{h}][\text{a}] \])

\[ [\text{f}][\text{j}][\text{h}][\text{u}][\text{f}][\text{h}][\text{u}][\text{m}][\text{ak}][\text{x}][\text{h}][\text{a}][\text{l}][\text{a}] \] (train)

1.102 -- \[ [\text{d}][\text{z}] \]: The voiced prepalatal affricate. It occurs before all vowels except \[ [\text{u}] \] and \[ [\text{u}].\]

Examples:

\[ [\text{mu}][\text{d}][\text{z}][\text{i}] \] (eater)

\[ [\text{d}][\text{z}][\text{th}][\text{im}][\text{ile}] \] (perf. of \[ [\text{d}][\text{z}][\text{th}][\text{ima}][\text{ma}] \])

\[ [\text{d}][\text{z}][\text{th}][\text{ima}][\text{ma}] \] (jump down)

\[ [\text{d}][\text{z}][\text{ets}][\text{t}] \] (perf. of \[ [\text{d}][\text{z}][\text{ula}] \] (sow))

\[ [\text{d}][\text{z}][\text{ula}] \] (appl. of \[ [\text{d}][\text{z}][\text{a}] \] (eat))

\[ [\text{d}][\text{z}][\text{ala}] \] (sow)

/...[\text{d}][\text{d}][\text{z}][\text{a}]\]
[didʒފ] (food)
[didʒɔŋ] (loc. of [didʒɔ])
[dyəwa] (be eaten)

1.103 -- [kxh]: The voiceless aspirated velar medial affricate. It occurs before all vowels.

Exemples:
[kxhile] (perf. of [kxha](scoop))
[kxhıtʰile] (perf. of [kxhıtʰa] (fall, of snow))
[kxhıtʰu] (fall, of snow)
[kxhethile] (perf. of [kxhetha])
[kxhıtha] (choose)
[kxhak’a] (guinea-fowl)
[kxhɔts’ɔ] (peace)
[kxhɔts’ɔŋ] (loc. of [kxhɔts’ɔ])
[kxhɔlɔ] (big)
[kxhudisiz] (upbringing)
[kxhuts’a] (keep quiet)

NASAL Consonants.

1.104 Bilebilal Alveolar Prepalatal Velar voiced m n p ҳ

Table II

1.105 All the S.Sotho nasal consonants are voiced. Even when they occur before voiceless homorganic explosives, they do not lose their voicing.

1.106 I suspect the existence in S.Sotho of a palatal nasal [ŋ]. My reason for this is the seeming vacillation between [ŋ] (or ?[ŋ]) and [ŋ] in the pronunciation of certain expressions containing this indeterminate sound.

The words in which it occurs are given in Paroz's dictionary with two different spellings, one with /ny/ and the other with /ng/ for this sound. These are menyenengene / mengenengene (jingling things), and lenyetse / lengetse /... (lock
(lock of plaited hair). There is also the word spelt
nyene (day-time, obsolete), but pronounced almost like
ngene (i.e. [ŋːn]). While lack of measuring apparatus
makes it difficult to determine the precise point where
this sound is articulated, there seems to be no doubt
that that point lies somewhere between the prepalatal
and the velar positions.

1.107 All the S.Sotho nasal consonants occur both syllabically
and non-syllabically, and in this connection it is
pertinent to remark about the similarity between nasal
consonants and vowels. One of the most important dis-
tinguishing characteristics between consonants and vowels
is that in the articulation of the former the air stream
is interfered with in various ways in its passage through
the mouth, giving us the various articulatory and auditory
types of consonants, while in the articulation of vowels,
the air stream passes without interruption from the lungs
to the outer air. There is the anomaly here that nasal
consonants are, in this respect, more like vowels than
like consonants. For here also the air stream passes un-
interruptedly to the outer air, the main difference being
that in the case of nasals the passage of air is entirely
through the nose, while in the case of vowels the air
passes at least partly through the mouth. This makes
it easy and natural for nasal consonants to occur sylla-
bically.

Examples of the occurrence, in words, of the consonants
in Table II.

1.108 -- [m]: The voiced bilabial nasal. It occurs
before all vowels.

Examples:

[mina]  (blow one's nose)
[middle] (perf. of [mːlə])

/...[mːlə]
[məla] (grow)
[məmə] (perf. of [məma])
[məma] (invite)
[mətha] (run)
[mərumɔ] (spears)
[məna] (here)
[məsəsa] (kindness)
[məsə] (smoke)
[sɪmumù] (dumb person)

1.109 — [n]: The voiced alveolar nasal. It occurs before all vowels.

Examples:
[səboni] (seer)
[nət'ile] (perf. of [nət's])
[nət'a] (smear thickly)
[nəp'ile] (perf. of [nəp's])
[nəp'a] (hit the target)
[nəna] (walk softly)
[nəna] (become fat)
[nəntsha] (make fat)
[nət'a] (guesu)
[nət'ile] (perf. of [nət'a])
[əna] (be rejected)

1.110 — [p]: The voiced prepalatal nasal. It occurs before all vowels except [u].

Examples:
[eəra] (destroyer)
[eəsəts'e] (perf. of [eəsə])
[eəsə] (suckle)
[eəla] (lunatic asylum)
[məsəla] (become absorbed)
[məsə] (absorb)
[ərəwa] (become thirsty)

/... [porilwe]
The voiced velar nasal. It occurs before all vowels except \[I\] and \[u\].

---

1.112 Syllabic occurrence of nasal consonants. Used before vowels as in the above illustrations, nasal consonants are non-syllabic. When, however, a nasal is followed by an identical nasal, or by a consonant or consonant combination articulated at the same point as itself, then it (i.e. the nasal) is syllabic.

Examples:

- \[m\] (mother)
- \[mp\] (see me)
- \[mp\] (give me)
- \[mp\] (crush me)
- \[m\] (I, me)
- \[m\] (louse)
- \[m\] (wake me up)
- \[m\] (startle me)
- \[m\] (despise, or find fault with, me)
- \[m\] (dog)
- \[m\] (new)
- \[m\] (argue with me)

/... \[g\]
Only ORAL clicked consonants are found, divided into non-nasalized and nasalized, as the following tables show:

(a) Non-nasalized

<table>
<thead>
<tr>
<th>Dental-velar</th>
<th>Prepalatal-velar</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \text{vl} ) unasp.</td>
<td>( \text{f} )</td>
</tr>
<tr>
<td>( \text{vl} ) esp.</td>
<td>( \text{h} )</td>
</tr>
</tbody>
</table>

Table III

(b) Nasalized

<table>
<thead>
<tr>
<th>Dental-velar</th>
<th>Prepalatal-velar</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \text{vd} )</td>
<td>( \text{t} )</td>
</tr>
</tbody>
</table>

Table IIIa

The sounds classified here are the so-called click consonants, i.e. suction sounds. It seems to me that these consonants could quite justifiably be called implosives, because the processes involved in the articulation of the two sets of sounds differ only in detail. In both cases there is a double closure. With the Sotho clicks, two separate sections of the tongue are raised at the same time, making contact with two separate parts of the roof of the mouth. In the case of the dental-velar type of "click", the tip of the tongue articulates at the back of the upper front teeth and the back of the tongue at the velum. In the case of the prepalatal-velar type, the front of the tongue articulates against the front section of the palate and the back of the tongue against the velum. The front closure in both cases is the primary closure, and the velar one the secondary closure.
In the case of the implosive /6/ the two closures are respectively at the lips and at the glottis, the first mentioned being the primary closure, and the second mentioned the secondary closure. Again, in the case of the implosive /d/ the primary closure is at the alveolus, and the secondary closure again at the glottis. The release of the primary closure in all these cases (i.e. cases involving both clicks and implosives) results in a rush of air inwards to fill the rarefied space, or the vacuum-range as it is here called, to wit the area delimited by the two points of contact. The resulting sound is plosive, being implosive since the air rushed inwards.

As long ago as 1926, Doke, in his Phonetics of the Zulu Language, drew attention to this close similarity in the articulation of clicks and implosives. In describing the Zulu bilabial implosive /6/ he says, "6 is, in reality, a species of click sound". (Chap. V §1) Later in the same paragraph he says, "A comparison of the kymograph tracings of a voiced click and of 6 shows very clearly the close relationship between these two types of sound". Again, in Chapter XI where he deals with the click consonants, Doke says of them (§2), "Zulu click consonants are implosive, injective or suction sounds, produced by the formation of a partial vacuum between the tip and the back of the tongue, so that when the tip or the side (as is the case with lateral clicks) of the tongue is released from contact with the palate, etc., air rushes momentarily into the rarefaction, and causes the smacking sound". This is a point of view which Doke expresses again in later works, as in his Textbook of Zulu Grammar.  

--- From

1 Witwatersrand University Press, 1926.
From this, it would seem that there is a strong case for the abandonment of the term **click**, and the substitution for it of the term **explosive**, which, as a descriptive term, is more apt in that it reflects more accurately the manner of articulation of this set of sounds.

S. Sotho

1.116 The dental-velar and the prepalatal-velar clicks, both non-nasalized and nasalized, are diaphonemic variants. The nasalized varieties occur in only a few words.

1.116 The prepalatal type is used more commonly than the dental type, and this applies to both the non-nasalized and the nasalized forms.

Examples of the occurrence, in words, of the consonants in Tables III and IIIa.

1.117 -- [γ] and [χ]: The voiceless unaspirated dental-velar click, and the voiceless unaspirated prepalatal-velar click, respectively. Both these consonants occur before all vowels. Only examples with the prepalatal type are given here.

Examples:

- [dγ]: (sound of footsteps)
- [rγle]: (perf. of [γla])
- [γa]: (ooze)
- [et'elloγ]: (eventually)
- [έt'a]: (finish)
- [ala]: (begin)
- [məγapor]: (conversation)
- [məθopoγ]: (loc. of [məθa])
- [olla]: (pick out)
- [uthile]: (perf. of [θilas] (break off a piece))
- [ubu]: (heep)

1.118 -- [h] and [x]: The voiceless aspirated dental-velar click, and the voiceless aspirated prepalatal-velar click, respectively. Both these consonants occur before...
all vowels. Only examples with the prepalatal type are given.

Examples:
\[\text{\l\text{chita}a}\] (ooze)
\[\text{\l\text{chirdia}}\] (caus. of \[\text{\l\text{chula}}\])
\[\text{\l\text{chula}}\] (scatter, push aside)
\[\text{\l\text{chek}u}\] (old man)
\[\text{\l\text{cherm}}\] (type of hut)
\[\text{\l\text{cha}ha}\] (dismantle)
\[\text{\l\text{choro}lo}\] (big pile)
\[\text{\l\text{choro}cho\gamma}\] (on the throat)
\[\text{\l\text{chok}o}\] (spite, quarrelsomeness)
\[\text{\l\text{chumisa}}\] (caus. of \[\text{\l\text{choma}}\] (jump))
\[\text{\l\text{chubu}}\] (wave)

1.119 -- \[\text{n}\] and \[\text{\l}\]: The voiced unaspirated nasalized dental-velar click, and the voiced unaspirated nasalized prepalatal-velar click, respectively. These are found in very few words. Only examples with the prepalatal type are given.

Examples:
\[\text{\l\text{chubila}ha}\] (melt)
\[\text{\l\text{et}}\] (little)
\[\text{\l\text{al}o}\] (place)
\[\text{\l\text{mat}i}\] (section of stomach)
\[\text{\l\text{osa}}\] (accuse)

In a few words, \[\text{\l}\] may be used in the place of the above nasalized clicks.

Examples:
\[\text{\l\text{mat}i}\] and \[\text{\l\text{at}i}\] (section of stomach)
\[\text{\l\text{osai}}\] and \[\text{\l\text{ai}}\] (an uncircumcised man)
\[\text{\l\text{osa}}\] and \[\text{\l\text{osa}}\] (accuse)

Heterorganic Consonant combinations

1.120 The term *heterorganic* is used here to distinguish
the combinations discussed in this section from affricates which, as seen above, are homorganic combinations. Heterorganic consonant combinations (i.e. those whose constituents are articulated at different points) in S. Sotho are the result of sound changes, some occurrences of which are historical, while others are synchronic. A fuller treatment of these combinations, showing, where possible, the various stages in their evolution, will therefore be found in the section devoted to such changes.

1.121 The heterorganic consonant combinations of S. Sotho all contain, as one of their constituents, a labial sound which occurs initially. The second of these constituents, of which there are never more than two, consists of a prepalatal sound. These combinations are:

1. [b3]: The voiced bilabial explosive plus the voiced prepalatal fricative.

   Examples:
   
   [b3ab'arets'a]   (crush, as bones)
   [b3a:]           (pure white, ideo.)

2. [pʃ]: The voiceless bilabial explosive plus the voiceless prepalatal fricative. This combination is accompanied by ejection.

   Examples:
   
   [pʃ'atʃ'a]       (boil, of thick liquid)
   [pʃ'aŋ]          (meet suddenly, ideo.)

3. [pʃh]: The aspirated form of No. 2 above.

   Examples:
   
   [pʃha]          (dry up, of water)
   [pʃhatʃ'a]       (break, trans.)

4. [fʃ]: The voiceless dentilabial fricative plus the voiceless prepalatal fricative. This combination always occurs with labialization.

   Examples:
   
   [boʃ'wa]       (be tied or bound)
   /
   /... [liʃ'wa]
As I shall attempt to show, when dealing with sound changes, these combinations represent the middle stage in the transition from simple labials to simple palatals.

The Semivowels

1.122 There are two semivowels in S.Sotho, viz. the palatal [j], and the labio-velar [w].

Occurrence of these Semivowels in words.

1.123 [j] occurs before the vowels [a], [e], [æ], [l], [o], and [o].

Examples:

\[ja\] (go)
\[jena\] (he, him)
\[jea\] (that one)
\[jina\] (it)
\[jo-æ\] (the whole of it, all of them)
\[j\] (neg. of [ja] (go))

1.124 [w] occurs before the vowels [a], [e], [æ], [l], [i], [e], [ə], and [o].

Examples:

\[wa\] (fall)
\[we-na\] (you)
\[we-sæ\] (my brother or countryman)
\[wi\] (neg. of [wa] (fall))
\[wa-sæ\] (alt. cause of [wa])
\[wo-na\] (it)
\[wo-æ\] (the whole of it)

The Phonemes of Southern Sotho

The Consonantal Phonemes.

1.125 In our attempt to identify the S.Sotho consonantal phonemes, we have to bear in mind, among other things, the

---

1 Doke calls it prepalatal. I think it is definitely palatal.
the following facts:

1. That ejection and aspiration as attributes of voiceless consonants and consonant combinations containing an explosive element, are mutually exclusive, and are phonemically distinctive. So, for instance, the sounds [t'] and [th] belong to different phonemes, as shown by the pair of words [t'aba] (affair) and [thaba] (mountain; be happy). A complete list of these sounds, with examples, is now appended.

[p'] and [ph]: as in [p'ak'a] (give evidence) and [phak'a] (eat hastily)
[t'] and [th]: as in [t'aba] (affair) and [thaba] (mountain; be happy)
[k'] and [kh]: as in [ak'ɔne] (stint him) and [ak'ɔna] (calsbash)
[tʃ'] and [tʃh]: as in [ntʃ'ula] (fill me) and [ntʃ'ala] (divorce me)
[ts'] and [tʃh]: as in [matsɔʃ] (root) and [matsɔwɔ] (black)
[ʃʃ'] and [ʃʃh]: as in [ʃʃ'ɑ] (dog) and [ʃʃ'ɑ] (new)
[pʃ'] and [pʃh]: as in [pʃ'atʃ'a] (boil, of thick liquid) and [pʃ'atʃ'a] (break)
[ʃʃ] and [ʃʃh]: as in [ʃʃ'ɑ] (become evident) and [ʃʃ'ɑ] (dismantle)

1.126 -- 2. That voicing and voicelessness are also phonemically distinctive features of the sounds in which they occur, as shown by the following illustrations:

[b] and [p']: as in [bat'a] (strike; be cold) and [p'at'a] (hide, trans.)
[d] and [t']: as in [dula] (sit, dwell) and [t'ula] (stamp)

1 This sound is mainly radical, but it is sometimes also pronounced with ejection. After this illustration, therefore, it will always be written without the ejection sign as before.
2 The diaphonemic variants of these clicks, viz. the dentivelar types, are also distinguished in the same way.
There is one other pair of voiced and voiceless consonants which is, however, not comparable to the above ones. This is [ʂ - ʂ]. The distribution of the members of this pair is controlled solely by stress factors without any relationship to meaning, and even here there is no consistency as to the particular member employed in a given situation, no misunderstanding being likely to occur as a result of their confusion. [ʂ] and [ʂ] are thus seen to be phonemically non-distinctive, but are best regarded as members of the same phoneme.

1.127 From the above, we see that by means of the criteria of ejection, aspiration, and voicing, all three of which are mutually exclusive, we can isolate three distinct phonemes at any given organic position where consonants and consonant combinations are articulated.

Examples:

[pʰ - ph - b]: as in [pʰak'ə] (witness, give evidence)  
[phak'ə] (eat hastily)  
[bak'ə] (to cause)  

tʰ - th - d]: as in [tʰubə] (oppress)  
[thuba] (break)  
[duba] (mix)  

[pfʰ - pʰ - b]: as in [pfʰatʃ'ə] (boil, thick liquid)  
[pfʰatʃ'ə] (smash)  
[bʃatʃ'ə] (break, ide.).

The series is, however, not always complete, some of these types having, for example, only ejective and aspirated forms, but no voiced one: e.g. [kʰ] and [kh], but no [g]. So also [kxh] is found all by itself, having ... neither
neither a voiced nor an ejective counterpart.

1.128 -- 3. The fricative phonemes are distinguished from each other mainly by difference of organic position, there being, except in one case, no attributes by means of which they may be differentiated. The one case is that of [j] and [z] which have the same organic position, and are distinguished solely by the attributes of voicing and voicelessness. The fricative sounds are [:r], [:s], [:f], [:s], [:z], [:x], [:h]. They occur, inter alia, in the following words:

Examples:
[rə] (give)
[sə] (clear up)
[fə] (do indeed)
[hə] (if)
[xə] (choke) [ʃə] (be acrid)
[ʃə] (passive of [ʃə] (die))
[hə] (be eaten)

1.129 -- 4. The nasal consonant phonemes are distinguished from each other by the point where the oral closure takes place in their articulation. These nasals are: [:m], [:n], [:p], and [:ŋ]. They occur, inter alia, in the following words:

Examples:
[mə] (intestines)
[nə] (plenty)
[pə] (marry)
[ŋə] (go away in protest)

1.130 -- 5. The compound phoneme [ʃʃ] occurs only in its labialized form, i.e. it is always followed by [:w], as in the following word:

[ʃə] (be cured)

1.131 Using the above criteria -- organic position, i.e.
point of articulation; auditory impression; the attributes of ejection, aspiration, voicing and voicelessness; and also the complementary distribution of the sounds described by means of them — we are able to distinguish 35 consonantal phonemes in S. Sotho. These include affricates and heterorganic combinations which are compound phonemes, but exclude compound phonemes containing [w] as one of their constituents. The latter are treated separately in §1.134 et seq. below.

N.B. Attention must be drawn here to the occasional non-significant substitution of the sounds [(] or []) and [(] or []). Examples where this occurs are:

[(al:] and [al:] (place)
[(leai] and [leai] (uncircumcised man)

This is, however, an arbitrary variation of these sounds, which proves nothing as far as their phonemic status is concerned. The occurrence of many words in which one of these varieties occurs to the exclusion of the other without any relationship to phonetic context shows that the two sounds belong to different phonemes.

The Vowel Phonemes.

1.132 As was indicated in the section devoted to the vowels, there are eleven vowel sounds in S. Sotho grouped into seven phonemes. These phonemes are:

[i]
[i — i]
[e — e]
[a]
[2 — o]
[2 — u]
[u]

The Semivowel Phonemes.

1.133 The two semivowels [w] and [i] constitute two ... separate
separate phonemes.

The Compound Phoneme comprising labialized consonant + w

1.134 A compound phoneme is one which consists of two or more simple phonemes. In our description of the S. Sotho phonemes above, we have treated all the simple phonemes — i.e. those consisting of one sound only — and some compound phonemes. The compound phonemes included in the above treatment are the homorganic combinations of consonant plus consonant, viz. the affricates, and the heterorganic combinations of consonants, viz. labial plus prepalatal combinations. A third type of compound phoneme is treated here, separately from the others, for a number of reasons. Firstly, this phoneme consists, not of consonant plus consonant, but of consonant plus semivowel.

Secondly, it incorporates, as its first element, all the labialized phonemic variants of the entire range of non-labial simple consonantal phonemes, plus all the compound phonemes consisting of consonant plus consonant, i.e. affricates and heterorganic combinations. There is also the difference between affricates and C^w+w (where C^w = any labialized consonant or consonant combination) that affricates constitute a closer phonetic unit than C^v+w, as the two constituents of an affricate are articulated at the same point, while in C^v+w the constituent C^w has two articulatory movements, viz. a primary one, e.g. alveolar closure and release for [t'], and a secondary one at the velum, the two movements then being followed by [w].

1.135 As between C^w+w and heterorganic combinations, the difference lies in the fact that in the latter there is no anticipation of the second element, while this is a regular feature of C^w+w. In other words, the difference between, say, the [b] in [br] and the [b] in [ba] is much /... less
less than that between, say, the [r] in [rwa] and that in [ra].

1.136 In our list of phonemic symbols, therefore, we shall include the non-labial consonants and consonant combinations whose labialized counterparts occur before [w]. We shall also include [w] as a separate phoneme. The sequences consisting of CW+w, however, will be excluded, since these are combinations which occur regularly as a result of the placing of [w] after most non-labialized consonantal phonemes, both simple and compound, and are easily deduced from them. When we have excluded these sequences, we are left with 44 consonantal phonemes, the majority of which are simple, while the others are compound.

Suggested Orthography

1.137 The problem of the evolution of an orthography consists in trying to combine the greatest amount of accuracy with the least amount of expenditure of energy, time, and money, in the distinctions made and the symbols employed. Such an orthography must be phonemic, being based on broad, rather than narrow, phonetic distinctions. On this latter point, linguists are now generally agreed; and it is interesting to note that even orthographers who set to work without a conscious attempt to be phonemic, do very often to a large extent operate along phonemic lines.

1.138 In the abstract, it does not matter what symbols we use to represent phonemes, as long as such symbols are used consistently to represent the sounds for which they have been chosen. But, in the concrete, there seems to be a case for making the symbols as simple and as easy as possible of usage by reason of shape and familiarity. On these grounds, one is justified in basing one's phonemic orthography on the Roman letters solely, which may /... be
be used singly or in combination, or on these letters with
the minimum of changes and additions thereto.

1.139 Another point to be borne in mind is that phonemic
representation is enhanced by the accuracy with which it
reflects the phonetic relationships, if any, between indi-
vidual phonemes. So, for instance, if [p'] is represented
by /p/ in spelling, then [ph], the aspirated counterpart,
should be represented by /p/ plus an aspiration symbol,
and not by a completely different character such as, for
example, /q/. This makes for a more systematic repre-
sentation, because an isolable sound attribute may then,
as far as possible, be represented by the same orthographic
symbol in whatever context it may appear.

1.140 Hermann Kruger, in an observation in §1 of his
Steps to learn the Sesuto language, second edition, 1883
(first edition 1878) made the following remark: "The
Sesuto orthography which we speak of, has been fixed gra-
dually, in a mere empiric way. But, the whole Bible
having thus been printed besides a great many other books,
it will be difficult henceforth to introduce any amelio-
rations, however necessary they may appear."

It was perhaps partly due to this warning that Jacot-
tet nine years later (in 1892) made a major contribution
towards the stabilization of the S.Sotho orthography in his
Elementary Sketch of Sesuto Grammar. Jacottet, ever aware
that there is always room for improvement, never omitted
to criticize his own earlier efforts in subsequent pub-
lications where he found it necessary to do so. And in-
deed he came to dominate the S.Sotho field to such a de-
gree that the orthography at present in use in this lang-

uage is more than 99 p.c. in accordance with his suggestions.
The publications I refer to are A practical method to learn
Sesuto, Morija 1906, and A Grammar of the Sesuto Language,
\(\ldots\) Witwatersrand
Witwatersrand 1927 (actually written and completed by 1920).  
1.141 Jacottet’s 1927 orthography is itself in need of improvement in a number of respects, as we will try to show presently. The main defects in this orthography may be more conveniently spot-lighted when his symbols are placed side by side with those recommended here for adoption.

Tucker also made suggestions towards the improvement of the Sotho orthography in his *Comparative Phonetics* (1929), some of which he himself later criticized in his *Sotho-Nguni* (1949). Tucker’s 1949 suggestions will also be included in our comparative list and comments made thereon.

It has already been remarked elsewhere how closely parallel the situation is among the three members of the Sotho group as regards their vowels. This similarity, and quite often absolute identicalness, is found also among the consonants of these languages. That is why Tucker does not make separate recommendations for the various members; and that is why Cole’s suggestions for Tswana, put forward in his *Tswana Grammar*, 1955, are also included in the comparative list below. Cole has, unfortunately, recommended one set of vowel symbols (§1.30, p.18) and used another throughout his book, without saying why. One can only say that Cole has been inconsistent in this respect. Two columns of vowel symbols will therefore be included under his name, the first of which is the one he advocates, and the second the one he actually employs.

1.142 Five columns of symbols are therefore given below. The first consists of the phonetic representation of the various S.Sotho sounds; the second consists of Jacottet’s (1927) symbols (for S.Sotho); the third contains Tucker’s... (1949)
(1949) suggestions (for the whole of the Sotho group as well as for the Nguni group); the fourth contains Cole's (1955) recommendations (for Tswana); and, finally, the fifth column contains the symbols recommended here.¹

N.B. Doke and Mofokeng, Southern Sotho Grammar, 1957, made no specific recommendations, but simply used Jacottet's orthography.

1.143

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1 Although these symbols are recommended here primarily for S.Sotho, yet they are suitable for use in N.Sotho and Tswana as well, where these three dialect groups have sounds in common. In fact, I have constantly borne in mind, in working towards these recommendations, the desirability of a unified orthography for these languages.

2 Jacottet and Tucker recognized only one member in this phoneme. Their suggested symbols are, in practice, however, used also for the member which they failed to identify, viz. the higher member.
<table>
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</table>

1. This sound does not occur in Tswana.
2. and its diaphonemic variant $[R]$.
4. Tswana has no voiced glottal fricative.
5. This sound does not occur in Tswana.
<table>
<thead>
<tr>
<th>Phon. symbol</th>
<th>Jacottet</th>
<th>Tucker</th>
<th>Cole</th>
<th>Proposed</th>
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<tr>
<td>pʃ'</td>
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<td>pǝh or pʃh</td>
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<td>bj</td>
<td>ʔby</td>
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<td>fʃ</td>
<td>fǝh</td>
<td>fǝy</td>
<td>fǝ</td>
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</tbody>
</table>

The Semi-vowels:
- j
- w
- ʔ (u)
- y

### 1.144 Additional consonant combinations

In addition to the consonant combinations included among the above sounds, there are also combinations consisting of a nasal plus consisting solely of, or containing, an explosive element. These nasals are homorganic with such consonants, or with the first element of a consonant combination, as in [mpʔ], [ntʔ], [ŋtʃ ʔ], [ŋkʔ], [mpʃʔ] etc. In Jacottet's orthography, /m/ is written before all bilabial consonants, and also before combinations beginning with a bilabial consonant. In the rest of the combinations he uses /n/ to represent the first (nasal) element whether the following element be alveolar, prepalatal, or velar, thus: mp, mpʃ, nt, ntʃ, nk, etc.

Tucker makes no specific mention of nasal combinations in his orthography.

We suggest here that Jacottet's representations of these combinations be retained. We shall refer to these again in our comments on the present orthography.

### 1.145 Combinations of labialized consonant + w

As was indicated elsewhere, when a consonant or consonant combination is followed by /w/, the labialized counterpart of the consonant or consonant combination is used in place of the unlabialized one. Homorganic nasals coming before consonants and consonant combinations are also labialized by a /w/ following such a sequence. The orthographic /... representation
representation suggested here for $C^w$w is the symbol /w/ placed after the symbol for the unlabialized counterpart of the now-labialized consonant or consonant combination, as in tw, thw, tsw, fòw, tòw, pòhw, ntw, nthw, ntsw, ntsw, mpòhw, etc.

Jacottet's representation of this type of sequence is: symbol for the unlabialized consonant or consonant combination, followed by ģ. Tucker's and Cole's are the same as that recommended here.

Remarks on the various suggestions outlined above

Paroz and Doke and Mofokeng employ Jacottet's orthography without any modification. No mention of these authors will be made, therefore, in the course of our criticisms. Doke and Mofokeng have indicated their awareness of the need for reform in this respect, especially in regard to the representation of the vowels, but they have, notwithstanding, shown a disinclination to do anything about it. "... it has been felt wise, in this grammatical exposition," they say, "to continue using Jacottet's symbols differentiating each member of the [lower mid vowel] phoneme". (§14). Again, "The orthography, generally, of Southern Sotho is in need of an agreed revision; but we have not felt it to be within our province, in this grammar, to put forward any personal views in regard to this subject." (§100).

The Vowels.

As already indicated elsewhere, Jacottet has been the most influential single figure in the shaping of the S. Sotho orthography. It is a pity, however, that in so far, at least, as vowel representation is concerned, the orthography currently in use in S. Sotho does not follow him consistently. The diacritical signs advocated by him to be used with certain vowel symbols, are employed /... at
at the discretion of the individual writer, and very often the reader is confronted with an /o/ which could be read either as [ɔ - ʊ], as [ɔ - o], or as [ʊ]; or by a similarly confusing use of the letter /e/.

Jacottet’s vowel representation, even though it was not strictly phonemic, was yet an improvement on the one used before it, in the sense that it was at least consistent. The following quotation from his Grammar of the Sesuto Language (§1 obs. 1 and 2) sums up the position neatly: "Obs. 1. As the distinctions between the different e and o sounds are important, and ought to be carefully understood, we shall mark them in this grammar. Open e and o will always be written ė and ĕ; closed e and o will always be written ě and Ě, semi-closed e and o will have no special mark.

"In the present official orthography, the three different e and o sounds are not distinguished, as it is in most cases unnecessary to do so, as far at least as the Basuto themselves are concerned. Only in some cases in which two words in e and o have to be distinguished, so as to avoid misunderstanding closed o is written Ă, and open e is written ě, as lōke (river), nōke (hip), hō tēla (to pour), hō tēla (to cross)." ¹

"Obs. 2. In the dictionary closed o is written Ă, and open e is written ě. But as there are not two, but three, ² different e and o sounds, the reader is unable to know whether o represents ě (open) or Ă (semi-closed), and /... whether

¹ The effect of the representation criticised by Jacottet, is that in the orthography he is criticizing, the words he quotes would be written nōke for river and nōke for hip; tēla for pour and tēla for cross. In other words the front lower mid vowel [ɛ] and the back higher mid vowel [ɔ] or its variant [ʊ], would be marked with a diacritic whenever such a distinguishing device was felt to be necessary.

² In fact there are four of the "e-type", constituting two phonemes, and four of the "o-type", also grouped into two phonemes.
whether £ represents [ə] (closed) or [e] (semi-closed)."

In the present orthography, the practice of distinguishing between front vowels by using the grave accent ('). and between back vowels by using the horizontal stroke ("), is perpetuated. Jacottet's criticisms are therefore still valid.

1.148 The weak point in Jacottet's vowel representation is that it distinguishes between members of the lower mid vowel phonemes, writing ṣ for [ɛ] and e for [e]; and similarly ṭ for [ɔ] and o for [o]. That he was unaware of the existence of the higher members of the higher mid vowel phonemes was therefore a blessing in disguise, for it probably spared the orthography yet another unnecessary diacritical sign.

1.149 By way of a general criticism of Tucker's symbols, we may remark that he is greatly handicapped in his orthography proposals by the fact that he is trying to devise a (as far as possible) uniform orthography for Sotho and Nguni, a problem which, in my opinion, is of less importance, both immediate and ultimate, than that of a uniform orthography for the languages of a single group. We may assume that Tucker, in suggesting that diacritical signs be used around the high vowels, was actuated, among other things, by the fact that these vowels occur the least in a representative sample passage in Sotho (cf. Cole, Tswana Grammar, §1.30), so that the occasions requiring the use of these signs, if placed around these high vowels only, would be reduced to the barest minimum. A very good reason for such a suggestion. Cole recommends the vowel symbols in the first of the two columns under his name, which are identical with Tucker's, solely for this reason. After comparing frequency figures, Cole says, "Of every hundred vowels in an average Tswana passage therefore, /... approximately
approximately 22 are semi-open, while only 15 are close, i.e. the semi-open vowels occur nearly twice as frequently as the close vowels. In order to economize in the use of diacritic symbols it would be advantageous to employ them in representing the least common vowels." 

But if we concern ourselves solely with the Sotho group to begin with, then we come to the conclusion that, for various reasons, Tucker's (and Cole's) suggested symbols for the higher mid vowel phonemes are unsuitable. Seeing that we cannot entirely discount prejudice and/or conservatism as a deciding factor in the hoped-for acceptance or oft-repeated rejection of suggested orthography modifications, we may as well face it and avoid going against popular prejudices where it is not absolutely imperative to do so. And it is not imperative to do so in this case, the symbols e and o being eminently suitable for the representation of the phonemes concerned. Seeing that we have two front and two back mid vowel phonemes (the higher and the lower in each case) to find symbols for, the use of the letter e for the front phonemes and the letter o for the back phonemes, with a diacritic on each letter when it represents the one phoneme, and without a diacritic when it represents the other, seems to me to be quite adequate. Besides, these letters have been used for these phonemes ever since the S.Sotho orthography began to take its present shape at the turn of the century. It would seem, therefore, that our energies were better spent on trying to regularize and standardize the particular diacritical sign to be used on these symbols. This sign could be used either on the higher or on the lower mid phonemes. Now, the frequency ratio between the higher and lower mid phonemes (back and front taken together) is approximately 3:2. It would seem, /... therefore
therefore, that there will be fewer occasions on which to use a diacritical sign if we place these signs over the lower mid vowel phonemes. Tswana and N.Sotho already make use of the circumflex (ˆ) with certain occurrences of members of the lower mid phonemes. S.Sotho could employ this sign, not only because it is used in a similar manner in a number of languages (e.g. Afrikaans more, wereld), but also, and more important, as a positive contribution towards the attainment of a uniform orthography for the Sotho group. The letters e and a could then be left unmarked to represent the higher mid phonemes. /I/, /u/, and /a/ must obviously continue to fulfil the function allotted to them till now.

These recommendations have the advantage of regularizing the S.Sotho vowel representation, and taking the unification of the languages of the Sotho group a step further in so far as their orthographies are concerned, while at the same time introducing only a bare minimum of change to the present position as regards S.Sotho.

The Consonants.

1.150 The voiceless aspirated alveolar affricate [tšh] is represented with /tʰ/ by Jacottet, and this representation is employed in the present orthography. There is no reason why this symbolization should be retained. Indeed one fails to understand why it was introduced in the first place. The diacritical sign /ˇ/ is used in this case to indicate aspiration which is indicated in nearly all the other situations by /h/, as in /ph/, /th/, /tlh/. It is therefore recommended here that [tšh] be represented by /tšh/, thus bringing it into line with the representation of other aspirated explosives and affricates.

1.151 The release of /ˇ/ from the duty of acting as aspirating symbol in /tšh/ makes this diacritic conveniently available
available for use in a more appropriate situation. This is in the representation of the voiceless prepalatal fricative [ʃ], at present spelt /sh/ (Jacottet). We recommend that this sound be spelt /h/. The continued use of the spelling /sh/ here raises the problem of the representation of the affricates [ʃʃ'] and [ʃʃh], once /tsh/ has been accepted for [tʃh]. The point is that the spelling of [ʃʃ'] and [ʃʃh] should reflect the fact that the first of these sounds is a sequence consisting of the prepalatal phonemic variant of the T-phoneme and the prepalatal fricative [ʃ], and the second one the aspirated form of the first. The use of /h/ for [ʃ] makes this possible, and also makes for a higher degree of consistency in our employment of symbols. Tucker here recommends either /h/ or /ʃ/. /ʃ/ for S.Sothe has the disadvantage that it makes it necessary for the press to introduce a new type, and for the reading public to reorientate themselves to a completely new spelling, when in fact the former could be entirely avoided, and the second made as little noticeable as possible.

1.162 [ʃʃ'] and [ʃʃh] are logically the next group to be considered. After what has been said in favour of the use of /h/ above, and what has already been said and implied regarding [ʃʃ'] and [ʃʃh], it is realized that the most convenient and logical representations of these sounds are /tʃ/ and /tʃh/ respectively. For these sounds the present orthography employs the symbols /tʃ/ and /ʃʃ/ respectively. These representations, firstly, do not reflect the relationship between [tʃ'] and [ʃ] in the combinations [ʃʃ'] and [ʃʃh], and secondly, they do not reflect the phonetic relationship between [ʃʃ'] and [ʃʃh], namely that the latter is the aspirated counterpart of the former. Besides, the symbol /ʃ/ in the present orthography
orthography when used alone, represents the affricate [dʒ], and it were better not used as a constituent of another affricate. Tucker's recommendations here are either /tʃ/ or /tʃ/ for [tʃ], and either /tʃh/ or /tʃh/ for [tʃh]. The same objections apply to his second alternatives as to his /ʃ/ for [ʃ].

[kxh] is represented in the present orthography by /kh/. This is an unsuitable representation firstly because it is completely misleading, by which I mean that /kh/, as at present employed, is not to /k/ as /ph/ is to /p/, and /th/ is to /t/, and /tλh/ is to /tl/, and so on, and yet it gives the reader the impression that it is. Secondly, there is an aspirated form of /k/ which should have first claim on the representation /kh/, if our phonemic-phonetic alphabet is to be consistent. We recommend here the use of /kg/ to represent [kxh]. Although this is an aspirated sound, we do not recommend the employment of the aspiration symbol /h/ after /kg/ for the simple reason that there is no unaspirated counterpart to distinguish the aspirated one from. So, to be economical in our employment of symbols, we must leave out the letter /h/.

Tucker's recommendation for the representation of [kxh] is either /kgh/ or /kʃh/. Also, he suggests the use of either /g/ or /ʃ/ for the voiceless velar fricative. We have the same objections to /ʃ/ as we indicated for /ʃ/. Consequently we also reject the representation /kʃh/ for [kxh]. From this other alternative, viz. /kgh/, the h must be removed as we have already suggested.

In regard to [kh], we have already indicated that our suggestion is that this sound be represented by /kh/. Jacottet makes no provision at all for this sound. In the present orthography it is written either /k'/ or /k'h/.

... The
The use of /kh/, here recommended, completes the series /p-ph/, /t-th/, /k-kh/.

1.155 [ŋ] is represented in the present orthography by /nง/. This is a relic of the series /ɔ/ for [ɔ], /kʰ/ for [kʰ], and /nɡ/ for [ʒ] which appear in the second (1883) edition of Kruger's Steps to learn the Sesuto language, and were apparently in use before he wrote his book.

Jacottet, in his Elementary Sketch of Sesuto Grammar (1892), suggested the use of /q/ for [ç] and /qh/ for [çʰ], to bring the symbolization of these sounds into line with their representation in the Xhosa orthography; but he continued to use /nɡ/ for the nasalized counterpart. An undesirable consequence of this representation has been that many people now pronounce the sound as [ŋ] instead of [ŋ], as in [ŋalɔ] instead of [qalɔ]. This must not be understood to mean that it is undesirable for the sounds of a language to change. This they will do as long as the language is alive and in constant use. What is deplorable is that changes in pronunciation should be brought about by a faulty orthographic representation, and this must always be regarded as unfortunate. We recommend here the symbol /ŋ/, for it appears to us to be more logical to use, for this nasalized click sound, the symbol used for its non-nasalized counterpart plus a diacritic, rather than an entirely different symbol.

The use of /nŋ/, which would otherwise recommend itself, is out of the question since there exists a combination consisting of nasal and /q/, and the digraph /nŋ/ would seem to be more suitable for representing this sequence. Tucker makes no provision for the sound [ŋ] in his suggested orthography, beyond saying that "The present representation of clicks needs no attention (except in the case of South Sotho nŋ, sometimes written 'ŋ')", /... which
which does no more than imply that he suggests /nq/ for [\_\_]. If this assumption is correct, then we must again draw attention to our reasons for regarding /nq/ as not being the best representation.

1.156 The sounds [p\_f\_], [\_p[h]] and [f\_] are represented in the present orthography by /pj/, /ph/, and /fsh/ respectively. Our representation of [f\_] by /\_\_/ means that these sounds must be represented /p\_h/, /p\_h/, and /f\_h/, respectively, since they are combinations of the labials /p/, /ph/, and /f/ with /\_/.

The Representation of combinations incorporating a nasal as the first element.

1.157 As indicated above, the present orthography uses the symbol /m/ for the syllabic nasal occurring before bilabial consonants, both when they stand alone and when they occur as first elements in combination with other consonants, as in /mp/, /mp\_h/, /mp\_h/. When, however, the nasal comes before a consonant other than a bilabial, then it (the nasal) is invariably represented by /n/. This is phonetically inconsistent, because while /m/ before bilabials and /n/ before alveolars reflect that the nasal is homorganic to the following consonant, /n/ before prepalatals and velars does not reflect this assimilation.

We might draw attention, in this respect, to a parallel situation in the representation of identical combinations in English and Afrikaans: Cf. English impossible, interminable, injudicious, ink; and Afrikaans emper, centrek, aanjaeg, anker. This manner of representing the homorganic nasal in such combinations is not only widespread, but is also of long standing. Considering the dislocation that would result from an attempt to straighten /...out

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1 Occasionally one sees /ptj/ also.
out this position, we recommend here that it be condoned, especially as it does not appear to present any difficulties to authors and readers.

1.158 There is need for reform, however, in the representation of an initial nasal occurring before an identical nasal. At present, the first of these two nasals is represented by an apostrophe ('), as in 'mʊne (see him), 'nete (truth), 'nyatsa (find fault with me), 'ngolla (write to me). We recommend that /mm/, /nn/, /nnn/, and /nng/ be used in place of the present '/m/, '/n/, '/ny/, and '/ng/ respectively. An apostrophe suggests to many people that a sound has been elided, as in the case of don't, and mustn't, among others, in English. The initial nasal in Sotho is, however, not elided, and one fails to see why the appropriate letter, rather than an apostrophe, should not be used to represent it. It will be seen that, as with combinations consisting of nasal + non-nasal consonant or consonant combination, the effect of this recommendation is that /m/ will be used before the bilabial nasal, and /n/ before all other nasals (alveolar, pre-palatal, and velar) in the place of the present apostrophe. The words quoted above will then be written /mmʊne/, /nnete/, /nnnyatsa/, and /nngolla/ respectively.

The representation of Cw+w.1

1.159 When a consonant or consonant combination is followed by /w/, the labialized counterpart of the consonant, or of the consonant combination, is used instead of the unlabialized one. Homorganic nasals coming before consonants and consonant combinations are also labialized by a /w/ following such a sequence. The orthographic representation of Cw+w presents no difficulty, as the symbol /w/ placed /... after

1 See §§1.134 - 1.136 above.
after such a consonant or consonant combination is quite adequate for such representation.

1.160 It may hardly be necessary to point out at this stage that my honest desire to limit the number, and to restrict the range of employment, of diacritical signs, has resulted in only two diacritics being recommended. These are to be used consistently around the letters with which it is suggested they be used. Only two vowels, viz. æ and ã will be used with one of these diacritics, namely the circumflex, while â both singly and in combinations, and â, are used with the inverted circumflex.

The Semivowels.

1.161 Jacottet employs the vowel symbols ë and ã with an inverted circumflex (viz. /ë/ and /ã/) to represent the palatal and labio-velar semivowels respectively. Sometimes the letter /u/ is used instead of /ã/ for the sound /w/. We suggest that there is no need to overburden ë and ã with these extra duties, when the symbols /y/ and /w/ lend themselves so naturally to this usage, by reason of their being almost universally used for these, or very similar, sounds. The position is made even worse by the fact that Jacottet's recommendations are not being followed strictly in this connection, the letters ë and ã being used, without any distinctive sign, as semivowels. It must be obvious from this that the reader's powers of concentration and discrimination are taxed to the utmost in his attempt to determine whether an ñ stands for /w/ or /o/ or /ã/; or an ë for /y/ or /e/ or /ë/. For example, the sequence /ya/ (go; possessive concord of Classes 4 and 9) is written ëa. But so also is the sequence /œa/ (S.C. of Classes 4 and 9 + long form formative). The same remarks are applicable also in the case of /wa/ (fall; P.C. of Classes 1 and 3), written œa,
while the S.C.s of these classes + the long form formative are also written əə. As the voiced intervocalic [h] is elided from more and more S. Sotho words, as it often is from, e.g. [bɛ̃̃hɛ] (ortho. beha) giving [bɛə] (ortho. beea), [sɛ̃̃hɛ] (ortho. seha) giving [sɛə] (ortho. seea), and this is reflected in the orthography by the omission of the /h/, readers will soon be confronted with such pairs of spelling sequences as loa [ləa] (weave, plait) and loa [lwa] (fight); tsoa [tɔ'ɔə] (wake up) and tsoa [tsw'əa] (go out), and so on; a situation which need not arise, and which we try here to avoid. If the symbols /ɛ/ and /ɔ/ were used, as suggested by Jacottet, and used consistently, the difficulty would have been greatly reduced, if not entirely eliminated. However, I still regard /y/ and /w/ as being the most suitable symbols. Tucker also recommends /y/ and /w/ for these semivowels.
CHAPTER II
SOUND CHANGES

Changes involving Vowels

Assimilation. 1

2.1 Assimilation may be defined as the acquiring, either partially or wholly, of the characteristics of one sound by another sound.

Assimilation of mid vowels more often than not takes place in respect of height, i.e. a lower member of a mid vowel phoneme is replaced by a higher member of the same phoneme. Assimilation involving the substitution of a back vowel for a front one also occurs, though not often.

If we agree that in each of these two instances of assimilation, there is a norm and a variant -- the norms being the unraised vowel in the one case, and the front one in the other 2 -- then the implication is that a reversion to the previous vowel is not to be regarded as a sound change -- not, that is, in the same sense in which raising, for example, is a sound change. To illustrate: The [ɛ] of [rela] is replaced by [e] in [relə]. A sound change is involved, viz. change of [ɛ] to [e]. The reversal of this process, where final [l] in the second word is replaced by [a] in the first, is accompanied by the reversion [e] to [ɛ]. But this latter substitution is not here regarded as a sound change. With this clear, we can now safely make the assertion that a higher member of a mid vowel phoneme is usually not assimilated to a lower one. Also, that a back vowel is never assimilated to a front

1 Illustrations of the assimilation of vowels are given in phonetic script as it is often necessary to indicate what particular member of a phoneme either the affected vowel, or the resulting one, is. Thereafter all examples are given in phonemic script only, except where this is felt to be inadequate.

2 Cf. §1.57 above.
front one.

1. Retrogressive assimilation.

2.2 This is said to take place when a vowel assimilates another vowel occurring in a preceding syllable; in other words, when a vowel throws its influence back to a vowel that comes before it. This happens with respect to height only. In this process, the following specific changes take place:

\( \varepsilon > e \)

\( l > i \)

\( \mathcal{O} > o \)

\( O > u \)

The influencing agents are as follows:

(a) Patent (i.e. expressed) /I/ or /U/ in an immediately following syllable, causes all the above changes.

Examples:

\[ \varepsilon - e : (\varepsilon t'a \text{ (finish)} > \text{perf. } \zeta t'iile} \]

\[ k\mathcal{h}\text{theta} \text{ (choose)} > \text{perf. passive } k\mathcal{h}\text{ethuwe} \]

\[ l - i : t\varepsilon'ba \text{ (know)} > \text{causa. } t\varepsilon'\text{bisas} \]

\[ b\mathcal{t}'a \text{ (choke)} > \text{pass. } b\mathcal{t}'uwa \]

\[ \mathcal{O} - o : l\text{ora} \text{ (dream)} > \text{perf. } l\text{orile} \]

\[ b\text{ola} \text{ (rot)} > \text{noun } s\text{abdou} \text{ (rotten smell/thing)} \]

\[ O - u : b\mathcal{b}\text{ts'a} \text{ (ask)} > \text{intensive } b\mathcal{t}s'\text{isisa} \]

\[ t\mathcal{b}\text{w}a \text{ (move off)} > \text{pass. } t\mathcal{b}\text{w}uwa \]

(b) Patent /E/ or /O/ in an immediately following syllable causes two of the above changes, viz. \( \varepsilon - e \) and \( \mathcal{O} - o \)

Examples:

\[ \varepsilon - e : k\varepsilon n\text{a} \text{ (enter)} > \text{neg. } k\varepsilon'\text{en} \]

\[ k\mathcal{h}\text{theta} \text{ (choose)} > \text{reversive } k\mathcal{h}\text{etholla} \]

\[ \mathcal{O} - o : b\text{ona} \text{ (see)} > \text{neg. } b\text{on} \]

\[ k\mathcal{b}\text{ba} \text{ (bend)} > \text{reversive } k'\text{obolla} \]

These changes have been treated in detail in §§1.32 to 1.38 (both inclusive) above.
(c) Latent (i.e. unexpressed but sometimes reappearing and/or influencing neighbouring sounds) /1/ in an immediately following syllable causes two of the above changes, viz. ε - e and o - o.

Examples:
ε - e : k'ena (enter) > k'ena
o - o : bona (see) > bontsha

N.B. The latent /1/ in the locative suffix also causes the change a - e, a case of coalescence, i.e. complete ambidirectional assimilation.

e.g. theba (mountain) > thabeŋ

2.3 In the case of the raising of mid vowels, the influencing agent affects all vowels of the same height as the first affected one, throughout an unbroken series. Where a vowel of a different height from the first affected one interrupts the series of the affected height, however, no further influencing takes place after such an interruption. ¹

2.4 Retrogressive assimilation may also take place in respect of the section of the tongue raised (hereafter called "position"), and here we find that a back vowel is substituted for a front one. The vowels involved in this process are /1/ which is replaced by /u/, /e/ which is replaced by /o/, and /a/ which is replaced by /ɔ/. In the latter case only the higher members of the front and back phonemes involved are affected. Assimilation of /ɔ/ (i.e. [a]) to /a/ is also found in one or two cases. It is seen from this that, in respect of the first three changes, i.e. /1/ to /u/, /e/ to /o/, and /a/ to /ɔ/, the substituted (back) vowel has a tongue height corresponding to that front vowel which it replaces. In the... case

¹ Illustrations of this will be found in §§1.33 and 1.52.
case of /ə/ to /a/ the tongue height is obviously not the same.

Examples:

surfəha< & sirəha (stop obstructing someone's view)

cf. sirə (obstruct someone's view)

muditsw'am< muditsw'am (hunting expedition organized

in order to bring rain)

k'otəha< k'etəha (fall, of something not properly

balanced)

f/homoθa< p/hemoθa (become disjointed, slip from

grip)

N.B. Each member of the above pairs of words is still in

active use in the language.

In long passives, the passive suffixes /uwa/ and

/owa/ are derived from original */iwa/ and */owa/ respectively,

by a process of assimilation of the type described here. This change is,

as in the case of [muditsw'am],

caused by the /w/ in the syllable immediately following

the one in which the affected sound occurs. Suffix /iwa/

is no longer found in S.Sotho, /uwa/ having permanently

replaced it. The suffixes */owa/ (where still used) and

/owa/ occur only with monosyllabic stems, some of which

employ both suffixes alternately, while others use only

/owa/.

Examples:

/fiwa/ (be given) < */fiwa/, cf. Tsw. /fiwa/ or /hiwa/

/iwa/ (be gone) < */iwa/, cf. Tsw. /iwa/

/kgiwa/ (be picked, of fruit; be drawn, of water) <

--------------------------------------------------------

1 The second syllable in each of these examples employs the
higher member of the /o/ phoneme because of progressive
assimilation by the high vowel (/i/ or /u/) in the immedi-
ately preceding syllable.

2 Note here that the transitional (second) stage in the
process labial consonant → labial consonant + prepalatal
fricative → prepalatal consonant or consonant combination,
is illustrated by [pʰ] in [pʰemoθa], and the final
stage by [tʰ] in [tʰomoθa]. See §2.52 et seq. below.

3 It is still very widely used in Tswana where no assim-
ilation of /i/ has as yet taken place.
* /kgiwa/, cf. Tsw. /kgiwa/  
/tluwa/ (be come) < *tliwa/, cf. Tsw. /tliwa/  
/hapuwa/ (be captured) < *hapiwa/, cf. Tsw. /gapiwa/  
/alafiwa/ (be cured) < *alafiwa/, cf Tsw. /alafiwa/  
or /alahiwa/  
/jowa/ (be eaten) < /jews/, both still used, cf. Tsw. /jews/  
/tshowa/ (be burnt) < /tshewa/, both still used, cf. Tsw. /tshewa/  
/nowa/ (be drunked) < */nwevwa/, cf. Tsw. /nwevwa/  
/hlawa/ (be climbed) < */hlwewa/  
/lowa/ (be died) < */lwewa/  

Another occurrence of the assimilation of /l/ to /u/ and /e/ to /o/ is found in the passives of certain perfect forms of the verb. The endings affected are the passive-perfect suffixes [ilwe] which is replaced by [uwe] and [elwe] which is replaced by [owe]. These cases of assimilation are accompanied by the elision of the /l/ of the perfect suffix. The two words given in each illustration are both still in use.

Examples:
/uwe < ilwê/ (has been gone)  
/fuwê < filwê/ (has been given)  
/hapuwê < hapilwê/ (has been captured)  
/nyôruwê < nyôrilwê/ (to have become thirsty)  
/jowê < jelwê/ (has been eaten)  
/nowê < nwelwê/ (has been drunked)

2.5 It is interesting to note, in this connection, that the Sothoized form of the Nguni name Matiwane (where Nguni /l/ = Sotho /e/) is Matowane (currently spelt Matowane), showing assimilation of the type under discussion here.

Other, miscellaneous, occurrences of this process,
involving here only the vowel [e] which is replaced by [o], are:

[ne] > [no], as in

(he was burnt down)

and

[be] > [bo], as in

(I am sure you have lost the money as usual)

2.6 The influencing agents in all the above cases are /o/ and the semivowel /w/.

2.7 Cases where [e] is assimilated to [a] are illustrated by the following occurrences:

[ne] > [na], as in

(he was speaking)

and

[be] > [ba], as in

(Now where do they come from?)

2.8 This is said to take place when a vowel assimilates another vowel occurring in a following syllable; in other words, when a vowel throws its influence forward to a vowel that comes after it. This is fairly restricted in S.Sotho. An example is found in the word [busi] (night) where /i/ influences not only the [o] in the preceding syllable (retrogressive assimilation), but also the [a] in the following syllable (progressive assimilation). A comparison with the N.Sotho and Tswana forms of this word helps to clarify the position. These are N.Sotho [bofro] and Tswana [busirro], in both of which the terminal vowel is [o] (unassimilated) and not [u] as is the case in S.Sotho. The spelling of the S.Sotho word, viz. busi, shows that this assimilation is so nearly complete that one often gets the acoustic impression of /u/ instead
instead of /o/. Needless to say that such a spelling, being not in accordance with phonemic principles, ought to give way to /bosio/.

Other examples of this phenomenon are [sisiv] (a large grain basket) and [tshiv] (a day).¹

A good example of progressive assimilation is found in the Tswana expression [xak'lis'li] (I don't know) where the final vowel is pronounced almost, if not exactly, like /i/, whereas it is, in fact, the negative ending /e/, strongly attracted towards the /i/ in the immediately preceding syllable.

2.9 The ideal conditions under which progressive assimilation takes place are as follows:

(a) The high front vowel assimilates the lower member of the front higher mid vowel phoneme, and the high back vowel assimilates the lower member of the back higher mid vowel phoneme.

N.B. Cases where /i/ assimilates a following /o/ (i.e. where a front vowel assimilates a back one) do occur, however, as the examples [busiv], [sisiv], and [tshiv] show. I do not know of any cases where /u/ assimilates a following /e/, however.

(b) With regard to the influence of /i/ on following /e/, assimilation is more distinctly noticeable where there is no intervening consonant between these vowels.

Examples:
[sir] (neg. of [sia] (leave behind))
[t'ir] (neg. of [t'ia] (become firm, strong))

N.B. More often than not a semivowel intrudes itself between the two vowels. I could find no case where /u/ is followed by /o/ without an intervening consonant or /... semivowel

¹ See 1.37 above.
semivowel.

2.10 Assimilation of /e/ by preceding /1/ is found, apart from miscellaneous occurrences, in negative and habitual forms of verb stems containing /1/ in the penult, while assimilation of /o/ by preceding /u/ is found regularly in reverse forms of verbs containing /u/ in the penult.

Examples:

(i) assimilation of /e/ by /1/

[k4′iisə] neg. and habitual of [t4′isa] (bring)
[dìsi], " " " [dìsa] (to herd)
[ut4′wìsiə], " " " [ut4′wìsa] (understand)
[budìtsə], (misc.) (hair at end of horse's tail)

(ii) assimilation of /o/ by /u/

[ut⁣ulëna] (emerge, become exposed), often pronounced [ut⁣ulëna], cf. [ut⁣a] (cover, smother)
[phùthulla] (unfold), often pronounced [phùthulla], cf. [phutha] (fold, gather up)
[rut⁣ulëna] (rush forward), often pronounced [rút⁣ulëna], cf. [rút⁣a] (pull with a jerk, wrench)
[busulëna] (become loosened up, of a knot); often pronounced [busulëna], cf. [búsa] (bring back)
[k⁣ubulla] (cause to rise), often pronounced [k⁣ubulla]
[phuba] (slap), often pronounced [phubula], and also sometimes [phòbula].

[k⁣up⁣ulëla] (uncover), often pronounced [k⁣up⁣ulëla]
[rumula] (provoke, tease), often pronounced [rumula]
[k⁣umula] (root out), often pronounced [k⁣umula]
[phumula] (wipe, erase), often pronounced [phumula]
[nasumu] (rinhals), (misc.) often pronounced [nasumu]¹

(iii) assimilation of /o/ by /i/

[busi] (night, during the night)
[arsiu] (large grain basket)

¹ See §§1.34 - 1.36 (incl.) above.
The existence of [suru√a], often heard as [suru√a], with the same meaning as the last example above, provides an interesting instance of mutual assimilation. First the root vowel [i] raises the [u] in the immediately following syllable to [u], and ultimately to [u]. This [u] (or [u]) in turn influences the high front vowel [i] in respect of position, so that it is replaced by a high back vowel.  

2.11 Progressive assimilation involving the lower mid vowel phonemes (both front and back) occurs in the following situations: 

(a) The normal verb ending [e] of the Subjunctive Mood, present tense, positive, and the Imperative Mood, positive, singular, with an O.C., is replaced by [e] when the vowel in the penultimate syllable is the higher member of either of the two lower mid vowel phonemes, i.e. either [e] itself or [o].

Examples:

[k'epo], from [k'epa] (put in)
[sebets'e] from [sebets'a] (to work)
[bese] from [besa] (roast, make a fire)

It may be found that in certain cases where the vowels involved in this type of assimilation occur, as in the above examples, assimilation either does not take place, or is not easy to detect. It appears that sound change, under closely parallel conditions, may occur in one word and not in another, or be more pronounced in one word than in another. Such irregularities are known to occur in cases other than the above, for reasons which can only be psychological. In Tswana, for instance, retrogressive assimilation of the lower members of the /e/ and the /o/ phonemes respectively by the high front vowel (whether latent or patent) is sometimes so nearly complete, that the new sound influences an immediately preceding /l/ in accordance with the rule that /l/ is replaced by its phonemic variant /d/ before /i/ and /u/. Cf. [mmi'diŋ] via [mmi'l'ŋ], and [p'i'yan] via [p'i'len]; cf. Cole, Tswana Grammar, §1.13. In other cases, however, this stage is not reached, thus you get, for instance [mosep'il'ly], but never [mosep'f'il'].
(b) The normal noun ending [e] of non-personal deverbalative nouns is replaced by [o] when the vowel in the penultimate syllable is [e] or [o].

Examples:
[k'ets'o] (deed)
[tsehelets'o] (work)
[p'ontsho] (a showing, an indication)

2.12 A high vowel does not exert a raising influence upon a following lower member of a lower mid vowel phoneme. In fact it would seem that, on the contrary, the contrast between the preceding high vowel and the following lower one is emphasized, as in [bits'ë] (call), [map'uts'ë] (reward, wages), [p'its'ë] (gathering).

2.13 The influence of a high vowel in progressive assimilation does not go beyond the vowel of the immediately neighbouring syllable, unlike in retrogressive assimilation where, as seen in §2.3, the influence of the assimilating agent extends beyond the vowel of the immediately neighbouring syllable until the series is broken.

Examples:
[phuthulöha] (become unfolded) /...[rutu]loña]

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1 Doke and Mofokeng's assertion that [ë] and [e] are not assimilated when they occur in the penult, is not borne out by the facts, as the following examples show:
[fose'ts'ë] (wrong someone), [kxhage'ts'ë] (shine upon), [dik'epen] (Put them in'), [k'ets'ëpO] loc. of [k'ets'ë] (deed). It would be more correct to say that [ë] remains [ë] in the examples they cite, viz. [fose'ts'ë] and [ets'ë] because of the low vowel in the following syllable. In the examples [ets'ëlelets'ë] and [besellets'ë] which they quote presumably to show that these vowels are affected when away from the penult, the raised variety of the vowel concerned is occasioned not by its position, but by the /ts/ which follows it (cf. §1.44 above). It may be noted, on the other hand, that [ë] is retained in final position (i.e., away from the penult) in the word [fossa], Subjunctive present positive of [fossa] (err).
3. Ambidirectional assimilation, or Coalescence.

2.14 This sound change occurs in only a few words in Sotho, and often it is difficult to say whether a case of coalescence should be regarded as being historical or current (i.e. synchronic). I have selected, for my illustration of coalescence, cases where at least one of the coalescing vowels is found in its original form in certain other situations. The examples are therefore accompanied by commentaries.

Examples:

\[\text{[mɛnɔ]}\] (teeth), also often heard as \[\text{[menɔ]}\].

This is a noun of Class 6 with singular \([\text{[ɛinɔ]}]\), showing that the full stem is \([\text{[inɔ]}]\). The \([\text{[a]}\) of the Class 6 prefix \([\text{[me]}\) coalesces with initial \([\text{[i]}\) of the stem to form \([\text{[ɛ]}\). It is interesting to note how, in the alternative pronunciation of the plural form, final vowel \([\text{[ɔ]}\) causes the vowel \([\text{[ɛ]}\) in the preceding syllable to be replaced by its higher phonemic variant \([\text{[o]}\) (cf. §1.43 above). In this word, both coalescing vowels are found in their original form, \([\text{[a]}\) in \([\text{[ma]}\) and \([\text{[i]}\) in \([\text{[inɔ]}\).

\[\text{[mɛtsi]}\] (water)

Also a noun of Class 6. In this case, while prefix \([\text{[ma]}\) is current, the stem *[itsi]* is hypothetical, since it is never found as such in any situation.

\[\text{[hɛsɔ]}\] (of our village/community)

\[\text{[hɛnɔ]}\] (of your village/community)

These are locative-possessive qualificatives, with the Class 17 P.C. \([\text{[hə]}\) (current), and the stems \([\text{[isɔ]}\) and \([\text{[inɔ]}\) (both hypothetical).

\[\text{[kxhaben]}\], loc. of \([\text{[kxhaba]}\) (spoon)

Initial \([\text{[i]}\) of suffix \([\text{[in]}\), which coalesces with final \([\text{[o]}\) of \([\text{[kxhaba]}\), is hypothetical. There are numerous

... occurrences
occurrences of this combination, as it is found in prac-
tically all locatives from nouns originally ending in /a/.

[bev] (masters)

A noun of Class 2, with prefix [ba] (current). [i] of
[iv] is hypothetical.

2.15 From the examples given above, it may be concluded
that coalescence of [a] and [i] in S. Sotho results in [e],
and never in [e] in the first instance. Occurrences of
[e] in coalescence are found in accordance with the rules
enumerated in §§ 1.42 and 1.43 above. The example [męnə]
and its variant [menə] are a good illustration of this
point. The singular form of this noun has [mınə] (with
final [ə]) as its stem, and so the variant [męnə] in the
plural may be taken as the older of the two alternatives,
with final [ə] in the variant [menə] causing [e] in the
preceding syllable to be replaced by its higher phonemic
variant [e]. The final vowels [i] of [metsǐ] and [o] of
[heć] and [heńə] have the same effect, and so also has
the locative suffix [ŋ] and the [ŋ] of [bev], both of
which come from an earlier [m̩nǐ].

Elision.

2.16 This refers to the omission of a sound which can be
shown to have been there before. Vowel elision may be
either compulsory or voluntary. It occurs in the follow-
ing situations :

1. Where the allomorph /mo/ is prefixed to a stem with
initial /b/, the /o/ of /mo/ is elided.

Examples:

| mmadi    | (reader) < mobadi |
| mmatli   | (seeker) < mobatli |
| mm̩nə    | (see him) < mobnə |
| mmotsa   | (ask him) < mobotsa |

/... mmusə
Elision in these examples is voluntary except in the last two cases, where it is compulsory. In all the examples quoted, elision of /o/ of /mo/ is accompanied by a complete assimilation of /b/ to preceding /m/. This latter sound change is discussed in §2.48 below.

2. Where, in compound verbal constructions, a S.C. consisting of a vowel only, or of a semivowel plus a vowel, is preceded by a verb stem, the final vowel of the preceding verb stem is often elided, and so also is the semivowel, if any. Elision here is voluntary throughout.

Examples:
sek' ab' aštse jwalo < sekə waba raštse jwelə
(Don't ever do that)
Esek' ab' ašla < Esekə yaba yatla
(It must never come)
A k' otlə kwano < A kə otlə kwano
(Please come here)
Ontse' aphaltə jwangə < Ontse aphaltə jwangə
(How is he keeping?)
Atə am' as' k' abua < Atə amə asekə abua
(He must rather not speak)

3. The final vowel of a verb stem is sometimes elided when the stem is immediately followed by the Infinitive prefix ho.

Examples:
tliː (have come for purpose of) < tliː ho
y'ə (go for the purpose of) < yə ho

4. Sometimes where nouns in the weak classes, particularly Class 1, are followed by forms or formatives beginning either with a vowel or a semivowel, the final vowel of the noun is elided.

Examples:
Examples:

ngwan' ake < ngwena waka (my child)
ngwan' eno < either ngwana weno (your brother) or ngwana yeno (that child), depending on the tone pattern of 'eno.
moren' ake < morena waka (my king)
nts' ahao < ntsa yahao (your dog)
nts' ela < ntsa yela (or zela) (that dog over there)
matla ahao < matla ahao (his strength)
mohatl' ayana < mohatlwa yana (its tail)

N.B. Nouns in the weak classes ending in di — the element ɑ being a phonemic variant of ɪ — provide an interesting illustration of phonemic behaviour in these circumstances. For example, mosadi waka never contracts to mosad' ake, because the omission of final ɪ of mosadi brings about a phonetic context incompatible with the variant ɑ. On the other hand, mosad' ake is out of the question since there is no noun mosali [mosali]. For that reason, contraction in such an expression does not involve the final vowel of the noun, but the semivowel (i.e. part of the P.C.) immediately following, which is elided, thus : mosadi ake. With the final ɪ of mosadi and the initial ɑ of ake thus following each other, a semivowel glide involving the palatal semivowel ʒ, and often quite distinct, develops between these two vowels. Thus one often hears mosadi yaka, where the elided ʒ of waka has ultimately been replaced by ɣ. It appears, however, that it is unusual in any case to elide final ɪ no matter which consonant precedes it. When preceded by another vowel, final ɪ is never elided.

/... Examples:
Examples:
moëti waka (my visitor)
mohani yênwa (this milker)
mosëbetsi ofàdilè (the work is finished)
motsamai ofihilile (the traveller has arrived)
koloi yaka (my waggon)

There is no elision of the final vowel of the noun in any of the above examples. What may well happen in cases such as moëti waka and mosëbetsi ofàdilè is that, by positional assimilation to the following back vowel or labio-velar semivowel, preceding ́ may be replaced by a rapidly-pronounced u, giving
moëtu waka and
mosëbsasu ofàdilè,
respectively.

A phonemic behaviour similar to the one seen in the case of mosàdil in the illustration is provided by a noun the consonant of whose final syllable is labialized. For example, ntlo yêno (eno) never contracts to ntš sân, since the elision of the final vowel o of ntlo phonemic variant would demand the substitution of an unlabialized of the consonant involved for the labialized one. No contraction takes place here. What can, and often does, happen, is that the o of ntlo may be semiconsonantalized, resulting in stronger lip-rounding for ntì, giving ntlw ėno. In that case, if the form following the noun begins with a semivowel, this semivowel is elided, as in ntlw 'aka < ntlo yaka.

5. The initial vowel of the noun ěno (what) is almost invariably elided when this noun appears after another form or formative. This could be regarded as compulsory elision, because when the full form is used, there is a difference of emphasis. /... Examples:
Examples:

Obatla 'ng? < Obatla eng? (What do you want?)

Bangōla 'ng? < Bangōla eng? (What are they writing?)

6. Sometimes the vowel of the noun prefix is elided before primitive vowel-commencing stems. Elision here is compulsory.

Examples:

mōya (wind) < mo (Cl.3) + *-ōya

bōya (wool, fur) < bo (Cl.14) + *-ōya

7. The final vowel of some adverbials of place is elided before the P.C. of Class 17 (ha). Elision is not compulsory in these instances, though it habitually takes place.

Examples:

pel' a < pele ha (near to)

har' a < hare ha (in the centre of)

hodim' a < hodimo ha (on top of)

2.17 There are cases of historical elision where the elided vowel reappears in certain grammatical situations. This occasional reappearance of the elided vowel (i.e. its latency) is the only justification for the inclusion of these historical cases in this treatment.

1. Elision of e.

Examples:

lila (cry) -- e after the first l reappears in the causatives lele and lelela, and in the reflexive itela (complain). The full form lele is still also heard, but almost exclusively in poetic speech. Cf. Tswana lela and Nguni lila.

2. Elision of å.

Examples:

thêlla (slip, slide, glide) -- å after the first /... l
1 reappears in the perfect *thélētæ*, in the nouns *thélēdi* (knee-cap) and *thélēdisane* (slippery place), in the causative *thélētæ*, and in the ideophone *thélēlē*.

bolēlla (tell) -- ã between the two juxtaposed 1's reappears in the perfect *bolēlētæ*.

N.B. ã in the last example is the  ã of the applicative suffix -ēla. This ã is always elided when this suffix is suffixed to non-mono syllabic verb stems whose final syllable is 1e.

3. Elision of 0.

Examples:

stålolla (straighten, stretch) -- 0 is retained between the two juxtaposed l's in the neuter-passive form *ståloHora*, and it reappears in the perfect *stålotætæ*.

nyolla (raise, pull up) -- 0 is retained between the two l's in the neuter-passive form *nyoloHa*, and it reappears in the perfect *nyoloțae*.

Anticipation.

2.16 This term is used here to refer to situations where a vowel in a following syllable is anticipated by the speaker, so that it intrudes itself into the articulation of the vowel of the preceding syllable. In all cases of anticipation, the anticipated vowel is either any front vowel, or the low vowel ã, while the vowel in the preceding syllable is always a back vowel. Anticipation of the vowel in the following syllable amounts, in effect, to the juxtaposition of the two vowels involved, the front or low vowel being placed immediately after the back vowel.

Semiconsonantalization of the back vowel in this case is,
therefore, seen to be a necessary adjunct to anticipation.¹

**Examples:**

- lengwêle < lengêle (knee)
- lerwele < lerole (dust)
- kgwêle < kgêle (string)
- rwabala < robala (sleep)
- Quething < Qething (place-name)
- Lehlwibi < Leholbi (Hlubi person)
- lekwêle < lekêle (sod)

Both words in each illustration (i.e. with and without anticipation) are used in the language.

Cole includes under Vowel Alteration² a number of Tswana examples which are clearly cases of Vowel Anticipation as defined here. These are

- kgwêle < kgêle (string)
- lengwêle < lengêle (knee)
- kwanyana < kônyana (lamb)
- mogwagadi < mogôgadi (man's parent-in-law)

**Vowel Merging.**

2.19 This term refers to the coming closer of two or more juxtaposed identical vowels, so that they are ultimately pronounced as one (often long) vowel, instead of two or more.³ The length of the resulting secondary vowel is often determined largely by the tones of the elements which have merged. For this reason, and also depending on the number of merging vowels, secondary vowels resulting from this merging vary greatly in length. Some of the situations in which merging occurs are:

1. Indicative present positive, long form, when the S.C. is, or ends in, ə, and is followed by the formative a

¹ See §§1.14 - 1.17 above, and 2.27 below.
² In Tswana Grammar, §1.88.
³ Cf. Letele, *Tone in S.Sotho*, p.6 : "On long vowels".
of this form.

Examples:
Baaabapale (They are playing)
Aamaths (They are running)

2. Where the O.C. e of Class 5 is preceded by a S.C. containing, or consisting of, a, which includes S.C.s of the past Subjunctive in all persons and classes.

Examples:
Baba baabôna (They ultimately saw them)
Asitsa (And he called them)

Sometimes three, four, or even five e's may come one after another, and merge into one long e, with dynamic tone, as in the following examples :-

Examples:
Baaabôna (They see them)
Haaabôna (He did not see them)
Haaaapara (He is not wearing them)

3. When the O.C. e is preceded by a S.C. containing, or consisting of, e.

Examples:
Reebône (We saw it/ them)
Eebolallê (It has killed it)

4. When the O.C. e is preceded by a S.C. containing, or consisting of, a.

Examples:
Ootlisê kwano (You must bring it here)
Ooisa kae? (Where is he taking it? or What does he want with you?)

One of the most glaring inconsistencies in the current S. Sotho orthography is found in this construction, the long form formative being left out when the S.C. is, or ends in, a, and written when the S.C. is, or ends in, a vowel other than a. Some of the modern writers write the long form formative a in all cases where this form is used, which is the correct thing to do.
5. When the reflexive prefix ı is preceded by a S.C. containing ı.

Examples:

Diitšela hantše (They, for their part, are eating well)

Diikisits año (They went on their own)

ı+ı is also found in some perfects and causatives.

Examples:

sišša (has left behind)

süss (cause to leave behind)

tišša (is firm)

tišño (strengthen, make firm)

6. utu is found, inter alia, in passive forms of some verb stems.

Examples:

buuwa (be spoken)

suuwa (be tanned)

7. ə+ə is found very often as a result of the elision of h occurring in the final syllable of a non-mono-syllabic verb stem, and the substitution, for final a, of the applicative suffix -šle, or the Subjunctive Mood, present tense, positive ending ə.

Examples:

bëšša (put down for, keep for) < bëhëšša

sëšša (cut for) < sëhëšša

abəšə (he must put) < bëhë

asəšə (he must cut) < sëhë

Devoicing.

2.20 This term is used to refer to the omission of voicing in the articulation of sounds which are normally voiced.

When a low-toned syllable occurs finally in a word /... which
which stands alone, or comes at the end of a sentence or phrase, the tone of such a syllable is markedly lower than the normal low level pitch. For the sake of brevity, this subvariant of the low toneme will henceforth be referred to as the **low-minus** tone.

A vowel occurring in a final syllable whose tone is low-minus, tends to be devoiced. The position for the articulation of this vowel is taken up and maintained for the duration of the syllable, but the vowel itself is whispered. Jones and Plaatje, referring to this aspect of Tswana phonetics, say "It [i.e. the low-minus tone] often becomes a sort of very low grunt rather than a sound of definite musical pitch. An alternative pronunciation of the tone — applied to a vowel is to devocalize the vowel entirely".

In the examples provided below, lack of voicing will be indicated by a small circle under the symbol representing the devoiced sound.

**Examples:**

<table>
<thead>
<tr>
<th>lefifi</th>
<th>lerata</th>
<th>reteg</th>
</tr>
</thead>
<tbody>
<tr>
<td>(darkness)</td>
<td>(love)</td>
<td>(to love)</td>
</tr>
</tbody>
</table>

This devoicing of the final vowel in turn causes a devoicing of an immediately preceding voiced consonant or consonant combination in the same syllable. The restoration of voicing to a devoiced final vowel, as when the tone of the syllable in which it occurs is raised from low-minus to a higher level, causes an automatic restoration of voicing to an inherently voiced preceding consonant or consonant combination.

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\[\ldots\] **Examples:**

---

2 In *A Sechuana Reader*, parts of §§65 and 66.
Examples:
ditedu (beard), but cf. ditedusaka (my beard)
bohobgo (bread), but cf. bohobebaka (my bread)

2.21 When devoicing takes place, and the devoiced vowel is whispered, the resulting ħ-sound (i.e. the whisper), is accompanied by the quality of this vowel. Front vowels give a palatal colouring to, and back vowels tend to labialize, this ħ. The degree to which this ħ is affected by these vowels differs, of course, with the height of the vowel, being greatest where the devoiced vowel is a high one, and least where it is of the lower mid variety.

2.22 Where a semivowel constitutes the first element in the syllable whose vowel is affected, the semivowel is also devoiced.

Examples:
tsamaya (walk, travel)
bore awo (so that he may fall)

2.23 Where the final vowel by itself constitutes a syllable (in which case it is immediately preceded by the vowel of the preceding syllable), devoicing of this final vowel does not extend to the vowel immediately preceding it.

Examples:
baga (put)
pug (language, talk)

2.24 As has already been indicated, the devoicing of a final vowel cancels the voicing of an immediately preceding voiced consonant or consonant combination in the same syllable. At the same time it gives to these sounds, and also to an originally voiceless consonant in this syllable, a comparatively slight, yet distinctly /... perceptible
perceptible, aspiration,\(^1\) so that it ultimately reduces to the barest minimum such differences within the explosive series as are caused by voicing, ejection, and aspiration. For example, \(\text{p}, \text{ph}\), and devoiced \(\text{b}\) in a final syllable with low-minus tone, tend to be very similar, except that the aspiration of \(\text{ph}\), being deliberate and achieved by expulsion of air from the lungs, is stronger than that of the other two. This may be illustrated as follows:—

\[\text{[p']} > \text{[p'h]}\text{ or }\text{[ph]}\text{\(^2\)}
\]

\[\text{[b]} > \text{[ph]}\]

\text{[ph] remains [ph].}

2.26 Following are additional examples in which pairs of words are given, one with final low-minus tone accompanied by devoicing, and the other with final tone higher than low-minus (in that order), for purposes of comparison.

**Examples:**

- \text{mohapi} (captor, ravisher) cf. \text{mabapi} (opposite)
- \text{bogeq} (mould, create) cf. \text{serapa} (plot, area)
- \text{ruteq} (teach) cf. \text{lerata} (noise)
- \text{lebaké} (reason) cf. \text{noke} (river)
- \text{ditëdu} (beard) cf. \text{sebëdu} (rotten smell)
- \text{mobodî} (reader) cf. \text{madi} (blood)
- \text{molômo} (mouth) cf. \text{kgômo} (head of cattle)
- \text{kganyâ} (shine) cf. \text{kganyà} (light, glory)
- \text{selothô} (riddle) cf. \text{sethô} (limb, member)

Tucker makes only a passing reference to devoicing in

**Comparative Phonetics, §252.** Other treatises on Sotho phonetics

\(^1\) which is, however, weaker than normal aspiration as it is effected through the agency of the air already in the mouth-cavity at the time of the articulation of the consonant, not reinforced by additional air from the lungs.

\(^2\) Ejection is sometimes retained and sometimes omitted.
phonetics make no reference to devoicing.

Latency.

2.26 Sounds which are omitted in most situations through compulsory elision, but which, in given circumstances, either reappear or influence other sounds, are said to be latent.

Examples of the latency of vowels are found mainly in verb stems in which two l's have become juxtaposed as a result of the elision of an intervening vowel. This vowel reappears in certain grammatical situations.

Examples:

letsa (play musical instrument)
ledissa (cause to cry)

both from lla (cry), cf. Tsw. lela, Ng. lila
thélëtse (has/have slipped)
thélëtssa (cause to slip)

both from thëlla (slip)
ngålëtse (has/have written) from ngálëba (write to etc)
bolélëtse (has/have told) from bolëlla (tell)
ôtlolotse (has/have stretched out) from ôtlolëla (stretch out)
nyoletse (has/have pulled up or raised) from nyalla (pull up, raise)

Semiconsonantalization.

2.27 This term refers to the losing of syllabicity by a front or back vowel, so that it constitutes one syllable with the following vowel. This occurs

(a) where the front or back vowel involved (usually a mid vowel) is followed by a lower (i.e. more open) vowel than itself. The greater the interval between the closed and the open vowels, the more pronounced the

---

1 See §1.14 et seq. above.
semiconsonantal qualities of the first vowel. Typical occurrences of this process are found, inter alia, in past S.C.s, in P.C.s, and in demonstrative concords of those weak classes whose basic concord is a mid vowel, as follows:

<table>
<thead>
<tr>
<th>Class</th>
<th>past S.C.</th>
<th>P.C.</th>
<th>D.C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>wa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>wa</td>
<td>wa</td>
<td>w</td>
</tr>
<tr>
<td>4</td>
<td>ya</td>
<td>ya</td>
<td>y</td>
</tr>
<tr>
<td>9</td>
<td>ya</td>
<td>ya</td>
<td>y</td>
</tr>
</tbody>
</table>

Cf. the basic concords of these classes, viz. ə, ɔ, e, and o, respectively.

N.B. Class 1 is irregular in that its past S.C. is a (not we), and its D.C. is y (not w). Compare also its A.P. which is wəna as against wəna of Class 3.

(b) when a back vowel is followed by a front vowel (and sometimes vice-versa), as in vowel anticipation as seen in §8.18 above.

Examples:
lerwele < lerole (dust) (we < o+e)
lengwəle < lengəle (knee) (wa < ə+ə)

From the above, it is seen that the palatal semivowel ŋ is derived from a front vowel, while the labiovelar semivowel w is derived from a back vowel.

Vowel additions and substitutions due to causes other than phonetic ones.

Epenthesis.

2.28 The vowel /ə/ is sometimes prefixed to monosyllabic verb stems in the Imperative Mood positive singular without O.C.s, the positive of the participial modality of the Indicative Mood, and the positive of the past tense of the Subjunctive Mood. In the case of the participial
modality and the past Subjunctive, the vowel of the S.C. preceding the monosyllabic stem is sometimes lengthened in preference to the prefixing of the epenthetic e to the stem. In the case of Imperatives, the vowel of the verb stem is sometimes lengthened in preference to the prefixing of the epenthetic e.

Gradation or Ablaut.

2.39 This refers to cases where vowel substitutions within the same form take place for grammatical reasons. Following are the changes and the situations in which they take place:

(a) Substitution of /e/ for final /a/ of the verb stem takes place in the formation of the Subjunctive Mood present tense positive, and the Imperative positive with an O.C.

Examples:

abuè (he must speak) cf. bua
Dibalè (Count them) cf. bala

(b) Substitution of /e/ for final /a/ of the verb stem takes place in the negative conjugation of certain tenses, and also in the habitual tense.

Examples:

Habue (He is not speaking) cf. bua
Se$tse jwalè (Don't do that) cf. ët$a
Bayè batle (They come as a rule) cf. tla

(c) Substitution of /i/ for final /a/ of the verb stem takes place in the formation of nouns-agent from verb stems.

Examples:

moruti (teacher) cf. ruta
setsomi (hunter) cf. tsome

1 Whether the higher or lower member of this phoneme is used, depends on the rules outlined above (§§1.38 et seq.)
(d) Substitution of /ɔ/ for final /a/ of the verb stem takes place in the formation of non-personal nouns from verb stems.

Examples:
- tsebô (knowledge) cf. tseba
- mongô (writing) cf. ngôia

**Changes involving Consonants**

**Strengthening.**

2.30 This is a blanket term used to cover a number of specific sound changes. The sounds which are liable to strengthening, and the sounds resulting from this process, are as follows:

- \( b \rightarrow p \)
- \( f \rightarrow ph \)
- \( l \rightarrow t \)
- \( d^2 \rightarrow t \)
- \( r \rightarrow th \)
- \( s \rightarrow tsh \)
- \( hl \rightarrow tlh \)
- \( j \rightarrow t\ddot{s} \)
- \( \ddot{s} \rightarrow t\ddot{s}h \)
- \( *[g]^3 \rightarrow k \) or vowel and semivowel \( w \) have \( k \) placed before them
- \( h \rightarrow kg \)
- \( g \rightarrow kg \)

N.B. This list shows that there is no major change of organic position in the derivation of strengthened forms.

2.31 From this list, it is seen that

(a) voiced explosives and fricatives become voiceless /... (ejective)/

---

1 Whether the higher or the lower member of this phoneme is used depends on the rules outlined in §1.38 et seq above.
2 Phonetic variant of 1.
(ejective) explosives, i.e.
\[ b \rightarrow p; \quad d \rightarrow t; \quad *[g] \rightarrow k \]
(b) voiceless fricatives become aspirated explosives and affricates, i.e.
\[ f \rightarrow ph; \quad s \rightarrow tsh; \quad s \rightarrow tsh; \quad h \rightarrow th; \quad h \text{ and } g \rightarrow kg \]
(c) the voiced alveolar trill becomes a voiceless aspirated alveolar explosive, i.e.
\[ r \rightarrow th \]
(d) the voiced prepalatal affricate or (diaphonemically) the voiced prepalatal fricative, becomes a voiceless (ejective) prepalatal affricate, i.e.
\[ j \rightarrow th \]
(e) the voiced frictionless alveolar consonant becomes a voiceless (ejective) alveolar explosive, i.e.
\[ l \rightarrow t \]

2.32 One characteristic which is seen to be common to all the derived sounds in this process is that they all consist solely of, or at least contain, an explosive element. So that no matter to which auditory type the unstrengthened sound belongs, it is always replaced by wholly or partially explosive types. Another common characteristic is that all the derived sounds are voiceless, whether the original sounds are voiced or voiceless. Thirdly, we find that original voiceless fricatives are all replaced by aspirated affricates.

2.33 From this we may conclude that the two really important sound changes involved here are DEVOICING and ASPIRATION. And when we have dealt fully with aspiration and its significance here, it will be found that this process itself is merely contributory towards the achievement of devoicing.

2.34 The terms devoicing and aspiration, as used here need to be qualified. With regard to devoicing:
This term is used here mostly to refer, not to the loss of voicing on the part of the sound affected, as in the devoicing of vowels above, but rather to the substitution, for that sound, of a voiceless consonant. Only in connection with the changes b to p, d to t, and j to tʃ, can we strictly speak of devoicing, since the derived consonant is, in each of these cases, the voiceless counterpart of the original one. Even in such cases, however, it would perhaps be more to the point to say that the voiced consonant is replaced by its voiceless counterpart, rather than that it is devoiced. But in the changes involved in l to l̩, j to tʃ, b to kp, etc., the term devoicing is seen to be truly arbitrary. And it is still more so where the original sounds are themselves voiceless, as where voiceless fricatives are replaced by voiceless aspirated affricates. It is, in these cases more than in the previous ones, more appropriate to speak of substitution of the voiceless sounds for the original ones, because the new sounds belong to a different auditory class from the ones they replace. The term Devoicing is used here to cover all these cases.

2.36 Aspiration is also used in a special sense. This process occurs mainly where the original sound is a voiceless fricative. But now, in S.Sotho, only consonants and consonant combinations consisting of, or containing, an explosive element may be articulated with aspiration. What happens, therefore, is not that originally unaspirated sounds acquire aspiration, but rather that the first-mentioned are replaced by sounds of a different auditory type accompanied by aspiration. It is, once again, a question of substitution. Here also, the term aspiration is used to cover all the cases mentioned.

N.B. When the terms devoicing and aspiration are used in... other
other contexts in this work, they must be understood to refer purely to the devoicing and aspiration of the original sound, unless the contrary is specifically stated, as is done here.

2.36 The *explosivization* which takes place in strengthening, is necessary only for the achievement of the two changes mentioned above, as we will try to show presently. The important thing to note here is that the devoicing of voiced sounds and the aspiration of voiceless ones are merely two stages in the same process.

Van Eeden (*Inleiding*, p.69) makes the observation that a voiceless *aspirated* explosive is even "more voiceless" than an unaspirated one. While it may seem absurd to speak of the "devoicing" of a voiceless sound, van Eeden's observation is yet far from being as absurd as it might thus superficially appear to be. And I agree with him, with one reservation, namely that the "devoicing" of voiceless sounds is subjective rather than objective. It would seem that the whisper following the explosion in aspirated explosives has a lot to do with this "feeling" of greater voicelessness.

Once this point is conceded, it is clear that the affrication and/or explosivization of ə to təh, ɨ to təh, h, and ɡ to ɡɡ, ɡl to tɡh, and f to ph, is also but a step in the same direction. In other words, as fricative sounds are, in S.Sotho, never aspirated, related sounds containing an explosive element are substituted for them, accompanied by aspiration.

N.B. From the list of sounds affected by strengthening and the sounds derived from them, it is seen that r and h, which are voiced, are taken to the second (subjective) degree of devoicing, i.e. they are replaced by voiceless *aspirated* explosives or explosive-containing sounds.
This is unlike other voiced sounds which are replaced by voiceless ejective sounds.

2.37 Schematically, this process may be represented as follows:

<table>
<thead>
<tr>
<th>Voiced</th>
<th>Voiceless (objectively dev'd)</th>
<th>Aspirated (subjectively dev'd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>b</td>
<td>p</td>
<td></td>
</tr>
<tr>
<td>l and d</td>
<td>t</td>
<td></td>
</tr>
<tr>
<td>*[g]</td>
<td>k</td>
<td></td>
</tr>
<tr>
<td>j</td>
<td>tš</td>
<td></td>
</tr>
<tr>
<td>r</td>
<td>th</td>
<td></td>
</tr>
<tr>
<td>h</td>
<td>kg</td>
<td></td>
</tr>
<tr>
<td>f</td>
<td>ph</td>
<td></td>
</tr>
<tr>
<td>s</td>
<td>tšh</td>
<td></td>
</tr>
<tr>
<td>š</td>
<td>tšh</td>
<td></td>
</tr>
<tr>
<td>hl</td>
<td>th</td>
<td></td>
</tr>
<tr>
<td>g</td>
<td>kg</td>
<td></td>
</tr>
</tbody>
</table>

2.38 This manner of approaching the process of strengthening is found to be more satisfactory than most, as it spotlights the main trend without clattering up the description with unimportant detail. For one thing, S.Sotho voiceless unaspirated explosives and affricates are normally ejective, and so it is redundant to refer to ejection as one of the specific processes involved in strengthening of sounds which are replaced by voiceless unaspirated explosives and affricates. Secondly, once the reason for replacing some non-affricative consonants with affricative ones is established, then affrication in this context is seen to be bound up with plosivization which in turn is simply a prerequisite which facilitates the major process of aspiration or subjective development.

2.39 Strengthening occurs in the following grammatical situations: -

/... (a)
(a) In the formation of Class 9 nouns from verb stems.

**Examples:**
- *pitsa* (gathering) < *bitsa* (call)
- *taeloa* (order) < *laela* (instruct, order)
- *thata* (will) < *rata* (love)
- *tshanola* (revelation) < *senaola* (reveal)

(b) When the O.C. of the 1st pers. singular is prefixed to verb stems.

**Examples:**
- *mpatsa* (want me) < *batla* (want)
- *mpba* (give me) < *fa* (give)
- *ntshaba* (look at me) < *baba* (look)
- *nkgopola* (remember me) < *hopola* (remember)

(c) When the reflexive prefix is prefixed to verb stems.

**Examples:**
- *itlhaha* (stab oneself) < *hlaba* (stab)
- *ikutlwana* (hear oneself) < *utlwa* (hear)
- *ithata* (love oneself) < *rata* (love)
- *ipotsa* (ask oneself) < *botsa* (ask)

(d) When the adjectival prefixes of Classes 8, 9, and 10, are prefixed to strong adjectival stems.

**Examples:**
- *padi* (two) < *badi*
- *tharo* (three) < *raro*
- *tshweu* (white) < *swelu*
- *tshela* (long, tall) < *lelela*

2.40 Before leaving the question of strengthening, we may observe that there is a growing tendency among present-day Sotho speakers to omit strengthening when using the O.C. of the 1st pers. singular with verb stems whose initial sounds are normally subject to this change. So that, with the possible exception of /b/, the original /... sounds
sounds remain unchanged after this concord. When this happens, then the alveolar nasal which constitutes this O.C. has to adapt itself, in some cases, to new phonetic surroundings. For instance, before ꞉ we find a denti-
labial nasal, narrowly transcribed [ŋ], e.g. [ŋfə] (give me). Again we find that the velar nasal [ŋ], which is then used before vowel-commencing stems, has syllabic value even in this context, whereas the normal thing is that any nasal is non-syllabic before a vowel in the same word, and syllabic only before a homorganic consonant.
In the absence of strengthening, the velar nasal is used also before stems commencing with ꞉, as in [ŋfətə] etc.
In all the other grammatical situations requiring strengthening, this process always takes place.

**Assimilation.**

2.41 Like strengthening, assimilation is a blanket term covering a number of specific changes.

Assimilation may take place retrogressively, where the influencing sound throws its influence back to a preceding sound; or progressively, where the influencing sound throws its influence forward to a following sound.

It may also take place in both directions, where the two sounds involved influence each other.

The various sound changes which take place in the assimilation of consonants are labialization, prepalatal-
ization, velarization, and nasalization. It will be found that two kinds of labialization are distinguished and treated separately below. In the one kind, the change involved is one in which a sound which was not before articulated at the lips, is, owing to this change, articulated at the lips. In the other kind, the basic...

\[ \text{or} \]

\[ \text{1 For definition see §2.1 above.} \]
or primary place of articulation is not changed, but rather labial qualities, in the form of lip-rounding, are imparted to the original sound. This is not partial labialization, it is complete labialization of a different order from the first one, for here a contributory articulation is added to the basic or primary one, but does not replace it.

1. Retrogressive assimilation.

(a) Labialization.

This affects the alveolar nasal \( n \)\(^1 \) which is replaced by the bilabial nasal \( m \) when it occurs before bilabial consonants, thus:

\[ n + \text{bilabial consonant} > m + \text{bilabial consonant} \]

Examples:

- \( mp \), as in \( mp\tilde{a}na \) (see me) and \( mpa \) (belly)
- \( mph \), as in \( mpha \) (give me) and \( mph\tilde{o} \) (gift)
- \( mm \), as in \( mmakatsa \) (surprise me)

2. Labialization by following \( w \).

When a consonant other than a labial consonant is immediately followed by the labio-velar semivowel \( w \), the latter imparts labial characteristics, in the form of lip-rounding, to the preceding consonant. Consonant combinations are also labialized in the same manner by a following \( w \).\(^2 \)

Examples:

- \( tw \), as in \( ratwa \) (be loved) cf. \( rata \)
- \( kw \), as in \( r\tilde{a}kwa \) (be praised) cf. \( r\tilde{o}ka \)

---

1\ This nasal, which is found as the prefix of Class 9 and as the O.C. of the first person singular, is regarded here as a specific type of nasal, viz. the alveolar nasal \( n \), and not as an abstract nasal (usually represented by \( \tilde{n} \)) which assumes a concrete form only when used in a given phonetic context. The reason for this point of view is that this nasal is descended from a \( n \) whose \( e \) has been permanently dropped. But the dropping of the \( e \) of this \( n \) is no reason why the nasal should be regarded as having assumed an abstract form.

2\ Cf. §§1.134 - 1.136 above.
lw, as in alwa (be spread) cf. ala
jw, as in jwala (beer) cf. jala (sow)
ntw, as in ntwa (a fight) cf. nta (louse)
ntlw, as in ntlwēdisa (peep at me) cf. ntlha
(point)

When w follows a consonant or consonant combination, as in the above illustrations, the lips are fully rounded for the w before the other articulating organs take up the position/s for the articulation of the preceding consonant or consonant combination. In other words, there is anticipation of the w-element very much like the anticipation of vowels which was observed in §2.15 above.  

2.43 Tucker, who calls this phenomenon back-labialization to distinguish it from front-labialization as described by him for N.Sotho,1 says (Comparative Phonetics, §209): "There is no doubt that this labialization is descended from an historical epenthetic o or u, which once had the value of a syllable and doubtless a tone value as well. This syllable is now lost, and even the semivowel w (as is heard in English or in the genitive particle ọa) is no longer heard; all that remains is the labialized preceding consonant or consonant combination, and it is the simultaneous unrounding of the lips and breaking of the consonantal closure that has given investigators the impression of consonant + w or unsyllabic ọ." (my own italics). In the preceding paragraph, after suggesting the use of the digraph consonant + w, instead of new symbols, for the labialized consonants, he says: "It is, however, to be understood that each digraph represents a single sound of double articulation, not a sequence of sounds ending in w".  

1 See Comparative Phonetics, §§212 et seq.
2.44 My own standpoint here is that the w-element precedes, persists through, and follows the articulation of the labialized consonant. Before the consonant there is a silent w, while after the consonant there is an audible w. What clouds the issue here is the rounding of the lips before the commencement of the articulation of the consonant, resulting in a labialized consonant. The difference between this and a similar sequence in English would appear to consist almost solely of this anticipation of the w-element in Sotho, which does not happen in English. Otherwise I wish to strongly suggest that the interval between the consonant and the following w is about the same in both cases, and thus long enough in Sotho for the sequence to be regarded as a combination.

2.45 This observation leads us to the following conclusion:

The element w, when occurring immediately after a consonant or consonant combination, is anticipated in the articulation of this sequence, imparting labial characteristics, in the form of lip-rounding, to this consonant or consonant combination, and itself persisting after the articulation of such consonant or consonant combination, and being released by the movement of the lips towards the position for the following vowel. This means that where w occurs after a consonant, we have, contrary to the opinion of Tucker and others, a sequence of two sounds, viz. a labialized consonant or consonant combination + w. I say two sounds, not three, because I think we can safely leave out of consideration the silent w immediately before the articulation of the consonant as being merely anticipatory, and, more important, not fully articulated until the lips begin to change their position in the direction of the following vowel.

We may take, as an example, the sentence Bealwane... They
(They are fighting). In a narrow phonetic transcription this could be written something like [ba:lwana], so that if the speaker should stop just short of articulating [lw], the acoustic impression of what he does pronounce would be [ba:wan].

2.46 Lexical distinctions between sequences where the only difference is that a given consonant is followed by \( \text{w} \) in the one case, and not followed by \( \text{w} \) in the other, are achieved solely by means of this difference. In other words, there is no labialized consonantal phoneme as distinct from an unlabialized one. What does obtain is that the labialized phonemic variant of a given non-labial consonant, plus the labio-velar semivowel \( \text{w} \), together constitute a compound phoneme which is contrastive to the phoneme represented by the non-labialized consonant standing alone.

**Examples:**
- rwale (carry on head) and rale (cut open a carcass)
- ntwa (a fight) and nte (louse)
- kgwa (spit) and kga (draw, scoop)
- nwa (drink) and na (to rain)
- hlwa (climb) and hla (do actually)
- hwa (congeal) and hama (to milk)

2.47 There are cases where the use of the one or the other of these two phonemes results, not in a difference of basic meaning, but rather in a grammatical distinction, as in the formation of the short passive of verbs, and some cases of the formation of diminutives of nouns and adjectives by means of the suffix \( \text{ana} \).

**Examples:**
- ratwa (be loved) passive of rata (love)
- ôtlwa (be hit) " Ôtlia (hit)
- leotwana (little foot) dim. of leoto

/... tehwana
tshwana (black) dim.-fem. of tsho

2.48 (b) Prepalatalization.

Here n + prepalatal consonant > ny (spelt n) + prepalatal consonant.

Examples:

ntša, as in ntša (dog) and ntšera (carry me)

ntš, as in njera (carry me) and njwētša (tell me)

nā, as in nāapa (chastise me) and nāeba (look at me)

Other cases of assimilation achieved through prepalatalization are:

l > ŋ

n > ny

ng > ny

t > tš

th > tšh

These changes take place when the diminutive suffix ena is suffixed to a final syllable containing l, n, ŋ, and th, followed by a front vowel, or to a final syllable consisting of ng. What probably happens is that the front vowel is semiconsonantalized to ŋ by the immediately following ŋ of ena, and the preceding consonant adjusts itself accordingly. In the case of the syllable ng, the likelihood is that the historical (latent) Ą in the now-obsolete original form eni comes into action in this formation, bringing ng into line with n followed by a front vowel.

Examples:

l > ŋ: bohale (anger) > bohajana

Notes:

1 When strengthening is not observed.

2 Endemann's i-range vowel. See his Palatalisering en Labialisering in Sepedi, which is very informative in this connection.

3 Ą, the phonemic variant of Ą, changes to te in these circumstances, e.g. tutudu (heap) > tututswana; nakēdì (pole-cat) > nakētšana.
mabēle (sorghum) > mabējana
n > ny : mošemanë (boy) > mošemananyane
nemane (calf) > namanyane
ng > ny : lenōng (valtare) > lenōnyane
monwang (mosquito) > monwaynyane

2.49 (c) Velarization.

Here n + velar consonant > ng (spelt n) + velar consonant; n + vowel > ng + vowel; ² n + glottal fricative > ng + glottal fricative. ²

Examples:
nk, as in nkō (nose) and nkarabā (answer me)

n(g)+vowel, as in n(g)šīla (strike me)

n(g)šarabā (answer me)

n(g)+h, as in n(g)hopole (remember me)

n(g)shušela (pity me)

2.50 When w immediately follows n, it (the w) imparts velar characteristics to the n, changing it to ng. In like manner, the prepalatal nasal ny is changed to ngng (spelt ngng) by a following w. ³

1 This change normally takes place when t is followed by a front vowel in the original word, but there are a few cases where t becomes tš in spite of the fact that it is followed by either a back vowel or a, e.g. kōša (club) > kōšane; nkōtu (type of frog) > nkōtšane; lebēta (wall) > lebotšana (also lebotana). These cases of prepalatalization cannot, like the others, be described as assimilation. They are possibly cases of analogy with those in which a front vowel is found in the final syllable of the original word.

2 When strengthening is not observed.

3 The change w to ng, as well as the prepalatalization of b to j, p to tš, ph to tēh, and f to š, occurred by the use of w after the original sounds, have up to now either been described in isolation, or, when a common tendency has been recognized, solely as cases of dissimilation.
Examples:

ngw, as in longwa (be bitten) \(\rightarrow\) lomwa \(\rightarrow\) loma

nungw, as in senngwa (be spoilt) \(\rightarrow\) senywa \(\rightarrow\) senya

It must be noted that the new sounds resulting from the influence of \(w\) in the above cases, are themselves affected by this \(w\) which labializes them, i.e. causes them to be pronounced with lip-rounding.

2. Progressive assimilation.

2.61 (a) Nasalization.

Here \(b\) becomes \(m\), and \(l\) becomes either \(m\) or \(n\).

\[ b \rightarrow m \] This change takes place when the allomorph \(mo\) is prefixed to a stem commencing with the consonant \(b\). The \(g\) of \(mo\) is elided, and the initial \(b\) of the stem is completely assimilated to the \(m\). In other words, the sequence \(mob\) becomes \(mm\).

Examples:

\[
\begin{align*}
m\text{mad}i \text{ (reader)} & \rightarrow \text{mobadi} \\
m\text{m} \text{atli} \text{ (carpenter)} & \rightarrow \text{mobatli} \\
m\text{mus} \text{O} \text{ (government)} & \rightarrow \text{mobus} \text{O} \\
m\text{mo} \text{na} \text{ (see him)} & \rightarrow \text{mobona} \\
m\text{matla} \text{ (seek him)} & \rightarrow \text{mobatla}
\end{align*}
\]

As these examples show, the sequence \(mob\) is found regularly in the formation of nouns of Classes 1 and 3 from verb stems beginning with \(b\), and also when the O.C. \(mo\) of the third

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on the grounds that the original labial sound loses its labial characteristics, and therefore its similarity to the following semivowel. But this is obviously not the whole story in the case of the change \(m\) to \(ng\). This change is as much assimilation as it is dissimilation. This seeming contradiction is easily resolved when we consider the dual nature of the semivowel \(w\) which has both labial and velar characteristics in one and the same articulation. I agree, though, that dissimilation is the primary one of the two processes, because, if the reverse were the case, then there would be no reason why only labial consonants are assimilated, and not others as well. For this reason, I treat only the change \(m\) to \(ng\) under both assimilation and dissimilation. The rest of the changes I deal with under dissimilation only.
person Class 1 is prefixed to a verb stem beginning with b. In both these cases, assimilation of b to m (and also the elision of a) is not compulsory, both the form without, and that with, assimilation, being used.

(ii) l > m or n: This change takes place in some perfects of verb stems. The l of the perfect suffix ile is assimilated to a preceding m or n. In other words the sequences mil and nil become mm and nn respectively, the process of assimilation being accompanied by the elision of the vowel i:

Examples:

| mm < mil : hannè (has/have milked) < hamilè |
| lomè (has/have bitten) < lomilè |
| nn < nil : hannè (has/have refused) < *hanilè |
| kgonè (has/have been able) < *kgonilè |

As the above examples show, where the nasal assimilating the l of the perfect suffix is m, the forms without assimilation are also still used. But where the assimilating nasal is n, the forms without assimilation are, except for a few exceptional cases, no longer found.

Dissimilation.

2.52 This term is used to refer to the diminution of similarity, or the entire elimination thereof, between two similar or identical sounds. In S.Sotho, dissimilation occurs when a labial consonant is followed by the labio-velar semivowel w. Like strengthening and assimilation, dissimilation is a blanket term covering a number of specific sound changes.

The semivowel w often gives rise to two distinct sound changes when placed after one and the same sound, depending on whether it (i.e. w) is of passive or diminutive significance. So, for instance, ph+w in passive formation becomes tēh+w, whereas ph+w in diminutive formation /... becomes
becomes tsh+w. With some sounds, however, there is only one type of change in both passive and diminutive forms, as in b+w > j+w, and m+w > ng+w. It seems advisable, therefore, to treat the two grammatical forms separately from each other, and compare the results. Before doing so, however, we list the types of sound changes which are found in both of these situations.

1. **Alveolarization**, i.e. the substitution of an alveolar sound for a non-alveolar one. Here we find that --

   \[ p + w > ts + w \]
   \[ ph + w > tsh + w \]
   \[ f(followed by \text{i}) + w > tsh + w \]

2. **Prepalatalization**, i.e. the substitution of a prepalatal sound for a non-prepalatal one. Here we find that --

   \[ b + w > j + w^1 \]
   \[ f + w > ð (via \text{fð} which is obsolescent) + w \]
   \[ p + w > tð (via \text{pð} which is going out, but is still more commonly used than tð) + w \]
   \[ ph + w > tðh (via \text{pðh} which is going out, but is still more commonly used than tðh) + w \]

N.B. It is seen from these cases of prepalatalization that all explosive consonants are replaced, in the final stage, by prepalatal affricates: voiced explosives are replaced by voiced affricates, voiceless ejective explosives by voiceless ejective affricates, and voiceless aspirated explosives by voiceless aspirated affricates. The voiceless dentilabial fricative is, in the final stage, replaced by the voiceless prepalatal fricative.

3. **Velarization**, i.e. the substitution of a velar sound for...

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\[^1\] In diminutive formation, the w-element is sometimes not found either with the original sound b, or the derived one j. But see §2.56 n.1.
for a non-velar one. There is only one sound change involved here, viz.

\[ m + w > ng + w \]

**Changes occurring in the formation of the short passive.**

2.63 The infix \( w \) of the short passive is placed immediately after the consonant or consonant combination in the final syllable of the verb stem. Only prepalatalization and velarization are caused by this \( w \), but no alveolarization.

2.64 **Prepalatalization.**

\[ b > j, \text{ as in } r\text{oba (break, trans.)} > r\text{jwa (be broken)} \]
\[ f > ë, \text{ as in } l\text{efe (pay)} > l\text{etwa (also } l\text{efwē\text{a}) (be paid)} \]
\[ p > t\text{s, as in } h\text{apa (capture)} > h\text{atwa (also } h\text{spēwā)} \]

(3) **Velarization.**

\[ ph > t\text{s}h, \text{ as in } h\text{lōnephē (respect)} > h\text{lōnētēwē (also } h\text{lōnēpēwē) (be respected)} \]

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1 This refers, obviously, only to cases where the syllable concerned contains a consonant or consonant combination.

2 Khaketla, Sebopeho §54 n.1 says, inter alia, "Among the new generation there is a large proportion, which is growing larger every year, who change the final sound ph to ch (i.e. /tē/), instead of psh (/pē/). For that reason these verbs [mentioned in the text] take the following forms: hloneshoa (hōnetēwē), tēshocha (tshōtēwē), qachoa (qatēwē), khachoa (katēwē), qachoa (qotēwē). This is not good Sotho. It is a bad habit, indicating a great deal of laziness. It would be a good thing if people abandoned this bad habit of articulating words with so much carelessness, because by so doing they spoil the Sotho language. But, as it appears, such people are increasing every year, and it is quite possible that in a few years' time the sound ch (tē) will be found to be used in Sotho to the exclusion of psh (pē)." This is a remark which cannot go unchallenged, for a number of reasons. Firstly, one is reluctantly compelled to infer from this statement that Khaketla is not aware of the fact that the sound /j/ evolved from /b/ via an intermediate stage, viz. /bij/, thus: b > *bj (now obsolete) > /j/. There is ample evidence of this. Similarly /s/ evolved from /t/ via /fē/ as follows: - /ph/ > /pē/ (now obsolete) > /fē/ (incipient), and also /pē/ is an intermediate stage in the evolution /p/ > /pē/ > /fē/, which letter is, indeed, fast replacing /pē/. The /tē/ which Khaketla exhorts the younger generation not to use, comes about as a result of a process whose stages are exactly parallel to those of the other changes mentioned, as follows: - /ph/ > /pē/ (now obsolete) > /tē/ (incipient). What is surprising is that this author accepts as "correct" the changes b (via bj) to j, f (via fē) to ë, and p (via pē) to tē, which have developed, or are developing, beyond the intermediate stage, but does not... accept
2.55 Velarization.

m > ng, as in loma (bite) > longwa (be bitten)

Changes occurring in the formation of diminutives.

2.56 When the final vowel of a non-diminutive form is a back vowel, the effect of the diminutive suffix *ana* (or, rarely, *anyana*) is to semi-consonantize this back vowel to *w*, as a result of the low vowel coming immediately after it. This *w* affects immediately preceding labial consonants, where these are found in the last syllable of the non-diminutive word. In the majority of cases, however, the changes caused by this *w* are different from those caused by the passive infix *w*. Also, changes are often effected on labial consonants in the final syllables of non-diminutives, even where the final vowel of the non-diminutive form is not a back vowel, in other words, where the changes cannot be ascribed to a *w*, as in *thejane* < *thaba* (mountain), and *thejane* < *thēbe* (shield).

But with yet another group, despite the fact that the non-diminutive form does not end in a back vowel, a *w*-element does come into existence on the suffixing of *ana*, accompanied by changes on the labial consonant immediately preceding it (i.e. *w*). This is particularly the case where the labial consonant is either *p* or *ph*, as in *selētswena*

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accept /ph/ (via *pāh*) to /tēh/.

Secondly, one gets the impression, rightly or wrongly, that Khakela regards language as a non-living, static, phenomenon, so that each generation should speak exactly as their fathers did before them. Yet, on the other hand, his acceptance of Meinhof's ur-Bantu seems to point in the opposite direction. In any case, as he himself says, the people using the new sound in preference to the old one are increasing yearly, so that he should realize that this is a process which had better not be interfered with.

Thirdly, it is the task of a linguistic investigator to tell the people how to speak. Rather, he should observe how they speak, and analyse and describe their speech habits according to his findings.
seletswana < selepē (axe), and sehlotshwana < sehlophe (group). ¹

Here all three types of change, viz. alveolarization, prepalatalization, and velarization, are found.

2.67 Alveolarization.

p > ts : tshepe (iron) > tshepetswana
molapo (stream) > molastswana
selēpē (axe) > selētswana
holapi (fish) > hlatswana
mokāpu (pumpkin) > mokōtwana
lelapa (courtyard, home) > lelatswana

ph > tsh: sehlophe (crowd) > sehlotshwana
lephēphē (wide brim) > lephetshwana

f (followed by i) > tah:
lefifi (darkness) > lefitshwana
morifi (saucer) > moritshwana

2.68 Prepalatalization.

b > j : kobō (blanket) > kojwana
qubu (heap) > qujwana

N.B.1. As already stated, when b is followed by either a or a front vowel other than i, the j which results is not followed by w.

Examples:

/... bohēbē²

¹ Endemann, Palatalisering etc., speaking for N. Sotho, suggests that this w is a remnant of the labial sound which has now been replaced by the new sound. He says (§35), "Encaangesien in die betrokke gevalle die klankverandering nie te wyte is aan 'n vokaal van die u-reeks nie, moet die labiale simbool w wat ons aan die gewysigde klank kry, beskou word as die oorspronklike bilabiale konsonant". This would seem to be the most satisfactory explanation as yet offered for the presence of the w-element in diminutives of words having, in their final syllable, labial consonants followed by a vowel other than a back vowel. In N. Sotho all labial consonants are of the bilabial sub-type, unlike in S. Sotho where there is one anti-labial consonant, viz. f. In spite of this little difference, however, Endemann's theory remains valid for S. Sotho as well.
bohôbê (bread) > bohôjana
thâba (mountain) > thâjana
thêbê (shield) > thêjana
lerëba (trap) > lerajana

N.B. 2. When b is followed by i, the diminutive is formed with the long suffix nyana which causes no changes.

Example:
seshhabi (reptile) > seshhabinyana

N.B. 3. There are also cases where b in the final syllable is followed by a back vowel, but where the long diminutive suffix is used to the exclusion of the short one.

Example:
thabô (joy) > thabônyana
f > ñ (via ñâ, obsolescent):
phofo (meal) > phoñwana (also phoñwâna)
tlhañu (calf of leg) > tlhañwana (also tlhañwâna)

2.59 Velarization.

m > ng : molômo (mouth) > molôngwana
molûmu (stick) > molûngwana
leleme (tongue) > lelengwana

2.60 The incidence of the various specific changes is as follows:— Prepalatalization predominates where the changes are caused by the passive infix w, four of the five affected sounds being changed to prepalatals, while the remaining one is velarized. No alveolarization takes place here.

On the other hand, where the changes are caused by the diminutive suffix one (or enyene), alveolarization is the most prevalent of the three types of changes, there being three instances thereof, as against two of prepalatalization and one of velarization.

Affrication.

2.61 This occurs mainly in the formation of diminutives,
but also in other situations. The affected sounds are all alveolar, and so also are the sounds which replace them. The occurrences are as follows :-

1 \rightarrow ts
2 \rightarrow ts
h1 \rightarrow tsh
r \rightarrow tsh

These changes are called alveolar transference by Doke and Mofokeng (§§52 and 53), and palatalization by Jacottet (§13), Khaketla (§84), Tucker (Comparative Phonetics, §§232 et seq.), and Cole (Tswana Grammar, §§1.80 and 1.81). These terms are unsuitable for describing the processes involved. Alveolar transference is too vague. At best it is ambiguous, since it may quite conceivably mean the transference to an alveolar position of a sound originally articulated at some other organic position (i.e. what is here called alveolarization), or it may mean something else. Palatalization is inaccurate, since no palatal (i.e. either prepalatal, medio-palatal, or post-palatal) sound results from these changes.

The truth of the matter is that no change of organic position takes place here, the derived sounds being articulated at the same position as the original ones. In fact, in his consonant chart on p. 21, Cole classifies all the sounds in question as alveolars, and none of them as palatals. For him to describe the changes indicated above, and others of a similar nature, as instances of palatalization is therefore contradictory, since this "palatalization" results in sounds which are classified elsewhere as alveolars, as distinct from palatals. The same criticism applies to Tucker who has, in addition, failed to distinguish, in his terminology, between a and å, calling them both alveolars (Comparative Phonetics)
Phonetics §§101 - 103). In §174, however, Tucker calls \( t_s \) and \( t_s h \) palato-alveolar consonants, which seems, by implication, to mean that \( b \) on the one hand, and \( t_s \) and \( t_s h \) on the other, are articulated at different points.

From the list of the sounds affected and the sounds resulting from them, as given above, we see that in all the cases involved, alveolar non-affricates are replaced by alveolar affricates. From the voiced frictionless alveolar lateral \( l \), as well as from its phonemic variant \( d \) which is a voiced alveolar explosive, is derived the voiceless ejective alveolar medial affricate \( t_s \). Again, from the voiceless alveolar lateral fricative \( h_l \), as well as from the voiced alveolar medial trill \( r \), is derived the voiceless aspirated alveolar medial affricate \( t_s h \). I therefore call these changes AFFRICATION.

2.63 All S.Sotho alveolar affricates are voiceless. Therefore all the original sounds (whether voiced or voiceless -- in actual fact three of them are voiced, and one is voiceless) are replaced by voiceless affricates. We therefore do not include devoicing here as a change of equal importance with affrication -- as a matter of fact, there is no devoicing of the original sounds involved in this derivation.

2.64 The grammatical situations in which these changes occur are as follows:

1. Diminutive formation with suffix ana.

Three of the sounds affected figure here, as follows:

- \( d > t_s \), as in mofumahadi (queen, lady, Mrs.) > morumahatsana
- \( h_l > t_s h \), as in sehlahla (bush) > sehlatshana
- \( moh\tilde{h}_l \tilde{s} \) (abyss) > mohotshwana
- \( r > t_s h \), as in moriri (hair) > moritshana

/... nare
nare (buffalo) > natsheha
mafura (fat) > mafutshana

2. **Causative formation with suffix iy (Meinhof's y).**

Only one change occurs here, viz.

1 > ts, as in rôbala (sleep) > rôbatsa

3. **Perfect formation.**

Only one change occurs here, viz.

1 > ts, as in rôbala (sleep) > rôbetsa

Note here the change of s in the penultimate syllable to è.

The change 1 > ts is also found, *inter alia*, in certain concords of Classes 8 and 10: - P.C.'s tsë, D.C.'s te; Q.C.'s ts, etc. All these have probably come about as a result of the sequence 1 + y + a vowel.

**Elision.**

2.65 Two living cases of consonant elision have been noted. These are:

1. Elision of h, mainly when occurring between two vowels, but sometimes also when it occurs initially.

2. Elision of l.

The S.Sotho h is extremely voiced, and for this reason it often, so to speak, "melts" into voice, leaving nothing to indicate its former existence. This volatility of this sound is particularly evident where it occurs between two vowels, since these are themselves voiced.

In emphatic or stressed syllables, this h is retained.

The elision of l affects the l of the perfect suffix...
Ilalé when this suffix is suffixed to certain verb stems ending in lâ. In some cases the perfect forms with an elided l (and the consequent changes occasioned by the resulting juxtaposition of sounds) are the sole forms; in other cases they are alternatives of forms with the uncontracted suffix; while in yet other cases la-stems take only the uncontracted suffix ilalé.

Examples: Elision of h
beha (put) > bea
haha (build) > aha and haa, but never as
lehe (egg) > lee

Elision of l
kgathala (get tired) > kgathete

Devoicing.¹

2.66 A final vowel may become devoiced in accordance with the rules set out in §§2.18 et seq. above. As was indicated in that section, in all cases where a final vowel is devoiced in the manner described there, the consonant or consonant combination immediately preceding the devoiced vowel in the same syllable, is also devoiced.

Examples:
lesoba (hole)
mosadi (woman)
rôjwa (be broken)
nyoloha (ascend)

Latency.²

2.67 There are two cases of latency of consonants, as follows:— First there is latent [k] (Meinhof’s X) which re-emerges under strengthening in the form of [kʷ].³

¹ For definition, see §2.20 above.
² For definition, see §2.25 above.
³ It is difficult here to speak with any amount of certainty as regards the nature of the latent sound. Yet, if we reconstruct, in the case of k, a prowess analogous with /... that
This \( [g] \) is latent only in initial position in a word or formative. Its disappearance therefore results in vowel-commencing forms, most of which are verb stems. The effect of its re-emergence (in its strengthened form) is, therefore, that forms which commenced with vowels before, now have \( k \) initially, followed by the whole of the original form. The strengthening agent is also sometimes retained at the beginning of the strengthened form.

**Examples:**

- `arabə (answer)` \( \rightarrow \) `ikaraba (answer oneself)`
  - \( \rightarrow nkəraba (answer me) \)
  - `karaba (an answer)`

- `ọtla (strike)` \( \rightarrow \) `ikọtla (strike oneself)`
  - `nkọtla (strike me)`
  - `kọtla (punishment)`

- `utlwa (hear)` \( \rightarrow \) `ikutlwa (hear oneself)`
  - `nkutlwa (hear me)`
  - `kutla (understanding, obedience)`

As these examples show, the re-emergence of latent \( *[g] \) in its strengthened form, occurs in three grammatical situations, viz.

1. When the reflexive prefix \( ọ \) is prefixed to a vowel-commencing verb stem.

2. When the O.C. of the first person singular is

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that which holds for \( p \) and \( t \) which result from the strengthening of \( b \) and \( d \) respectively, then it seems quite legitimate to assume that the latent sound which reappears in the form of \( k \) is the voiced velar explosive \( [g] \) whose re-emergence always coincides with situations in which strengthening occurs. If this assumption is allowed, then we are able to complete the series \( p < b ; t < d ; k < *[g] \). On the other hand, it could well be that, since Sotho seems to be so averse to voiced consonants, to the extent that in many borrowed words voiced consonants are replaced by their voiceless counterparts, the original voiced velar explosive \( [g] \) has been permanently replaced by its voiceless counterpart \( [k] \); in which case the latent consonant in the above case would be \( k \). See Strengthening §§2.30 et seq. above.
prefixed to a vowel-commencing verb stem.

3. When the prefix of Class 9 is prefixed to a vowel-commencing stem.

The second case of latency is that of the prefix of Class 9 (both the noun prefix and the adjectival prefix), when the stem to which it is prefixed is non-mono-syllabic. In these circumstances, the nasal constituting the prefix does not appear, but in a number of cases\(^1\) exerts an influence (strengthening) on the initial consonant of the stem.

Latent \(n\) is found in nouns of Classes 9 and 10, and in strong adjectives of Classes 8, 9, and 10.

**Examples:**

\[\text{kêtsô (deed)} \triangleleft n + âtsa\]

\[\text{potsô (question)} \triangleleft n + bôtsa\]

\[\text{tôrô (a dream)} \triangleleft n + lôra\]

\[\text{kgapô (looting)} \triangleleft n + hapa\]

\[\text{tshwêu (white)} \triangleleft n + swêu\]

\[\text{tôlêlê (long, tall)} \triangleleft n + lôlêlê\]

\[\text{pêdi (two)} \triangleleft n + bêdi\]

\[\text{tharo (three)} \triangleleft n + raro\]

**Syllabification.**

2.68 The term syllabification is used to refer to the acquiring of syllabicity by a consonant which before was non-syllabic. A necessary accompanying change here is the elision of the vowel immediately following the affected consonant.

Syllabification occurs in the following situations:

- When a vowel separating two 1's or two m's or two n's is elided. The result is that the first of the two /... identical

\(^1\) In other cases, either the initial consonants involved are not liable to strengthening, or, in a few cases, sounds which are normally strengthened in these situations are left unaffected.
identical consonants which thus become juxtaposed, becomes syllabic.

Examples: Syllabification of l
lla (cry) < lela, still commonly used in Tswana and Nguni (lila), but only rarely in S. Sotho.

- cf. also the S. Sotho causatives lediše and letsa.
- bolêla\(^1\) (tell) < *bolêlela, still used in Tswana.
- cf. also S. Sotho perfect form bolêletse
- têlla (despise) < *têlela, cf. Nguni (Zulu) delela,
also the S. Sotho perfect form têleletsa

Syllabification of m
tlammê, alt. perf. of tlama (tie up)

N.B. There is a large number of verb stems ending in ma which behave like tlamê in the above example. No further examples are necessary.

Syllabic m results also from the changes which occur when the allomorph mo is prefixed to a stem beginning with b. Through various stages, mob ultimately becomes mm.\(^2\)

Examples:
- mmôna (see him) < mobôna
- mmatli (seeker) < mobatli

Syllabification of n
hanne, perf. of hans (refuse)

N.B. 1. Here also there's a whole series of verb stems which behave like hane in the above example, and no further examples are therefore given.

N.B. 2. In the case of the perfect forms in the above illustrations, assimilation of the l of suffix îlê to the nasal in the final consonant of the stem, and the elision of the applicative infix el is elided, and the l of the non-applicative stem becomes syllabic.

In all cases of the formation of applicative forms of verb stems whose final syllable is la, the 2 of the applicative infix el is elided, and the l of the non-applicative stem becomes syllabic.

See under Elision of vowels (§2.13), and assimilation of consonants (§2.48).
of the ı of that suffix, take place. Also, final [e] of the uncontracted suffix is replaced by [£] in the contracted forms.

2.69 In addition to the above occurrences of syllabic nasals, it must be stated as a rule of general application to all nasal consonants, that they are syllabic whenever they occur before homorganic consonants, whether these be oral or nasal.

Examples:
mpha (give me)
ntêboha (thank me)
ntšara (carry me)
nkgame (choke me)
mme (mother)
nna (I)

N.B. r also occurs syllabically before another r. But this occurs only in ideophones, and only occasionally even here.

Examples:
tairrr (run very fast, especially of small person or animal)
firrr (throw object, e.g. a stone)
kirrr (thunder)

Consonant substitutions due to causes other than phonetic ones.

2.70 There are two of these, viz. metathesis and alternation. In fact both these changes involve the alternation of two sounds. The distinctive terms are used here purely technically, with metathesis referring to the exchange of positions by two different sounds both of which occur together in different syllables of the same word; while alternation refers to the alternate use of two sounds, only one of which occurs at a time in the word... involved
involved.

1. **Metathesis.**

Examples:
- tʰɔʰɔhɔha and ˈpʰɔtʰɔhɔha (slip off, escape)
- tɔsɔmuха и dɔtsuha (get pulled out, e.g. a thorn)
- ʰɔhɔla и hɔbola (to bark)
- kɡɔmɑrɛla и kɡɔrɑmɛla (stick to)

2. **Alternation.**

Examples:
- ṭɛdɪmә и ṭɛdɪmә (look),
  as well as the Class 9 nouns derived from them, viz.
  ṭɛdɪmә и ṭɛhәdɪmә (a look, appearance)
  sɪrә и tshɪrә (obstruct someone's view)
  kɨtɪmә и tɨtɪmә (run)

N.B. The tsh of tshɪrә possibly exemplifies a retention of the strengthened s of sɪrә in circumstances which do not require such strengthening. Therefore, in this instance, the change s to tsh may quite possibly have first come about in accordance with a definite phonetic law, and was retained even where this law was not applicable.

**Changes involving Semivowels**

**Elision.**

2.71 The palatal semivowel ɣ, when occurring as the first element in the final syllable of a verb stem, is always elided, together with the vowel immediately following it, when a suffix commencing with a vowel other than ə is suffixed to the stem.

Examples:
- tɛmәmә (walk) perf. tɛsmәlɛ; caus. tɛmәsәsә; applic. tɛsmәlә; pass. tɛmsuwa

2.72 Elision of ɣ and ʁ occurring as first elements in P.C.s of the weak classes other than Class 6, is commonly found
found. This is accompanied by the elision of the final vowel of the noun constituting the antecedent, i.e. the posseseer.

Examples:

ntš' ahao for ntša yahao (your dog)
kgōm' aka for kgōmo yaka (my cow)
mohatl' ayōna for mohatla wayōna (its tail)
ngwan' aka for ngwana waka (my child)
mekgw' abōna for mekgwa yabōna (their habits)

N.B. The a immediately preceding the possessive stem in these examples is that of the P.C., whose semivowel has been dropped. The possibility that, where the noun antecedent ends in a, it is this a which is retained (the whole of the P.C. being elided), and not that of the P.C., is ruled out by the fact that, even where the final syllable of the noun antecedent has low tone, the a before the possessive stem always has high tone. This, taken together with the fact that the P.C. always has high tone, is conclusive evidence showing that this a immediately before the possessive stem is, in all cases, the a of the P.C. Cf. morēna (chief), low tone on the final syllable; but morēn' eka (my chief, my king), high tone on the first a of eka.

2.73 Elision of y often occurs where y is the first element of a demonstrative qualificative, viz. in weak classes other than Class 6. Here, too, the final vowel of the preceding noun is always elided also.

Examples:

ngwan' ēno for ngwana yēno (that child)
mehom' ēna for mehoma yēna (these ploughs)
nthw' ane for nthā yane (that thing over there)
ntš' ēla for ntša yēla (that dog over there)

N.B.1. In the case of the first two examples, some speakers... use
use the alternative forms of the demonstratives employed there, which alternatives have no \( v \) initially, in which case only the elision of the final vowel of the preceding noun is involved, and not that of a semivowel.

N.B. 2. Where the final syllable of the preceding noun consists of a non-labial consonant followed by a back vowel (e.g. nthò), semiconsonantalization of this back vowel (into \( w \)) often takes place, as the example nthw' ane shows.

Anticipation.

2.74 When the semivowel \( w \) comes immediately after a non-labial consonant, this \( w \) is formed before the articulation of the consonant (or of a combination of consonants) preceding it, the \( w \) being thus anticipated.\(^1\)

Examples:

- tswa (go·out)
- kwala (shut)
- nwa (drink)
- ntwa (battle, war)

\(^1\) See 2.42 above.
CHAPTER III

LENGTH AND STRESS

1. LENGTH

Introductory

3.1 Speech occupies a certain period of time in its utterance. This duration of utterances, also referred to as length, is usually studied in relation to the syllable. In stressed speech, however, it is often necessary to study length in relation to smaller units, notably the consonant.¹

3.2 The term length, as used here unqualified, is to be understood to mean the relative duration of a speech element. The value of the length of a given speech element therefore depends on its relationship with the lengths of other comparable elements uttered by one and the same speaker on a given occasion. The fast and the slow speaker both maintain the same relationships of lengths and are thus employing the same chronemes² in spite of the difference in the absolute duration of the speech elements they utter.

3.3 Length may or may not be significant, depending on whether or not it is employed to effect necessary distinctions, be they lexical, grammatical, or otherwise.

The role of length in Southern Sotho

3.4 The various roles played by length in S. Sotho are as follows:

1. Grammatical significance of length

In certain situations, the length of the penultimate syllable of an utterance is significant in so far as it /

¹ See under the description of stress, particularly the section on "How the various types of consonants are stressed".
² For a description of this term, see Jones, The Phoneme, Chapter XXIII, especially para. 399.
distinguishes between enquiry and affirmation. We thus begin this section by giving a working definition of penultimate length:

When a word or a phrase or a clause, or a series of words, phrases or clauses, is uttered in a non-interrogative sequence; or when the first of two grammatically related expressions, occurring non-interrogatively, is emphasized and is consequently followed by a pause and a down-step, the penultimate syllable of such an expression has a longer length than the rest of the syllables in that expression.

From this definition, it is clear that the interrogativeness or non-interrogativeness of the utterance is closely associated with the length of the penult, which is relatively long in non-interrogative, and relatively short in interrogative, expressions. Length of the penult is thus the sole criterion of distinction between questions and statements where the former do not employ interrogative words.

**Examples:**

Bebatla dijó? (Do they want food?)

Ŋ, bebatla dijó (Yes, they want food)

Reya Lesotho? (Are we going to Basutoland?)

Ŋ, reya Lece:thro (Yes, we are going to Basutoland)

Masërú? (Maseru?)

Ŋ, Masërú (Yes, Maseru)

HaMorëna Masophá? (At Chief Mosopha's)

Ŋ, haMorëna Masophá (Yes, etc.)

Yaafihlilèng maobane? (The one who arrived yesterday?)

Ŋ, yaafihlilèng maobane (Yes, etc.)

3.5 When penultimate length has been referred to in the past, the general impression given has been that this term... refers

1 The colon (:) is used to indicate long length.
refers only to the length of the penult of a sentence in its conventional definition. We are constrained by the facts of the situation, as revealed by the above illustrations, to be more specific, and to attempt, as our definition shows, to state the size and nature of each of a number of expressions in which the length of the penultimate syllable is of significance. It will be observed that all affirmative utterances, whatever may be the number of the syntactical units they comprise, are characterized by long length on the penult, with short length on this syllable in corresponding questions.

Examples (arranged according to size and nature of expression):

(a) word standing alone

Masopha? (Masopha?)
Eê, Masopha (Yes, etc.)
Sefatêng? (At the tree?)
Eê, sefatêng (Yes, etc.)
Wahae? (His one?)
Eê, wahae (Yes, etc.)

(b) phrase

HaMorêna Masopha? (At Chief Masopha's?)
Eê, haMorêna Masopha (Yes, etc.)
Homoisa haê? (To take him home?)
Eê, homoisa haê (Yes, etc.)
Kabaka lêo fêêle? (Just for that reason?)
Eê, kabaka lêo fêêle (Yes, etc.)

(c) subordinate clause

Ha bafihla? (When they arrive?)
Eê, ha bafihla (Yes, etc.)
Le ha basarate? (Even if they don't want to?)
Eê, le ha basarate (Yes, etc.)
Tseêkgolo? (The big ones?)
Eê, tseêkgolo (Yes, etc.)

... Tseê
Tseo arefileng tsôna? (The ones he gave us?)
E2, tseo arefileng tsôna (Yes, etc.)

(d) principal clause

Batwa Lesotho? (Do they come from Basutoland?)
E2, batwa Leso:tho (Yes, etc.)
Obatla hoja? (Does he want to eat?)
E2, Obatla hoja (Yes, etc.)
Babua le rona? (Are they talking to us?)
E2, babua le ro:na (Yes, etc.)

(e) emphasized expression followed by down-step

Barebône jha refi:hla?1 (Did they see us when we arrived?)
E2, barebône jha refi:hla (Yes, they saw us when we arrived.)
cf. Barebône ha refi:hla (They only saw us when we arrived)
Basêbêdi:te kama:ntana? (Did they work on Monday?)
E2, basêbêdi:te kama:ntana (Yes, they did work - or they really worked - on Monday)
cf. Basêbêdi:te kama:ntana (They worked only on Monday)
Kemoâsemene waha:e? (Is his one (i.e. child) a boy?)
E2, kemoâsemene waha:e (Yes, his one is a boy)
cf. Kemoâsemene waha:e (It is his boy)

Some demonstratives irregular in respect of length
modifications

3.6 Demonstratives do not all behave in the manner described above when they occur in the situations mentioned. Those which do follow the rules summarized in the definition given are the second position first and second precisions (e.g. sê:o and sê:no respectively), and the third position first and second precisions (e.g. sê:la and sane respectively).

Notes. 1. The first syllable of the second precision form in each of the two positions in question (i.e. sê:no and sane), has, inherently, a long length accompanied by a /... dynamic

1 The sign \ indicates that the syllable immediately following it has a down-step initiated on it. See 4:31 et seq.
dynamic (high-falling) tone. It is thus more in accordance with the facts to say that in affirmations, these demonstratives retain long length, which is then fairly markedly exaggerated, on this syllable when it constitutes the penult.

2. In questions, two things are noted. Firstly, the length of this syllable is shortened, but not to the extent of completely obliterating its inherent long length in relation to that of the second syllable. The tendency, remarked about in the section on tone, for a semipermanent tonal glide to be replaced by a level tone pitched at the higher one of the two end points of the glide, is observed in this connection. Secondly, there is a length modification in respect of the second (end final) syllable as well in enquiry-affirmation contrast, as follows: The dynamic (high-falling) tone of this syllable is replaced by a high level tone, and, correspondingly, its long length by a short length. This modification of the length (and tone) of the final syllable is more definite than that of the first syllable.

3.7 The remaining demonstratives -- those of the first position, both precisions (e.g. sēē and sēne respectively), and those of the second position third precision (e.g. sēnone), and the third position third precision (e.g. sēnene), are irregular in their length modifications. Those of the first position, which are disyllabic, retain short length on the first (viz. penultimate) syllable whether they occur in questions or in affirmations.²

Exemples:
Sefatā sēē? (This tree?) /... ëë

¹ See 4.26 and 4.27.
² In actual fact, one of them, viz. the first precision, occurs only in questions.
Ex, sefatê sêna (Yes, this tree)

3.6 Demonstratives of the third precisions of the second and third positions (i.e. the sêno and sâne forms) have, inherently, a long length accompanied by a dynamic (high-falling) tone on the first and final syllables. The first syllable in each case, even though not the penult, behaves, in respect of length and tone, exactly like the first syllable of the corresponding disyllabic forms (i.e. the sêno and sâne forms) as described in 3.6 above. In these two cases, therefore, it is prepenultimate, and not penultimate, length which is modified according to whether the expression in which it occurs is a question or an affirmation. In questions, the final syllable has, like that of the disyllabic forms, a short length and a (high) level tone.

2. Length in relation to sound change

Elision

3.9 The elision of a consonant may result in the juxtaposition of two identical vowels, as in the portion phôô of the word phôôphôô (animal), from original phôôphôô, now archaic in S. Sotho, but still found in Tswana. In that case, if the two juxtaposed vowels have the same tone height, the tendency is for these vowels to merge into one syllable with short length.

Example:

sêêla, applic. of sêa < sêha (cut)

But where the two vowels have different tone heights (as in phôôphôô above), we are confronted with a three-sided problem, the first aspect of which provides the basis for the other two. The first aspect of the problem concerns syllable division, i.e. whether the two vowels constitute two separate syllables or only one. The other two aspects of the problem are those of length and tone. If the two /.../ vowels
vowels constitute two separate syllables, then they have one short length and one level tone each; while, if they constitute one syllable, they have together one long length and one dynamic tone. This is a question which it has been thought best to leave open in this treatment, so that either of the two possible solutions can be applied in any given situation. 1

Diphthongal articulation

3.10 Where diphthongal articulation results from the occurrence, away from prefinal and final positions, of juxtaposed organically unidentical vowels, 2 such articulation is due to a drastic reduction in the duration of the first of these vowels. So that, for example, the á of báï (cowardice, cowardly) is much shorter in the sequence òbáï kaholo (He is very cowardly) than it is in òbáï (He is cowardly).

Contracted infinitives

3.11 In all cases of contracted infinitives in which the syllable immediately preceding the infinitive prefix (i.e. the syllable which contracts with this prefix) has a high tone, the syllable resulting from this contraction has a dynamic tone commencing at high and falling to the low of the partially submerged infinitive prefix. In such a situation, the syllable resulting from the contraction naturally has a long length.

Examples:

'tlil'á, as in Batlil'á ja (They have come to eat)

il'á, as in Bálil'á rõbala (They have gone to bed)

n'á, as in Len'á arabéla ha lebitwa (You must always answer when you are called)

3. Emotional significance of length

3.12 -- (a) Demonstratives. Here length is employed to express

1 cf. 1.9, 4.18, 4.29, 4.478, 4.481, and 4.494.

2 See 1.11 and 1.12 above.
express the distance of the object spoken about. Demonstratives of the third position are used to point out something relatively far away from both the speaker and the person addressed, but within sight. Varying degrees of the distance of this object are expressed by commensurate degrees of length of the first and final syllables in the case of second and third precision demonstratives, and of the second (and final) syllable in the case of first precision demonstratives.

Examples:

\[
\begin{align*}
\text{sa:......ne:......} & \quad (\text{i.e. same, e.g. sefarē)} \\
\text{so:......nene:......} & \quad (\text{i.e. same)} \\
\text{sēle:......} & \quad (\text{i.e. sēle)}
\end{align*}
\]

Notes. 1. The second syllable of the third precision, and the first syllable of the first precision, demonstratives, are very short.

2. When the first precision demonstrative is used as the base of an impersonal copulative, then it is the first syllable, and not the second, which is drawn out.

Example:

\[
\text{Kesē:......ia} \quad (\text{There it is far away})
\]

3.13 -- (b) Interjectives. Some interjections have their final syllable prolonged in order to express nuances of the feelings of the speaker.

Examples:

\[
\begin{align*}
\text{Itēhu:......} & \quad (\text{expression of feeling of pain)} \\
\text{Wmāle:......} & \quad (\text{feeling of surprise)} \\
\text{Aso:......} & \quad (\text{surprise and sympathy)} \\
\text{Owai:......} & \quad (\text{contempt)}
\end{align*}
\]

4. Employment of length in vocal communication across a distance\(^1\)

3.14 This is found in the case of noun vocatives, the /.../ lengthened

\(^1\) A kind of patterned sing-song, with unusual tonal relationships, is often a feature of this kind of communication.
lengthened syllable being the penult of the name used in calling. Any sentence which may follow such a call (but which may also occur alone where the name is not used) has long length on its penult. The greater the distance separating the communicating parties, the more prolonged are the affected syllables. This relationship of distance to length of syllable is a matter of practical necessity in the speaker's attempt to make his voice carry and have his message understood. It must, therefore, not be confused with a similar relationship described in 3.12 above, where the speaker merely wants to express the idea of distance.

**Examples:**

Dikêlê:.....di, oabi:....tswa! (You are called, Dikêlêdi)
Motlalepu:.....lê, tîla dijô tô:.....ô! (Motlalepuê, bring that food)
Holoki:.....lê; ketlâtâtii:.....sa! (All right, I'll bring it)

5. **Curt call to someone near the speaker**

3.15 A curt, reprimanding call to someone near the speaker shows length features which are the direct opposite of the kind just described. Here, extra-short syllables are used throughout the length of the noun.

**Example:**

Dikêlêdi!

6. **Length employed to express state and/or pervasiveness, and continuous action**

3.16 Long length, with these significances, is found on the final syllable of certain ideophones. Sometimes state and pervasiveness are implied by the same ideophone, with the lengthening of the final syllable emphasizing both notions. The extra-long length is intended to convey

1 cf. 4.473 below. See also examples of ideophones in 4.478 et seq., where prolongation of final syllable of ideophone is indicated where applicable.
convey the idea of the endurance or pervasiveness (i.e. "all-over-ness") of the state, or of the continuousness of the action.

Examples:

(i) State and/or pervasiveness
   tlèkèlèlè:..... (be at a loss)
   tu:..... (continuous state of silence)
   nyèlè:..... (continuous state of silence, or long disappearance)
   tlèrè:..... (be red)
   swèù:..... (be white, of extensive area, e.g. snow-covered country-side)
   tsho:..... (be pitch black, of extensive area)
   tswe:..... (be delicious)
   pò:..... (be ice cold)

(ii) Continuous action
   tshur:..... (flow out continuously, as water from tap)
   hwa:..... (fall, of shower)
   sei:..... (become scattered in all directions)
   tair:..... (run fast, of small animal or person)

II. STRESS
A. The Nature of Stress

3.17 Some phoneticians, in attempting to describe stress, give great prominence to the part played by the speaker's gestures -- nodding of the head, thumping of the table, etc. -- in such a description. For example Daniel Jones says that "Special visible gestures, and especially movements of the head, arms and hands, often accompany the utterance of strongly stressed syllables. The application of strong stress involves in fact a special effort of the whole body; it is not confined to the speech mechanism". No one will doubt the importance of these outward signs as an aid to the investigator in his search for the syllables on which the strong stresses fall in the particular

1 The Phoneme, §425.
particular language he is describing. What we must guard against, however, is to give the impression that such gestures have, in any way whatsoever, a place in the description of stress as a linguistic activity. These gestures accompany stress, but are not, in themselves, either in part or in whole, acts of speech. Their importance begins and ends in drawing the investigator's attention to the stressed syllables, which is, of course, a very useful thing within its own sphere of significance. The question which remains unanswered after these gestures have been observed is what is stress?, as against where is stress?, much in the same way as the footprints of the Abominable Snowman -- ever telling you where he has been, never what he is. Besides, gestures are often enough too slight in unemphatic speech that it is impossible for an observer to perceive them, so that he has to depend on the speaker to tell him where he feels the stress and not on his own judgment.

3.18 Jones comes nearer the mark when, after reiterating the difficulty of determining degrees of stress, he says that "It is conceivable that they might be determined experimentally from the movements of a speaker (muscular contraction of the diaphragm, etc.) ...". 2

3.19 Noel-Armfield is much clearer on this point. He says that to obtain stress "we exert our organs of speech so as to make some syllable or syllables stand out beyond the others", 3 (my emphasis)

3.20 Bloomfield is even more specific. In Language, he says, "Stress ... consists in greater amplitude of sound waves, and is produced by means of more energetic movements, such as pumping more breath, bringing the vocal chords

---

1 See §3.45 below. 2 Jones, op. cit. §450.
3 General Phonetics, §64.
chords closer together for voicing, and using the muscles more vigorously for oral articulation". 1

3.21 The description of stress is therefore divided, in this treatment, into two main sections, the first of which tells us how syllables are stressed in S. Sotho speech, while the second one indicates the positions of main, secondary and tertiary stresses in this language.

Main stress, as a speech event, in S. Sotho

3.22 All syllables require the expenditure of some energy in their articulation. Some syllables are articulated with more energy than others, and for this reason we have to think in terms of degrees of stress, rather than of stress and no-stress. Jones lists three such degrees, viz. strong, medium, and weak, and it is possible, as indeed suggested by his et cetera, that there are more degrees than just three. In Heffner's words, "Every speech articulation involves the expenditure of its own peculiar quantum of energy. There is undoubtedly a minimum expenditure which must be made if the sound is to be recognized as itself. Less energy expended upon it will change its character. Probably there is a maximum expenditure of energy beyond which further effort will produce a change in the character of the sound". This means that "The term unstressed is used loosely for minimally stressed and must always be understood in that sense". 2

3.23 S. Sotho is not a stress language. Strong stresses in this language are not easy to perceive in speech that is not extra-normally emphatic. Not only are the gestures which point to strongly stressed syllables rarely used in unemphatic speech, but the force of the contractions

1 §7.3. 2 General Phonetics, §11.1.
of the vocal organs and the abnormal speeds at which such
contractions, as well as the accompanying relaxations,
take place -- all these are extremely difficult for the
listener to observe. It seems best, therefore, to use
emphatic speech in our attempt to determine the nature of
stress, and to take such results as we obtain as applying,
in proportionate measure, to speech of all degrees of
emphasis.

On which portion of a syllable does strong stress fall?

3.24 The first requisite for the attainment of strong
stress is, as all investigators are evidently agreed, a
strong breath-force. This entails a more vigorous con-
traction of the diaphragm, and the expulsion of a greater
volume of air from the lungs. Now, to answer the ques-
tion posed above, it seems best to begin with a syllable
consisting of a vowel only, for two reasons. Firstly,
such a syllable has only one sound as its component, un-
like the more common CV-type of syllable, and it reduces
by half the margin of error in determining the exact
position of stress. In other words, strong stress, if
at all possible on such a syllable, can only be on the
vowel itself. Secondly, by experimenting with this
type of syllable, we may be able to determine whether
strong stress is attainable only on vowels, or only on
consonants, or on both. Now, if we try stressing a
V-type syllable by means of extra breath-force alone, the
result is aspiration (represented by h) + original vowel.
Thus,

\[ \text{[æræbə]} \text{ (answer)} > \text{[hæræbə]} \]
\[ \text{[ɛmə]} \text{ (stand up)} > \text{[hɛmə]} \]

Such aspiration is strong enough for the result to be
described as a prefixing of the (voiceless) glottal fric-
tative to the vowel. This way of applying stress to a
/... V-type
V-type syllable is used fairly frequently in S. Sotho. A more common method of stressing this type of syllable is, however, the following: A glottal stop is formed, and behind this a strong air-pressure is built up. The release of this closure gives a glottal explosive which immediately precedes the original vowel. The stressed counterparts of £araba and £eme are then £araba and £eme respectively. It is seen that in both cases the V-type syllable is first converted into a CV-type syllable before strong stress can be placed on it. It would seem, therefore, that the first essential is that the strongly stressed syllable must be of the CV-type. From this, it may be concluded that vowels are unstressable in S. Sotho, and, as a corollary to this, that, in this language, the consonant is the stress-bearing element in the syllable.

5.20 In the articulation of consonants, excluding nasal consonants, obstructions of various types and degrees are placed in the way of the breath from the lungs. In other words, the vocal organs resist, to a greater or lesser degree, the push of the out-going breath. The stronger the force of air pushing past or against these organs, therefore, the stronger their resistance. And in order to strengthen this resistance, these organs have to be held more tensely. We thus arrive at the next important conclusion concerning the nature of stress, viz. that it is achieved partly by a greater expenditure of energy on the part of the articulating organs, as well as the diaphragm and the lungs. There are more vigorous contractions.

1 The position here seems to be the same as in German as stated by Bloomfield in Language, 7.5: "...German ... marks the onset of stress so vigorously," he says, "that it often takes the shape of a (non-distinctive) glottal stop before the initial vowel of a stressed word or element, as in ein Arm [ejn arm] 'an arm', or in Verein [fer-7ein] 'association', where ver- is an unstressed prefix."

2 See my remarks concerning nasal consonants in 1.107 above.
This release is accompanied by a sudden further upward movement of the diaphragm, resulting in the caving in of the chest wall.

3.29 Stressing a voiceless unaspirated explosive. The position for the stop is assumed and maintained. Through the actions, previously described, of the diaphragm and the lungs, a strong air pressure is built up behind the closure. The vocal chords are then closed for the secondary (glottal) stop, and air pressure is built up behind them as well. With air saturation, the stage of inertia is reached, followed immediately by the release of the two stops. The time-interval between the release of the main closure and that of the glottal closure is appreciably longer in strongly stressed plosives than in weakly stressed ones, and it may be assumed that the vocal chords are held more tensely for the glottal stop than they are in weak stress. This relatively long interval between the two releases gives the impression of a clean break between the explosive and the following vowel, with the glottal stop separating the two. On releasing the main closure, one of two things may happen. Either (a) a distinct, forceful aspiration of comparatively short duration is heard to accompany the plosion, the brevity of this aspiration being explained by the fact that its medium is the air in the mouth (i.e. above the glottis) at the moment of inertia. This applies to all three species of voiceless plosives, viz. \( p \), \( t \), and \( k \). Or, (b) in the case of \( p \) and \( t \), the release is not smooth, but consists of a succession of taps due to the comparatively great resistance by the vocal organs at the point of closure, causing quick successions of closure and release as the strong current of air forces its way past the closure.

3.30 Stressing a voiceless aspirated explosive. The position
position for the stop is assumed and maintained. Strong air pressure is built up behind the closure. The vocal chords are adjusted to allow free passage of air. Air saturation leads to inertia, immediately followed by the release. The volume of air expelled on release is much greater than in the case of unaspirated plosives, and this results in a much more vigorous caving in of the chest wall. In exceptionally strong stress, there are occasions when there is a clean break between the unaspirated plosive and the following vowel, which latter is then preceded by a voiceless glottal fricative /h/ quite distinct from the frication accompanying the explosive. Examples of this are:

\[\text{ph-hatlola, i.e. phatlola (split in two)}\]
\[\text{th-hakgiss, i.e. thakgiss (stretch out, crucify)}\]

This does not happen in all cases, but, in general, it appears to be most likely to happen when the vowel of the syllable is \(\text{a}\), and correspondingly less likely as higher vowels occur in place of \(\text{a}\).

3.31 Stressing a fricative consonant. The position for the articulation of the fricative is assumed and maintained. The articulating organs are held tense. The fricative is protracted, but the amount of air allowed to pass through during this prolongation (i.e. before the transition to the following vowel) is minimal, as, apparently,\(^1\) the vocal chords are so adjusted that they allow comparatively little air to escape. The end of the frication, just prior to the onset of the vowel, is marked by the expulsion of a strong current of air from the lungs when the vocal chords and the other articulating organs are relaxed.

In the case of the glottal fricative,\(^2\) there are, of course

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1 As nearly as one can judge without the help of instruments.
2 Always voiceless in strongly stressed syllables. See 1.72 above.
course, no other articulating organs involved besides the vocal chords.

3.32 Stressing the alveolar trill. The trill is prolonged. Little air escapes during the prolongation of this sound due to the control at the glottis. A sudden relaxation of the vocal chords, resulting in the expulsion of a strong current of air, marks the onset of the following vowel.

3.33 Stressing an affricate

(a) voiceless affricates

(i) unaspirated

Two closures are formed, the primary one and the glottal one. The tendency is for the explosive element of the affricate to be appreciably mild, a tensely articulated fricative being more in evidence. The fricative element is of a longer duration than normal, but only the air in the mouth (above the glottis) is employed in its articulation. There is a clean break between the affricate and the following vowel, the two being separated by a glottal stop.

(ii) aspirated

There is one closure here, viz. the main closure, as the vocal chords are left open for aspiration. In the case of \textit{tsh}, the fricative element is prolonged, and there is a crescendo effect in the amount of breath heard to escape and the corresponding loudness. There seems, however, to be no tendency to \textit{tsh}-\textit{h} as in the case of aspirated explosives. In the affricates \textit{tsb}, \textit{kg}, and \textit{tjh}, on the other hand, the explosive element is more prominent: The closure is maintained longer than in the case of \textit{tsh}, while the fricative element is short. Because of the prominence of the explosive element, the stages in the articulation are parallel to those in the articulation of \textit{/...} explosives.
explosives (upward push of air, saturation point, etc.)

(b) voiced affricate \( j \)

The articulation of this affricate goes through all the stages of the articulation of voiced explosives, with the rather puzzling difference that in the case of \( j \), the stage of inertia is reached so soon that the vocal chords have no chance of vibrating during the stop-phase, and voicing is only heard at the release stage.

5.31 Stressing the continuants \( l, m, n, ny, ng \). In these cases, length plays a prominent part. The lengthened consonant gives the impression of two consonants, the first of which is syllabic and is protracted, while the second one is non-syllabic and short. Again there is, in all cases, an economizing in the expenditure of breath, the greatest volume being expelled, and the strongest puff heard, at the end of the consonant, just prior to the onset of the following vowel. The articulating organs (and related muscles) are held more tensely than usual.

5.35 Stressing the implosives \( g \) and \( gh \).

(a) \( g \). A closure is formed at the prepalatal position, another at the velar position, and a third at the glottis. The implosion heard at the release of the main and the secondary closures (prepalatal and velar respectively) is much more vigorous than it is when the sound is weakly stressed. The explosion at the glottis follows this implosion, the time interval between the two being appreciably longer than usual.

(b) \( gh \). The procedure is the same as for \( g \), except that there is no glottal closure in this case, and the implosion is followed by strong aspiration.

5.36 Stressing the semivowel. The front of the tongue is held more tensely than usual against the palate. The semivowel is prolonged, giving the acoustic effect of a /... short
short \( y \) preceded by a long and tense \( e \), which is accompanied by aspiration. Here also, the expenditure of air is restricted during the prolongation, with a strong current at the end of the articulation.

3.37 Stressing the semivowel \( w \). The lips and the back part of the tongue are held more tensely than usual. The semivowel is prolonged, giving the acoustic impression of a short \( w \) preceded by a long and tense \( o \), which is accompanied by aspiration. The expenditure of air is, as in the case of \( y \), restricted during the prolongation, with a strong current at the end of the articulation.

3.38 Stressing the unaspirated heterorganic combinations \( bi \) and \( ph \). Here the descriptions are as for \( b \) and \( p \) respectively, up to the point of air stagnation (or saturation). In the above combinations, the explosive and the fricative elements share the stress, each one receiving a measure of extra length. Between \( ph \) and the vowel that follows it, there is a clean break, with the glottal explosive coming between the two.

3.39 Stressing the aspirated heterorganic combination \( phh \). The fricative element of this combination has a longer duration than the explosive element.

3.40 Stressing labialized consonants. In general, the descriptions given for the stressing of the non-labialized counterparts apply here also, but, in addition, there is strong lip-rounding accompanying the articulation. An interesting feature of the articulation of labialized consonants is the contraction of the brow which, in very strong stress, is sometimes seen to accompany the lip-rounding. In other words there is, in such cases, a forward movement, of practically all the face muscles, sympathetic to the movement of the lips. The lip-rounding in all cases has the same duration as the consonant, ... including
including silences which occur during the articulation of some consonants.

3.41 Conclusions. The following common features and general trends are observed in the stressing of the various types of consonants:

1. The first essential is a strong breath force. This entails the energetic contraction of the diaphragm and the lungs.

2. There is a greater tenseness of the articulating organs due to their resistance to the greater push of the air from the lungs. The speed of the movements of contraction and relaxation of these organs, as well as those mentioned in 1 above, is proportionate to the degree of stress it is sought to attain.

3. There is prolongation of the whole consonant in the case of what may be described as one-phase consonants, such as fricatives, or of some phase of it in what may, correspondingly, be described as multi-phase consonants, such as explosives. This prolongation takes place, of course, within the limitations imposed by such natural factors as breath economy, stage of inertia reached, during the stop-phase of an explosive or explosive-containing combination, when no further air movement is possible; etc.

4. In most cases, one observes a minimal expenditure of breath during the life of the stressed consonant, and a maximal expenditure of breath at the point of transition from the consonant to the following vowel. This breath-control is seen to be related to point 3 above (viz. length of the stressed consonant) as a contributory factor towards the attainment of stress, since the more sparingly the breath is expended during the maintenance of the consonant, the longer is the possible duration of such a consonant.

/... 5. The
5. The shortening or "clipping" of the syllable immediately preceding the stressed one is observed; so also is the similar shortening of all syllables following the stressed one and occurring in the same breath group, provided these are not situated in prefinal or final position. This gives the impression of acceleration after the stressed syllable.

6. The total impression gained, and given greater validity by the speed variations described in 3 and 6 above, is that the stressed syllable (or rather the stressed consonant within this syllable) is singled out for special attention and given greater prominence by these and the various other devices described.

B. The position of main, secondary and tertiary stresses in S. Sotho.

3.42 Tucker states that "In a normal sentence, the last two syllables are both stressed", 1 (my emphasis) and he illustrates his statement with the sentence kеrеtà mоruti in which, he says, "the last syllable is as strongly stressed as the penultimate". Unfortunately the author does not say what he means by a normal sentence. Does an imperative predicate constitute an abnormal sentence, for instance? Again, one may infer, from the above statement, that a word standing by itself does not have a stress-pattern. In the illustrative sentence supplied by Tucker the two syllables with inherent main stress 2 are ra of rаtе and ru of mоruti.

3.43 Doke and Mofokeng say that main stress "is typically on the penultimate syllable". 3

3.44 In the present work, both Tucker's and Doke-and-

1 Comparative Phonetics, §258. 2 Defined below.
3 Southern Sotho Grammar, §60.
Mofokeng's conclusions on this score are queried in so far as they apply to inherent stress. In emphatic stress, it is true, syllables other than those carrying inherent stress are found sometimes to be more strongly stressed than the latter. Among such syllables are the penultimate and the ultimate. But whether emphasis is obtained by stressing the inherently stressed syllable in the word, or some other syllable, depends on the overtones of the statement or command. For instance, as will be more amply shown later, in verbs of more than two syllables, peremptory commands are made by stressing the root syllable, and deferential or persuasive ones by stressing the penultimate syllable. It is possibly this latter which led Doke into suggesting that (inherent) main stress is on the penult.

Inherent stress-patterns. 1

3.45 This term refers to the relation of stresses in a word in ordinarily pitched (i.e. unemotional) utterances. The position of main stress is best determined by observing one's own gestures in such utterances, since a gesture may consist of no more than the merest hint of a nod or some other movement accompanying a syllable, and/or a slightly more vigorous contraction of the diaphragm, all of which the listener is not able to perceive. 2 When main stress has been isolated, the remaining syllables either all bear tertiary stress, or include one with secondary stress, depending on the number of syllables in the word in question.

1 Unless otherwise stated, the patterns below are based on stems, excluding any formative elements such as prefixes etc.
2 The method of determining the position of main stress by observing the gestures of someone speaking emphatically is not always reliable since, as already shown above, emphasis may be obtained by stressing different syllables of the same word on different occasions, depending on the overtones of such an utterance.
question, as shown below.

3.46 Position of main stress in S. Sotho. Main stress has been found to be situated as follows in S. Sotho:

(a) In verbs, nouns, absolute pronouns, adjectives, adverbs, possessive and enumerative qualificatives, and ideophones, inherent main stress is on the root syllable.

(b) In demonstratives and quantitative qualificatives, inherent main stress is on the concordial element.

3.47 Distribution of the stresses in S. Sotho. Main, secondary, and tertiary stresses have the following distribution in situations where the main stress is on the root syllable:

N.B. 1. Each description of a particular stress-pattern is followed, in brackets, by a formula representing this pattern. In these formulae the symbols used are ---

\[ S \] for main stress,

\[ S_2 \] for secondary stress, and

\[ S_3 \] for tertiary stress.

N.B. 2. While it is not recommended that stress be marked in the orthography, for purposes of our illustrations the following marks are used:

A dot (') above the syllable bearing main stress,

A diseresis (") ......................... secondary stress, and

A no-mark ( ) ......................... tertiary stress.

(a) Mono-syllabic stems have one main stress (S),

Examples:

-tno, as in motho (person)

-tse, as in moise (village) /... -ha

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1 Where the possessive stem is monosyllabic, either in fact (as -ká of the 1st pers. singular), or in effect (as 1st and 2nd pers. plur., and 3rd pers. class 2 communal possessive stems which are respectively -tšo, -tšo, and -šošo in isolation, but whose initial syllable merges in confluence with the vowel of the possessive concord), main stress is on the possessive concord, and not on the stem.
-in, as in moha (envy)
-tilë, as in motlë (beautiful)
-tšho, as in motsha (new)
-be, as in mobë (ugly)
-tila, as in hotla (to come)
-ja, as in hoja (to eat)
-se, as in sefe? (which one?)
-pö, as in hore pö (be ice-cold)

(b) Diassyllabic stems have one main stress and one tertiary stress (SS2).

Examples:
-hëna, as in mëhëna (king)
-hlobu, as in lehlabu (pain)
-hate, as in mohatu (sweetness)
-hgato, as in buingato (many)
-hëdi, as in habëdi (two)
-tenya, as in moliyëna (stout)
-bala, as in hobaalu (to read)
-hula, as in hohutu (to teach)
-bele, as in dibele (wrong ones)
-haco, as in wahas (yours)
-jwang?, as in dijwäng? (How are they?)
-thoso, as in horë thoso (to appear unexpectedly)

(c) Trisyllabic stems have one main stress and two tertiary stresses (SS3S3).

Examples:
-hëmene, as in mëhëmene (boy)
-hopote, as in achopote (memorial)
-lebadi, as in bolebadi (forgetfulness)
-lëlë, as in baliëlë (tall)
-hyënene, as in sehënëne (small)
-hopola, as in hohopola (to remember)
-bopala, as in hoboapala (to play)
-kwiditi, as in hore kwiditi (to swallow a lump)
-kgaloko, as in hore kgaloko (to pay a flying visit)

(d) From quadrasyllabic stems on, whether these be
primitive or derived (excluding derivation by reduplication),
a regular pattern is followed, viz. one main stress, one
secondary stress on the penult, and tertiary stresses on
all the remaining syllables (SS₂S₂S₃, SS₃S₂S₃S₂, SS₃S₃S₂S₃,
etc.),

Examples: SS₂S₂S₂

-fatênyane, as in sefatênyane (little tree)
-beratehadi, as in leberatehadi (big noise)
-ferere, as in moferefere (commotion)
-tsokoitsane, as in setsokoitsane (whirlwind)
-kgutshwanyane, as in mogkgutshwanyane (short)
-brasañye, as in mobsasañye (thin)
-lêletsane, as in molêletsane (tallish)
-lêlêkisa, as in holêlêkisa (to pursue)
-hopoâsane, as in hoopohoâsane (to remind each other)
-hlohloñha, as in hohlohloñha (to be shaken off)
-ilêkêlêlê, as in hore ilêkêlêlê (to be at a loss)
-êkêlêlê, as in hore êkêlêlê (subside, of pain
or anxiety)

SS₃S₂S₃S₃

-bêbêtsiñhadi, as in moêbêtsiñhadi (a lot of work)
-kgathetsõnyene, as in dikgathetsõnyene (little
troubles)
-fubuðuñyane, as in mofubuðuñyane (red and small)
-futhumaitsane, as in hofuthumaitsane (make each
other warm)
-âtemelêtesa, as in hobeðmelêtesa (bring near for
someone)
-ilêmolläni, as in hore ilêmolläni (untie each other)

SS₃S₂S₃S₃S₃

-hotoloâtsane, as in hoâhotoloâtsane (to extend for
each other)
-karabisañhong, as in dikarabisasang (in mutual
exchanges)

//... Reduplicated
3.48 Reduplicated forms. In reduplicated forms, the first syllable of the repeated portion has S. For the rest, the stress-patterns of the constituents of the compounds are largely as they are in corresponding simple forms, except that an $S_2$ occurring on the penult is often replaced by $S_3$ in the first portion of the compound. It remains $S_2$, however, in the repeated portion.

Example:

(d1)Fatənyəna-fatənyəna (many little trees)
(formula: $SS_3S_3SS_3S_2S_2$)

3.49 Quinquesyllabic ideophones derived from disyllabic ones. These ideophones, derived by reduplicating the entire disyllabic form and then preplacing, to the resulting compound, the first syllable of the original form (as in tə-təəkə-təəkə < təəkə, to glitter), have $S_3$ on the first syllable, and $SS_3$ on each of the two repetitions, giving the stress-pattern $S_3SS_3SS_3$.

3.60 Demonstratives. These have the following stress-patterns:

(a) Position I, both precisions, $SS_3$

Examples:

bêe? (This one?)

bêna (This one)

(b) Position II, precision 1, $SS_3$, precision 2, $SS_2$, and precision 3, $SS_3S_2$

Examples:

bêo (That one near you)

bêño (same)

bênño (same)

(c) Position III, precision 1, $SS_3$, precision 2, $SS_2$, and precision 3, $SS_3S_2$...

Examples
Examples:

bâla (That one over there)
bâne (same)
bânehe (same)

3.61 Quantitatives. These have the following stress-pattern:

SS3

Example:

bôhlê (all of them)

N.B. The stress-patterns of demonstratives and quantitatives given above include the concordial element, the main stress being on the latter as stated in 3.46 above.

3.52 Formative elements. Most of these have S3.

Exceptions to this rule are possessive concords occurring with possessive stems which are either in fact, or in effect, monosyllabic (See 3.46 note 1 above); demonstrative and quantitative concords, all of which have S.

A suffixal formative has S2 on the syllable occurring in prefinal position where the word of which it is a part comprises not fewer than four syllables, except when such word constitutes the first portion of a reduplicated form, in which case this syllable has S3.

Example:

(se)ñatênyana (little tree)
cf. (d̕atênyana-ñatênyana)

Emphatic stress-patterns.

3.53 This refers to utterances in which heavy stress is placed on a particular syllable for the sake of emphasis. Some of these patterns are obtained by stressing the root syllable, others by stressing the penultimate syllable, while, in a few cases, even the final syllable may be stressed. The employment of any particular pattern... depends
depends on the overtones of the utterance.

3.54 Emphatic stress on any syllable bearing $^1$ may indicate one of the following:

(a) Emphasis, without any further implication.

Examples:

Keamorate ngwana ènwa (I really like this child)
Ketešèpè (I'll give you a good hiding)
 Holefifi kentê (It is very dark outside)
EDITHILE hampe pitsa ènè (This pot is very dirty)
Retawe hole (We come from very far away)
Omoiéle (He is very tall)
Amore kgate fatshe (He crashed him on the ground)
Ketešê (These are definitely mine)
Ketsahao le jwâle (Of course they are yours)

(b) "Cheekiness", rudeness, a quarrelling attitude, and, in the case of verbs, a stubborn persistence in doing what is forbidden.

Examples:

Keorobela nne (Save your breath -- I'm going to sleep)
Kemoápìle hê (Well, I've given him a hiding! So what?)
Keâva (Say what you like, I'm going)
Kemoiéle le jwâle (Of course he is the king, whether you like it or not)

(c) A peremptory manner, especially noticeable in commands.

Examples:

Tsamaye! (Get lost!)
Tutubala! (Close your eyes!)
Thôla! (Shut up!)

3.55 Emphatic stress on the penult of a verb may indicate one of the following:

(a) Something happening persistently, to someone's detriment

Most of these are root syllables, but they also include two concordial elements.
detriment.

**Examples:**

Tsahloholôôêha (They kept falling off, e.g. fruit from trees)
Oefôkôla (He is very weak indeed -- persistent state of weakness)
Diatôhwatôwabôêla (They are itching un-bearably)

(b) To do with determination over a period of time.

**Example:**

Hasebêtsa (We worked for a long time)

(c) A persuasive attitude, especially noticeable in commands.

**Examples:**

Sêbêtsa hle! (Pray work)
Atahêla! (Come near, I beg you)
Atamêlahang! (For goodness' sake, go near each other)

(d) A deferential attitude, especially noticeable in affirmative statements. The insinuation in such a statement is that the person addressed is not recognizing the speaker's performance of, or efforts to perform, the action referred to.

**Example:**

Kemojwetse (But I told him (or don't you believe me?))

It may be stated generally, concerning the other parts of speech, that emphatic stress on their penults indicates deference, patient long-suffering, a suppliant or appealing attitude, as in prayer. Here length is much in evidence, and is often given as much prominence as stress.

3.56 In the above cases, it would seem that emphatic stress is restricted to S and S₂ syllables, S₃ syllables being rigorously excluded. In general terms, it may be said that emphatic S conveys ordinary emphasis, but may also imply rudeness, while emphatic S₂ implies politeness.

3.57 Another contrast which may be made with the help of
CHAPTER IV

THE TONAL SYSTEM

**4.1 Southern Sotho is a tone language.** That is to say, that in this language important lexical and other distinctions between phonetically identical speech sequences are often achieved by means of tone only.¹

**4.2 Tone may be defined as the relative musical pitch of the speaking voice on one tone-bearing speech unit.** A speech unit in this context normally corresponds to a syllable.² As a rule, therefore, the number of tones in any given speech sequence will be the same as the number of syllables in that sequence. A succession of tones in a word or formative element constitutes the tone pattern of that word or formative element. A succession of tone patterns in a phrase or clause constitutes the intonational pattern of that phrase or clause.³

**4.3 Tone is relative musical pitch.** This means that the value of a tone depends on its relation to other tones in the speech of one and the same person on a given occasion. As Pike puts it, "It is immaterial to know the number of vibrations per second of a certain syllable. The important feature is the relative height of a syllable in relation to preceding and following syllables. It is even immaterial, on this level of analysis (but not in the analysis of the linguistic expression of emotion), to know the height of a specific syllable in proportion to the general average pitch which the speaker uses. Rather, one must know the relationship /... of

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¹ e.g. grammatical.
² K.L. Pike, Tone Languages, Ann Arbor, University of Michigan Press 1948, p.3, defines a tone language as "a language having lexically significant, contrastive, but relative pitch on each syllable".
⁴ It must be understood, though, that one word may, in certain circumstances, constitute a phrase or clause, in which case the succession of tones in the word will be both a tone pattern and an intonational pattern.
of one specific syllable to the other syllables in the specific context in the particular utterance. A man and a woman may both use the same tonemes, even though they speak on different general levels of pitch. Either of them may retain the same tonemes while lowering or raising the voice in general, since it is the relative pitch of syllables within the immediate context that constitutes the essence of tonemic contrast.  

4.4 The raising or lowering of the voice in general, of which Pike speaks, is a very prominent feature of Sotho tonal behaviour. And this is a feature which is quite distinct from the disturbance of normal voice key by emotional factors. In fact, it is not a disturbance at all, but rather a transition from a higher to a lower general level, called down-stepping, which takes place periodically during a chain of speech, regardless of the emotional state of the speaker and its effect on the overall height of his voice. The disturbance of the voice key by a disturbance of the emotional balance of the speaker may, to varying degrees, disturb the intervals between relatively high and relatively low pitch levels by diminishing or increasing these intervals, but it never obliterates them. This is important because it means that such disturbances do not upset tonemic relationships. In like manner, the transition, in a language like S. Sotho, from one key to another, affecting, as it does, the general height of the voice rather than individual syllables, leaves tonemic relationships exactly as they were before. The position here is seen to be analogous to performing the same piece of music in different keys. The song remains the same whether it is performed in Key C or Key G, the reason for which is that the relationships of the

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1 Pike, op.cit.p.4. See also Beach, op.cit.p.125.
relatively high and the relatively low notes is not affected by this change of key.¹

4.5 One of the problems which confront an investigator of the tones of a language, is that of determining a tonal norm for each word or formative element whose tonal character he seeks to describe. Some writers take the line of least resistance and simply enumerate the various tonal forms of the word in the various contexts in which it is found. Others go one step further and take one of these contextual forms as the basic or the primary or the inherent, etc., tone pattern (i.e. the norm mentioned above), of which the other contextual forms are variants or derivatives. Where two investigators take two different contextual forms as their norms, there is the positive disadvantage that some of their conclusions must differ as a result of this method. For instance, in Sotho certain nouns have H on their final syllable when, inter alia, they are immediately followed by their subject concords. These same nouns have L on the final syllable when, inter alia, they are immediately followed by their possessive concords. Now, the investigator who takes as his norm the tone pattern found when the noun is followed by its S.C., will regard the P.C. as an influencing element which lowers the tone of the final syllable. Contrariwise, the investigator who takes as his norm the tone pattern found when the noun is followed by its P.C., will regard the S.C. as an influencing element which raises the tone of the final syllable of the noun. This is a kind of relationship which may be described in a non-committal way by those, in the first category mentioned, who simply describe the tonal behaviour in the various contexts without reference to a norm, by simply saying that H on the final

¹ Down-stepping is discussed further down. See §§ 4.31 et seq.
final syllable of these nouns coincides with a following S.C., while L on this syllable coincides with a following P.C. This is a method whose advantage over the other one is obvious.

4.6 But then, situations often arise where it is necessary to compare the tone patterns of two words belonging to two distinct grammatical classes, and thus precluded from occurrence in the same syntactical context. For instance, the sequence hlahe is found as a noun meaning dry grass, as an adjective meaning wild, and as a verb stem meaning appear. Now, many investigators will say (and I say the same) that each of these three meanings depends on the tone pattern with which the sequence of sounds hlahe is pronounced. Yet this statement presupposes a common criterion for the determination of the three tone patterns which distinguish the various meanings of hlahe, or else it is highly arbitrary, and full of pitfalls. Take for instance the following situations:

1. The noun hlahe (dry grass) has the tone pattern LH in most of its occurrences. But it often has LL when in final position.

2. The verb stem hlahe (appear) has the tone pattern LL in, inter alia, the infinitive positive. But in, inter alia, the Imperative Mood it has the tone pattern LH, and in, inter alia, non-final occurrence in the participial modality of the Indicative Mood it has HL.

3. The weak adjectival stem hlahe (wild) has the tone pattern HL finally and HH non-finally.

This complex situation regarding the tones of hlahe (and there are many other words which behave similarly) drives us to a position where we have no choice but to either admit that we are unable to distinguish the various meanings of this sequence of sounds by reference to its /... tone patterns
tone patterns, or look for a method, applicable to all words, whereby we can obtain a hypothetical set of tones for such words. By means of the tones so abstracted, which the nature of the problem decrees must be unnatural, we should be able to compare the tones of any two words, irrespective of whether or not they belong to separate grammatical categories.

4.7 The method used here to obtain this kind of tonal norm is as follows:— The word whose inherent tone pattern it is sought to determine is placed at the end of a non-exclamatory, non-interrogative, sentence. All words which are liable to tonal modification by influencing elements, must be used without such elements. Verbs must be in their Infinitive positive form, and used as objects. With non-mono-syllabic words, the result is that the second last syllable, being now the penultimate syllable in the sentence, is subjected to the influence of penultimate length which, among other things, causes a level tone on this syllable to be replaced by a falling tone beginning at the point of the level tone which it replaces. Another thing to be observed in this connection is that a low tone on the final syllable of an ordinary statement (and very often in a question also) is pronounced lower than a low in non-final position. In other words, the low toneme on the final syllable of an ordinary statement is represented by its low-minus tonemic variant. From this we obtain the inherent tone pattern of the word concerned by neutralizing the influence of penultimate length on the tone of the penult, i.e. replacing the

1 Henceforth referred to as an ordinary statement.
2 It is necessary to restrict verbs in this manner, since a change from one grammatical situation (e.g. mood) to another, may be accompanied by a change of tone pattern.
falling tone on this syllable with a level tone pitched at the point where the fall begins, and also by replacing a final low-minus tone with a low tone. The tone pattern so obtained (i.e. the inherent tone pattern) may quite conceivably be identical with one or other of the contextual tone patterns of the word concerned, but this is inconsequential.

4.8 On the face of it, this procedure may appear to amount to nothing more than placing the word in final position, only to remove it again. But there is more to it than that. There is here no substitution of one context for another — the word is not removed from final to non-final position where the proximity of other words, or the mere fact of mid-phrase occurrence, may have a tonal influence on it. Rather is it removed from a specific context to no context — a situation deliberately contrived in order to obtain a tone pattern from which contextual influence has been removed to the greatest possible extent.

There are, no doubt, imperfections in this procedure, but it at least points in the right direction, and, in any case, it provides us with a good basis for tonal comparisons.

4.9 Let us now take a few illustrations:

*Kebatla, hēbūa* (I want to speak), tone pattern of *būa* in this context = HL\LM{l}; inherent tone pattern therefore = HL

*Kebənā, bənā* (I see the children), *bana* here L\LM{l}, inherent tone pattern therefore LH

*Kebula, monyakə* (I open the door), *monyakə* here L\LM{l}L, inherent tone pattern LLL

*Qebua, haheolo* (You speak too much), *heheolo* here LH\LM{l}L, inherent tone pattern LHL
4.10 With monosyllabic words, the only adjustment necessary is on the final syllable of the sentence, i.e. on the one syllable of the word itself, as has already been shown above. Apart from the fact that there is no penultimate syllable to take into consideration, therefore, the position is much the same for monosyllabic words as it is for non-monosyllabic ones.

The Tonemes of S.Sotho

4.11 The next problem to be considered is that of determining the number of tonemes in S.Sotho. By toneme is to be understood a lexically significant musical pitch on a tone-bearing element. In other words, situations must exist where a contrast of pitches on a syllable in an identical phonetic utterance, constitutes the sole criterion of lexical distinction. This problem is thus seen to be closely related to the one just disposed of, viz. the determination of a tonal norm for purposes of tonal comparisons. Provided that a suitable criterion for the determination of a norm for all grammatical classes of words has been found, little, if any, difficulty should be experienced in determining tonemic relationships.

4.12 A few examples of words in which pitch has a lexically distinctive significance are:

<table>
<thead>
<tr>
<th>Monophthong</th>
<th>Diphthong</th>
</tr>
</thead>
<tbody>
<tr>
<td>buə LL (to skin)</td>
<td>būa HL (speak)</td>
</tr>
<tr>
<td>löya LL (bewitch)</td>
<td>löya HL (be well blended, become sufficiently thickened)</td>
</tr>
<tr>
<td>sēba LL (do mischief)</td>
<td>sēba HL (whisper, slander)</td>
</tr>
<tr>
<td>bakə LL (to cause)</td>
<td>bākə HL (repent)</td>
</tr>
<tr>
<td>lehəta LLL (liar)</td>
<td>lehəta LHL (skull)</td>
</tr>
</tbody>
</table>

/... thəkə/
In each of the above words, there is only one contrasting syllable. There are many words, however, in which are found more tonally contrasting syllables than one.

Examples of these are:

- jwāng LH (grass) : jwāng? HL (how?)
- bobetsī LLH (width) : bobetsī LHL (nettle)
- pēle LL (in front) : pēle HN (first, at first, before)
- lehāre LLH (middle) : lehāre LHL (razor)
- mōna LH (envy, jealousy) : mōna HL (taste)

4.18 Tonemes are very often also of grammatical significance, being sometimes the sole means, and often one of the primary means, of grammatical inflexion.

Examples:

- verb stem bapala (play) has inherent LL;
- Imperative singular positive LHL; Indicative present participial positive HLL, as in bābāpala (they playing); Subjunctive present positive HLH, as in Bābāpālē (They must play), etc.

Again, the 1st and 2nd pers. S.C.s (all S.C.s are mono-syllabic) have L in, inter alia, the following situations:

- Primary modality of the Indicative Mood, present and future, and in the perfect form; also in the Subjunctive past.

But they have H in, inter alia, the following situations:

- Participial modality of the Indicative, all tenses; and in the Subjunctive present.

This function of grammatical inflexion is given first preference over that of lexical distinction. Indeed,
sometimes the change from inherent to grammatical tone results in the identicalness of pairs of tone patterns which, in their inherent form, are unlike and lexically distinctive. In other words, in tonal inflexion we very often encounter cases where one toneme is replaced by another without changing the basic meaning of the word in which such substitution takes place, but rather changing the grammatical significance of such word. In this way ambiguity is sometimes brought about by the inflexion of tones whose corresponding inherent forms are contrastive and distinctive. For instance, the utterance bua means speak when it has inherent tone pattern HL, and it means to skin when its inherent tone pattern is LL. These two inherent tone patterns sometimes occur uninflected in sentences, thus continuing to reflect the lexical distinction between the two words. This is the case in the two sentences:

Keabua jwålè (I am speaking now)

Keabua jwålè (I am skinning now)

But in the Babua kamelhla, in which bua has tone pattern HL, the meaning could be either They speak everyday or They skin everyday. What happens is that the syntactical context in which the form bua is placed in this sentence inflects the bua with tone pattern LL by raising the tone of its first syllable from L to H. This derived tone pattern is identical with the inherent tone pattern of bua meaning speak, which is not modified by this context. The result is that we have an ambiguous sentence which requires a wider context for it to lose its ambiguity.1

4.14 Sometimes identical phonetic utterances also have identical

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1 This is a phenomenon which is theoretically possible in all tone languages. For instance, Beach, Hottentot, notes it for Nama (p.146), stating that "Don't rest and Don't warm yourself are pronounced exactly the same in Nama".
identical inherent tone patterns, so that ambiguity is found already at this level.

Examples:

thọba, LL (either mountain or rejoice)

thọba, LL (either steal away or foment)

name, LL (either meat or stretch the legs)

4.16 Parallels of the kind of distribution noted in §3.13, i.e. where a significant distinction between two forms in one situation is obliterated in another situation, are found among phonemes as well. For example --

thọba (foment) has reflexive ithọba

rôba (break, trans.) also has reflexive ithọba

These reflexive forms also have the same tone pattern, viz. HEM. In the reflexive form of the second example, the allophone r is, in the presence of the immediately preceding reflexive formative i, replaced by the allophone th. In the reflexive form of the first example, the allophone th of the non-reflexive form is retained after preceding i. The phonetic distinction found in the non-reflexive forms because of the contrasting nature of the phonemes of which the allophones r and th are members, is obliterated in the reflexive forms.

4.16 From comparisons based on the inherent tone patterns of Sotho words, we come to the conclusion that there are two tonemes in this language, viz. a HIGH TONEME and a LOW TONEME. The low toneme comprises three variants or allotones, referred to here as mid (M), low (L), and low-minus (Lm), which occur according to definite rules, the details of which will become clear when tonal inflexion is discussed. The high toneme, on the other hand, apart from the fact that it may, like the low toneme, give rise to a falling glide in the penult, is a one-member toneme. This does not mean that H always occurs on the same
absolute level, even with the same speaker. What it
does mean is that, apart from sub-perceptual variations,
which are obviously of no concern to us, such variations
of H as are observed are restricted to cases of tonal
transition, which are changes of key covering the whole
range of tone used by the speaker, rather than changes
involving H as such. It just so happens that a down-step
transition is easier to observe on H than on L.

The mid tone\(^1\) variant of the low toneme occurs only
on the final syllable of a word occurring at the end of
a phrase. In all other situations -- in mid-phrase
occurrence generally, and also when it is followed by
an influencing succeeding element -- the variant L is
found on this syllable in the place of M. While the
allophones M and L are thus seen to be non-distinctive in
a lexical sense, attention must yet be drawn to their
significance in the word *mosâbâtsi* when occurring finally
(and also, therefore, in its inherent tone patterns).

With inherent tone pattern LHHM, this word means *a worker*,
while with inherent tone pattern LHHL, it means *work* (noun).

As already indicated, however, in mid-phrase occurrence
this distinction is obliterated, both forms having LHHL.

4.17 S. Sotho employs a *level tone system* as against a
*gliding tone system*.\(^2\) The tonal glides found in this
language are therefore mostly variants of the two level
tonemes already referred to. The falling tone on the
penult in an ordinary statement is a variant of the level

\(^1\) I must draw attention here to the fact that my *low tone*
is what Jones and Plaatje in their *Sechuana Reader* include
under *mid tone*, and what I call a *low-minus tone* they re-
fer to as a *low tone*.

Tucker also refers to my low tone as a *mid tone*. What
I regard as a mid tone he calls a *raised mid tone*. See
Sotho-Nguni, pp. 214 to 215.

\(^2\) Referred to respectively as a *register tone system* and
*a contour tone system* by Pike in *Tone Languages* (see
esp. Chapter I).
toneme (whether high or low) found at the point of commencement of the fall. Which means that H on the penultimate syllable of a word is replaced by H-falling, the end-point of the fall being either mid or low-minus, depending on the tone of the final syllable; while L in identical conditions is replaced by L↓LM.

4.18 The juxtaposition of two identical vowels with different tones eventually leads to the emergence of a gliding tone between them. In this connection, the problem of syllable division which hinges on the question: When do the two syllables concerned cease to be two short syllables and become one long syllable?, is intimately related to the one regarding the tones of these syllables, viz.: When do the two juxtaposed level tones merge into one gliding tone?. It is suggested here that it is best to leave this an open question, placing the onus on the individual investigator, as guided by the demands of the moment, to decide whether to regard such a sequence as two separate syllables with two separate pitches, or as one long syllable with a gliding tone. The truth is, indeed, that neither of the two alternatives will be found to be used to the entire exclusion of the other. Be that as it may, the fact is that there are no gliding tonemes in S. Sotho, as witness the tendency for even a semi-permanent glide to eventually develop into a level pitch, usually found at the higher of the two levels originally juxtaposed.

4.19 There are also a few cases where, in certain grammatical situations, a low-rising glide develops from a low-level tone. This is found, notably,

1. on the first syllable of a disyllabic A-form verb stem in a predicate in the participial modality, positive.

Example:

1 See §4.7 above.
Example:

Dini aryotša bana (He was teaching the children)

L/HH on rute (i.e. L/H on ru), cf. original participial tone pattern LH, still heard also, and used exclusively in Tswana.

2. on the second last syllable of a verb in the relative modality, with the relative suffix counting as the final syllable. Here the stem may be either A or B-form, and may be of any length, including monosyllabic stems. In the negative, however, disyllabic B-stems do not behave in this manner.

Examples:

batho bōš jang (the people who are eating)
sefata seš rōbahang (the tree which is breaking)
sefata seš rōbēhiling (the tree which is broken)
banā bōš māmēling (children who listen, i.e. obedient children)

The original tone pattern on the second last syllable in each of the above examples was L (still the only form in Tswana) which has now been replaced by L/H.

3. on the object concord, in a number of grammatical situations, when it is used with monosyllabic verb stems.

Examples:

Bānā bāmp̩a dijō (They were giving him food)
Bēilē bāmp̩a dijō (They gave him food)

Original L on the O.C. is here replaced by L/H.

It is noteworthy that in spite of the fact that in the above situations the glide originates from one level tone, yet here too the tendency is for this glide to be ultimately replaced by a new level tone pitched at the higher of the two points of the glide.

4.20 Glides are, therefore, never permanent in S. Sotho. Yet, in spite of this, it would seem that at least in the
three occurrences listed in the immediately preceding paragraph, there is no option but to reflect such glides in our tone-marking, because it would be wrong and misleading to write two vowel symbols (as if recognizing two separate syllables) where the glide arises, not from the merging of two originally separate tones on two separate syllables, but from one originally level-toned syllable. We choose, therefore, to mark all gliding tones in this work.

Tone-marking

4.21 It has been stated at various points above that tone is often employed, either by itself or together with certain other criteria, to make grammatical distinctions. Some of these distinctions are effected through the substitution of allotones belonging to the same toneme, rather than through the substitution of tonemes. The most outstanding substitution of this kind is that of the allotones M and L which both belong to the toneme L. For example, in all cases of trisyllabic A-form verb stems, the tone pattern HHM plus a prefixed Infinitive prefix ho, give the positive Infinitive form (or the Class 15 nominal form) of such a stem.

Example:

hohopola (to remember) L|HHM

Omission of the Infinitive prefix and the substitution of L for M on the final syllable of the stem give the Imperative Mood positive singular of that stem.

Example:

.Hopola! (Remember!) HHL

Again, in many situations, the derivation of a noun from a verb stem without any modification of the form of the stem, involves a modification of the tone pattern of that stem.

/... Example:
Example:

\[ \text{modîsa (herdboy)} \quad L/\text{H}u < -\text{dîsa (to herd)} \quad \text{H}L \]

But where the form of the stem is changed, the tone pattern is often found to be unchanged, since a criterion of distinction has already been introduced.

Example:

\[ \text{marûti (teacher)} \quad L/\text{H}u < -\text{rûta (teach)} \quad \text{H}L \]

The verb stems \text{disa} and \text{rûta} have the same inherent tone pattern, viz. \text{H}L, and have an identical tonal behaviour in all situations where they are subjected to the same influences.

4.22 Because of this inseparableness of tone and grammar, it is imperative that such allotones as are grammatically distinctive should be distinctively marked, and not only the tonemes to which they belong. This, together with what was said about gliding tones, would seem to suggest that narrow tone-marking should yield more satisfactory results than broad tone-marking. We therefore use the former.

The Tone-marks and their Positions

4.23 The tone-marks suggested, and the positions they must occupy in relation to the syllables to which they refer, are as follows (using \text{le} to represent a syllable):

1. A short horizontal stroke above the syllabic (usually a vowel) to indicate a high level tone. Thus \text{lā}.

2. A short horizontal stroke below the syllabic to indicate a low level tone. Thus \text{la}.

3. A short oblique line slanting to left (similar to grave accent) above the syllabic to indicate a high-falling tone. Thus \text{la}.

4. A short oblique line slanting to right, placed below the syllabic to indicate a low-rising tone. Thus \text{la}.

5. A short oblique line slanting to left placed below
the syllabic to indicate a low-falling tone. Thus la.

6. A no-mark around the syllabic to indicate a mid tone. Thus la.

4.24 The placing of the tone-mark above or below the syllabic, as the case may be, has been chosen in spite of the disadvantage that a number of vowels in our recommended orthography already carry diacritical marks over them, which means that, where the tone-marks are placed above the syllabics, some vowels will have to carry two diacritical marks above them at the same time. This makes typing quite difficult. The alternative to this, which is employed by Beach, Tucker, and Letele, consists in prefixing the tone-mark to the syllable to which it has reference. This has a disadvantage which, in our view, is more serious than the one attendant upon the previous alternative, viz. that spaces will have to be left open in the body of words of more syllables than one, in order to make room for the tone-marks, an obvious nuisance to typist, printer, and reader alike.

4.25 The recommendations for tone-marking put forward here agree in large measure with those of Jones and Plaatje in their Sechuana Reader. (see p. xxvi Intro.).

General remarks concerning semi-permanent glides

4.26 As already hinted above, rising glides tend to be ultimately replaced by levels pitched at the terminal point of the glide.

Examples:

hihlo (head), whose tone pattern probably began as LHM, next developed to L/HM (the pattern in current usage), which is gradually giving /... rise

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1 I am unable to say to what extent, if at all, it would be a hindrance to the printer.
2 in Sotho-Nguni.
rise to HM.

The fact that more and more people write one ə and not two in the first part of this word, would seem to indicate a growing recognition of at least the existence of a semi-permanent glide on this syllable, and possibly even of the incipient pattern HM.

The words phãkə (ram), kwãtæ (deep pool), kilə (gizzard), and letopə (trembling), all mentioned by Leetele in Tone, p.5, behave, in respect of the tone of the first syllable of the stem, in the same way as phãkə.

4.27 Falling glides other than those due to penultimate position tend to be ultimately pronounced as levels pitched at the point of commencement of the glide. An example is phãrafə (animal) whose tone pattern has evolved in the following way:

From HIL (cf. Tswana phãləfələ : HIL), to the present H\IL, which is gradually giving rise to HIL.

Notes on Tucker's (High) Falling Toneme

4.28 I find it difficult to understand why Tucker regards a high-falling tone due to penultimate occurrence, as a toneme rather than a variant of the high toneme. To be consistent, he should also recognize the existence of a low-falling toneme in penultimate position. We have, in these two cases of falling tones, the regularly-observed rule that in penultimate position in an ordinary statement, a high level tone is replaced by a high-falling-to-low (or high-falling-to-mid) tone, and a low tone by a low-falling-to-low-minus tone. In either case it is obvious that the level tone and the corresponding falling tone are members of the same toneme.

All evidence points to the fact that Sotho in general, Ʌ... and

See Sotho-Nguni, p.216.
and Sotho in particular, has a level tone system. Any suggestion of the possible existence of a gliding toneme in this language must therefore be subjected to a thorough scrutiny before any definite conclusions are reached regarding it.

4.29 There might be a case for regarding the high-falling tones of some groups of ideophones as constituting, by themselves, a toneme. But the remarks made above (§§ 4.18 and 4.19) regarding gliding tones and the juxtaposition of identical vowels with contrasting tones would seem to discourage such a view even here. A few additional remarks in this connection will be pertinent here.

There is a group of disyllabic ideophones which have tone pattern HL, with the last syllable prolonged to any desired length. These can be subdivided into the following groups:

1. Those whose two syllables are both of the typical consonant + vowel (CV) type, giving the sequence CVCV.

2. Those which have only a vowel as their second syllable, the CVV type, which may be further subdivided into

   (a) those in which the two vowels are unlike (CV1V2) and
   (b) those in which the two vowels are identical (CVV).

In the last of these types, viz. CVV, the impression of tone pattern H\L as against HL, is very strong. But this impression diminishes by degrees as, first, we examine the CV1V2 type of ideophone, and next the CVCV type, where the impression gained is unmistakably of the HL type of tone pattern. I give three sets of examples to correspond with the above divisions.

Examples: with syllables CVCV

fūbē (being red)

/... tlērē
tīrē (being red, esp. with blood)
iīla (being green)
sēhē (being yellow)

with syllables CV₁V₂
swēu (being white)
thūē (fall asleep)

with syllables CVV
twāa (being pure white)
hlwi (snatch)

The general impression gained here is that such tonal glides of the high-falling type as may be found in these ideophones are a result of the coming closer of two, at first quite separate, syllables. Or, at any rate, they have the makings of such glides.

4.30 It is observed that I here follow Jones who, speaking for Tswana, says,¹ "... we see that the high-fall may be regarded as a member of the same toneme as the high-level, the low-fall as a member of the same toneme as the mid-level, the low-level also as a member of the same toneme as the mid-level ...".²

Tonal Transition

Down-stepping

4.31 This very important aspect of the tonal behaviour of Sotho was first noted in Tswana by Jones and Plaatje in their Sechuan Reader in 1916. These authors noticed that it often happened that at certain points in the sentence "the high-level pitch is slightly lower than what it was before". That is to say, that the general height of the pitch of the voice (or the key) is changed by being lowered. The original high having been replaced by a high much nearer the original mid, this latter is

¹ See The Phoneme, §§475 - 482.
² Cf.§4.15, n.1 in this work.
also lowered in order that the distinction between them is maintained. The next tone below mid is also lowered, and so on until the whole scale has been transferred uniformly to a lower general level. We may refer here once more to the analogy made in §4.4 of a song which, though sung in different keys, does not lose its individuality for that reason, since, in spite of the difference in key, the relationship between its parts, as well as between its relatively high and relatively low notes, is not affected. For, in down-stepping, we see how the same speaker changes the absolute height of his voice quite frequently as he progresses, but without changing the relationship between the various levels of pitch in the language he is speaking.

4.32 In 1950, Jones, in *The Phoneme*, referred once more to this aspect of Sotho tonal behaviour. "... there exists in Tswana" he says, "a peculiar tonal phenomenon, which, though it has semantic function, can hardly be classed as a toneme. It is that at various points in sentences a high tone has to be made slightly lower (roughly a semi-tone lower) than the last preceding high tone, and that all subsequent high tones in the sentence have to be on this lower level — unless and until another point comes where a similar lowering has to take place. Any mid tones following such a point are lowered to match. The points of lowering sometimes occur between words and sometimes in the middle of a word. Long sentences often contain quite a number of these lowerings. The points at which the lowerings take place appear to be prescribed solely by syntactical considerations. Thus the verb with a prefixed pronoun [subject concord] is always

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1 §480
always lowered in comparison with the subject preceding it, and the direct object is often lowered as compared with the verb preceding it."

4.33 Tucker took up this point in his *Comparative Phonetics* in 1929, but made no advance on Jones and Plaatje; for, though he marked it regularly in the examples in which either it occurred, or he believed it occurred, he failed to list any of the situations in which its occurrence might be predicted.

4.34 Letele in his *Tone*, gave some of the situations where this transition occurs (p.118). But, in comparison with the actual number of such situations, Letele has given but an insignificant fraction of them.

No occurrence of down-stepping in the middle of a stem

4.35 I have to point out that I do not agree with Jones (*The Phoneme*) and Tucker (*Comparative Phonetics*) when they suggest that down-stepping also occurs in the middle of a word. Of course, a great deal depends on what is understood by a *word*, and I am sure it is possible to define it in such a way that my objection would fall away. The objection, as the sub-heading shows, is to the implication, in the statements of these two authors, that down-stepping also occurs in the middle of a *stem*. In fact, both of them more than imply this, as shown by Tucker's example *mosādi* (woman), where, he suggests, a down-step occurs on *di*, i.e. in the middle of the stem *sādi*; and Jones' initiation of a down-step on *u* of *fāu* in *kē tau* (It is a lion). Both these cases are further referred to below. But we may point out at this stage, that in the actual act of speaking, the syllables in the stem *sādi* are never isolated from each other, nor is their order ever changed. Their sequence of occurrence is fixed. For instance, *di*, which Tucker suggests is the *... beginning*
beginning of a down-step, never occurs at the beginning of the word, or, at any rate before it, so that we can see whether its absolute pitch is raised in that position. Yet this is an essential test. So, for instance, a subject concord occurring after the expressed subject is lowered in pitch, as it is the syllable on which the down-step transition takes place. But when the same subject concord is placed at the beginning of the sentence, either in the absence of the subject or when the order is inverted, then (if its tone is H) its absolute pitch is distinctly higher than it is in the other situation.

4.36 Again, there is a rule that a mid tone, which always occurs at the end of a word, is lowered to low when such word occurs in mid-phrase. A high tone is never lowered to low in these circumstances. Now, when mosedi is placed in the middle of a phrase, the tone of di becomes L. The tone on this syllable, when the word occurs alone or at the end of a sentence, is therefore not high (lowered or otherwise) but mid. Besides, Jones' and Tucker's suggestion that down-stepping is governed by syntactical laws would seem to make my viewpoint the more acceptable one.

4.37 The only situation where one might justifiably speak of a down-step transition as occurring in the body of a word is where it can be conclusively demonstrated that the word in question came into existence as a result of the historical merging of two originally separate elements whose present morphological relationship was preceded by an earlier syntactical relationship. If it can be shown that in the earlier relationship a down-step transition occurred between the two elements which have now merged, then it might be accepted that such a transition was retained when the elements were united into one word. /... Compound

1 Cf. §4.16 above.
Compound relative connectives in S. Sotho, which provide examples of that kind of word, have descended from simple relative connectives followed by their corresponding relative subjectival concords. This is a syntax relationship which still obtains in Tswana. Between these two elements is a down-step, so that the tonal sequence becomes a high tone followed by a lowered high tone, a relationship which was retained in S. Sotho when the two elements merged to form one word. The word mohlömong (perhaps) provides another such example, being descended from mohle 3 , mong, with a down-step transition after the simple relative connective 3 , retained as the vowel of the second syllable in mohlömong.

4.58 It is interesting to note that a phenomenon similar to the one under consideration here was observed in Nama Hottentot speech by Beach. In his Phonetics of the Hottentot language, he says (p. 145), "There is a general tendency for the average pitch of a speaker's voice to become progressively lower from the beginning to the end of the breath-group."

"A corollary to this is that a root occurring towards the end of a breath-group will often have a lower tone than a root having the same inherent tone which occurs near the beginning of a breath-group." Unfortunately "for lack of data", Beach could not supply any details of this occurrence, and one cannot say how closely parallel it may be to S. Sotho down-stepping.

4.59 L. E. Armstrong also observed a similar kind of tonal behaviour in Kikuyu. "The system of slight tone-lowering," she says, "so characteristic of SeChwana, which Professor D. Jones has described in the Introduction to A Sechuane Reader, functions also in Kikuyu, but nothing like to the same extent or so systematically." 1

1 L. E. Armstrong, Kikuyu, § 530.
Readjustment

4.40 After one or more down-steps, a lifting up of the general key of the scale is referred to as Readjustment. There are two types of readjustment to be taken account of, viz. phrasal and non-phrasal. Phrasal readjustment is significant in so far as it reflects, or helps in the attainment of, the phrasing of the speech chain. It mostly occurs immediately after points usually marked by a period (full-stop) in punctuation; or, in speech, where the speaker makes a complete pause in order to begin again in another direction. It does, however, also occur elsewhere. Where phrasal readjustment occurs immediately after a period, it is not necessary to mark it.

Non-phrasal readjustment results from the necessity to keep the pitch from descending below the range of the speaker’s voice. This is arbitrary, depending on the individual speaker and on the occasion. An important thing to note about non-phrasal readjustment is that, unlike in phrasal readjustment, the pitch is here not necessarily, and most of the time is, in fact, not, raised up to the original level, but only sufficiently for the speaker to speak in comfort. It is therefore both impossible and unnecessary to mark it.

The term readjustment will be used, without an adjective, to mean phrasal readjustment, except if and when the necessity should arise for non-phrasal readjustment to be referred to, in which case the full name non-phrasal readjustment will be applied.

Notes on Jones’ remarks re down-stepping

4.41 Let me introduce this discussion by quoting three different statements by Jones on this point.

/... 1.
1. In *A Sechuana Reader* he says, with reference to the
   discritical mark which he employs to indicate the begin-
   ning of a down-step: "... from this point onwards the
   high-level pitch is slightly lower than what it was before".
   (Intro. p.xxvii, §59) (my emphasis).

2. In *Tones of Sechuana nouns*, again with reference to
   a sign used for the same purpose as above, he says that
   this sign "is used to denote that the next and all follow-
   ing high tones are slightly ... lower than any high-level
   tone that may precede in the sense-group". (p.3) (my em-
   phasis).

3. In *The Phoneme* he says, with reference to down-stepp-
   ing in general: "... at various points in sentences a
   high tone has to be made slightly lower ... than the last
   preceding high tone, and ... all subsequent high tones
   in the sentence have to be on this lower level". (§480)
   (my emphasis).

4.42 In these three quotations, I want to draw attention
   especially to Jones' references to the lowering of a high
   tone in down-stepping, because his persistent reference to
   the high tone in particular leaves one with the impression
   that other tone levels are not affected by down-stepping.
   He does say, further down in §480 of *The Phoneme*, that
   "Any mid tones [under which he includes all members of
   the low toneme] following such a point [i.e. the first
   lowered high] are lowered to match". If, as should be
   the case, this statement is given as much emphasis as the
   lowering of the highs, then the equilibrium is restored
   into the picture, and one can see clearly that down-stepp-
   ing consists, in fact, in the uniform lowering of the
   entire musical scale occurring between the highest and
   the lowest pitches registered by the speaker's voice.

/* Of
Of course there can be no doubt that lowering is much more easily perceptible on a high than on a low. So that when, as it very often happens, a down-step begins on a low-toned syllable, it is at best extremely difficult, and often enough quite impossible, to detect. In that case, the first evidence of a transition to a lower level will come later than the actual commencement of the new level, viz. on a high tone (if any) in that particular key. It must be constantly borne in mind, therefore, that the first lowered high encountered is not necessarily situated at the beginning of the down-step. If Jones and Tucker had been aware of this, then they would probably not have fallen into the error of assuming that down-stepping occurs in the middle of words as well as at other points. One outstanding example of this error occurs in Jones-Plaatje, Sechuan Reader, in the sentence Kešau (It is a lion) (my own spelling) (§62) where the high-toned syllable y of teš is marked as being the beginning of a down-step. This is not so. And it is easy to prove this by using, as a copulative base following ke, a form (preferably a noun on this occasion, as teš is also a noun) whose first syllable has H. In that case the H of ke and that of the first syllable of the immediately following noun will be juxtaposed. Here are a few examples: K.B. The sign is used immediately before the first syllable in the new (lower) level.

Examples:

Kešū (It is rain)
Kešiteš (It is Piteš)
KešPulane (It is Pulane and Co.)

In all three examples the H coming immediately after the H of ke is pronounced on a lower level. In the last example, the highs following the first lowered one after /... ke/
are on the same absolute level of pitch as this first
lowered one, and it is not possible here to make a mis-
take regarding the point of commencement of the new level.
But suppose that in the place of high-toned ke in this
example a low-toned syllable had been used, then the in-
vestigator's first awareness of the new level would have
come later than the first syllable on which the transition
actually occurs, in other words, he would only have noticed
this change on the first high in the new level. In fact,
if there were no high-toned syllable at all in the copu-
labative base after ke, then, if there was no resort to
other means of putting the situation to the test, there
might be no suspicion at all that ke was followed by a
down-step. That is why the suggestion is made later on,
that wherever possible, an element suspected of being
followed by a down-step must be used with a high-toned
syllable following it. This should remove any doubts
which may exist.

4.43 It is clear from the above that in the Jones-Plaatje
example kete, the down-step is initiated on the syllable
to which happens to have low tone, and not on u which,
may we stress again, happens to have high tone.

4.44 I must differ with Jones also when he suggests (The
Phoneme, §482) that "The only way in which such a tonal
usage could be brought into a tone-mio classification
would be to distinguish two kinds of high tone. These
would be identical in actual tonal value, but one would
involve a lowering of a subsequent high tone, whereas the
other would have no effect on succeeding tones." The
first thing to note in this connection is that, as already
stated, down-stepping does not begin and end with high
tones. It is a relationship of whole scales, each of
which covers the whole range of pitches from the highest

/?... high
high to the lowest low. Secondly, it is not certain pitches or pitch-patterns which occasion this tonal transition. It is the syntax relationships between certain morphological classes of words which bring it about, as in the relationship between the subject of a sentence and the subject concord agreeing with it as shown by some of the examples given below. For these reasons, the question of the possible existence of a high tone involving "a lowering of a subsequent high tone", does not arise.

The two Tswana examples on which Jones' suggestion is partly based are an unfortunate choice. \[tʃʰələ\] (to hold, to carry) and \[tʃʰəla\] (to dish up) are, respectively, A and B verb stems,\(^1\) having two different sets of tone patterns; and it is solely for that reason that they show a difference of tonal behaviour in context. The word meaning dish up has inherent tone pattern LL. When used with a high-toned basic S.C., or, as done by Jones, with a participial S.C., this S.C. attracts the first syllable of this verb stem from L to H, while the second syllable remains unaffected. The result is HL from original LL. The fact that this verb is followed by a direct object has nothing to do with its tonal behaviour. \[tʃʰələ\] meaning to hold has inherent tone pattern HL. Its H on the first syllable remains H when preceded by the same kind of S.C. as the previous word, but, because of the particular adjunct following it in Jones' example, its L on the final syllable is raised to H. The tone pattern is then HH. The adjunct referred to need not be an object, but could be some other one (adverbial, for instance) which belongs to a group of adjuncts having this tonal effect on this tonal type of verb stem in these circumstances.

\(^{4.45}\) Even in syntactical relationships, however, it is, as

\(^1\)The terms A-form and B-form are explained below.
as pointed out further down, often difficult to say whether a down-step is caused by a preceding word, or whether it is inherent (being latent) in the syllable on which it is initiated.

Let us illustrate this point:

When a noun is followed by a formative with which it has a subject-predicate relationship, a down-step is initiated immediately after such noun, beginning on this formative.

Examples:

Pītsō rēhilīlē (Pītsō has arrived)
Lētātsai jārifalē (The sun was eclipsed)
Hē Pītsō əkatlē (If Pītsō should come)
Pītsō kēngwānā (Pītsō is a child)

Again, when a noun is followed by the conjunction le, which has H, a down-step is initiated on this le.

Example:

mōnā le mōsādi (a man and a woman)

But when a noun is followed by a P.C., which also has H, there is no down-step on this P.C.

Example:

mōsādi waka (my wife)

Again, a relative connective is not affected tonally when it follows a noun.

Example:

mōsādi ōmotlē (a beautiful woman)

These illustrations show that, while in some cases we might be led to believe that the noun demands a down-step after it, yet there are other cases where there is no coincidence between a noun and an immediately following down-step. A more satisfactory conclusion would seem to be that the S.C.s in these examples, as well as the copulative formative ke and the conjunction le, all have
a down-step potential, i.e. that mid-phrase occurrence per se results in their being down-stepped. This conclusion would arise partly from the fact that they are down-stepped also when they are preceded by words which are not nouns.

Examples:

ha babatla haya (if they want to go)
seka keke (This one is mine)
jwale le tesena tsafula (And now they too arrived)

The P.C. and the relative connective are also down-stepped after the conjunction ha, any demonstrative qualitative, and the adverb jwale. This suggests two things, viz. firstly, that ha, demonstratives, and jwale demand a down-step after them, and secondly that the P.C. and the relative connective are down-stepped only after forms demanding a down-step, but not in other situations.

In many cases, however, it is not possible, even by this laborious process of elimination, to determine conclusively whether a form has a down-step potential, or it is down-stepped only because a preceding form demands such a tonal behaviour.

4.46 Lastly, I refer to §480 of The Phoneme where Jones says that "the direct object is often lowered as compared with the verb preceding it". (my emphasis). A footnote (note 11) on this statement says, "Whether lowering of the direct object takes place depends upon the tense of the verb". This statement is not borne out by the facts. There is always a down-step transition between a verb and its object. Tswana behaves identically with S.Sotho in this particular case also, so that in all the examples in which the verb is followed by an object, a down-step should have been indicated as beginning on the object.

/... Up-stepping
Up-stepping

4.47 The occurrence of this transition is referred to by Tucker in Comparative Phonetics ($257$) and Letele in Tone. It is obvious that Tucker does not attach much importance to this phenomenon. He does not recommend that it be marked, for it is "not essential for good pronunciation". Letele takes it more seriously, and gives some rules for its occurrence on page 119.

While there can be no doubt that down-stepping is a very important feature of the tonal behaviour of S. Sotho, and that its omission results in markedly bad pronunciation, up-stepping is just as surely unessential, being in fact hardly perceptible in most of its occurrences. I therefore follow Tucker and suggest that it be ignored.

The Importance of Down-stepping

4.48 I am convinced, after the preliminary study of down-stepping whose results are outlined below, that this phenomenon is, in at least most of its occurrences, an indispensable part of the fabric of the syntactical structure of Southern Sotho. It helps in the phrasing of the speech chain, reflecting an even, uninterrupted flow of thought and expression, with one phrase linked to the preceding or following one at the tonal transition point. Any arrest of this smooth flow of ideas and expression is reflected in a return to the original general height of pitch. From this it may be concluded, with a fair amount of justification, that an attempt to determine the rules governing this phenomenon cannot have much hope of success; for phrasing often depends on the mood of the speaker, whether he is calm or excited, whether he is conversational or oratorical, etc., so that it depends partly on subjective factors. Yet if we analyse the speech of someone speaking calmly, without emotion, we... do
do observe a regular occurrence of down-steps associated with certain phrases and certain word-orders, and a pattern begins to emerge, which must hold good for all similar phrases spoken in similar circumstances. Illustrating the same point, only from a different angle, we may refer to a semi-literate person, whose reading provides a good example of phrasing gone crazy. The interruptions in the natural flow of words within a phrase, and of one phrase into another, is the cause of more frequent readjustments than would normally have been found. These readjustments may be placed just anywhere in such a reading, but quite often they occur where in fact a down-step should have taken place. For, this readjustment reflects the mental attitude of beginning the same phrase afresh, or beginning another phrase.

4.49 Down-stepping and readjustment can best be illustrated by the following diagram:

\[ \text{Diagram showing down-stepping and readjustment} \]

Notes: 1. The uneven steps are intended to show that down-stepping occurs after greatly varying intervals. The diagram is, however, not based on the analysis of an actual series of phrases, but is purely imaginary.

2. As the diagram shows, the return to the original height does not always occur at the same level. Sometimes fewer, sometimes more, phrases are related to each other by means of these down-steps. It is important to remember, however, that the pitch is never allowed to descend beyond the reach of the speaker's voice; and to avoid this, where necessary, a non-phrasal readjustment is made.

Method of investigating this problem

4.50 To arrive at the rules outlined below, I took two
passages\(^1\) and read them aloud. I noted all the highs which were lower than the ones before them. As stated above, it is necessary to concentrate on the highs at this stage, not because they are the only ones lowered, but because lowering is much easier to detect on them than on the lows. It often happens that a lowered high is found, not at the beginning of the down-step, but somewhere in the middle of the lowered phrase. It is then tempting to conclude that that is the point where the down-step falls. But whether this is so or not can, in most situations, be resolved by looking for an instance where a high occurs earlier than this point. Going backwards syllable by syllable in this manner, the point will finally be reached where the down-step properly begins.

4.61 A difficulty which often arises in the formulation of the rules of down-stepping is this: Is the form or formative on which down-stepping begins caused to behave the way it does (i.e. governed) by the form or formative immediately preceding it, or is there, within the element on which down-stepping begins, an inherent tendency to be lowered in certain situations?\(^2\) In fact neither was found to be exclusively the case on collating the data from the readings made, but rather both were found to occur to an appreciable extent.

4.62 Notwithstanding what was said above about the difficulty of discovering and properly formulating the rules concerning down-stepping since these are partly determined by the mood of the speaker etc., yet we can, basing our analysis on the calm, conversational speech of a /... normal

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1 One from Segoe, Kongo ke moholo ke moyane, Morija, ed. 1940, pp. 1 and 2, and Mofokeng, Letona, A.P.B. 1964, pp. 1 and 2.
2 See §4.46 above.
normal speaker of the language (or fluent reading by him), arrive at certain very definite conclusions which, with only slight and non-significant variations, will be found to be applicable to all similar situations.

The marking of down-stepping and readjustment

4.53 The following marks are used to indicate down-stepping and readjustment:

- la = first syllable on the lower level, i.e. the syllable on which a down-step begins.
- le = first syllable on the readjusted level — marked only for phrasal readjustment.

N.B. In most cases phrasal readjustment will be found to coincide, in the written language, with the period. The occurrence of the period therefore means a return to the original height immediately after such period. Readjustment in these situations is not marked.

Some of the situations in which down-stepping may be expected to occur.

4.54 Following are what I believe to be most of the rules governing down-stepping and readjustment, based on my reading of the passages named above. In these occurrences of this transition, only the particular one being illustrated is marked. Later, however, all occurrences will be marked.

Coincidence between down-stepping and the participial modality.

4.55 — 1. When a predicate is in the participial modality because of a preceding conjunction, then down-stepping occurs on the first syllable of such a predicate, i.e. on its S.C. or copulative formative, as the case may be.

Examples:

Lö häbabätle hoye (Even though they want to go)
Höja bütilë megbëne (If they had come yesterday)  /... Hä
normal speaker of the language (or fluent reading by him), arrive at certain very definite conclusions which, with only slight and non-significant variations, will be found to be applicable to all similar situations.

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Examples:

- Le hā bābātla hoye (Even though they want to go)
- Hāje bātliše maqāne (If they had come yesterday)

... Hā
Ha dikene katlung (When they have entered the house)

N.B. In all other occurrences of the participial modality -- where, for instance, it occurs with a verb complementary to certain deficient verbs -- no down-stepping occurs on the first syllable of the verb except as detailed in Rules 2 and 3 immediately below.

4.66 -- 2. On the first syllable of any form which immediately follows a conjunction governing the participial modality.

Examples:

Kā ha jwēlē bērǐhlīlē (Since they have now arrived)
Hōjē gbē gbēlē ... (If at all he was coming ...)
Lē hōjēpēlē ēsēnē (Even though it does not rain)
Hōjē gbē dīkgāthētē wadiphomōtsa (You should have rested them when they were tired)
Hōjē kōjēnō bēsēflīlē (If they do not arrive even today)
Lē hōjēkējēnō bēsēflē (Even though today they have not come)
Hākābāhāg bētlīlē (If yours have come)
Hōjēyēō kēmoratēng ēlē hāufū lē mā (If only the one I love was near me)

4.67 -- 3. When deficient verbs are themselves in the participial modality, they demand a down-step on the first syllable of the complementary predicate following them.

Examples:

Lē hōjē bātsohā bērǐhlē (Even though they arrive tomorrow)

cf. Bātsohā bērǐhla (They arrive tomorrow)

Kā hā bālētēsē bēbīnē (Since they sang all night)

cf. Bālētēsē bēbīnē (They sang all night)
When adverbials formed by means of prefixal adverbial formatives are preceded by predicates in the participial modality, then a down-step occurs on such formatives.

**Examples:**

(a) the formative *ka*

\[\text{Lē hā bālwāna, kādithūnya (Even though they fight with guns)\]}

 cf. Bālwāna kādithūnya (They fight with guns)

Hā bābuā kāwēna (If they talk about you)

cf. Bābuā kāwēna (They are talking about you)

(b) the formative *he*

\[\text{Bānē bāsēbētsa, hāntlē (They were working well)\]}

 cf. Bāsēbētsa hāntlē (They work well)

(c) the conjunction *le*

\[\text{Onē ātsāmgye, lē rona (He was walking with us)\]}

 cf.  

---

1 A few deficient verbs demand a down-step after them even when they are in the primary modality. The more notable ones are *sele*, *sāś, niūs/ntanōs, nōs*. 
cf. ḗtsāmaya le roqa (He is walking with us)

(d) comparative adverbial phrases:

(1) manner: jwālē kā

Le hōja ābūjājwālē kā wēng (Even though he speaks like you)

cf. ābūa jwālē kēwēng (He speaks like you)

(2) degree: ḡēkālē kā

Le hōja bāsēbētsa ḡēkālē kārōng (Even though they work as much as we do)

cf. Bāsēbētsa ḡēkālē kārōng (They work as much as we do)

N.B. The locative prefixal formatives ho and ha are down-stepped whether the preceding predicate is in the participial or primary modality.

Examples:

Bāyā, hōPūlānē (They are going to Pulane)
Ha bēgyä, hōPūlānē (When they go to Pulane)
Dītswā, hōThulārē (They come from Thulare's place)
Le hōja dītswā, hōThulārē (Even though they come from Thulare's place)

4.59 -- 5. When a copulative construction incorporating the copulative verb na is in the participial modality in the positive conjugation, a down-step occurs on the conjunction le which is then used immediately after this na.

Example:

Bānē bēgnē, le dīkgōmō (They had cattle)

cf. Bānē le dīkgōmō (They have cattle)

4.60 -- 6. When a relative predicative clause, whether direct or indirect, is preceded by a predicate in the participial modality, a down-step occurs on the relative connective of such a clause.

Examples:

Akāthētsa, hōjā nālwēng hōma (Being so tired

/... that
that he could not stand)
cf. Őkgathētēg hēhā ēsitwēng etc. (He is so tired etc.)

翁ē ombiesē kēsegōnāng (He saw what I saw)
cf. Őbonesē kēsegōnāng (He sees what I see)

Lē hē ēle, tēē ēwēlāng (Even if they are dead ones)
cf. Kētsēē ēwēlāng (They are dead ones)

Lē hē ēle, tēē nyēnýāng (Even if they are small ones)
cf. Kētsē nyēnýāng (They are small ones)

4.61 -- 7. When the copulative verbs le (positive) and se (negative) are constituents of copulative constructions, a down-step occurs on the first syllable of the complement used with these verbs.

N.B. These copulative verbs occur only in the participial modality.

Examples:
翁ē ēlē, mínā (He was here)
Hē ēlē Pītē (If it is Pītē)
Lē hē ēsē, bēg (Even if it is not those)

4.62 -- 8. When an ideophone occurring with re (or any of its tense forms) is in the participial modality, then the first syllable of such ideophone is down-stepped.

Examples:
Bēntsē bēre, tlērēl (They are blood-red)
cf. Bēre tlērēl (do)
Hōēhōitsē, nyēlēl (it was dead quiet)
cf. Hōitsē nyēlēl (they is dead quiet)

4.63 -- 9. When the predicate of an indirect relative clause is a bi-verbal compound with the second verb in the participial (as against the relative) modality, then a down-step occurs on the first syllable of the correlative.

Examples:
-------------------------------------------------
/... Bēg
-------------------------------------------------
1 The double vowel here represents a long vowel sound and not two short ones. It is therefore tone-marked as one syllable.
Bâo rênêng rébuâ kebône (Those about whom we were talking)
Yêô kêsêng kebône ne le yêna (The one with whom I have already had an interview)

N.B. The reason for down-stepping here is the participial nature of the preceding verb rather than its occurrence in a relative clause. (cf. Rule 4 above)

4.64 -- 10. When the progressive formative sa occurs in a predicate in the participial modality, then a down-step occurs on the first syllable of the verb immediately following sa.

Example:
Le hâ basâle Gautêng (Even though they are still in Johannesburg)
   cf. Basâle Gautêng (They are still in J'burg)
Bânê basëbûa (They were still talking)
   cf. Basëbûa (They are still talking)

4.65 -- 11. When the potential formative ka occurs in a predicate in the participial modality, then a down-step occurs on the first syllable of the verb immediately following ka.

Example:
Hâ basëbûa (If they should speak)
   cf. Bakëbûa (They may speak)

4.66 -- 12. When the negative formative sa occurs in a predicate in the participial modality -- it could also occur in the relative modality -- then a down-step occurs on the first syllable of the verb immediately following sa.

Example:
Bânê bâsâtaêbê hobâla (They did not know how to read)

N.B. In Rules 10, 11, and 12 above, if an O.C. immediately precedes the verb stem on which the down-step occurs, then /... down-stepping
down-stepping begins on the O.C.

4.67 -- 13. When a reciprocal verb, or a verb with reciprocal effect, is in the participial modality and is followed by le, a down-step occurs on this le.

Examples:

Masöpha órø tatóna le Pulušane (Masopha and Pulašane loved one another)

cf. Masöpha ortonaho le Pulušane (Masopha and P. love one another)

Ha Pitsö akøppanö le Tsekö (When Pitsö met Tsekö)

cf. Pitsö okøppanö le Tsekö (Pitsö meets Tsekö)

Coincidence between down-stepping and placement of emphasis.

4.68 -- 14. When a verb is followed by an adverbial expression, it will be found that in many cases the occurrence or non-occurrence of down-stepping on the first syllable of the adverbial is closely associated with the placement of emphasis either on the verb or on the adverbial. Where such shifts of emphasis are possible, an emphatic verb is followed by a down-step on the first syllable of the following adverbial which is then unemphatic, while an unemphatic verb is followed by no downstep on the adverbial which is then emphatic. This means that, in this case, emphasis on the adverbial is obtained by maintaining the key on which the verb occurs. A slight raising (up-stepping) of the tone of the first syllable of the adverbial may, on occasion, even be noticed, depending on the degree of emphasis. It is important to note that when the emphasis is on the verb, then it (the verb) behaves tonally and otherwise as if it were occurring in final position, having all the necessary attributes for final occurrence in ordinary statements or in questions, whichever may apply. There is also a slight pause after the verb. In other words, the syntactic link /... between
between such verb and the adverbial following it becomes loose.

4.69 The occurrence of down-stepping here is best illustrated with temporal and conditional adverbial clauses introduced by ḫe. Illustrations incorporating other adverbials will, however, also be provided.

Examples: adverbials incorporating ḫe

Bālē bābula ḫa kēkōkōta (They opened when I knocked)
cf. Bālē bābula ḫa kēkōkōta (They opened (only) when I knocked)

Bakāphomōla ḫa bākgāthēte (They may rest if they are tired)
cf. Bakāphomōla ḫa bākgāthēte (They may rest only if they are tired)

Bābātla ḫojā ḫa bālapīlē (They want to eat when they are hungry)
cf. Bābātla ḫojā ḫa bālapīlē (They want to eat only when they are hungry)

other adverbials

Bāsē'bētsa māl (They are working there)
cf. Bāsē'bētsa māl (They work there)

Bālē bātla kwāng (They did come here)
cf. Bālē bātla kwāng (They came here (instead)) (definitely)
Bātla'sē'bētsa hōsēgānē (They will work tomorrow)
cf. Bātla'sē'bētsa hōsēgānē (They will (only) work tomorrow)

Bājēlē kēkagā yē (They ate with that spoon)
cf. Bājēlē kēkagā yē (They ate with that spoon)
Bātla'amsaya le bōnē (They too will go)
cf. Bātla'amsaya le bōnē (They will go with them)

Oṭlāja wāle kē ḫa le wānā ơjēlē (He will eat,
/... just

---

1 Note use of long form of the Indicative present positive when the emphasis is on the verb, and the short form when the emphasis is elsewhere.
just as you too have eaten)
cf. ʘtšaǂjə jwålå kà hã lè wãnã ʘjelå (He will eat in the same way in which you also ate)
Bâsâbëdítaǂ kàlãbôrûro (They really worked on Wednesday)
cf. Bâsâbëdítaǂ kàlãbôrûro (They worked (only) on Wednesday)

In some cases this kind of shift of emphasis is excluded on logical grounds, in which case the down-step relation is not found.

4.70 In the habitual tense, there is simply no down-stepping, irrespective of where the emphasis lies. The reason for this behaviour is obscure to me. Another exception to the rule just described -- in fact, in this case, the very reverse of it -- is found where the verb is in the negative of the Indicative Mood primary modality, where a down-step occurs on the adverbial when the adverbial itself is emphasized, while it does not occur at all when the verb is emphasized. The qualities attributed to final occurrence are, however, still found on the verb even in this case.

Example:
Hâbâjē hã bâlåpîlå (They do not eat when they are hungry)

cf. Hâbâjē hã bâlåpîlå (They do not eat (only) when they are hungry)

Yet another exception is the negative of the participial modality of the Indicative. Here down-stepping simply does not occur, irrespective of where the emphasis lies.

Example:
Lè hã bâsâjē hã bâlåpîlå (Even though they do not eat when they are hungry)

4.71 -- 15. Another instance of shift of emphasis involves noun copulative bases followed by the following...qualificatives
qualities: possessive, demonstrative, and relative clause (whether direct or indirect). A down-step occurs on the first syllable of the qualifier when the emphasis is on the noun preceding it. In such cases the qualifier is in fact a pronominal used in apposition to the noun preceding it. The phrasing is marked by a slight pause after the noun, such as happens in the case of the verb as described above. This complex of shift of emphasis, tonal down-step, and modification of phrasing, fulfills the very important grammatical function of revealing or identifying a pronominal use of the qualifier which, in this particular context, might easily go undetected.

On the other hand, the emphasis may be on the qualifier following the noun, in which case there is no down-step on such qualifier.

4.72 As in the previous rule, the noun, when emphasized, behaves tonally and otherwise as if it were in final position. This, together with the modification of phrasing already mentioned, once again shows a loose syntactical linking of the noun and the following qualifier.

Examples:

Kōmasadi waka (Mine is a real woman/wife)
cf. Kōmasadi waka (She is my wife)
Kōmaĩna ēnwa (This is a man)
cf. Kōmaĩna ēnwa (It is this man)
Kōmasadi yāa mkgēthā (The tidy one — she is a real woman)
cf. Kōmasadi yāa mkgēthā (She is tidy woman)
Kōmaśēmane yēo kēmmitsēnē (The one I called is a boy)
cf. Kōmaśēmane yēo kēmmitsēnē (He is the boy whom I called)
Kēngwana nē matlē yēo (She is a girl, that /beautiful
beautiful one)

cf. Kēngwēnēnē ɓmotē ɲe (That is a beautiful girl)

**Down-stepping on and after certain conjunctives**

4.73 -- 16. Down-stepping occurs invariably on the first syllables of forms and formatives coming immediately after the following conjunctions and conjunctives:

- *athē* (whereas, and yet) *hōmmē* (yet)
- *kapa* (or) *kwāng* (however)
- *hā* (if; when) *fəla* (only, however, but)
- *lē hā* (even if/when) *hōja* (if, if only)
- *kā hā* (seeing that) *kā hōo* (therefore)
- *hēpē* (besides) *mōhōmōng* (perhaps)
- *jwālē* (now) *lē hōja* (even though)
- *mōm* (and; but)

**Examples:**

Bārē ɓabagājā, *athē* bājelē (They say they have not eaten, whereas they have eaten)

Kājēnō ɓaantumēdiśa, *athē* kēmēhā ɓogūntumēdiśa (Today he does not greet me, whereas he always greets me)

*Athē* hā ɓātē hōtāmaya, ɓkētsamaya (He should know that he is at liberty to go if he wants to)

*Lē ho jēnwa kēsēmōtsēbe* (Even though I do not know this one)

Hēpē lē yēnū ɓōntsēba (Besides, he too knows me)

Jwālē bōya kē? (Now where are they going?)

Bōntsēba, mōm hōmōrāte (They know him, and they like him)

Kwāng  lē  mō hākēmōrāte (However, I myself do not like him)

Hōja ɓemōjwētēsa (They should have told him; If /... only)
only they had told him)

N.B. The conjunction le and the conjunctives horé (that, in order that), ṣọmba (but), hoba (after), ḫobhọ (because), do not occasion a down-step after them.

4.74 -- 17. A down-step occurs on some conjunctives when they occur in the middle of a sentence. This is most noticeable with le, but may be found also with mme, ḥapé, ḥbile, ṣọmba, and ọthẹ. le is down-stepped in the following situations:

(a) When it is immediately preceded by a substantive.

Examples:

mẹnidi le mguna (a woman and a man)
wakā le yēna (mine also)

(b) When it is immediately preceded by a verb in the participial modality.

Examples:

Na kēbū le yēna (When I speak with him)
Bēnē bābāpala le bēna (They too were playing)

Examples of other conjunctives down-stepped in the middle of a sentence are:

Bēmōtsēba, mme bāmōrata (They know him and they like him)
Bēmōtsēba, ḥapē bāmōrata (They know him, besides they like him)
Bāre ọmọbē, ọthọ ọmọtē (They say she is ugly, whereas she is beautiful)

Down-stepping on and after impersonal copulative formatives, and some copulative verbs.


Examples:

Mọnāre kēmorutī (Monare is a teacher)
Difatē taēna tēnhū kōtsāka (All these trees are mine)
Ngwana yeqa kera tenga hobua le yeha kajeno k'pita6
(The child to whom I would like to speak today is pita6)

N.B. 1. When ke is immediately preceded by the conjunctives ema (but), and hobene (because), it is not down-stepped.

N.B. 2. If, in the last two examples above, the copulative is emphasized, a readjustment, instead of a further lowering, takes place on ke, and there is also a slight pause just before ke. Cf. shifts of emphasis in Rules 14 and 15 above.

4.76 -- 19. hase, of which ha is the negative formative and so the negative equivalent of ke in Rule 16 above, is down-stepped when it occurs in mid-phrase. The same conditions for down-stepping apply here as in the case of ke. The only difference is that here we have a low-toned syllable (viz. ha) to initiate the down-step. No further examples are provided.

4.77 -- 20. The impersonal copulative formative so seen in Rule 19 above, occurring in negative copulatives, demands a down-step on the first syllable of any word following it.

Examples:
Hase pulu (It is not rain)
Hase tsuka (They are not mine)
Hase ama (It is not this one)
Hase yaa duang (It is not the one who is speaking)
Hase ju mahole (It is not the big one)
Hase bolle (It is not all (people))
Hase diele (They are not the wrong ones)

4.78 -- 21. The copulative verb na when used in negative constructions where it occurs immediately before its substantival complement, demands a down-step on the first syllable of the substantival following it.

Examples:
Examples:

Hekeno peri (I have no horse)
Hekeno kqalqo (I do not have a big one)
Hekeno teedi jwale (I do not have ones like that)

4.79 -- 22. The following formatives, which include the copulative formative ke and the copulative verb bû, demand a down-step on the first syllable of a following noun or possessive pronominal.

(a) Impersonal copulative formative ke

Examples:

Kepula (It is rain)
Kefasha (They are mine)

(b) The copulative verb bû

Examples:

BÔ nItena (He is becoming a teacher)
Bû nasha (They are becoming mine)

(c) The adverbial formative ka

Examples:

Habu kepitso (They are talking about Pitsô)
Habu kqasha (They are talking about yours)

(d) The manner-comparison adverbial-forming expressions jwale ka, jwala ka, teke ka, têne ka, all of which mean like, in the manner of; and the degree-comparison adverbial-forming expressions hake ka, hâkalâ ka, hâkalô ka, all of which mean as much as, to the same extent or degree as.

Examples:

Obinga jwale kepitso (He sings like Pitsô)
Obuha hâkalô kqasha (She speaks as much as yours)

4.80 -- 23. A down-step occurs on a noun or a possessive qualificative pronominal also in the following circumstances:

(a) When either of these two substantives occurs as object

Examples:

Ngwana yag kemorâtang (the child whom I love) /... leaves
legsēpo leegi rūbēšilikëng (the bone which is broken)

Note: The glide heard in the tone of a compound relative connective joins two high tones, the second of which is lower than the first since a down-step occurs on it. This connective has resulted from the merging of two historically separate elements, viz. a high-toned simple relative connective, followed by a down-stepped high-toned relative subject concord. Tswana provides a good illustration of these two elements occurring separately in current usage in conditions which have become historical in S.Sotho.

Examples: (from Tswana)

batho bē bēbētuŋ (the people who are talking)
dikgāmē tseē dirēbētaŋ (the cattle which are sleeping)

In S.Sotho, all that remains of the relative S.C. in such clauses is, in most cases, only the extra length (which may, for practical purposes, be regarded as an extra syllable) in the vowel of the preceding relative connective. The down-step still falls on this relic of the S.C.

Down-stepping on and after relative connectives

A down-step occurs on the relative connective, whether direct or indirect, if preceded by a qualificative.

Examples:

batho bē bengata bēn mēthēng (many running people)
bēnē bāng bē bētlē (these beautiful children)
dīnē thēshē tseē adēbēlēng (all the things he wants)

But if the relative connective comes immediately after the antecedent, then there is no down-stepping on it.

Example:

bēnē bē bētlē (beautiful children)

A down-step occurs on the first syllable of a strong
suffix -ng, a down-step occurs on the first syllable of such subject. Only examples with noun subjects are provided.

**Examples:**

Kāmehlā Pūlāne őya sekōlōng (Everyday Pūlāne goes to school)

Lēriē Pūlāne őtladūlā vēkā fēla (Pūlāne will stay only one week in Lēriē)

Lē kūjēng Pītaŋ hāēfīhē (Even today Pītaŋ has not come)

Following are some examples incorporating locative adverbials formed with suffix -ng.

(i) where a down-step occurs on the subject.

Sekōlōng Pūlāne őbālē (At school Pūlāne reads)

Manyalōng Pūlāne őbīna hēntlē (At weddings, Pūlāne sings well)

(ii) where a down-step does not occur on the subject.

Sefatēng Pūlāne őbēpālē hāmōnāte (Pūlāne plays pleasantly by the tree)

Lehēhēng Pūlāne őbēse mōllē (In the cave Pūlāne makes a fire)

It would appear that a down-step occurs after a locative of a noun originally ending in M, i.e. where the last two syllables of the locative form have Lū arising from the lowering of this M and the suffixing of the low-toned suffix -ng, whereas if the original noun ends in L, the locative formed from it is not followed by a down-step.

4.88 -- 31. A down-step occurs on the comparative adverbial formative kā in --

(a) the manner-comparison adverbial-forming expressions jwulē kā, jwulō kā, tēē kā, tēēnē kā; and

(b) the degree-comparison adverbial-forming expressions hākē kā, hākēlē kā, hākalō kā, /... as
as indicated.

4.89 -- 32. A down-step occurs on the first syllable of locative adverbials (all formations) irrespective of what form precedes them.

Examples:
- Masopha oyà, hêmôrâng (Masopha is going to the chief)
- Bânta bâsâwâ kgotla (The men come from court)
- Bânta bâbâpela hâhôlô pûlâng (The children play a lot in the rain)
- Taû oyà kâmehlâ hâmôrutî (Tau goes everyday to the teacher's place)
- Reûpûnga kàvêkà è mngwe ë e mngwe pîtâông (We meet every week at the meeting)

4.90 -- 33. A down-step occurs on the first syllable of any form following an ideophone.

Examples:
- Twêba yêre tâhôbê kâmôkatîng (The mouse disappeared quickly into the hole)
- Yêre tâhôbê hâ ërebôna (It disappeared quickly when it saw us)

4.91 -- 34. A down-step occurs on the first syllable of a miscellany of forms and formatives when these come after an absolute pronoun.

Examples:
- Kêbûnê bâna (It is these very ones)
- yêna,yêna bûng (the very one who is speaking)
- yêna,kgûdu ye (that very tortoise)
- Keyôna,ye ë abûang kàyôna (It is the very one about which he is talking)
- tsêna,tsêka (the very ones belonging to me)

4.92 -- 35. A down-step occurs on the first syllable of each following one of a series of grammatical forms which are structurally identical.

/... Examples:
Examples:

- Bi!~1ia, baka r!ll!mu, ·..,l:)itswa, ·.,bits.!.m~Y.!·
  (They got up, took their sticks, went out, and departed)

- ngwana weka, wametsibola (my first child)

- dintša teš padi, teš kgolo, teš ntseho (two big black dogs)

- Jwalə ontsha senőlə, əbula monyako, ūkəne, əbula fotshe, əphoməle. (Now he takes out the key, opens the door, goes in, sits down, and rests)

There are exceptions to this rule. So it often happens that there is no down-step between two verbs in the present Subjunctive.

Example:

- Lekēnē, ledüle fotshe (You must go in and sit down)

It would seem in this particular case, however, that the occurrence or non-occurrence of a down-step is determined by the presence or absence of an adjunct after the preceding verb. So that, in the above example, the clause ledüle fotshe would, by reason of its having an adjunct, demand a down-step on a form coming after it. Thus:

Lekēnē, ledüle fotshe, əphoməle (You must go in and sit down and rest)

but : Lekēnē, ledüle, əphoməle (You must go in and sit and rest)

It happens often, though, that for balance and for rhetorical effect, as well as for the very practical reason that the pitch must not descend beyond the range of the speaker's voice, substantives following each other are taken in pairs, each pair joined by the conjunction le. Down-stepping then occurs on the le, but is immediate-followed by a readjustment at the introduction of the next pair.
The Tonal Behaviour of the Noun

4.93 I referred, in my introductory remarks at the beginning of this section, to the importance of determining a norm or a basic tonal pattern for the form being studied. I referred also to the unsatisfactory results obtained from the use of contextual forms as basic forms. There were two main reasons for this objection. Firstly, contextual forms are, in fact, already determined forms, determined, that is, by the context in which they occur. A more abstract form -- a hypothetical form -- which assumes a concrete tonal shape only when placed in a given context, has seemed to me to be the most rewarding approach to the problem.¹

4.94 Of the writers who have made a study of tone in Sotho, Jones, in his *Tones of Sechuana nouns*, and Letele in his *Role of Tone in the Southern Sotho language*, have made no attempt to determine a norm such as is referred to above. They have simply taken the words as they occur in specific contexts and described their tonal behaviour in those contexts. Jones divides the nouns into A-forms, B-forms, and C-forms. Of these, "A-forms are used when the word terminates an ordinary statement of fact. B-forms are used when the word terminates a

¹ See §§4.5 to 4.10 incl. above.
question, a command or a sentence of an exclamatory character. C-forms are used when the word is not final."

4.25 Letele has selected two sets of syntax contexts, each set consisting of three specific types of context. One set is used with certain groups of nouns, and the other with verbs. This author does not name the contexts he employs, but simply gives examples of the occurrence of the word in certain unnamed contexts. The examples on page 17 of his book, with the noun lerakō placed in these contexts, may be interpreted as follows:

Context 1: noun occurring finally, and immediately preceded by the perfect form of the verb whose object it is.

  e.g. Keāhīle lerakō (I have built a wall)

Context 2: noun occurring initially, and immediately followed by the perfect form of the verb whose subject it is.

  e.g. Lerakō lēvelē (The wall has fallen)

Context 3: noun occurring medially, and immediately preceded by the perfect form of the verb whose object it is, and immediately followed by a demonstrative qualificative qualifying it.¹

  e.g. Keāhīle lerakō lāo (I built that wall)

4.96 All the words (including nouns) whose tonal behaviour he is studying, are divided by Letele into two main groups, viz. "X-words which consist of a high tone on the first syllable of the radical or stem", e.g. lefā (inheritance, heritage), rēka (buy), ūrō (on the hearth), tērē (red); and "Y-words which consist of a low tone on the first syllable...

¹ Context 3 as exemplified on page 64 of Letele's book is slightly different from this one, being: noun occurring initially and followed by a demonstrative qualificative qualifying it, and the perfect form of the verb of which it is the subject, in that order.
syllable of the radical or stem", e.g. 
motho (person),
bona (they), bala (read, count).

4.97 Tucker in Comparative Phonetics, and Doke and
Mofokeng in their Southern Sotho, each pick out a context-
ual form and take it as the basic tone pattern. Tucker
takes Jones' C-forms as his norms, but he takes certain
precautions: Not only must the noun not be final in
the sentence, but it must actually occur at the beginning
of the sentence, followed immediately by its subject con-
cord, so that it is "the unqualified subject of that
sentence". His reason for doing so is that when the
noun occurs in the body of the sentence, it may still be
subjected to the influence of preceding elements. How-
ever, the equivalent of what he rightly seeks to avoid
here, takes place in the context he has chosen, because
the subject concord in fact influences the tones of the
final syllables of certain tonal types of nouns when it
comes immediately after them. All the nouns he gives in
his Declension 1 in §263 are influenced in this manner by
their subject concords. I use this type of context below
in treating of the tonal declension of nouns, to show the
influence of succeeding elements.

4.98 Doke and Mofokeng's assertion that "The character-
istic tones of a word are found in Sotho when that word
appears in a final position in a question not employing
the interrogative adverb na", is wrong as it stands,
because a word in such a position may be preceded by in-
fluencing elements. As we have just seen, Tucker avoided
this by placing the word at the beginning of the sentence.

4.99 Here are a few examples to validate this criticism.

1 See Role of Tone, pp. 13-14.
2 See Comparative Phonetics, §262.
3 See Textbook of Southern Sotho Grammar, §68.
4 Cf. Jones's dependent B-forms: see p. 2 of Tones of
Sechuana nouns.
of Doke and Mofokeng's approach to the problem:-

Examples:

Qbsene morane? (Did you see the king?), tones of morane LLM
Qbsene le morane? (Did you see the king also?), tones of morane HLM
Bayemotseng? (Are they going to the village?), tones of motseng LLM
Baboena leamotseng? (Are they seeing the ones belonging to the village?), tones of motseng HLM
Kolesela le leswu? (Is it a white cloth?), tones of leswu LLI
Lesela le kolesela? (Is the cloth white?), tones of leswu HLI
Rengwana bomatle? (Is it a beautiful child?), tones of matle LLI
Ngwana omotle? (Is the child beautiful?), tones of matle HLM
Lesabela? (Are you reading?), tones of bala LLM
Lesabela? (Are you reading it?), tones of bala HLM
Bababapala? (Are they playing?), tones of bapala LLI
Bababapala? (Do they play it?), tones of bapala HLM

THE NOUN

4.100 I use here the reference terms A-form and B-form (sometimes A-stem and B-stem respectively) for stems with a high-toned initial syllable and ones with a low-toned initial syllable respectively. My A-forms are therefore equivalent to Letele's X-forms, and my B-forms to his Y-forms.

The prefix is here treated together with the stem; /... that
that is to say, that the tone pattern of the noun incorporates the tones of both the prefix and the stem. The presence of the prefix is no hindrance in the discussion of situations where only the stem is actively involved, or vice-versa. On the contrary, there is at least one situation where the tonal behaviour of the prefix is due partly to the tonal nature of the stem with which it occurs. This is where a B-form noun (i.e. one with a stem having L on its initial syllable) is preceded by an influencing preceding element.¹ The tone of the prefix is here raised from L to H, which does not happen with A-form nouns, where the initial syllable of the stem has H. In fact, with monosyllabic-stemmed B-form nouns, the modification of the prefix by an influencing preceding element is accompanied by a modification of the stem as well. It is obvious that in these situations the prefix and the stem must be treated together.

4.101 Monosyllabic-stemmed nouns

A-forms: Inherent tone pattern is LH

Examples:
- mörü (forest)
- boteières (laziness)
- mohe (day)
- mobû (soil)

B-forms: Inherent tone pattern is LL

Examples:
- motse (village)
- moto (person)
- nte (house)
- sefi (trap)

4.102 Disyllabic-stemmed nouns

A-forms: There are two groups with the following inherent tone

¹ See § 4.106 below.
tone patterns:

(a) Set 1 LH

Examples:
- lebese (milk) 
- lerumâ (spear) 
- hodûtu (loneliness) 
- mohâmi (milker)

(b) Set ii LHM

Examples:
- môna (man) 
- musâdi (woman) 
- lenyôra (thirst) 
- mohlôdi (source)

B-forms: There are two groups with the following inherent tone patterns:

(a) Set 1 LLL

Examples:
- morôna (king) 
- lerîfa (darkness) 
- motôra (ashes) 
- bohlaswe (untidiness)

(b) Set ii LHH

Examples:
- molato (fault) 
- lenatî (door) 
- sehlabî (pain) 
- letsetsî (sun, day)

4.103 Trisyllabic-stemmed nouns

A-forms: There are three groups with the following inherent tone patterns:

(a) Set 1 LWLHL

Examples:
- mosebêtsai (work) 
- tutûdu (heap) 

/... (b)
(b) Set ii LLLL

Examples:

morathuwa (beloved) mkgathala (fatigue)
lebatama (heat) phahama (high place)
morituwa (pupil) tafola (table)
sekgothala (down-pour) moromuwa (messenger)

(c) Set iii LUMM

Examples:
selhopetsa (memorial) baphaham (height)
leolahore (side) kgothetsa (encouragement)
merokola (short-comings) tseblaso (notice)
mogebetsi (worker) manyabolo (water)

B-forms: There are three groups with the following inherent patterns:

(a) Set 1 LLLL

Examples:
motsemao (gait) papiseo (comparison)
DIMAKATSO (wonders) pheta hugo (change)
melakwane (dagger) katshh (success)
diparso (clothes) potlako (haste)

(b) Set II LLLL

Examples:
letlamatlo (bull-frog)
lehedi (lightning)
ditsolou (divining bones)
bokgabane (virtue)

(c) Set III LLLL

Examples:
molaodi (commander) papadi (game, e.g. golf)
morobaodi (sleeper) makweheli (renegade)
mohlophohi (needy person) morapadi (supplicant)
bolobodi (forgetfulness)

/... Nouns
N.B. It is not necessary to go beyond three-syllabled stems in the examples of nouns given, since there is no change of basic pattern from four-syllabled stems on.

Nouns in specific contexts

4.104 When nouns are placed in specific contexts, it will be found that their inherent tone patterns either change or remain the same, according to the tonal and grammatical character of the element either preceding or succeeding them. It must be emphasized that it is not only the tonal character of the neighbouring element which modifies the tone pattern of the noun to which it is related, but also, and perhaps mainly, the grammatical character of such element. It would appear, then, that tone and syntax are very closely related even on this level (i.e. the word-relation level as against the phrase-relation level) of tonal behaviour, a fact which will become more evident in the treatment of the verb.

Preceding elements

4.105 These are formative elements, and they may be divided into Influencing and Non-influencing according to whether or not they modify the tone pattern of the noun they precede. If the presence of an element immediately before a noun belonging to any one of the tonal types listed above, modifies the inherent tone pattern of that noun, such an element is an Influencing element. Influencing elements do not necessarily, and generally will be found not to, modify the tone patterns of all the types listed. If, on the other hand, the presence of an element immediately before nouns does not modify the inherent tone patterns of these nouns, then it is a Non-influencing element. These preceding elements, which are monosyllabic, may also be divided into high-toned and low-toned elements. All Influencing preceding elements have high /.../ tone
tone, but not all high-toned elements are influencing. On the other hand, all low-toned preceding elements are non-influencing. The position, therefore, is that Non-influencing preceding elements may be either high-toned or low-toned, while Influencing preceding elements are all high-toned.

4.106 Influencing preceding elements

These are —

(a) the conjunction le (and, with, also, even),
   e.g. le mōrēnā (the king also), tones of mōrēnā
   HLL, cf. inherent tone pattern LLL

(b) the possessive concord,
   e.g. tsēmōrēnā (those belonging to the king),
   mōrēnā again HLL

(c) the compound relative connective 1
   e.g. yaā mōlenā (a kind one), mōlenā HLL, cf.
   inherent tone pattern LLL

(d) the manner-adverbial formative ha,
   e.g. hāboīme (with difficulty), boīme HLL, cf.
   inherent tone pattern LLL

(e) the locative prefix hō,
   e.g. hōmōti (to the traveller), mōti HLL, cf.
   inherent tone pattern LLL

(f) third person basic subject concords,
   e.g. bōīme (It is heavy), boīme HLL, cf. inherent
   tone pattern LLL

(g) the manner-comparison adverbial formative se,
   e.g. sāmōti (like a traveller), mōti HLL, cf.
   inherent tone pattern LLL

(h) the Class 2a prefix bō,
   e.g. bō-Likēlēli (Likēlēli and co.), Likēlēli HLLL,
   cf.

1 Here it is really the S.C.-element in this connective which causes the tonal change, rather than the connective itself.
cf. inherent tone pattern LLLL

(1) the copulative verb be,
  e.g. Ebh boïma (It is becoming heavy), boïma HLL,
  cf. inherent tone pattern LLL

The Tonal Declension of Nouns
4.107 The above formatives affect B-form nouns. The nature of the changes effected by these formatives is as follows:

(a) Where the noun-stem is monosyllabic, the tone sequence LL is replaced by HM.

Examples:
  le motise (the village also) cf. motae (village)
  bëmajwë (of the stones) cf. majwë (stones)
  homotho (to the person) cf. motho (person)
  yënamatla (the strong one) cf. matla (strength)

(b) Where the noun-stem consists of two or more syllables, only the tone of the prefix is affected, being raised from low to high. The rest of the tones remain unchanged. Where there is no expressed prefix -- where it is either disguised as in jwala (beer) Class 14, and kopõ: (request) Class 9; or is simply not found, as in some Class 9 nouns, e.g. hlapõ (fish) -- in these cases there is, obviously, no prefix to be raised from L to H, and therefore the tone pattern of the noun is not affected by Influencing preceding elements.
4.108 The tone pattern substitutions which occur when these Influencing preceding elements precede B-form nouns are as follows:

LLL > HLL
  e.g. hëmôrëna (to the king) cf. morëna (king)

LLH > HLL non-finally, and HLL finally.
  e.g. hëbôsaula non-finally and hëbôsaula finally,
  cf. bôsaula (tastelessness, discomfort)

/... LLLL
LLLL > HLLL
  e.g. le matékwaŋe (dagga also), cf. matékwaŋe (dagga)
LHLL > HLLH non-finally, and HLLL finally.
  e.g. tšaletlamešlœ non-finally and tšaletlamešlœ
      finally, cf. letlamœtœ (bull-frog)
LLHL > HIHL
  e.g. hœmœlœdœ (at the commander's place), cf.
      moledœ (commander)

4.109 Such Influencing preceding elements as may be
immediately preceded by the negative formative he, lose
their power of influencing when this formative is placed
before them. Only one type of Influencing element, viz.
the S.C., may occur in this kind of syntax.

Examples:
  Haœmœlœmœ (He is not kind), molemœ LLL
       cf. Gœmœlœmœ (He is kind), molemœ HLL
  Haœmatœla (It is not strong), matœa LL
       cf. Emœlœla (It is strong), matœa HM
  Haœmœlœlœtœ (They are not guilty), molœlœ LLL
       cf. Bœmœlœlœtœ (They are guilty), molœlœ HLL (final)

Notes on the nouns motho and lethà

4.110 When these nouns are used in negative personal
copulatives with the S.C. of Class 17 ho, as in
  Hahomotho (There is no one), and
  Haholethà (There is nothing),
as well as in negative impersonal copulatives, as in
  Hasemotho (It is not a person)
  Haselethà (It is nothing),
each of them may be pronounced with either of two tone
patterns. One of these tone patterns is the inherent
one in either case, viz. LL for motho and LH for lethà.

4.111 The alternative tone patterns these nouns may
assume in these usages are as follows:

/... motho
motho : HM, as against inherent LL.

This pattern, viz. HM, is one that is found in normal conditions for the declension of monosyllabic-stemmed B-form nouns by Influencing preceding elements. That is to say, that with these elements preceding the noun, and not themselves preceded by the negative formative ha, the derived tone pattern HM is perfectly regular. But in negative constructions it is unusual. Besides, in respect of the impersonal copulative hasemotho, it must be remembered that the impersonal copulative formatives kō (positive) and (ha)ko (negative) are normally non-influencing.

letho : HM, as against inherent LH.

Here the tonal modification of the noun does not follow any known declension, for letho is an A-form, and A-forms are not normally affected, as to their prefix, by preceding elements.

4.112 When we take into consideration the facts that the negative formative ha neutralizes any influencing element to which it is prefixed, that impersonal copulative formatives are non-influencing, and that the prefixes of A-forms are normally not subject to the influence of preceding elements, then we must conclude that the modification of the tone patterns of motho and letho in these contexts, is due to causes which are as yet undetermined. The difference of emphasis in the meanings of constructions involving these different tone patterns, and incorporating these two words, is the only basis on which the tonal differences may be classified. Here are some illustrations:

Hahemotho kālung, with the tone pattern of motho LL,
means There is no one (lit. no person) in the house,
-- an unemphatic negation; but the same sentence,
with the tone pattern of motho HM, means There is not a single person in the house -- an emphatic or absolute negation.

Similarly,

Haholetho kapitseng, with the tone pattern of letho LH, means There is nothing in the pot -- an unemphatic negation; but the same sentence, with the tone pattern of letho HM, means There is absolutely nothing in the pot -- an emphatic or absolute negation.

Again,

Hasemotho can mean either He/She is not a person, or It isn't anybody at all, depending on whether motho has tone pattern LL or HM respectively;

and likewise,

Haseletho can mean either It is nothing, or It is absolutely nothing at all (or There is absolutely nothing the matter), depending on whether letho has tone pattern LH or HM respectively.

In face of this evidence, we must conclude that the tonal difference in these circumstances is due to emotional factors reflecting the degree of emphasis which it is sought to place on the negation. It is remarkable that only the two nouns mentioned appear to be subject to this tonal behaviour, the rest of the nouns found in each of the tonal types to which motho and letho belong, being unaffected in the situations just described.

Notes on the copulative verb ba as an Influencing preceding element

The copulative verb ba is included among the Influencing preceding elements listed above. Attention must, however, be drawn to the fact that this verb is unique in that, unlike other Influencing elements, it affects the tone patterns of only some nouns of the B-group,
but not others. Before going on to speculate on the probable cause or causes of this, let us observe some examples incorporating this copulative verb.

1. Where ba does not affect the tones of an immediately following noun of the B-group:

   **Examples:**
   
   Ŭ.batle, hab, morêna (He wants to be king), tones of morêna LLL
   
   Ebâ, lejwê (It is changing into a stone), tones of lejwê LL
   
   Kebatla hore ebê, motae (I want it to become a village), tones of motae LL
   
   Yâebô, sediba (It became a fountain), tones of sediba LLL
   
   Otlobô, sesâsi (You will be a good swimmer), tones of sesâsi LLL
   
   Ebâ, letlamêtlo, jwàle (It is becoming a bull-frog now), tones of letlamêtlo LLLH
   
   Lebatla habô, bakwenêhi? (Do you want to become renegades?), tones of bakwenêhi LLLH

2. Where ba affects the tones of an immediately following noun of the B-group:

   **Examples:**
   
   Ŭbô mâtla (He is becoming strong), tones of mâtla HH, cf. inherent LL
   
   Bâtô moloêmô (They are becoming kind), tones of moloêmô HLL, cf. inherent LLL
   
   Hôbô lefîfî (It is becoming dark), tones of lefîfî HLL, cf. inherent LLL
   
   Keôbô letswaîô (I am becoming nervous), tones of letswaîô HLL, cf. inherent LLL
   
   Abô moloîtô, kábaka jêô (He was guilty for that /... reason
reason), tones of molato HIH, cf. inherent LLH
Otlabē lešano ĭmpē (You will become a great liar)
tones of lešano HIH, cf. inherent LLH
Aba meharō bahola (He was very greedy), tones of meharō HIH, cf. inherent LLH
Aba bokgbane (He was virtuous), tones of bokgbane HLLL, cf. inherent LLLL
Otlabē motsamaō omōbe (He will have an ungraceful walk), tones of motsamaō HLLL, cf. inherent LLLL

4.116 The above illustrations show that the difference in tonal behaviour between the nouns in the first set of examples and those in the second set, viz. that the latter are tonally modified by be while the former are not, is due to a grammatico-lexical distinction. To take the second set first, the nouns used in these examples indicate certain attributes, and in personal copulative constructions they refer to the possession of such attributes by the subjects of such constructions. It is seen, therefore, that they have a strong qualitative bias. These nouns are capable of being, and very often are, used as weak adjectival stems. As such, they may be used as bases of personal copulatives even when the subject is third person.

The nouns in the first set of illustrations, on the other hand, are used exclusively as nouns. In copulative constructions with third person subjects, they are always used with impersonal copulative formatives, viz. ke in the Indicative Mood primary modality present tense positive, (ha)še in the negative, and e in copulative constructions. The copulatives so formed are what Cole calls Identificative copulatives, i.e. those identifying

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1 Tswana Grammar, §14.2.
the subject of the construction with the substantival (in this case noun) base.

4.116 More conclusive evidence of the part played by grammatico-lexical distinctions in this tonal behaviour is provided by the fact that an expression such as ḃā majwē shows no tonal modification of majwe by ba where majwē is used as a noun (meaning stones), whereas the same expression shows an influence on majwē by preceding ba when majwē is used attributively (meaning stony). Thus:

 ḃā majwē (They are turning into stones), tones of majwē LL, cf. inherent LL;

 but ḃā majwē (It is becoming stony), tones of majwē HM, as against inherent LL.

 Other examples of B-form nouns functioning both as nouns and as adjectives in these circumstances are:

 lerata (inherent LHH):

 Ṣemīnō wābōna ɣāebōa lerata ɣamīla (Their singing was just a lot of noise), tones of lerata LHH

 Yāebā lerata ḱamnepītə ɣə (That meeting was very noisy), tones of lerata HHH

 molemō (inherent LLL):

 ḍabīhla ġāheė ɣāebā molemō 猰mahōdō hōrona (His arrival was a great help to us), tones of molemō LLL

 Yāebā molemō hōrona ngaka ɣə (That doctor was kind to us), tones of molemō HLL

 maru (inherent LL):

 Ḽamōdī wānē ɣēba maru ɣwala (That mist is changing into clouds now), tones of maru LL

 Lehōdīmō ɣēba maru ɣwala (The sky is becoming cloudy now), tones of maru HM

 lerifi (inherent LLL):

 /... Yāebā
Yēebā lefifi, lela ketlung, ha, mebānē atima (There was nothing but darkness in the house when the lights went out), tones of lefifi LLL
Kgēle, yēebā lefifi, ntlo! Moleto ke'ng? (Gracious, how dark the house is! What's the matter?), tones of lefifi HLL

4.117 It must be emphasized that the only nouns affected by ba as shown in the above examples are B-form nouns; and equally, that not all B-form nouns are so affected. A corollary to this statement is that A-form nouns are never affected even though they may be capable of being used both as nouns and as qualificatives; and that B-nouns are never affected if they are not capable of being used both as nouns and as qualificatives.

Notes on ke meaning like, resembling

4.118 The formative of comparison ke, used with the prefix of Class 7 se immediately preceding it, has, as a rule, a low tone. In this case it is, of course, non-influencing.

Examples:

sekamotho (a mentally and/or physically retarded person -- lit. something like a person)
sekalejwē (imitation stone), etc.

But the noun sekamotho, when used as a proper name (a girl's name), as it very often is, has h on the syllable ke, and this formative then becomes an influencing element in relation to the noun motho. The tone pattern of Sekamotho is then LHHM, as against LLLL as a common noun.

Influence of preceding elements on inherent final H in final sentence occurrence

4.119 Influencing preceding elements, besides their effect on B-form nouns as described above, also have the /... effect
effect of lowering from H to L the tone of the final syllable of any noun, whether A-form or B-form, when such noun occurs finally in a sentence of any kind.

Examples:

Naba bəmə́lato? (Are they guilty?), tones of molato HIL, cf. inherent tone pattern LHI
hoteténa həmoru (the denseness of the forest),
tones of moru LI, cf. inherent LH
Kena le dikə́mo (I have cattle), tones of dikə́mo HIL, cf. inherent LLI
bobə́k bələ́madina (the speed of lightning), tones of lehadina HIL, cf. inherent LLIH.

N.B. Attention must be drawn to the fact that the prefix of an A-form noun still remains unaffected (i.e. retains its L) even in this case (see moru above). On the other hand, B-form nouns affected by the above rule are seen to be doubly modified, first as to their prefix, which has its L raised to H, and secondly as to their final, which has its H lowered to L.

When, however, the nouns referred to above are not preceded by Influencing elements, they retain their H on the last syllable even in final occurrence.

Examples:

Qbū́a kə́gáfə́molato? (About which crime are you talking?), tones of molato LIH, cf. inh. LII
Bə́bə́bə́lə́hə́bə́nə́moru (They want to see the forest),
tones of moru ILH, cf. inherent LLIH

Non-influencing high-toned preceding elements

4.120 These are as follows:

1. the impersonal copulative formatives ke (positive) and (he)se (negative);
2. the copulative verb le;
3. the conjunction he; and
4. the adverbial formative ke.

All these elements are followed by a down-step in the tonal sequence of the constructions in which they occur.\(^1\)

Conversely, all Influencing preceding elements are not followed by a down-step.\(^2\)

Low-toned preceding elements

4.121 These consist of the 1st and 2nd pers. basic S.C.s; the 1st and 2nd pers., and the 3rd pers. Class 1, past S.C.s; and all habitual tense S.C.s. As already stated above, these are all non-influencing.

Influencing succeeding elements

4.122 This term is used for formatives which are suffixed to the noun, and which affect the tone pattern of the noun to which they are suffixed. They are ---

1. the locative suffix -ng;
2. the diminutive suffixes -ane and -nye; and
3. the augmentative suffix -hadi.

These suffixes modify the final syllable of the noun in the following ways:

(a) Final L of the noun is raised to H, except in the case of B-form nouns having L on all syllables (but see N.B. following presently).

(b) Final H of the noun is lowered to L.

N.B. -ng raises the tone of the final syllable of some

It might be argued that, for this reason, these elements should not be regarded as Non-influencing. To meet this possible objection, I must point out that elements are here regarded as Influencing or Non-influencing purely in so far as they affect, or do not affect, the tones of immediately following nouns as single words and not as phrases or constituents of phrases. The kind of influence exerted by the elements now under consideration is one that affects the whole of a succeeding phrase, rather than simply the following word by itself.

It will be noticed that some of my conclusions in regard to down-stepping are at variance with Tucker's. For instance, his S.Sotho example: in §256 of Comparative Phonetics suggests that conjunction le is followed by a down-step. This would happen, presumably, only when le occurs as a constituent of the phrase na le (have), because in other cases of the occurrence of this conjunction
B-form nouns of Set 1, but does not affect others belonging to the same Set. So, for example, the tone of the final syllable is raised in the following cases:

- sediba' (fountain) LLL, which becomes sedibeng LIL/L
- molâra (ash) LLL, ................. molârêng LIL/L
- tlela (hunger) LIL, ................. tlelêng LIL/L
- lefêrî (darkness) LLL, ................. lefêrêng LIL/L
- lebêta (wall) LLL, ................. lebêten LIL/L

On the other hand, the tone of the final syllable remains unaffected in the following cases:

- LLL
  - bohlaseng (carelessness) which becomes bohlaswêng LIL/L
  - sesaêl (swimmer), LLL, ................. sesêlêng LIL/L
  - maseœl (soldiers) LLL, ................. maseœlêng LIL/L
  - morên (king, chief) LLL, ................. morênêng LIL/L

In some cases, there is vacillation between influencing and non-influencing, so for instance—

- selaôthêng LIL/L or LIL/L < selâthê (riddle) LLL
- matswalêng LIL/L or LIL/L < matswêl (fear) LLL

There seems to be no ascertainable reason for this dissimilarity of behaviour among these nouns, and because of this, the changes involved are associated not with all nouns of the class B-form Set 1, but with an undefined subdivision of this class.¹

4.183 The tone pattern substitutions which occur are as follows:—²

| Tucker does not indicate that it is followed by a down-step (see, inter alia, §§268 and 270), except for the S.Sepedi example in §270; but, on the other hand, the S.Sepedi example in §268 is not shown to be followed by a down-step. In fact, the S.Sepedi le is never followed by a down-step. These slips and inconsistencies on the part of Tucker are understandable as he was among the pioneers in the analysis of this sometimes elusive tonal phenomenon. |
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2. In the following illustrations, the tone patterns of the derived nouns are also given in full (i.e. including that of the suffix), in order to draw attention to the tones of the Influencing elements themselves.
Where final L > H

**LHL > LHH**

- e.g. **lekgøtla > lekgøtlæ**, (council place), as in
  - lekgøtlæng **LHH|L**
  - lekgøtlæna **LHH|M**
  - lekgøtlnyana **LHH|LL**
  - lekgøtlæhadi **LHH|LL**

**LHVL > LHH1**

- e.g. **mosøbøtsi > mosøbøtsi** (work), as in
  - mosøbøtsiing **LHHH|L**
  - mosøbøtsinyana **LHHH|LL**
  - mosøbøtsihadi **LHHH|LL**

**LHL > LHHL**

- e.g. **mokgøthala > mokgøthala** (fatigue), as in
  - mokgøthalæng **LHLH|L**
  - mokgøthala **LHLH|L**
  - mokgøthalænyana **LHLH|HM**
  - mokgøthalahadi **LHLH|HL**

**LLHL > LLHH**

- e.g. **mølaødi > mølaødi** (commander), as in
  - mølaøding **LLHH|L**
  - mølaødinyana **LLHH|LL**
  - mølaødihadi **LLHH|LL**

Where final H > L

**LHH > LHL**

- e.g. **mosødi > mosødi** (woman), as in
  - mosøding **LHL|L**
  - mosøjana **LHL|L**
  - mosødinyana **LHL|LL**

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A not-so-common alternative tone pattern when nouns of this group are used with these suffixes is **LHLH**, which is characterized by the occurrence of L on the third syllable. This substitution of L for H on this syllable is sometimes found with these nouns in other situations as well.
The tonal behaviour of the suffixes used above

4.194 The tonal behaviour of these suffixes is as follows:-

1. -ng, which is monosyllabic, always has L.

2. -ana, -nyana, and -hadi: There are similarities and differences in the tonal behaviour of these suffixes, which are therefore treated together in a comparative manner.

Note re -ana: This syllable is disyllabic, but its first syllable (the vowel a) is always absorbed into the final syllable of the noun to which it is suffixed, and it is also tonally assimilated by this syllable. In connection with this tonal assimilation, it must be emphasized that initial a of -ana is assimilated by the derived tone, that is the one resulting from the suffixing of -ana, and not by the original tone of this syllable. So, for instance, when -ana is suffixed to a noun ending in M, first this M is lowered to L according to rule, and then the initial a of -ana is assimilated by this derived L, and not by the original M.

Example:

mōnā (man) LH M > mōnānga LHL|L

With this clear, we may now give the rest of the tonal behaviour of -ana, as well as that of -nyana and -hadi in summary form as follows:-

(a) All three suffixes have tone pattern LL where the derived tone of the final syllable of the noun is L.

(b) Where the derived final tone of the noun is H, /... then
then,

(i) if this $H$ is preceded by $L$, giving $LH$ as the tone pattern of the last two syllables,

- *-ena* has tone pattern $(H)L$,
- *-nyene* ............... $HM$, and
- *-heçi* ............... $HL$; while

(ii) if this $H$ is preceded by another $H$, giving $HH$ as the tone pattern of the last two syllables,

- *-ena* has tone pattern $(H)H$,
- *-nyene* ............... $LL$, and
- *-heçi* ............... $LL$.

4.126 Sometimes the modifications of the final tone of the noun, as illustrated above, are due to syntactical, rather than morphological, circumstances. In such situations, $M$ is always affected, being lowered to $L$. Final $L$, on the other hand, is raised to $H$ only in some of these situations, but not in others. Some of the syntax situations in which final $L$ and $M$ are thus affected are:

where the noun affected is followed by

1. a s.c.,
2. a conjunction or conjunctive,
3. the impersonal copulative formatives $kô$ (pos.)
   and $(h)lôkô$ (neg.),
4. an adverb or adverbia, and
5. a qualificative qualifying it.

Final $M$ is replaced by $L$ in all these situations.

Examples:

Mosadi $ôsihi$ $lô$ (The woman has arrived)
mosadi $wâkô$ (my wife)
Basëbêtsi, $kôjëngô$ $bôthâbîlô$ (The workers are happy today)

Final $L$ is raised to $H$ only in situations 1-4 above, but not in situation 5.
Examples: where change occurs

Lekgotla lelehalane (The council has dispersed)
Lekgotla, ho lelehalane (The council, when it dispersed...)
Lekgotla, kajabatho bhlè (The court is open to all people)
Lekgotla, kamar' a mò, lelehalane (After that the council dispersed)

where change does not occur

Lekgotla lemorëna (the King's Council)
Lekgotla lena (this council)
Lekgotla le hlophehang (respectable council)
Lekgotla le reyang holëna (the court to which we are going)

4.126 From this evidence, it may be concluded that the noun has its final L raised to H when it has a subject relationship with a following predicate, and there is no element, syntactically related to the noun, occurring between it and the predicate. So, therefore, this tonal change takes place --

1. when the predicate comes straight after the noun;
2. when the noun is separated from its predicate by an adverb or adverbial; and
3. when the noun is separated from its predicate by a adverbial subordinate clause.

In the last two occurrences, the adverb and adverbial, as well as the subordinate clause, are seen to be syntactically sealed off from the noun and its predicate by a parenthesis.

Reduplicated Nouns

4.127 Where the noun stem is monosyllabic, reduplication is achieved by repeating the whole noun, prefix and stem. Where the noun stem is non-monosyllabic, reduplication is /... achieved
achieved by repeating the stem only.

4.128 In studying the tone pattern of reduplicated nouns, it is sought to determine the tonal influence, if any, of the repeated portion on the original, unreduplicated form.

If the repeated portion is found to modify the inherent tone pattern of the unreduplicated form, then, in this particular context, the repeated portion may be regarded as an influencing succeeding element.

4.129 Repeated portions modify the final syllable of the noun in two ways, as follows:

1. Final H of the noun is raised to R, except in the case of B-form nouns having L on all their syllables.

2. Final M of the noun is lowered to L.

The tone pattern substitutions which occur are as follows:

Where final L > H

<table>
<thead>
<tr>
<th>Initial</th>
<th>Final Substitution</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>LHL</td>
<td>LHH</td>
<td>e.g. diriti &gt; diriti (shadows), as in diriti-riti (numerous shadows) LHH</td>
</tr>
<tr>
<td>LHH</td>
<td>LHHH</td>
<td>e.g. ditutudü &gt; ditutudü (heaps), as in ditutudü-tutudü (heaps and heaps) LHHH</td>
</tr>
<tr>
<td>LLL</td>
<td>LHH</td>
<td>e.g. baromuwa &gt; baromuwa (messengers), as in baromuwa-romuwa (numerous messengers) LHH</td>
</tr>
<tr>
<td>LLH</td>
<td>LHHH</td>
<td>e.g. baladi &gt; baladi (commanders), as in baladi-ladi (numerous commanders) LHHH</td>
</tr>
</tbody>
</table>

Where final M > L

<table>
<thead>
<tr>
<th>Initial</th>
<th>Final Substitution</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>LHM</td>
<td>LHL</td>
<td>e.g. manya1a &gt; manya1a (weddings), as in manya1a-manya1ad }...manya1a-nya1a</td>
</tr>
</tbody>
</table>

1 The tone patterns of the derived forms are given in full in order to focus attention on the tonal behaviour of the repeated portions as well.
manyəlnə-nyəlnə (numerous weddings) LLL|LL

LHLM > LHLL

e.g. difəpənə > difəpənə (crosses), as in
difəpənə-panə (numerous crosses) LHLL|LLL

This lowering of M to L takes place also where final M occurs on a form derived by means of -əna or -nyana, as shown in §§4.123 and 4.124, rather than on the original, non-derivative, noun. Here we find that LHMM > LHHL.

Examples:
difətənə > difətənə (little trees), as in
difətənə-ənə (many little trees) LHLL|LLL
diʃənyana > diʃənyana (a bit of food), as in
diʃənyana-ʃənyana (many little quantities of food) LHLL|LLL

4.130 As the above illustrations show, in all cases of reduplication of nouns, the repeated portion has L on all its syllables throughout.

Tonal behaviour of certain disyllabic-stemmed nouns, most of which may also function as weak adjectival stems

4.131 Reduplicated disyllabic-stemmed A-form nouns may behave tonally in two different ways, depending on whether the reduplicated form has a quantitative or a qualitative (or particularizing) significance. Most of these nouns are used in their plural form when they have a quantitative significance -- i.e. when they are used unambiguously as nouns -- and in their singular form when they are of qualitative significance. When they have a quantitative significance, the repeated portion has the effect of raising final L to H. This repeated portion itself has tone pattern LL, and the behaviour of the whole noun is seen to accord with the relevant rules outlined above for reduplicated nouns.

4.132 If, on the other hand, these nouns have a qualifi-
tative or particularizing significance (which naturally includes adjectival function), then the original (inherent) tone pattern of the unreduplicated form, viz. LHL, in unaffected, but the two syllables of the repeated portion have tone pattern HM. The complete tone patterns of these two groups of nouns are then as follows :-

<table>
<thead>
<tr>
<th>Quantitative LHH</th>
<th>LL</th>
<th>Qualitative LHL</th>
<th>HM</th>
</tr>
</thead>
<tbody>
<tr>
<td>menate-nate (many nice things)</td>
<td>monate-nate (very nice)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mahlale-hlale (great knowledge or wisdom)</td>
<td>bohlale-hlale (very clever or intelligent)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mahlokho-hloko (many diseases)</td>
<td>bohloko-hloko (very painful)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mathata-thata (many difficulties)</td>
<td>bothata-thata (the greatest difficulty)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N.B. When mafura-fura is used adjectivally with the meaning with fat all over, rather than very fat, then it has the same tone pattern as when used strictly as a noun, the reason, presumably, being that it has, in this case, a strong nounal bias. This tone pattern (i.e. LHH|LL) is used also when this form has an adjectival function with the meaning very fat with reference to a person, as if to say that he has fat all over.

Some of the forms under discussion here are found in the singular only, and used mainly, but not exclusively, qualitatively.

**Examples** (all with tone pattern LHL|HM) :

- bodutu-dutu (very lonely, or great loneliness)
- böhale-hale (very angry, or great anger)

/... bonolo-nolo
It is seen here that, even as nouns, these forms indicate a quality. This probably explains the use of the tone pattern $LHL\|HM$ for the reduplicated forms.

A few other nouns have the tone pattern $LHL\|HM$, without having any qualitative significance.

**Examples:**

- sedîka-dîkê (a circle)
- sehleka-hleka (island)

Note, however, that the nouns given here have no unreduplicated counterparts.

Numerous other nouns, which occur solely as nouns and are never used qualitatively, have the tone pattern $L_{HH}\|LL$, in accordance with the relevant rules outlined for nouns above. These are usually in the plural, and they indicate quantity.

**Examples:**

- mefûta-futa (many different kinds)
- mahâha-hâha (many caves)
- masîtsâ-bitsâ (many different names)

From the above analysis it may be concluded that when nouns are reduplicated as nouns, the tonal effect of the repeated portion on the original, unreduplicated, form is the same as that of Influencing succeeding elements upon such nouns. In both cases, the two most regular changes consist in the raising of $L$ to $H$, and the lowering of $M$ to $L$. On the other hand, where a disyllabic-stemmed A-form noun is, or may be, used qualitatively, the inherent tone pattern of the original noun is not tonally modified by the repeated portion. This latter, however, has tone pattern $HM$ as against the normal $LL$ of the repeated portion of a disyllabic-stemmed noun.\(^1\)

\(^1\) Letele treats reduplicated nouns on pp. 26-31 of his book.
Influencing preceding elements before reduplicated nouns

4.137 As with unreduplicated nouns, these elements affect only B-forms by raising the tone of the prefix from L to H.

Examples:

le dithaba-thaba (and many mountains), tones of
dithaba-thaba HLL|LL, cf. inherent LLL|LL
tsamatlo-matlo (those of many houses), tones of
matlo-matlo HL|LL, cf. inherent LL LL

4.138 With nouns whose final H is replaced by L when they occur finally and are preceded by an Influencing preceding element, the effect of the reduplication is that the original, unreduplicated, form has the tone pattern it would take in non-final occurrence. In other words, its final H is not lowered.

Examples:

le dikgomo-kgomo (with lots of cattle), tones of
dikgomo-kgomo HHH LL, cf. le dikgomo where,
in final occurrence, dikgomo has tones HLL
tsameru-meru (those of many forests), meru-meru
has LLL|LL, cf. tsameru where meru has LL finally.

4.139 The reduplication of monosyllabic-stemmed nouns has the effect of giving these nouns the tonal characteristics of non-monosyllabic-stemmed nouns. The final mid tone resulting from the preplacing of an Influencing preceding element to monosyllabic-stemmed B-form nouns (inherent LL) is therefore not found with reduplicated monosyllabic B-forms. That is to say that unreduplicated HM as in le batho (with the people) is replaced by reduplicated HL|LL as in le batho-batho (with a great many people).

Influencing succeeding elements after reduplicated nouns

4.140 Three of the Influencing succeeding elements seen
in §4.122 above occur with both parts of the reduplicated noun. These are -nyana, -ana, and -hadi.

Examples:

difatēnyana-fatēnyana (numerous little trees)
difatēhada-fatēhada (numerous big trees)

In these examples, the original, unreduplicated form has the same tone pattern in the reduplicated form (i.e. where it is followed by a repeated portion) as when it stands alone.

Example:

difatēnyana-fatēnyana LLLL
     cf. difatēnyana LLLL

But where the suffix has the effect of producing a derived form with final M when suffixed to an unreduplicated form, the repeated portion of the reduplicated form lowers this M to L.

Examples:

difatēhada-fatēhada LLLL
     cf. difatēhada LLLL

Tones of some derived nouns

4.141 While many of the examples given above, in discussing the tonal behaviour of the noun in general, are in fact derived nouns, it is nevertheless found necessary to discuss derived nouns by themselves, in order, among other things, to compare the inherent tone patterns of these nouns with those of the words from which they are derived. It has been necessary, however, to be selective in the types of derived nouns treated, the main criterion being the presence or absence of diversity in the tones of the original word and those of the noun derived from it. There is not much point discussing forms where the derivation of the noun shows no tonal deviation from the

/* original
original form, except for purposes of comparison, where necessary, especially since such nouns will be found scattered among the groups for which rules have already been given above. The main interest in this section will, therefore, be found to be on the differences in tonal behaviour between the original and the derivative forms, as well as on any peculiarities of tonal behaviour observed.

Nouns from nouns

4.142 Only nouns derived by means of the prefixes re-, me-, and bo- recommend themselves for discussion here. All three prefixes are influencing. Each of them has special characteristics which are discussed immediately below.

1. re-. This prefix is most likely derived from the now-obsolete rerea (father) LH, via rere LH still found in Tswana, to the mere vestige re-, now the only form found in S. Sotho. This re- has no tone of its own, but seems to always maintain a tonal contrast between itself and the immediately following syllable, viz. the first syllable of the noun to which it is prefixed. The tonal contrast, it must be emphasized, is as between the derived, against the inherent, tone of this first syllable of the noun, and re-.

4.143 From the fact that all influencing preceding elements seen hitherto have been found to be high-toned, it may be assumed, with a certain amount of justification, that this re- is derived, historically, from a high-toned form (probably the second syllable of the original form rerea). Only such an assumption can explain the apparent anomaly that a modification caused by high-toned elements in more than 90 p.c. of the cases, is here caused by an /... s-tonal

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1 resulting from the influence of re- itself which, as already stated, has the same effect as an influencing preceding element.
a-tonal element.

Examples:

ramaotse (family head, headman) LHM

cf. motse LL; i.e. LL >HM, and ra is L

but Rēdībe (person's name) H|LL

cf. Dībe LH; here LH >LL finally and remains LH non-finally,\(^1\) and ra is H

Rēpōlo (person's name) L|HL

cf. Polo HL; here HL remains HL, and ra is L

Rēmosīdī (person's name) L|LLL

cf. Mosīdi LLL; here LLL >HL, and ra is L

Rēmohāpī (person's name) H|HL

cf. Mohāpī LHL; here HL remains AHL, and ra is H

Rēdīkēlēdī (person's name) L|LLL

cf. Dīkēlēdī LLLL; here LLLL >HLL, and ra is L

Rēmohānūwa (person's name) H|HL

cf. Mohānūwa LHL; here LHL remains LHLL, and ra is H

N.B. 1. The example Rēdībe shows that ra, like other influencing preceding elements, has the effect, in conjunction with final occurrence of the noun to which it is prefixed, of lowering final H of such noun to L.

N.B. 2. As seen from most of these examples, ra, which may be translated "father of", mainly forms proper names of men.

4.144 --2mmē. This disyllabic form is, strictly speaking, not a prefix. It is, in fact, a contraction of a whole phrase, viz. mmē wa (mother of). From this it is easy to deduce that the influencing nature of this form when preplaced to B-form nouns is due to the possessive concord element (wa) within its composition.\(^2\) The tone /... pattern

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\(^1\) cf. 4.119 above.

\(^2\) See Influencing preceding elements, §4.106.
pattern of \textit{mm\textbar a} is LH in all situations.

\textbf{Examples:} (all of them proper names unless otherwise indicated)

\begin{itemize}
  \item \textit{Mm\textbar antwa} \quad LH|HM
  \textit{cf. } \textit{ntwa} (war) LL; here LL \textgreater{} HM
  \item \textit{Mm\textbar amose} \quad LH|LL
  \textit{cf. } \textit{mos\textbar a} (kindness) LH; i.e. LH \textgreater{} LL finally
  \textit{and remains LH non-finally.}\textsuperscript{1}
  \item \textit{Mm\textbar amose\textbar i} \quad LH|\textbar HLL
  \textit{cf. } \textit{Mos\textbar i} \quad LLL; i.e. LLL \textgreater{} HLL
  \item \textit{Mm\textbar adik\textbar \textbar \textbar ed\textbar i} \quad LH|\textbar HLLL
  \textit{cf. } \textit{Dik\textbar \textbar \textbar e\textbar \textbar \textbar di} \quad LLLL; i.e. LLLL \textgreater{} HLLL
\end{itemize}

\textbf{N.B.} The example \textit{Mm\textbar amose} shows that \textit{mm\textbar a}, like other Influencing preceding elements, has the effect, in conjunction with final occurrence of the noun to which it is prefixed, of lowering final H of such noun to L.

\textbf{4.145-- 3. b\textbar o.} This is a noun prefix which is unlike most other noun prefixes in, \textit{inter alia}, its tone and its significance. Other prefixes\textsuperscript{2} all have a low tone, but \textit{b\textbar o} has a high tone. This makes it of particular significance in the tonal declension of nouns because it is one of those high-toned elements which modify the tone patterns of certain nouns when these nouns follow it, i.e. it is an Influencing preceding element. In its meaning, it does not often indicate more than one of the same type of thing, but rather so-and-so and those with him or such and such a thing and others like it. Partly for this reason, \textit{b\textbar o} is always preplaced to, rather than substituted for, the prefix of the noun to which it is attached.

The importance of this, in tonal declension, lies in the fact that we are able to see the tonal effect of this prefix on the prefix of a B-form noun to which it is prefixed

\textsuperscript{1} cf. §4.119 above.

\textsuperscript{2} with the exception of the Class 17 prefix when used to form place-indicating (locative) substantives from other substantives.
prefixed, and in this way we are able to say that it is an Influencing preceding element.

 Examples: (all meaning So-and-So and those with him)

  bō-Majwē H/HM
  cf. Majwē LL; i.e. LL > HM

  bō-Dibe H/LL
  cf. Dibe IH; i.e. IH > LL finally and remains
       IH non-finally.

  bō-Mosidi H/LLL
  cf. Mosidi LLL; i.e. LLL > HLL

  bō-Dikēlēdi H/LLL
  cf. Dikēlēdi LLLL; i.e. LLLL > HLLL

Nouns from verb stems

14. Agentive nouns

(a) Monosyllabic-stemmed nouns

14.146 With both A and B-forms, the noun stem has the same tone pattern as the verb stem from which it is derived.

 Examples:  A-form

           moji (eater) IH, cf. jē (est) H

           B-form

           motli (comer) LL, cf. tla (come) L

Monosyllabic deverbative noun stems may also occur without a change of the verbal ending ā to the ending ī of the corresponding noun stem, but this is found mostly when these nouns occur with adjuncts to the verbal idea in the stem. This is discussed below under Compound nouns.

(b) Disyllabic-stemmed nouns

14.147 With both A and B-forms, the noun stem has the same tone pattern as the verb stem from which it is derived, if the final ā of the verb stem is replaced by ī in the derivation.

... Examples:
Examples: A-form
morūtī (teacher) LHL, cf. rūta (teach) HL

B-form
mobādī (reader) LLL, cf. balā (read) LL

4.146 Where the noun stem is derived without change of final a of the verb stem to i, the stem is tonally modified in order to reflect its change of function which is not obvious from its structure. These changes are shown in the following examples.

(i) Noun stems from both A and B-form verb stems have tone pattern HM. That is, HL > HM, and LL also > HM

Examples: From A-verb stems
modīsa (shepherd) LHM, cf. dis (to herd) HL
sehōra (last-born) LHM, cf. hōra (lick) HL
Mosāla (person’s name) LHM, cf. sāla (remain) HL

From B-verb stems
mongāla (boy deserter from circumcision school) LHM, cf. ngāla (desert) LL

Some of the nouns derived from B-verb stems take e in place of final a of the verb stem, but behave tonally like those which retain this a.

Examples:
sonohē (diviner) LHM, cf. noha (guess, foretell) LL
sepūfē (prattler) LHM, cf. pho(o) (talk in one’s sleep, be delirious) LL

These nouns, although derived from B-verb stems, are declined tonally just like A-nouns which in fact they are.

4.149 (ii) Another group of noun stems derived from B-verb stems differ tonally from these corresponding verb stems by having H on the final syllable (complete tone pattern LH) as against L of the verb stem on this syllable (complete tone pattern LL).

/... Examples:
Examples:
- *seputa* (rotten smell) LLH, cf. *puta* (decay) LL
- *semelaa* (plant) LLH, cf. *mela* (grow) LL
- *tema* (plot) LH, cf. *mela* (as above)
- *thipaa* (knife) LH, cf. *ripaa* (rip, cut) LL

4.150 — (iii) There is yet another group of noun stems which have the same tones as the verb stems from which they come, even though they retain the ending *a*.

Examples:
- *seritaa* (cripple) LLL, cf. *ritaa* (side along) LL
- *sehlotaa* (lame person) LLL, cf. *hlota* (limp) LL
- *lehlanya* (mad person) LLL, cf. *hlenya* (be mad) LL
- *molaa* (abstainer) LLL, cf. *ila* (abstain from) LL
- *sekwalaa* (beautiful person) LLL, cf. *kwala* (shut) LL

(c) Trisyllabic-stemmed nouns

4.151 Nouns from A-verb stems go according to the following rules:

1. If the final vowel of the derived noun stem is *a*, then the tone pattern of this stem is the same as that of the verb stem from which it is derived.

Examples:
- *mebeeta* (worker) LHMM, cf. *beeta* (to work) HHM
- *mollieri* (wanderer) LHMM, cf. *leria* (roam about) HHM
- *mahlahlobi* (examiner) LHMM, cf. *hlahloba* (examine) HHM
- *mahloodi* (judge) LHMM, cf. *hloola* (to judge) HHM

Note the exception *moboleedi* or *molodi* (evangelist) LLLL from *baleela* (tell) HHM, which behaves like the nouns in group (ii) immediately below.

(ii) If the noun stem retains final *a* of the verb stem from which it is derived, then the following tone substitution...
substitution takes place: verb stem HHM becomes noun stem HLL. Here again change of function is effected solely through change of tone.

Examples:
- mokgathala (fatigue) HLL, cf. kgathàla (become tired) HHM
- sekgohala (rain storm) HLL, cf. hohàla (sweep along) HHM
- moghatsela (cold) HLL, cf. hatsela (feel cold) HHM
- phahema (high place) HLL, cf. phahema (to rise) HHM

4.52 Nouns from B-verb stems go according to the following rules:

1. Some noun stems ending in I have H on the second syllable as against L on the second syllable of the corresponding verb stem, so that the noun stem has the tone pattern IHLL which corresponds to LLL of the verb stem.

Examples:
- mòròbèdi (sleeper) LLHL, cf. ròbàla (sleep) LLL
- morapèdi (suppliant) " " repèla (pray) "
- mòhlophèhi (needy person) " " hlophàna (be needy) "
- mòdumèdi (believer) " " dumèla (agree) "
- papèdi (game) IHHL, cf. bapàla (play) "

N.B.1. When nouns of this group are used as proper names, then the tones of their stems are the same as those of the verb stems from which they are derived. For examples, motsamei and morapèdi have each LLHL as common nouns, but LLLL as proper names. The corresponding verb stems are tsamaye and repalè respectively, each having tone pattern LLL.

N.B.2. It is interesting also to compare the tones of non-personal nouns derived from the same verb stems as some
of the personal (agentive) nouns just described. For examples:

motšemane (manner of walking) LLLL, cf. motšemul (traveler) LHHL
morobalo (manner of sleeping) LLLL, cf. morobadi (sleeper) LHHL
thapela (prayer) LLL, cf. morapedi (supplicant) LHHL etc.

(ii) Other noun stems ending in i retain the tone pattern of the verb stem from which they are derived.

Examples:

sebapedi (player) LLLL, cf. bapela (play) LLL
sekukguni (prowler) LLLL, cf. kgukguna (prowl)

(iii) Noun stems which retain final a of the verb stems from which they are derived, have H on the final syllable as against L on the final syllable of the corresponding verb stems, so that the noun stems have tone pattern LH corresponding to LLL of the verb stems.

Examples:

letlaile (bad singer or speaker) LHHL, cf. tlaila (sing or speak badly) LLL
setsele (half-witted person) LHHL, cf. setsele (slumber) LLL
tests (whet-stone) LHHL, cf. leotsa (sharpen) LLL

Deverbative agentive nouns incorporating an OC, or the reflexive formative i.

4.153 The object concord and the reflexive formative have a tonal effect on B-verb stems identical with that of Influencing preceding elements on B-nouns.

Examples:

Ithaha (kick oneself) and moraha (kick him),
stem in each case has HM, cf. raha (kick) LL;
When a verb stem is taken over, in the formation of a noun, together with its O.C. or its reflexive formative \(i\), the tonal influence of these formatives is transferred from the verb stem to the corresponding noun stem. There are only a few nouns incorporating O.C.s, therefore most of the examples below occur with reflexive \(i\).

**Examples:**
- mo\(i\)ny\(\ddot{a}\)tsi (repentent person) LHHM, cf. \(i\)nty\(\ddot{a}\)tsa (repent) HHM and ny\(\ddot{a}\)tsa (find fault with) LLL
- mo\(i\)thah\(\ddot{a}\)nodi (one who reveals himself) LHLLL, cf. \(i\)thah\(\ddot{a}\)nola (reveal oneself) HHLL, and senola (reveal someone) LLL
- mo\(i\)kgo\(m\ddot{a}\)mosi (conceited person) LHLLL, cf. \(i\)kgo\(m\ddot{a}\)mosa (be conceited) HHLLL, and hohosa (raise, swell trans.) LLLL

2. **Nouns from passive verb stems**

4.154 Passives of verbs are formed mostly with the short infix \(-w-\) before the final vowel, giving final \(wa\) in the Infinitive positive, and comparatively rarely with the long infix \(-uw-\), giving ending \(uwa\). But in forming nouns from passives, \(-uw-\) is the more common infix found with the stem, so that very often even deverbative noun stems whose corresponding verb stems take \(-w-\), employ \(-uw-\). It is convenient to discuss the two types of passive stems together.

4.155 A-stems

/... (1)
(1) Disyllabic noun stems employing -w- have the tone pattern HM as against HL of the verb stem; i.e. HL > HM.

Examples:
- marongwa (messenger) LHM, cf. rongwa (be sent) HL
- seboiswa (prisoner) LHM, cf. boiswa (be tied up) HL

(ii) Trisyllabic noun stems employing -w- have tone pattern HLL as against HHM of the verb stem; i.e. HHM > HLL.

Examples:
- moahalwa (one against whom judgement is given) LHL, cf. alowwa (be judged) HHM
- moholawwa (prisoner) LLH, cf. holawwa (be tied up) HHM

(iii) Trisyllabic noun stems derived from disyllabic verb stems by means of the long infix -uw-, have the same tone pattern as the trisyllabic stems described in (ii) above, viz. HLL, as against HHM of the corresponding verb stems.

Examples:
- moratula (beloved) LHL, cf. ratula (be loved) HHM
  also ratula HL more commonly used than ratula
- monyadula (bride) LHL, cf. nyadula (get married)
  (rare) HHM, also nyalwa HL, more commonly used.
- moholula (hated one) LHL, cf. holula (be hated) HHM

N.B. The rules of tonal behaviour in all the three groups above are identical with those concerning the derivation, without change of final vowel, of nouns from some non-passive verb stems, as shown in §§4.148 et seq. above. The reason for this behaviour on the part of the noun stems from passive verb stems is obviously that here too the final vowel of the verb stem is not changed in the derivation of the noun stem. The tone pattern

/... substitutions
substitutions in these two cases are as follows:—

HL of the verb stem > HM of the noun stem

HHM of the verb stem > HLL of the noun stem

Compare the following examples:—

<table>
<thead>
<tr>
<th>Verb stem</th>
<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>non-passive: dīsa HL</td>
<td>modīsā L</td>
</tr>
<tr>
<td>passive: bōswa HL</td>
<td>sebōswa L</td>
</tr>
</tbody>
</table>

non-passive: kgāthāla HHM | mokgathala L|HLL |
| passive: shlo1wa HHM | masholwa L|HLL |
| ratūwa HHM | moratūwa L|HLL |

4.156 B-stems

(i) Disyllabic noun stems with -w- are used here more commonly than with A-stems. In deriving the noun, the verb stem has its final syllable raised from L to H, giving tone pattern LH as against LL of the verb stem. That is LL > LH.

Examples:

letfētwā (old-maid) LLH, cf. fetwā (be passed by) LL
letēthwā (drunkard) LLH, cf. tuhwā (be drunk) LL
moilwā (hated one) LLH, cf. ilwā (be disliked) LL

N.B. These nouns behave tonally in the same way as the disyllabic- stemmed nouns from B-verb stems without change of final e discussed in §4.149 above. That is, in both groups LL of the verb stem is replaced by LH of the noun stem. Here too the reason for this identical tonal behaviour in these two groups of verb stems is that both types are used without modification of form as noun stems.

Compare the following examples:—

<table>
<thead>
<tr>
<th>Verb stem</th>
<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>non-passive: mēla LL</td>
<td>semēla L</td>
</tr>
<tr>
<td>passive: tēhwā LL</td>
<td>letēhwā L</td>
</tr>
</tbody>
</table>

(ii) Trisyllabic noun stems are derived from B-verb stems by raising the tone of the second syllable from L to H, giving
giving the tone pattern LHL as against LLL of the verb stem. That is LLL > LHL.

Examples:

- mohladwā (divorcee) LLLH, cf. hladuwa (be divorced) LLL, also hlgīwa (ditto)
- mōtlōtsuwā (anointed one) LLHL, cf. tlōtsuwā (be anointed) LLL, also tlōtswa (do)
- mōkgēthwā (chosen one) LLHL, cf. kgēthwā (be chosen) LLL, also kgēthwā (ditto)

N.B. These nouns behave tonally in the same way as the trisyllabic-stemmed nouns from B-verb stems derived by changing final a of the verb stem to i, discussed in §4.152 above. That is, in both groups, LLL of the verb stem is replaced by LHL of the noun stem. Compare the following examples:

<table>
<thead>
<tr>
<th>Verb stem</th>
<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>non-passive: dumēla LLL</td>
<td>modumēdi L</td>
</tr>
<tr>
<td>passive: tlōtsuwā LLL</td>
<td>mōtlōtsuwā L</td>
</tr>
</tbody>
</table>

Compound nouns

4.157 Most compound nouns will not come under discussion here as their constituent elements have the same tone patterns in combination as in isolation. A few examples of these are:

- leteg-tshwēne (warrior who has killed another in battle) L|LL|LL, cf. tēa (strike) LL and tshwēne (babeen) LL
- Sefalē-bohōhē (Venus in the evening) L|LL|LHL, cf. fēlē (scrape) LL and bohōhē (crust) LHL
- motswā-hōlē (one who comes from far) L|LL|HL, cf. tswa (come from) L and hōlē (far) HL

Only nouns any one of whose constituents shows a peculiar tonal behaviour when used in combinations will therefore be discussed here.

/... 1.
1. Nouns from monosyllabic verb stem + object.

4.158 The stems of these nouns, when used with objects of the verb stems from which they are derived, retain final a of these verb stems. An interesting phenomenon here is that monosyllabic A-stems followed by objects act as Influencing preceding elements in relation to those objects, having on them the same tonal effect as would the Influencing preceding elements mentioned in 4.106 above.

Further, it is remarkable that these same stems, when used purely as verb stems (i.e. as constituents of verbs and not of nouns), cease to have this modifying influence on the tones of the immediately following noun objects. There are only a few examples, as shown immediately below.

**Examples:**

sefa-batho (generous person) LH|HM, cf. fa (give) H and batho (people) LL; i.e. LL> HM

sewa-moro (drinker of the gravy) LH|HM, cf. nwa (drink) H and moro (gravy) LL; substitution as above.

seja-matekwane (dagga-smoker) LH|HLLL, cf. ja (eat) H and matekwane (dagga) LLLL; i.e. LLLL> HLLL

4.159 Again, like Influencing preceding elements, a high-toned monosyllabic verb stem functioning as a noun stem in compounds of this nature, has the effect, in conjunction with final occurrence of the compound form, of lowering final H on the noun object to L. Here, too, when the verb stem functions purely as a verb stem, it ceases to have this modifying influence on the tones of the immediately following noun object.

**Examples:**

sekga-meta (drawer of water) LH|LL, cf. inherent tone pattern of meta viz. LH

moja-lefa (heir) LH|LL, cf. inherent tone pattern /... of
of lefã viz. LH
dipãna-mathe (wonders) LH|LL, cf. inherent LH of
mathe

2. Nouns from disyllabic verb stem + object.

4.160 The first portion of a compound noun based on an
A-verb stem plus an object, retains the inherent tone
pattern of the verb stem, which is HL, thus having LHL
as its complete tone pattern. The immediately follow-
ing object, if a B-form, has its tone pattern modified as
if it were preceded by an Influencing element.

Examples:
setãšase-ntlo (species of grasshopper) L|HL|HM,
cf. tãšase (burn) HL and ntlo (house) LL
seräta-majwe (type of grass) L|HL|HM, cf. räta
(like) HL and majwe (stones) LL
setiša-mollõ (fire-extinguisher) L|HL|LLL, cf.
tiša (extinguish) HL and mollõ (fire) LLL
segäta-majwana (herdboys' game) L|HL|LLL, cf.
qäta (put on pair of drawers) HL and majwana
(little stones) LLL

The tonal substitutions illustrated here are :

LL > HM, and
LLL > HLL

N.B. In these examples, the syllable immediately preceding
the object is low-toned. The only reason why a modify-
ing influence, similar to that of Influencing preceding
elements, is exerted by these verb stems would therefore
seem to be the fact of their being A-stems. It is
interesting to observe here also that when the verb and
the object are related outside of this nominal context
(i.e. when they have a purely predicate-object relation-
ship), then the verb does not modify the tone pattern of
the noun object.

/... 4.161
4.161 Where these deverbal or noun stems are followed by noun objects with A-stems, the tone of the final syllable of the deverbal stem in the first part of the compound is raised from L to H, this stem thus having HH. This is due to the effect of the object, as an adjunct of Context 1, on the final syllable of the immediately preceding verb stem (now a noun stem).  

Examples:

- modula-setulo (chairman) L|HH|LHM, cf. duša (sit) HL
- serwaša-nkgwana (praying mantis) L|HH|LHL, cf. rwala (carry on head) HL
- selaha-merungwana (deserter from battle-field) L|HH|LHM, cf. løhla (throw away) HL

3. Nouns from noun + adjective.

4.162 (1) Where the stem of the noun is an A-stem, it modifies the tone pattern of an immediately following strong adjective in the same way as Influencing preceding elements modify B-form nouns.  

Examples:

- madĩ-matle (good luck, lit. good blood) LH|HM, cf. matle (good) LL
- meru-metsho (black forests) LH|HM, cf. metsho (black) LL

The tone substitution here is LL > HM.

There is also a lowering of the final H of the adjective to L when this compound occurs finally.  

Examples:

- madĩ-mabe (bad luck, lit. bad blood) LH|LL, cf. /... mabe

---

1 See Syntax Contexts, and also H-L alternation, in the section on the tonal behaviour of the verb below.
2 Cf. §§4.106, 4.158, and 4.160 above.
3 Cf. §§4.119, 4.158, and 4.159 above.
mabē (bad) LH

(ii) Where the noun has M on its final syllable outside of a combination, this M is replaced by a L in a compound of the type under discussion here.

Examples:
moľne-moholo (old man) LHL LHL, cf. moľna (man) LHM
mosadi-moholo (old woman) LHL LHL, cf. mosadi (woman) LHM

It must be emphasized, however, that the adjective does not modify the tones of the immediately preceding noun by reason of its being an adjective, but simply because it removes the noun from final occurrence.

Recapitulation on influencing and influenced forms

4.163 The influenced form may be either in ordinary syntax relation with the preceding form which influences it, or it and the influencing form may be co-constituents of a compound form.

Modifying influence is exerted on the noun by the following:

1. Influencing preceding elements as outlined in §4.106 above, e.g. le batho (with the people), batho in this context HM as against inherent LL; homorēna (to the king), morēna HLL here as against inherent LLL, etc.

2. The nominal derivative prefixes ru, mmē, and bō, as described in §§4.142 et seq. above, e.g. remotse (family head), motse here HM as against inherent LL; mmē-ntwa (person's name), ntwa here HM as against inherent LL; bō-Mosidi (Mosidi and co.), Mosidi here HLL as against inherent LLL, etc.

3. Deverbative A-noun stems occurring as constituents of compound nouns the second element of which is a noun /... object
These stems may be either monosyllabic or polysyllabic (in practice usually only disyllabic), as described in §§4.158 et seq. above, e.g. setĕ-batho (generous person), batho here HM as against inherent tone pattern LL; setĕsese-ntlo (species of grasshopper), ntlo here HM as against inherent LL; setĭms-mollă (fire extinguisher), mollă here HLL as against inherent LLL.

4.164 The changes seen above are LL> HM, LLL> HLL, and LLLL> HLLL. And it may be assumed, from the nature of the last two changes, that derived forms with more syllables than four (including the prefix) would behave according to the pattern: H on the first syllable and L on all the remaining syllables. The most consistent change here is that involving the raising of the L of the prefix to H. As regards the final syllable, it depends for its tone in this context on the number of syllables in the stem of the noun, being H if the stem is monosyllabic, and L if the stem is non-monosyllabic. If the final vowel is L, then all preceding syllables, except the prefix, are also L.

4.165 Another important change is that of final H of the noun which becomes L when the above influencing elements precede, and the influenced form occurs finally in the sentence. This change takes place irrespective of whether the noun involved is A or B-form, as in the following examples:–

le mătsi (with water), mătsi here LL as against inherent LH; sekgamătsi (drawer of water), mătsi as above; omănganę (he is stubborn), menganę here HLL as against inherent LLH; habosula (unpleasantly), bosula here HLL as against inherent LLH.

As the last two examples show, the two changes comprising the raising of the L of the prefix of a B-form to H...
on the one hand, and the lowering of final H of any noun.
(whether A or B-form) to L on the other, can take place
on one and the same noun simultaneously, given the two
conditions that, firstly, the noun incorporates a non-
onosyllabic B-stem, and, secondly, that its final syllable
has H.

Noun Declension Groups

4.166 Nouns are here divided into five declension groups,
the first of which has two subdivisions.

Declension 1.

This comprises monosyllabic-stemmed A-form
nouns. These, naturally, all have H on the final syllable,
viz., the syllable of the stem.

Example:

mûrû (forest) LH

Nouns of this Declension have their inherent final H
lowered to L when they occur finally in the sentence,
and are preceded by Influencing preceding elements.1

In non-final occurrence they retain their final H
no matter what (if anything) precedes them.
Succeeding elements have no modifying influence on
the tone pattern of nouns of this Declension.

A summary of the tonal forms which nouns of this
Declension may assume is as follows:

IH non-finally;
IH finally, not preceded by Influencing element;
LL finally, preceded by Influencing element;
IH when both preceded and followed by Influencing

\[ \text{cf. Inherent LH} \]

4.167 Declension 1a.

This comprises trisyllabic-stemmed

1 See §§4.119, 4.158, 4.159, and 4.161 above.
A-nouns with inherent tone pattern IHLL.

Example:

mokgôthala (fatigue)

Nouns of this Declension have their inherent final L raised to H in non-final occurrence. They thus resemble Declension 1 nouns in this respect, with the difference that the H of the latter group is an inherent (or primary) H, while that of Declension 1a nouns is a derived (or secondary) H. In other words Declension 1 nouns retain H on the final syllable in these circumstances, while Declension 1a nouns acquire H on this syllable in these same circumstances.

In final occurrence, Declension 1a nouns retain final L irrespective of what precedes them. Declension 1 nouns, on the other hand, acquire final L when occurring finally if at the same time preceded by Influencing elements.

Influencing succeeding elements raise inherent final L of Declension 1a nouns to H.

Example:

mokgôthalâhâdi (great fatigue) IHIH|HL

A summary of the tonal forms which nouns of this Declension may assume is as follows:

- IHIH non-finally;
- IHIH with Influencing succeeding elements;
- IHLL finally irrespective of what precedes them.

cf. Inherent IHLL

4.168 Declension 2.

This comprises all A-forms with L on the final syllable, with the exception of those in Declension 1a above. These are, obviously, all non-mono-syllabic. They are --

1. disyllabic-stemmed nouns with inherent tone pattern LHL, e.g. mgorûti (teacher);
2. trisyllabic-stemmed nouns with inherent tone pattern IHHL, e.g. ditutūdū (heaps).

Influencing preceding elements do not affect the tone pattern of this group.

Example:

hōmorūti (to the teacher) H|IHHL, cf. inherent tone pattern of morūti viz. IHHL.

Influencing succeeding elements raise the tone of the final syllable of these nouns from L to H.

Examples:

morūting (in the shade) IH|IL, cf. inherent tone pattern ILH of the noun morūti.

mosēbêtsînyana (little work) IHHL|LL, cf. inherent pattern LHHL of the noun mosēbêtsi.

It must be remembered that, as indicated in §4.123 n. 1 (p. 215) above, trisyllabic-stemmed nouns of this group are sometimes pronounced with L on the second syllable of the stem.

4.169 A summary of the tone patterns which may be assumed by nouns of Declension 2 is as follows:

IHHL and IHHH (with rare alternative LHHL)

when followed by Influencing succeeding elements;

IHHL or IHL, and IHHH or LHHL, in non-final occurrence, the alternative tone pattern used depending on the syntax relation of the noun to the succeeding word or formative.1

cf. Inherent tone patterns ILH and IHHL.

4.170 Declension 3.

This comprises all A-forms with M on the final syllable. The nouns in this Declension are all non-mono-syllabic. They are --/... 1.

1 See §§4.125 and 4.126 above.
1. disyllabic-stemmed nouns with tone pattern LHM, e.g. monna (man);
2. trisyllabic-stemmed nouns with tone pattern LHHM, e.g. sehopota (memorial).

Influencing preceding elements do not affect these nouns.

Examples:
- taomonna (those of the man) H_LHM, cf. inherent tone pattern of monna viz. LHM
- le sehopota (and the memorial) H_LHHM, cf. inherent pattern of sehopota viz. LHHM

Influencing succeeding elements lower the tone of the final syllable from H to L.

Examples:
- mosadihadi (big woman) LHL|LL, cf. inherent tone pattern LHM of the noun mosadi
- dikgathatseng (in troubles) LHHL|L, cf. inherent pattern of dikgathatseng viz. LHHL

4.171 A summary of the tone patterns which may be assumed by nouns of Declension 3 is as follows:—

LHL and LHHL when followed by Influencing elements;
LHL and LHHL in non-final occurrence.

cf. Inherent patterns LHM and LHHM

4.172 Declension 4.

This comprises all B-forms whose final syllable has L.

Examples:
- motho (person). LL
- morëna (king) LLL
- dimakatsa (wonders) LLLL
- bolebadi (forgetfulness) LLHL

/... Influencing

1 See §§4.123 and 4.125 above.
Influencing preceding elements affect these nouns in the following ways:—

1. They raise the tone on the syllable of the prefix from L to H.

Example:

homorëna (to the king) H|HLL, cf. inherent tone pattern of morëna viz. LLL.

2. They raise final L of monosyllabic-stemmed nouns to M.

Example:

tsëbatho (those of the people) H|HM, cf. inherent tone pattern of batho viz. LL.

Influencing succeeding elements have no modifying effect on nouns of Declension 4 in their original form. They do, however, restore derived M on the final syllable of monosyllabic-stemmed forms just referred to above, to original L, in the same way as they lower original final M of A-forms to L.

4.173 A summary of the tone patterns which may be assumed by nouns of Declension 4 is as follows:—

LL, LLL, LLLL; and LLHH respectively when followed by Influencing elements;

HM, HLL, HLLL; and HHLH respectively when preceded by Influencing elements;

HL, HLL, HLLL; and HHHH respectively when both preceded and followed by Influencing elements;

LL, LLL, LLLL; and LLHH or LLHL in non-final occurrence (but without any Influencing elements), the alternative used in respect of the last pattern depending on the syntax relation with the succeeding word or formative.

cf. Inherent tone patterns LL, LLL, LLLL; /... and

---

1 See Declension 3 above.
2 See §§4.125 and 4.126 above.
and LLH respectively.

4.174 **Declension 6.**

This comprises B-forms, from disyllabic-stemmed ones on, which have H on the final syllable and L on all preceding syllables.

**Examples:**

- lemātī (door) LLH
- letlamētlo (bull-frog) LLH

Influencing preceding elements affect these nouns in the following ways:

1. They raise the tone of the prefix from L to H;
2. In conjunction with final occurrence, they lower the tone of the final syllable from H to L.

The two rules are best illustrated together.

**Examples:**

- le lemātī (and the door) H HHH non-finally and H HLL finally, cf. inherent tone pattern of lemātī viz. LLH
- tealetlamētlo (those of the bull-frog) H HLLL non-finally, and H HLLL finally, cf. inherent tone pattern of letlamētlo viz. LLH

Influencing succeeding elements have no modifying effect on the inherent tones of nouns of Declension 5. They do, however, restore derived final L, as in the above situations, to original H.

4.175 A summary of the tone patterns which may be assumed by nouns of Declension 5 is as follows:

- LLH, LLH etc. when followed, but not at the same time preceded, by Influencing elements;
- LLH, LLH etc. when occurring non-finally but not preceded by Influencing elements;
- HLH, HLLH etc. when both preceded and followed by Influencing elements.

---

1 Cf. Declension 1 above.
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HLH, HLLH etc. when preceded by Influencing elements and occurring non-finally;
HLL, HLLL etc. when preceded by Influencing elements and occurring finally.

of. Inherent tone patterns LLH, LLLH, LLLLH, etc.

Notes on the differences between this approach and those of Tucker and Letele.

4.176 It seems appropriate to conclude this section by spot-lighting the differences in the approach to the tonal problem of the declension of Sotho nouns between myself and Tucker and Letele.

4.177 I have already indicated elsewhere that Tucker’s mid tone is apparently my low tone, and that his low is my low-minus, while he regards my mid tone as a raised mid. This is a difference of terminology, and is of no great importance. I must, however, point out that Tucker's term raised mid would seem to imply that he would regard, for example, L on the final syllable of *mosadi* in non-final occurrence, or with Influencing succeeding elements, as the norm, and the M found on this syllable in final occurrence as the (raised) variant. To me it appears that M is... the norm, as it is found in situations where the word in which it occurs is not influenced tonally by neighbouring words or formatives.

Again, Tucker's inclusion, among his Sotho tonemes, *(Sotho-Nguni, p.215)* of a high-falling toneme, which I have already shown elsewhere to be a variant of a toneme rather than a toneme in itself, must be taken note of, since it suggests, on the face of it, that Tucker recognizes the existence of gliding tonemes in Sotho. If this assumption is correct, then the difference between us is seen to be fundamental, for, as the arguments I have
have adduced in §§4.28 to 4.30 above show, I take a directly opposite view, regarding all gliding tones as purely accidental, being mere links between two level tones of different heights. And I may add here that Tucker is inconsistent in not recognizing a mid-falling toneme (mid in the sense in which Tucker uses the term). For, if the syllable so of *močótho* in final occurrence represents a high-falling toneme, then one would expect that the syllable re of *moréna* would, if the word occurred finally, represent a low-falling (i.e. Tucker's mid-falling) toneme.

4.178 Thirdly, I treat the whole noun (prefix and stem) as one unit, which Tucker does not do. The main advantage in my method lies in the fact that in the tonal declension of nouns, it is found that certain types of nouns have the low tone on their prefix raised to high if the first syllable of their stem has low tone. In addition, as already indicated above (§4.100), monosyllabic-stemmed B-form nouns have their stems modified by Influencing preceding elements simultaneously with the modification effected on the prefix by such elements. Now, here we have an important aspect of the tonal declension of the noun, to wit a tonal modification of the prefix, which manifests itself only in conjunction with the first syllable of the stem with which the prefix occurs, which change may, besides, necessarily be accompanied by a tonal modification of the stem also. Neither the stem nor the prefix can, in this case, be treated in isolation from the other. As seen in the declension of nouns above, my method of dealing with this aspect of the noun gives full scope for the treatment of the form as a whole. While, therefore, in arranging nouns into Declension groups, their endings are given a prominent place,
yet the beginnings of these nouns (the prefix, where expressed, and the first syllable of the stem) play a very important role also in the determination of such groupings. So, for instance, monosyllabic-stemmed A-nouns (Declension 1) and B-nouns of Declension 6 both have H on their final syllable. Both have this H lowered to L when they occur finally and are preceded by Influencing preceding elements. But then an important difference is found between them, viz. that when Influencing elements precede them, the B-nouns have H on their prefix, while the A-nouns retain their inherent L on the prefix. And this, together with the difference in the inherent tone patterns of these groups, is sufficiently important to place these groups in separate Declensions.

4.179 Letele divides his X-nouns (my A-nouns) into four tone groups, and his Y-nouns (my B-nouns) into five tone groups, according to "the tone pattern described by the last two syllables of a word". He then observes the tonal behaviour of these nouns when they are placed in the three contexts illustrated on the same page. The unsatisfactory method of presenting these contexts has already been referred to in §4.95 above.

We may add here that Letele also treats the stem separately from the prefix in his tonal analysis of the noun. Broadly speaking, therefore, my criticisms of Tucker's method apply to Letele's as well.

The Absolute Pronoun

4.180 The inherent tone pattern of the absolute pronoun is, like those of other words, determined in final occurrence in an ordinary statement. In the case of the A.P., however, there is, in addition, the requirement that it (the A.P.) be not used here as a constituent of an adver-
bial; that is to say, it must not be preceded by an adver-
bial formative, or by the copulative formative ke. When
it occurs in the absence of these formatives, the A.P. has
tone pattern LAImH finally in an ordinary statement. Af-
eter the necessary adjustments have been made, the inherent
tone pattern resulting is LH.

Tonal Declension of the A.P.

4.181 Influencing preceding elements. Only some of
the Influencing preceding elements seen in the treatment
of the noun are found with A.P.s. These are the conjunc-
tion le (and, with, also, even); the locative prefix ho
(to, from, etc.); all possessive concords; and the
Class 2a noun prefix bê-. The rest of the elements which
occur with nouns are excluded here on logical grounds.
The applicable ones influence the A.P. in conjunction
with final occurrence, in exactly the same way as they
influence nouns of Declensions 1a and 5. That is to say,
that final H of the A.P. is lowered to L when the A.P.
occurrs finally and is preceded by one of the applicable
Influencing preceding elements.

Examples:
le bôna (they too) H/LL
ho yôna (to him) H/LL
tsâraüa (ours) H/LL

4.182 The influence of certain other high-toned elements
on A.P.s. There are also high-toned elements which are
non-influencing as far as nouns are concerned, but which
have the same effect on A.P.s as the Influencing preceding
elements. These are --

1. the adverbial formative ke; and
2. the impersonal copulative formative ke.

In conjunction with final occurrence of the A.P. these
formatives lower H on the final syllable of this A.P. to L.

... Examples:
Examples:
kalōna (by means of it; about it, etc.) H|LL
kōlōna (it is it; by it)  H|LL

Comparison of the tonal behaviour of the A.P. with that of some of the nouns treated above.

4.183 It is interesting to compare the tonal behaviour of A.P.s with that of certain nouns. First let us take nouns of Declension 1 which, like A.P.s, have inherent H on the final syllable. Declension 1 nouns and A.P.s are identical in tonal behaviour in so far as --

1. they each have two syllables (prefix of the noun included) with inherent tone pattern LH; and

2. their H on the final syllable is lowered to L when the word occurs finally and is preceded by an Influencing preceding element.

Examples: with A.P., e.g. bōna
yābōna (theirs)
le bōna (they too)
hōbōna (to them, from them etc.)
bōna in each example LL, cf. inherent LH

with noun, e.g. mādi
yāmādi (thoroughbred, lit. of the blood)
le mādi (the blood also)
hōmādi (there is blood)
mādi in each example LL, cf. inherent LH

4.184 But a divergence is observed where A.P.s have their final H lowered to L in final occurrence when preceded by high-toned elements which are non-influencing as far as nouns are concerned.

Examples: with A.P., e.g. yōna
kēyōna (by means of it; about it; during it, etc.)
kēyōna (it is it; by it)

yōna in each example LL, cf. inherent LH

... with
with noun, e.g. mētsi
kēmētsi (with water; about water, etc.)
kēmētsi (it is water; by water)
mētsi in each example IH, cf. inherent IH

4.185 Nouns of Declension 1, on the other hand, resemble A.P.s and Declension 1 nouns in so far as their final tone is always H in non-final occurrence.

Example:

mokgathala 5maholo (great fatigue) tones of mokgathala IHIH

In final occurrence, final H of these nouns is always lowered to L whether or not the noun is preceded by a high-toned element.

Example:

Kebatla moromuwa (I want a messenger), tones of moromuwa IHLL, cf. inherent IHLL and non-final IHIH

4.186 Nouns of Declension 5 resemble Declension 1 nouns and A.P.s in that they have inherent H on their final syllable, and that this H is lowered to L in the same circumstances in which final H of Declension 1 nouns and of A.P.s are similarly affected.

4.187 As shown in §4.109 above, Influencing preceding elements which may be preceded by negative formatives, cease to affect the substantives before which they are placed when they are preceded by these negative formatives. This is probably the reason why są, the negative counterpart of ke of copulative formation does not affect inherent final H of the A.P., since it (i.e. så) occurs only in negative formations, preceded by the negative formative ha.

Example:

Haseyēna (It is not he), yēna here IH, cf. /... inherent
inherent LH

4.188 Tonal behaviour of the locative pronounal tēng.
The pronounal of locative significance tēng which has
almost completely superseded the normal A.P. of Class 17
hōna.¹ has a tonal behaviour which is identical with that
of the A.P. It has the same inherent tone pattern, viz.
LH, and is subject to the same tonal modifications, under
the same conditions,² as A.P.s. Unlike A.P.s, tēng may be
used as the base of a personal copulative with 3rd person
subjects, being therefore preceded by 3rd pers. basic S.C.s
which are all high-toned, and are influencing.³ This, of
course, merely gives tēng an additional influencing pre-
ceding element without adding a new feature of tonal
behaviour.

Example:

ōtēng (he is present), tones of tēng here LL,
cf. inherent tone pattern LH

When this copulative is negated, the involvement of the
preceding S.C. in this negative formation makes it lose
its power of influencing.

Example:

Habatēng (They are not present), tones of tēng
LH,⁴ cf. inherent LH

4.189 Letele treats A.P.s on pp.70–71 of his tonal study.
He is rather cryptic, restricting himself mainly to
illustrations

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¹ Like hōna, tēng is used not only for Class 17, but for
all three locative classes, viz. 16, 17, and 18.
² except, of course, when certain preceding formatives
are excluded, on logical grounds, from occurrence with
tēng, e.g. the instrumental and topical adverbia-
formatives.
³ See 4.106 above. Non-locative A.P.s occur in personal
copulative constructions only with 1st and 2nd pers.
subjects.
⁴ One often gets the impression of LL even here. But the
reason for this is not that the preceding S.C. continues
to exert an influence, but rather that ʉŋ is often so
dramatically reduced in duration that it becomes part of
the preceding syllable. And this is probably what some-
times happens here also.
illustrations without indulging in what I consider to be necessary and useful discussion. He thus disposes of the A.P. in less than one page. Tucker does not treat the A.P.

The Qualificative and the Qualificative pronominal

4.190 Since the qualificative pronominal is simply the qualificative in the absence of the substantive it qualifies, the forms discussed under this head will cover both categories, being either qualificatives or qualificative pronominals, depending on the context.

The Adjective

The Strong Adjective

4.191 Strong adjectives are, like nouns, divided into A and B-forms, according to whether the first syllable of the stem has high tone (A-form) or low tone (B-form). With the exception of only one sub-group, strong adjectives may be divided, according to their inherent tone patterns, into the same number and types of groups and sub-groups as nouns. Their tonal inflexion will be found also to parallel that of the nouns treated above. It has been found useful, therefore, to group strong adjectives side by side with representative nouns belonging to each of these groups.

4.192 In order to bring out this correspondence between nouns and adjectives most clearly, adjectival stems have been used with an adjectival prefix. But, while noun stems generally have prefixes with which they are permanently associated, this is not the case with adjectival stems, which take a prefix identical with that of the noun to which they are syntactically related. For this reason, I have made a random choice, and taken what I consider to be one of the most convenient adjectival prefixes for the present purpose, viz. ba of Class 2.
The prefix employed must, of course, be of plural significance in order that it may be possible to use it with adjectival stems indicating numbers above one.

Grouping of strong adjectives according to inherent tone patterns.

4.193 Monosyllabic-stemmed forms.
A-forms: Inherent tone pattern IH.

Examples:

babō (ugly)
batāhā (new, young)
banē (some, others)
bang? (what kind?)

cf. noun morū (forest)

B-forms: Inherent tone pattern LL.

Examples:

batsho (black)
batlē (beautiful)
bānē (four)
bang (some, others -- used without relative connective)

cf. noun mothó (person)

4.194 Disyllabic-stemmed forms.
A-forms: Set i: Inherent tone pattern LHL.

Examples:

bahlō (big, great)
barārō (three)
batēnya (stout)
batēshitē (round)

cf. noun lebēse

Set ii: Inherent tone pattern LHM.

Examples:

bahlāno (five)
batōna (male, big)

/cf.
cf. noun mosadi (woman)

B-forms: Set i: Inherent tone pattern LLL.

Examples:
- bangate (many)
- bputasa (grey)
- bphathswa (black-and-white)
- bkwēbu (roan)

cf. noun morēna (king)

Set ii: Inherent tone pattern LLI.

Examples:
- baswē (white)
- basēhla (yellow)
- basēe? (how many?)
- babē (two)

cf. noun molato (debt, error)

4.195 Trisyllabic-stemmed forms.

A-forms: Set i: Inherent tone pattern LHHL.

Examples:
- befubēdu (red)
- batolodi (black with small white spots)

cf. noun mosēbētai (work)

Set ii: Inherent tone pattern LHLL.

Examples:
- banyenyane (small)
- batongše (big, very big)
- baseane (thin)
- bkgūtshwane (short)

cf. noun morētuwa (beloved)

Set iii: Inherent tone pattern LHHM.

1 These are colours of animals, mainly cattle. The personal prefix is used only for the convenience of classification, as already stated above.

2 These adjectives are classified twice, under two separate sub-groups. A note about them will be found among the observations concerning this list, occurring immediately below it.
Examples:

batšënhēdi (female)
balēliē (tall, long)
bakgūnēngē (light brown)
basešēnē (thin)
bakgūtshwane (short)

cf. noun sehopesē (memorial)

B-forms: Set 1: Inherent tone pattern LLLL.

Examples:

bathobošē (speckled)
bathamēhē (red with small white spots)
bathshērē (red-and-white)

cf. noun dimakate (wonders)

Set iv: Inherent tone pattern LHLM.

Examples:

bakalē (so big, so many, so much)
basēthē (brown)

Notes on the above list

4.196. 1. Re: basešēnē and bakgūtshwane.
The second syllable of the stem in each of these adjectives may be pronounced either with a dynamic (L/H) tone, or with a static (H) one. This dynamic tone comes into existence in compensation for an elided high-toned syllable.
The original forms are basešanyēnē and bakgūtshwanyēnē respectively, each of which has inherent tone pattern LHLM. The high-toned syllable nve (fourth syllable of the complete form) is elided, and a compensatory extra length

1 These are also colours applicable mainly to animals.
2 These adjectives are classified twice, under two separate sub-groups. A note about them will be found among the observations concerning this list, occurring immediately below it.
3 No corresponding noun group. Also there are no adjectives corresponding to Sets ii and iii of trisyllabic-stemmed B-form nouns. See observations on the list.
length is attached to the preceding syllable, whose tone now becomes dynamic, moving from its own L to the H of the elided syllable. And once the stage L/H is reached, the next stage, viz. L/H > H, seems inevitable.

The first syllable of the stem in these adjectives (i.e. the second syllable of the whole form) has a long length and a dynamic tone (L/H). The two adjectives are grouped as B-forms on account of the fact that the dynamic tone on the first syllable of the stem begins at L. It is possible that this syllable is a result of the merging of two historically distinct syllables, the first of which had a low tone, while the second had a high tone. Where, as in these cases, a syllable consisting of a vowel only is preceded by one consisting of, or ending in, an identical vowel, it is easy and natural for the two vowels to merge, resulting in one syllable with a long length. The next stage, which is already often realized in relatively rapid speech, will be for the dynamic (L/H) tone to be replaced by a static (H) tone. When this comes about, we shall have witnessed the interesting phenomenon of an original B-form evolving into an A-form. At present, these forms, like all other B-forms, still have their prefixes raised from L to H in the presence of an Influencing preceding element. No comparable sub-group of tri-syllabic-stemmed B-form nouns could be found, and these adjectives are therefore sub-grouped by themselves as Set iv.

Tonal inflexion of strong adjectives

Influencing preceding elements.

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1 Many instances occur where L/H is finally replaced by H, as, for example, in some syntax relations of G.C.a, and also of certain verb stems, e.g. ruta (teach) in the participial modality (where it has L/H, often replaced by H, on the first syllable); also in some nouns, e.g. hloho (head), with L/H, often replaced by H, on the first syllable.
4.198 As strong adjectives are, in most of their occurrences, immediately preceded by simple relative connectives, the occurrence, immediately before them, of any other elements (influencing or otherwise), is very restricted. Even with adjectives like bang? (what kind?), which is always used without a relative connective, and bang (same, others), which is sometimes used without this formative, the use of most Influencing preceding elements is excluded on grounds of meaning. Only one of these elements can be used with adjectives, viz. the 3rd pers. basic S.C. in the formation of personal copulatives from adjectives.

4.199 Influencing preceding elements modify the tones of adjectives in the same way in which they modify those of nouns, as follows:

1. They raise the tone of the prefix of B-form adjectives from L to H.

Examples:

Bàbatsho (They are black), tones of batsho HM, cf. inherent tone pattern LL
Bàbàngate (They are many), tones of bangate HLL, cf. inherent tone pattern LLL
Bàbasway (They are white), tones of baawâu HLL finally 2nd HLL non-finally, cf. inherent tone pattern LLL

This behaviour is identical to the last detail with that of the corresponding nouns. Compare the following:

homâtho (to the person), motho here HM, cf.
inherent LL
homorâng (to the king) morâng HLL, cf. inh. LLL
bâmêharo (they are greedy), meharo HLL finally and HLL non-finally, inherent LLL

As the examples with adjectives supplied above show,
where the adjectival stem of a B-form is monosyllabic, i.e. where the whole adjective has two syllables with inherent tone pattern LL, the L of the stem is raised to M when Influencing elements precede. The complete substitution is then LL > HM. Further examples are:

Bëbëne (They are four)
Bëbëtlë (They are handsome)
Bëbëng (They are alone)
The same substitution is found with nouns, as shown by the example homotho above.

4.200 -- 2. In conjunction with final occurrence of the adjective, Influencing preceding elements lower an inherent H on the final syllable of any adjective (whether it be an A-form or a B-form, and irrespective of the number of syllables it comprises) to L.¹

Examples:
Bëbatëha (They are young or new), tones of batëha
LL, cf. inherent tone pattern LH
Bëbabëdi (They are two), tones of babëdi HLL, cf.
inherent tone pattern LH

N.B. It is important to note, however, that in emphatic speech final H of the adjective very often remains H even in the above circumstances.

4.201 Influencing preceding elements in negative constructions. When the negative formative ha is placed before personal copulatives formed from adjectives, the S.C. loses its power of influencing, as is also the case where nouns and A.P.s are concerned.

Examples:
Hababatë (They are not handsome), tones of batë /... LL

¹ An identical modification was seen to take place with nouns and A.P.s. Cf. §§4.119, 4.158, 4.159, and 4.182 above.
Influencing succeeding elements

4.202 As with nouns, the influence exerted by these suffixes modifies the tone of the final syllable of the adjective. The elements in question are:

1. the diminutive suffixes -ana, -nyane, -anyane; and
2. the augmentative suffix -hadi.

The suffixes -ana, -nyane, and -hadi, regularly modify the tone of the final syllable of the adjective in two ways, as follows:

(a) They raise final L of the adjective to H, except in the case of B-form adjectives with L on all syllables; and
(b) They lower final M of the adjective to L.

N.B. The changes caused by -anyane, as well as other (irregular) changes caused by -ana and -nyane, are described in notes following the list of tone substitutions below.

4.203 The tone pattern substitutions resulting from this modification of the final syllable of the adjective are as follows:

Where final L > H.

LHL > LHH

e.g. baholo > baholo (big), as in
baholonyane LHH|LL
baholohadi LHH|LL

N.B. -ana does not occur with baholo, but is found with batshita with the same effect as described above. Thus

batshitana LHH|M, cf. inherent pattern of batshita, LHL
LHHL > LHH

e.g. barubedu barubedu (red), as in
... barubedunyane
Notes on the above.

1. -nyana: When batšhitša is used with -nyana, it may behave either regularly (showing change L to H on its final syllable), or it may retain its final L. In the latter case, however, the tones of the suffix -nyana are HM and not LL as in the regular inflexion.

2. -anyane: When this suffix is used with baholo, initial a of the suffix merges into one syllable with the now-semiconsonantalized final a of baholo. There are, therefore, only two additional syllables when anyane is suffixed, and not three as might be expected. Final L of baholo remains L, and the last two syllables of the suffix have tone pattern HM.

\[... 3.\]

1 For comparable changes in respect of nouns, see §§4.123 et seq. above.
3. -ene: (a) When this suffix is suffixed to bafubêdu and balêlêle, it causes the tone of the second syllable of the adjectival stem to be lowered from H to L. In the case of bafubêdu the regular change of final L to H also takes place. balêlêle, on the other hand, has its final M replaced by H instead of the regular change M > L. The first syllable of -ene, having merged with the last syllable of the adjective to which it is suffixed, has the same tone as this syllable, viz. H, and its final syllable, viz. na, has M. The resulting forms are then: bafubêtsêna and balêlêtsêna, each of which has tone pattern LILH|M. Sometimes L is heard instead of M on the final syllable, giving the tone pattern LILH|L. ¹

(b) When used with -ene, bakanõng behaves irregularly (phonetically) by dropping its final syllable -ng before -ene is suffixed. The suffixing of -ene, whose initial a merges with the syllable preceding it, therefore results in a form having the same number of syllables as the original one. The tone pattern of the derived form is identical with that of the original form, viz. LHHH.

(c) batolodi is irregular in that its final L is not raised to H, but remains L, when -ene is suffixed, the complete tone pattern then being LHHHL.

4.206 The tonal behaviour of the suffixes used above. The remarks made in the corresponding section in the treatment of nouns, regarding the merging of initial a of -ene with the immediately preceding syllable, and its tonal assimilation to the tone of that syllable (§4.124), apply here as well.

¹ Cf. the noun ditututu with inherent LHHH and diminutive ditutututswana with tone pattern LILH|L.
Here now is a summary of the tonal behaviour of -ena, -nyana, and -hadi, when these are suffixed to adjectives:

(a) All three suffixes have tone pattern LL where the tone of the final syllable of the adjective is a derived L (for example a L derived from a M by lowering), or a primary L as in B-forms all of whose syllables have L.

(b) Where the derived final tone of the adjective is H,

(i) if this H is preceded by L, giving LH as the tone pattern of the last two syllables, then
-ena has tone pattern (H)L,
-nyana ................ H,M, and
-hadi ................ H,L;

(ii) if this H is preceded by another H, giving HH as the tone pattern of the last two syllables, then
-ena has tone pattern (H)M,
-nyana ................ LL, and
-hadi ................ LL.

This tonal adaptation of the suffixes used above is seen to be identical to the last detail with their tonal adaptation to nouns.1

4.207 Modification of final tones of adjectives in certain syntactical relationships. As with nouns, the modifications of the final tones of adjectives, as illustrated above, are sometimes due to syntactical, rather than morphological, circumstances. In such situations, inherent final M is always affected, being lowered to L. Inherent final L in circumstances where it is raised to H by Influencing succeeding elements, is similarly affected in most of the syntax situations involved, but not in all of them.

Some of the situations in which L and M are thus affected are:

/... Where

1 Cf. §4.124 above.
Where the adjective affected is followed by
1. a S.C.,
2. a conjunction or conjunctive,
3. the impersonal copulative formatives ᵇe
   (positive) and ᵇeše (negative),
4. an adverb or adverbial, and
5. a qualificative.

Inherent ᵇ on the final syllable of the adjective is replaced by L in all these situations.

Examples:
Bašbalēlē bāšemēlē thōkō (The tall ones must stand to one side)
bašbasesāngē bāšolo (very thin ones)
Bašbakgutshwēnē kēbēka (The short ones are mine)
bašbatshehādi bāō (those female ones)

The adjectives balēlē, basesāngē, bakgutshwēnē, and batshehādi in the above examples all have inherent tone pattern LHHM, which is replaced by LHHL in the syntax situations illustrated.

Final L of the adjective is always raised to H in situations 1-4. In situation 5, the change L> H takes place with all qualificatives except demonstratives.

This may mean that the relative clause is more closely linked, syntactically, with an immediately following demonstrative than it is with other qualificatives which may occur after it, an assumption which is further strengthened by the fact that the demonstrative is not downstepped when it comes immediately after a relative clause such as the one under discussion here, whereas all other qualificatives are.

Examples: where change occurs
Bašbāšolo bafihlīlē (The big ones have arrived)
Bašbāšolo kēbēka (The big ones are mine)
be baholo baholo (very big ones)
be baholo ha bethihla (when the big ones arrived)
Ba ba baholo, ka ha batesemali (Since the big ones have left)
Ba ba baholo ba fihilileng (The big ones who have arrived)
ba baholo boli (all the big ones)
ba baholo bong kebueng kahone (the big ones about whom I am talking)

where change does not occur
ba baholo be (those big ones)

In the first set of examples, baholo has tone pattern LHH throughout, as against inherent tone pattern LHL. In the one example of the second set, baholo has LHL, cf. inherent LHL.

Reduplicated strong adjectives

4.208 Where the adjectival stem is monosyllabic, reduplication is achieved by repeating the whole adjective, prefix and stem. Where the adjectival stem is non-mono-syllabic, reduplication is achieved by repeating the stem only. In some cases, the repeated portion of the adjectival modifies the tone pattern of the original, unreduplicated, form. The repeated portion often differs in its tone pattern from the equivalent section of the unreduplicated form.

4.209 Repeated portions of strong adjectives modify the tone of the final syllable of the unreduplicated form in the following ways:

1. Final L of an A-form, if preceded by another L, is raised to H.

2. Final H of both A and B-forms is lowered to L.

The tone-pattern substitutions which result from these modifications are as follows:

/... Where
Where final $L > H$

$LHLL > LHHL$

e.g. *batonana* $> *batonana*$ (very big), as in

*batonana-tonana* $\quad LHHL|HLL$

Where final $M > L$

$LHM > LHL$

e.g. *batana* $> *batona*$ (big), as in

*batona-tona* $\quad LHL|HM$

$LHMH > LHHL$

e.g. *balilele* $> *balilele*$ (tall, long), as in

*balilele-lelele* $\quad LHHL|HHL$

$LLHM > LLHL$

e.g. *bakalo* $> *bakalo*$ (so big, etc.), as in

*bakalo-kalo* $\quad LLHL|LHL$

With the rest of the tonal types of adjectives, a repeated portion does not modify the tone of the final syllable of the original form.

4.210 In order to focus attention on the tones of repeated portions of reduplicated adjectives, a complete scheme of representative samples of the tone patterns of such adjectives is now appended, with examples. The repeated portion, in the complete tone pattern, is separated from the unrepeated form (which may now, however, have been modified by the repeated portion) by a perpendicular line. Comparable sections in both parts of the tone pattern are underlined. The corresponding inherent tone pattern is also given, and its comparable portion underlined.

$LH|LL$ finally and $LH|IH$ non-finally, e.g. *babe-babe*, cf. inherent $IH$ of *babe*

$LL|LL$ both finally and non-finally, e.g. *batla-batla*, cf. inherent $LL$ of *batla*

$LH|LL$ finally and $LH|IH$ non-finally, e.g. *batala-tala*, cf. inherent $LH$ of *batala*... $LHL|HM$
LH|HM finally and LH|HL non-finally, e.g. "betonana", cf. inherent LH|HM of "betona"
LH|HM finally and LH|HL non-finally, e.g. "baho-lo", cf. inherent LH|HL of "baho-lo"
LLL|LL both finally and non-finally, e.g. "banga-ta-ngata", cf. inherent LLL|LL of "banga-ta-ngata"
LHHL|HMM finally and LHHL|HL|LL finally, e.g. "ba-lé-lé-ba-lé-lé", cf. inherent LHHL|HMM of "ba-lé-lé-ba-lé-lé"
LALH|HHL both finally and non-finally, e.g. "ba-fubédu-fubédu", cf. inherent LALH|HHL of "ba-fubédu-fubédu"
LHHL|LL|HL finally and LHHL|LL|HL non-finally, e.g. "bakalé-baka-lé", cf. inherent LHHL|LL|HL of "bakalé-baka-lé"
LHH|HLL finally and LH|HL|LL|HL non-finally, e.g. "beto-ne-ne-tonana", cf. inherent LHH|HLL of "beto-ne-ne-tonana"

Declension Groups of Adjectives

4.211 Strong adjectives are divided into five declension groups as follows:

Declension 1.

This comprises monosyllabic-stemmed A-form adjectives, viz. ones with H on the one syllable of the stem.

Example:

babé (ugly, evil) LH

Adjectives of this Declension have their inherent final H lowered to L when they occur finally in non-emphatic statements, and are preceded by Influencing elements. In emphatic statements, the tendency is for final H to remain unmodified even in these circumstances. In non-final occurrence, these adjectives retain their final H in all situations.

Succeeding elements have no modifying influence on /... the

1 Cf. nouns of Declension 1, §4.166.
2 Cf. §4.200 above.
the tone pattern of adjectives of this Declension.

A summary of the tone patterns which these adjectives may assume is as follows:-

IH non-finally;

IH finally, not preceded by Influencing elements:

LL (non-emphatic) finally when preceded by Influencing elements, otherwise IH here also;

cf. Inherent LH

4.212 Declension 2.

This comprises non-mono-syllabic A-forms with L on the final syllable.

Examples:

* baholo (big) LHL
* bafubădu (red) LHHL

Influencing preceding elements do not affect the tones of adjectives of this Declension.

Influencing succeeding elements raise final L of these adjectives to H.

Examples:

* baholo(hadi) (very big) LHH|LL, cf. inherent LHL of baholo
* bafubădu(nyara) (red) LHHH|LL, cf. inherent LHHL of bafubădu

When used as constituents of non-relative predicatives, these adjectives have their final L raised to H in all cases of non-final occurrence. When used in relative predicatives their final L is raised to H in all situations except where they are followed by a demonstrative qualificative.¹

A summary of the tone patterns which may be assumed by adjectives of this Declension is as follows:-

LHL and LHHL finally; /... LHH.

¹ Cf. §4.207 above.
LHH and LHHH with Influencing succeeding elements;
LHH and LHHH in non-final occurrence, except when immediately followed by a demonstrative qualificative, in which case LHL and LHHL respectively are retained.

\[ \text{cf. Inherent patterns LHL and LHHL} \]

4.313 Declension 3.

This comprises all adjectives with M on the final syllable. These are --

1. Diysyllabic-stemmed adjectives with inherent tone pattern LHH, e.g. bahlano (five);
2. disyllabic-stemmed adjectives with inherent tone pattern LLHM, e.g. basotho (brown); and
3. trisyllabic-stemmed adjectives with inherent tone pattern LHMM, e.g. balilele (tall, long)

Influencing preceding elements modify the tone pattern of the adjectives in group 2 in the above list by raising L of the adjectival prefix to H, LLHM being then replaced by HLHM. The rest of the adjectives of this Declension are not affected by preceding elements.

Influencing succeeding elements lower final M of all the above adjectives to L.

\[ \text{Examples:} \]
\[ \text{bahlângonyana} \ (a \ \text{paltry \ five}) \ \text{LHL|LL, cf. inherent} \]
\[ \text{LHM of bahlano} \]
\[ \text{balilelehadi} \ (\text{very \ tall}) \ \text{LHHL|LL, cf. inherent} \]
\[ \text{LHMM of balilele} \]

Non-final occurrence lowers final M of all these adjectives to L.

A summary of the tone patterns which adjectives of this Declension may assume is as follows:

\[ \text{LHM, LL|HM, and LHMM finally; /... LHL} \]
LHL, LL/HL, and LHHL nonfinally;
LHL, LL/HL, and LHHL with Influencing succeeding elements;
those of group 2 in the above list have the additional patterns HLHM finally and HL/HL nonfinally, when preceded by Influencing preceding elements.

cf. Inherent tone patterns IAM, LL/AM, and LHAM.

4.214 Declension 4.

This comprises B-forms with L on all syllables.

Examples:

batle (beautiful) -LL

bangata (many) LLL

Influencing preceding elements

1. raise L of the adjectival prefix to H,
e.g. Babangata (They are many) H|LL, cf.
inherent LL of bangata; and

2. raise final L of monosyllabic-stemmed adjectives to H,
e.g. Babatle (They are beautiful) H|HM, cf.
inherent LL of batle

Influencing succeeding elements have no modifying effect on these adjectives, except that they restore a derived final M on monosyllabic-stemmed adjectives to L.

Example:

Babatlehadi (They are very beautiful) H|HL|LL
cf. Babatle H|HM, and inherent LL of batle

A summary of the tone patterns which adjectives of this Declension may assume is as follows:

LL, LLL, LLLL, etc. both finally, not preceded by

Influencing elements;

HM, HLL, HLLL etc. both finally, preceded by

Influencing elements;
HL, HLL, HLLL, etc. non-finally, preceded by Influencing elements.

cf. Inherent patterns LL, LLL, LLLL, etc.

4.21b Declension 5.

This comprises disyllabic-stemmed B-forms with H on the final syllable, i.e. those with inherent tone pattern LH.

Example:

babõži (two)

Influencing preceding elements

1. raise the tone of the prefix from L to H, and,

2. in conjunction with final occurrence of the adjective, lower final H to L. ¹

The two modifications are illustrated together.

Example:

BABABõži (They are two) H|HLL, cf. inherent LH of babõži

A summary of the tone patterns which adjectives of this Declension may assume is as follows:—

LLH both finally and non-finally, when not preceded by Influencing elements;

HLH non-finally, preceded by Influencing elements

HLL finally, preceded by Influencing elements.

cf. Inherent pattern LLH.

The Weak Adjective

4.216 Weak adjectives are divided into intrinsically qualificative ones, and those derived from other parts of speech, mainly nouns. In our treatment of the tonal /... behaviour

¹ bakõž is exceptional in this respect, in that it retains its final H even in these circumstances, probably because it occurs in questions, whether direct or indirect.
behaviour of weak adjectives, we shall restrict ourselves to intrinsically qualificative ones, and make only such references to synchronically derived (or secondary) ones as may be necessary. The tonal peculiarities of nouns used adjectively have already been analysed and described in dealing with nouns,¹ and further reference to them in this section is unnecessary.

4.217 All weak adjectives differ from strong ones in two important respects. Firstly, weak adjectives do not take adjectival prefixes. This means that in their tonal inflexion, the question of the raising of L of the prefix to H, which is an important aspect in the tonal inflexion of nouns and strong adjectives, does not arise.² Secondly, unlike strong adjectives, weak adjectives are used with compound relative connectives, whereas strong adjectives are used with simple relative connectives. This difference is important, not only from the syntactical point of view, but also from the point of view of tonal behaviour. The history of the compound relative connectives shows that they have resulted from the earlier merging of the corresponding simple relative connectives, and the immediately following corresponding relative subjectival concords. The partially lost S.C. in the compound connective, is still reflected in the additional length of the vowel of this connective, and in the tone of this additional length. Now, the S.C., as repeatedly mentioned above, is an influencing preceding element, affecting the tone pattern of a following noun or adjectival in a certain way. And, while simple relative

¹ See §§4.114 to 4.116, both inclusive, and 4.131 to 4.136, both inclusive.
² Except in the case of nthithi (blunt) and nthutho (sharp) where initial syllabic p behaves like a noun or adjectival prefix in tonal inflexion.
connectives are definitely not influencing, compound relative connectives are found to be influencing. This must be attributed to the partially lost S.C. This means that the tonal behaviour of weak adjectives as affected (or not affected) by influencing preceding elements, can be observed both when these adjectives occur as constituents of relative clauses (i.e. where they are preceded by compound relative connectives), and when they are constituents of non-relative copulative predicatives (i.e. where they are preceded by basic S.C.s).

4.218 Like nouns and strong adjectives, weak adjectives are divided into A and B-forms according to whether the initial syllable of the stem has H or L respectively. The following list, though not exhaustive, is fairly well representative of the tonal varieties that are found:

A-forms (all disyllabic, with tone pattern HL):

- hīsha (wild)
- kgoṣa (crooked, wicked)
- ṭhata (hard, difficult)

B-forms: disyllabic-stemmed

- agoto (unfortunate)
- agoro (cruel)
- bgtsi (wide)

all of which have inherent tone pattern LH, and

- fofa (lukewarm)

with inherent tone pattern L/HH

trisyllabic-stemmed

- nthiti (blunt)
- nthāṭhā (sharp)

both of which have inherent tone pattern LLL

quadsyllabic-stemmed

- pongono (naked)

with inherent tone pattern LIHL /... Tonal
Tonal Inflection of Weak Adjectives

4.219 Influencing preceding elements. As stated above, compound relative connectives and 3rd pers. basic S.C.s are the only influencing preceding elements which may occur with weak adjectives. These elements cause the following tonal modifications:

1. They raise the tone of initial syllabic \( n \) of the adjectives \( nthithi \) and \( nthôtshô \) from \( L \) to \( H \), as follows:

\[ \text{Dinthithi} \quad \text{(They are blunt)} \]
\[ \text{tsêp ñthithi} \quad \text{(the blunt ones)} \]
\[ \text{Dintshôtshô} \quad \text{(They are sharp)} \]
\[ \text{tsêp nthôtshô} \quad \text{(the sharp ones)} \]

Tones of \( nthithi \) and \( nthôtshô \) in the above examples \( HLL \), cf. their inherent tone pattern \( LLL \).

2. In conjunction with final occurrence of the adjective, influencing preceding elements lower an inherent final \( H \) of the adjective to \( L \).

Examples:

\[ òsåto \quad \text{(he is unfortunate)} \]
\[ yäp sòto \quad \text{(the unfortunate one)} \]
\[ òsåro \quad \text{(he is cruel)} \]
\[ yäp sòro \quad \text{(the cruel one)} \]

Tones of \( sòto \) and \( sòro \) in the above examples \( LL \), cf. their inherent tone pattern, viz. \( LH \).

N.B. As with strong adjectives, final \( H \) of weak adjectives often remains unmodified in emphatic speech.

4.220 Influencing succeeding elements. The logically permissible elements here are the suffixes \( -nyana \) (diminutive) and \( -nadi \) (augmentative). Their influence is of the following nature: They raise the tone of the final syllable of disyllabic-stemmed \( A \)-forms and the one quadri-syllabic-stemmed form from \( L \) to \( H \). Note that in both these cases original final \( L \) is preceded by \( H \), giving \( HL \) /... as
as the tone pattern of the last two syllables.

**Examples:** disyllabic-stemmed A-forms

thatányang (rather difficult) HH|LL

thatähadj (very difficult) HH|LL

cf. inherent HL of thana

quadrisyllabic-stemmed B-form

ponopononyang LLHH|LL

ponopononhadj LLHH|LL

cf. inherent LLHL of ponopono

Influencing succeeding elements lower inherent M on the final syllable of fofo to L.

**Examples:**

fofononyang L=HLLL

cf. inherent L=HM of fofo

4.261 Weak adjectives in certain syntactical relationships.

In the syntactical situations listed for nouns in §3.126 and for strong adjectives in §3.207, weak adjectives with final M (of which there is only one, viz. fofo), and those with final L preceded by H (i.e. all A-forms, and the one quadrisyllabic-stemmed B-form), are affected in the same manner as strong adjectives. In all these situations, final M of weak adjectives is lowered to L.

**Examples:**

Mëste = fofo ēfōdīle (The luke-warm water is finished)

Mëste = fofo kōlē (The luke-warm water is mine)

Final L preceded by H is raised to H in all these situations the adjective is if used as a constituent of a non-relative copulative predicate.

**Examples:**

Ēthēthē jahōlo (It is very hard/difficult)

Ēthēthē jēlo (That one is hard/difficult)

Dithēthē kērēlo (They are all hard/difficult)
On the other hand, when the adjective is a constituent of a relative clause, this final \( L \) is raised to \( H \) in most of these situations, but not in all of them, the exception being when it is immediately followed by a demonstrative qualifying, in which case final \( L \) is not changed.

**Examples:**

- \( bèè hłła₃a₃ kəyamənəg? \) (Whose is the wild one?)
- \( bèè hłła₃a₃ səwəle \) (The wild one is dead)
- \( bèè hła₃a₃ həho₃lo \) (a very wild one)

\( hła₃a \) in all these examples has tone pattern \( HH \)

cf. \( bèè hła₃a yəo \) (that wild one)

where \( hła₃a \) has tone pattern \( HL \).

4.222 The tonal behaviour of the suffixes \( -nyana \) and 

\( -hadi \) when used with weak adjectives.

1. Where the last two syllables of the adjective have 

the tone pattern \( LH \), \( -nyana \) has tone pattern \( HM \), and \( hadi \) 

\( HL \). ¹

2. In all the other situations, both \( nyana \) and \( hadi \) 

have tone pattern \( LL \).

**Reduplicated weak adjectives**

4.223 Where the adjective is disyllabic, reduplication 

is achieved by repeating the whole adjective. Where the 

adjective is trisyllabic, only the last two syllables are 

repeated. There is no reduplicated form of \( zonožono \) 

which seems to be itself a reduplication of an earlier 

form \( zono \).

4.224 The repeated portion has no effect on the first 

portion. This repeated portion, on the other hand, has 

tones which differ from those of the corresponding section 

of the unreduplicated form, except with adjectives having 

\( L \) on all syllables.

1 Cfr. \( -nyana \) and \( -hadi \) with nouns in §4.124, and with 

strong adjectives in §4.206, above.
Examples:
thaṭa-thaṭa (very difficult) HL|HM, cf. thaṭa HL
soto-soto (very unfortunate) LH|LL, cf. soto LH
nthithi-thithi (very blunt) LLL|LL, cf. nthithi LLL

The repeated portions, as the above examples show, have HM after preceding HL, and LL in all other situations.

The Possessive Qualitative

4.225 The possessive qualitative consists of a possessive concord (P.C.) and a possessive stem. The P.C. is monosyllabic, and has inherent tone pattern H.\(^1\) Possessive stems are of various kinds, only some of which can conveniently come into discussion here. The ones discussed are nouns, A.P.s, qualitative pronouns, intrinsically possessive pronominal stems, both individual and communal possession, adverbs and adverbials, and conjunctives. The excluded "stems" are those which consist of phrases and clauses, whose constituent elements will have been discussed individually in their proper place.

4.226 Possessive qualificatives with noun stems. The P.C. is placed immediately before the noun stem. It will be remembered that the P.C. is an Influencing preceding element. Inherent tone patterns of possessive qualificatives with noun stems must therefore be understood to mean the tone patterns of the various nouns occurring as stems as tonally modified (or not modified) by the preceding P.C., preceded by the H of the P.C. itself. To arrive at the inherent tone patterns of possessive qualificatives with noun stems, therefore, we require to know the inherent pattern of the noun before which the P.C. is placed, and /... the

\(^1\) Sometimes H\(\backslash\)L when used with the intrinsically possessive pronominal stem \(ka\) of the 1st pers. singular.
the effect of the P.C. on this pattern. All this has already been done in the treatment of the noun, and the reader is referred to the relevant section.1

Possessive qualifications with pronominal stems

4.227 The A.P. as possessive stem. The P.C. is placed immediately before the A.P. Here also, therefore, we can do no more take the inherent tone pattern of the A.P., and the tone pattern resulting from its inflexion by Influencing preceding elements, of which the P.C. is one. These derived tones of the A.P., and the H of the immediately preceding P.C., together constitute the inherent tone pattern of the possessive qualitative based on the A.P.2

4.228 The quantitative qualitative pronominal as possessive stem. The inherent tone pattern of the quantitative qualitative pronominal is HM. The inherent tone pattern of a possessive qualitative based on it is therefore HHM.

Example:

tsabshle (belonging to all)

4.229 The enumerative qualitative pronominal as possessive stem. There are two enumerative stems, viz. se and sele. The enumerative qualitative comprises the enumerative concord followed by the enumerative stem. Examples are base and basele whose inherent tone patterns are LH and HL respectively. To obtain the inherent tone pattern of the possessive qualitative with an enumerative qualitative pronominal as possessive stem, the H of the P.C. is placed before these inherent tone patterns, yielding

HLH, e.g. tsabsele (those belonging to which ones?)

1 See §§4.101-4.103 both incl., and 4.106-4.109, both incl.
2 See §§4.181-4.183 both inclusive.
HIHL, e.g. tsabaselo (those belonging to different ones)

4.280 The demonstrative qualitative pronominal as possessive stem. The inherent tone patterns of possessive qualificatives based on demonstratives are obtained by placing the H of the P.C. before the inherent tone pattern of the particular demonstrative used. The following inherent tone patterns result from this juxtaposition:

- HLH, e.g. tsab\-
- HHM, e.g. tsab\-
- HHL, e.g. tsab\-
- HH\IH, e.g. tsab\-
- HH\IH, e.g. tsab\-
- HHL, e.g. tsab\-

4.231 Intrinsically possessive pronominal stems.

1. ka: The inherent tone pattern of ka is L. The inherent tone pattern of a possessive qualitative based on ka is therefore HL. Quite often, though, the P.C., when used with ka, has a low-falling tone. There is, therefore an alternative inherent tone pattern, viz. H\LL.

Example:

tshe or ts\ke (mine)

2. heo and hee: These stems are both disyllabic. Historically, the second (L) syllable in each of these stems (viz. o and e respectively) is the true possessive stem, or rather a remnant of it.\1 The historical possessive stem in each case is therefore seen to be monosyllabic, and to have the same inherent tone pattern as ka, viz. L. The present form of these stems, with which we are here concerned is, however, disyllabic and has the /.../ inherent

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\1 Cf. the Tswana and N.Sothe equivalents go and gw\, and the Nguni ones kho and khe. The original S.Sothe forms must therefore have been *ho and *he. 
inherent tone pattern HL.

Examples:

tsēhāq (yours)
tsēhē (his/hers)

4.282 -- 3. *iso, *ino, *abo: The a of the possessive concord coalesces with the first vowel of the stem. This initial vowel of the stem is hypothetical, being deduced from the change of final a of the P.C. to e in the case of the first two stems. The possessive qualificative so derived is disyllabic. The final syllable of each of the stems above has an inherent L. The inherent tone pattern of a possessive qualificative based on one of these stems is therefore HL.

Examples:

tsēso (belonging to my family)
tsēno (belonging to your family)
tsēbo (belonging to his/her family)

4. *iso, *ino, and *abo with prefixed locative P.C. ha, preceded by P.C. of any class (meaning "of my country"). It is strange and interesting to observe that the tone pattern of the Class 17 P.C. ha, which, like that of other P.C.'s, is normally H, is L in these circumstances, and also that normal L on the final syllable of the possessive stems mentioned is replaced by H. The tone pattern of ha + any one of these stems is then IH and not HL as one might have expected. For some obscure reason the P.C. and the stem exchange roles as far as their tones are concerned. The inherent tone pattern of a possessive qualificative based on this possessive qualificative pronominal is, therefore, H1H.

Examples:

bāhēsō (my countrymen; also my relatives)
bāhēno (your countrymen/relatives) /... bāhēbo
bāhābō (his/her. countrymen/relatives)

N.B. When he is used with *isa, *ing, and *abō in the circumstances described in No. 3 at the beginning of this paragraph, the tone pattern is "normal", viz. HL, but the meaning conveyed is then my home, your home, his/her home, as against my country etc. which is the meaning of the form discussed here.

4.233 Possessive qualifications with adverbial stems.
The few primitive adverbs which may be used as possessive stems, are not tonally modified by the preceding P.C. A few examples are:

Examples:
  tsāng (of which, time or date?) HHL, cf. inherent HL of nēng (when?)
  tsākgalē (of long ago) HHL, cf. inherent HL of kgalē (long ago)
  tsājwālē (of the present time) HHM, cf. inherent HM of jwālē (now)

As regards adverbials (e.g. locative adverbials) and their use as possessive stems, a discussion of these will be found in the various sections devoted to the forms from which these adverbials are derived.

4.234 Possessive qualifications with conjunctive stems.
Very few conjunctives may occur as constituents of possessive qualifications. The following ones: hore (that, so that), hōba (that; after), and hōbāne (that; after; because), are discussed here. Their inherent tone patterns are as follows:

  hore LL, hōba LL, and hōbāne IHL

When the P.C. is placed before hore and hōba, the L of the first syllable of these forms is replaced by H. In other words they behave like B-form nouns and strong adjectives whose prefixes are raised by Influencing /... preceding
preceding elements from L to H. The syllable ho in all three conjunctives is, of course, the infinitive prefix which is prefixed to a verb stem in the first two cases (the stems being -re and -ba), and to a verb stem plus a suffixed ne in the last one. Also, two of these forms, viz. hore and hoba are B-forms because the tone on the only syllable of the stem is L. When the P.C. is prefixed to hobane, on the other hand, the inherent tone pattern of this conjunctive is not affected, since it is an A-form, with a high tone on the first syllable of the stem.

The inherent tone patterns of possessive qualificatives based on these conjunctives are therefore as follows: -

HHL for forms with hore and hoba
i.e. tsahore, cf. inherent LL of hore
tsahoba, cf. inherent LL of hoba

HIIIH for the form based on hobane
i.e. tsahohobane, cf. inherent LHL of hobane

Tonal inflexion of possessive qualificatives

4.235 Influencing preceding and succeeding elements.

Preceding elements do not affect any of the possessive qualificatives outlined above. Succeeding elements are in most cases excluded on logical grounds. The use of succeeding elements with nouns used as possessive stems, really belongs to the inflexion of nouns rather than to that of possessive qualificatives as such.

4.235 Possessive qualificatives in syntactical relationships.

With regard to possessive qualificatives based on nouns and A.P.A., the reader is referred to the sections dealing with those forms for particulars relevant to the present discussion. For the rest of the possessive qualificatives, the position is as follows: -

1. Possessive qualificatives with stems ke (as tsaka), /... (mine)
I. (mine) 

HL: *iso, *ino, *ebô (as in tsêso, tsêno, tesbô) (of my family, of your family, of his/her family, respectively), each one with tone pattern HL: *hae (as in tehae) (his), HHL: basele (as in tesbasele) (those belonging to the wrong ones) HHL: whose final vowel is L as shown by the examples provided, have this final L raised to H in non-final position. The resulting tone patterns are then:

HH for teaka, teâso, teêno, teabo, cf. HL in final position for each of these;

HHM for teahae, cf. ÂHL in final position;

HILH for tsabasele, cf. ILH in final position.

2. Possessive qualificatives based on hae do not raise final L to H in non-final occurrence, a behaviour for which there seems to be no explanation, since hae to which hao is so closely related both structurally, tonally and in meaning, has its final L raised in these circumstances.

Another interesting difference in the tonal behaviour of hao and hae is that hae is followed by a down-step, but hao is not. This difference is no doubt related to the difference regarding the tone of the final syllable in non-final position.

Examples:

Bahae bafihlile (His have arrived)
but :Bahao bafihlile (Your.s have arrived)

N.B. The stems ka, lso, ino, and ebô are also followed by a down-step.

3. Possessive qualificatives based on a quantitative qualificative pronominal, whose final syllable has tone M, have this M lowered to L in non-final occurrence. The resulting tone pattern is then:

HHL, e.g. tesbôhle bêa tilêng (those belonging to all who have come), cf.

HHM in final position.

/... The
The Quantitative Qualificative

4.237 The quantitative stem is hleh with mid tone. The quantitative concord has high tone. The inherent tone pattern of the quantitative qualificative is therefore HM, as in bōhle (all of them -- people)

Tonal inflexion

4.238 There is no influence by preceding elements. Succeeding elements are never used with this qualitative. In non-final occurrence, however, final M is lowered to L.

Example:

bōhle bafihlile (All have arrived), bōhle HL

The Enumerative Qualificative

4.239 There are two enumerative stems, viz. fe (with alternative feng) and sele. The tone patterns of these stems are H for fe, and HL for feng and sele. The enumerative concord has L. The inherent tone patterns of enumerative qualificatives are therefore as follows :-

LH for bafe? (which ones? -- people)
LHL for bafeng? (ditto)
LHL for basele (wrong/different ones)

Tonal inflexion

4.240 There is no influence by preceding elements. Succeeding elements are never used with enumeratives. In non-final occurrence, however, final L of bafeng and basele is raised to H, as in the following :-

Kebafeng ba? (Who are these?) bafeng LHH
Kebasele bana (These are wrong ones) basele LHH

The Demonstrative Qualificative

4.241 There are altogether eight demonstrative types grouped into three groups according to the position they indicate relative to the speaker and the person spoken to.
Two of these demonstratives are in Position I, three in Position II, and three in Position III. Except in one case, all demonstrative concords have high tone. The exceptional case is that of the interrogative demonstrative of Position I. As regards the stems, these vary in the number of syllables they contain, and hence also in their inherent tone patterns. There are some, belonging to different groups, which parallel each other in number of syllables and tone pattern, as will become evident later on.

4.242 The inherent tone patterns of demonstratives are as follows:

**Position I**

Interrogative demonstrative LH, e.g. bæ? (these?)

Emphatic demonstrative HM, e.g. bæna (these)

**Position II**

Non-emphatic demonstrative HL, e.g. bæ (those)

Emphatic, sub-type I H\LH, e.g. bænō (those)

sub-type II H\LHH, e.g. bànonō (those)

**Position III**

Non-emphatic demonstrative HL, e.g. bænō (those over there)

Emphatic, sub-type I H\LH, e.g. bànē (those over there)

Emphatic, sub-type II H\LHH, e.g. bànenē (those over there)

**Tonal inflexion**

4.243 Preceding and succeeding elements. These do not affect the tones of demonstratives, succeeding elements being in fact never used with these qualificatives.

4.244 Demonstratives are affected as to their tones by the position they occupy in the sentence. Following are the main modifications that take place:

1. Position I demonstratives, both interrogative and emphatic, have two syllables each. When they occur finally, therefore, their first syllable constitutes the penult. This penult, however, does not have a longer /... length
length than the other syllables in the sentence. Indeed, if anything, the length of the penult in the emphatic demonstrative is shorter than that of the other syllables. Such a difference is, however, not significant. What is important is that the penult is not longer in duration than the other syllables in the same sentence. As regards interrogative demonstratives, the question of extra length on the penult in this case does not arise, since these demonstratives are used only in questions, and penultimate length does not occur in questions. The tonal modification which accompanies penultimate length, therefore, does not take place with these demonstratives.

2. Positions II and III non-emphatic demonstratives carry penultimate length when they occur finally. Their tone patterns are then modified as follows:

- inherent HL becomes final H\LL, as in bâq and bâlê.

3. Position II emphatic demonstrative sub-type i and Position III emphatic demonstrative sub-type i -- these have tone H\L on the first syllable in any case. This obscures any possible effect which penultimate length might have on the tones of these syllables. There is certainly no difference of any significance observed when these forms occur finally and when they occur non-finally.

4. Position II emphatic demonstrative sub-type ii, and Position III emphatic demonstrative sub-type ii -- these have three syllables each, the third of which is a repetition of the second. Both demonstratives have H\L on the first syllable, which is prepenultimate. The second syllable, which constitutes the penult in final occurrence, has, if anything, a shorter length than the other syllables in the sentence, certainly a shorter length than that of the first and the last syllables of the demonstrative itself.
5. Some demonstratives are affected as to their final syllable when they occur finally. The final syllable of a demonstrative whose first syllable has H\L also tends to become H\L in final occurrence in an ordinary statement, as in the following illustrations:--

H\LH\L, e.g. bènò and bènè, cf. inherent H\LH
H\LH\L, e.g. bùnùnò and bànène, cf. inherent H\LH

6. Position I emphatic demonstrative when occurring non-finally, has tone pattern HL, its inherent final W being lowered to L in this position.

4.246 Note: Demonstratives are subject to emotional length and tone, and it often happens that, in order to emphasize distance of something in sight but far away, high tones are raised higher than usual, and length patterns are exaggerated, usually long length (as that of the dynamic-tone syllable in Position III demonstratives) being made very much longer than usual, while short length (as that of the penultimate syllable of the trisyllabic-stemmed emphatic demonstrative of Position III sub-type 11) is made shorter than usual. These exaggerations of length and tone must be regarded merely as variations, for emotional purposes, of the normal length and tone on the syllables concerned, as shown above. There is, therefore, no need to devise special symbols to represent these extra-normal attributes, especially since, in so far as tone is concerned, exaggerations of the absolute pitch of syllables does not disturb tonemic relationships.

The Verb

4.246 Like nouns and strong adjectives, verbs are divided into A-forms and B-forms according to the tone of the first syllable of the stem. A-forms have H on this syllable, and B-forms have L. Verb stems are then /... further
further divided into groups according to number of syllables. The determination of the inherent tone patterns of verbs goes according to the general formula given at the beginning of this tonal study, viz. placing the infinitive form of the verb at the end of an ordinary statement, and then removing the effects, on tone, of this syntactical position. The following grouping is then obtained:

4.247 Monosyllabic stems. The inherent tone patterns of these stems are H for A-forms and L for B-forms.

N.B. Since there are comparatively few monosyllabic verb stems, the list that follows has been made as complete as possible. In the case of non-monosyllabic verb stems, only a few samples will be given for each group.

<table>
<thead>
<tr>
<th>A-forms</th>
<th>B-forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>jā (eat)</td>
<td>tswā (go out)</td>
</tr>
<tr>
<td>nwā (drink)</td>
<td>na (fall, of rain)</td>
</tr>
<tr>
<td>fa (give)</td>
<td>ya (go)</td>
</tr>
<tr>
<td>kge (draw (water); pick (fruit))</td>
<td>wa (fall)</td>
</tr>
<tr>
<td>sa (clear up)</td>
<td>tla (come)</td>
</tr>
<tr>
<td>stå (die)</td>
<td>re (say)</td>
</tr>
<tr>
<td>kgwā (spit out, get weaned)</td>
<td>nga (excrete)</td>
</tr>
<tr>
<td>tāha (burn, intr.)</td>
<td></td>
</tr>
<tr>
<td>pāha (dry up)</td>
<td></td>
</tr>
<tr>
<td>hlewā (climb, mount)</td>
<td></td>
</tr>
</tbody>
</table>

4.248 To complete the list of monosyllabic stems, I give also a list of deficient verb stems, as well as copulative stems. These two groups of verbs are quite often restricted in their conjugation, not being found in all the moods and tenses through which non-deficient, non-copulative verbs may be taken. The tonal behaviour of copulative verbs and primary deficient verbs is therefore

/... discussed
discussed separately from that of the other verbs.

Deficient verb stems

<table>
<thead>
<tr>
<th>A-forms</th>
<th>B-forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>bā</td>
<td>nē</td>
</tr>
<tr>
<td></td>
<td>bē</td>
</tr>
<tr>
<td></td>
<td>ke</td>
</tr>
<tr>
<td></td>
<td>sē</td>
</tr>
<tr>
<td></td>
<td>hla</td>
</tr>
</tbody>
</table>

Copulative verb stems

<table>
<thead>
<tr>
<th>A-forms</th>
<th>B-forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>bā</td>
<td>na</td>
</tr>
<tr>
<td>le</td>
<td></td>
</tr>
<tr>
<td>se</td>
<td></td>
</tr>
</tbody>
</table>

N.B. No English equivalents of the above stems are provided since it is impossible to give an accurate translation/these stems outside of specific contexts.

4.249 Disyllabic stems.

Examples:

<table>
<thead>
<tr>
<th>A-forms</th>
<th>B-forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>bāa (speak)</td>
<td>bāa (to skin)</td>
</tr>
<tr>
<td>tsoha (know)</td>
<td>asa (divide)</td>
</tr>
<tr>
<td>rate (love, like)</td>
<td>late (fetch)</td>
</tr>
<tr>
<td>ngōla (write)</td>
<td>phēha (cook)</td>
</tr>
</tbody>
</table>

The inherent tone patterns are HL for A-forms and LL for B-forms.

N.B. All disyllabic stems derived by suffix from monosyllabic ones, both A and B-forms, have the same inherent tone patterns as the non-derivative disyllabic stems just illustrated.

Examples:

<table>
<thead>
<tr>
<th>A-forms</th>
<th>B-forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>jēla &lt; ja (eat)</td>
<td>wēla &lt; wa (fall)</td>
</tr>
<tr>
<td>tēla &lt; tēha (burn)</td>
<td>tīsa &lt; tla (come)</td>
</tr>
<tr>
<td></td>
<td>/... rāna</td>
</tr>
</tbody>
</table>
Deficient verb stems

**Examples:**

<table>
<thead>
<tr>
<th>A-forms</th>
<th>B-forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>mpa</td>
<td>salë</td>
</tr>
<tr>
<td>sëtsë</td>
<td>nyafa</td>
</tr>
</tbody>
</table>

N.B. All A-form deficient stems here have tone pattern HL. Concerning the two B-forms given, salë has tone pattern IH, while nyafa has tone pattern LL like all other disyllabic B-forms.

### 4.250 Trisyllabic stems

**Examples:**

<table>
<thead>
<tr>
<th>A-forms</th>
<th>B-forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>sëbëtsa (work)</td>
<td>bepëla (play)</td>
</tr>
<tr>
<td>hëpëla (remember, think)</td>
<td>lebëla (forget)</td>
</tr>
<tr>
<td>mëmëla (listen, obey)</td>
<td>hëgëla (undress)</td>
</tr>
<tr>
<td>kgëthëla (get tired)</td>
<td>spëra (dress)</td>
</tr>
</tbody>
</table>

The inherent tone patterns are HHM for A-forms, and LLL for B-forms.

N.B. All trisyllabic stems derived by suffix from monosyllabic and disyllabic stems, both A and B-forms, have the same inherent tone patterns as the non-derivative trisyllabic stems just illustrated.

**Examples:**

<table>
<thead>
<tr>
<th>A-forms</th>
<th>B-forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>tëhësëna (burn each other)</td>
<td>wëlëna (come upon each other suddenly)</td>
</tr>
<tr>
<td>kgëlëna (draw water or pick fruit for each other)</td>
<td>tlësëtsëa (bring for) tla</td>
</tr>
<tr>
<td>tsebësëa (notify)</td>
<td>lëtëla (fetch for)</td>
</tr>
<tr>
<td>ratëna (love one another)</td>
<td>kguflisëa (return, tr.)</td>
</tr>
</tbody>
</table>
4.61 Quadrisyllabic stems.

Examples:

<table>
<thead>
<tr>
<th>A-forms</th>
<th>B-forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>.transitions (sniff)</td>
<td>atemela (go near)</td>
</tr>
<tr>
<td>holoshalwa (long for)</td>
<td>mamaroela (clinging to)</td>
</tr>
<tr>
<td>futuhela (attack, raid)</td>
<td>amophela (receive)</td>
</tr>
<tr>
<td>kgathalla (be concerned about)</td>
<td>fetohela (turn against)</td>
</tr>
</tbody>
</table>

The inherent tone patterns are HHLL for A-forms, and LLLL for B-forms.

N.B.1. Most quadrisyllabic stems are currently derived by suffix from simpler stems. The remaining few are historical derivations whose simpler forms are no longer found. Needless to say, therefore, that all quadrisyllabic stems derived by suffix from monosyllabic, disyllabic, and trisyllabic stems, have the same inherent tone patterns as the quadrisyllabic stems just illustrated.

Examples:

<table>
<thead>
<tr>
<th>A-forms</th>
<th>B-forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>jesetaana (make each other eat for)</td>
<td>tlesetaana (bring for each other)</td>
</tr>
<tr>
<td>tsobisana (inform each other)</td>
<td>badijana (make each other read)</td>
</tr>
<tr>
<td>mamelaana (listen to each other)</td>
<td>holobida (undress some-one else)</td>
</tr>
</tbody>
</table>

N.B.2. Quintessyllabic, sextesyllabic, and even longer forms can be obtained by stringing together a number of derivative suffixes. There would, however, be no point in doing so since there is no change of basic pattern after quadrisyllabic stems. This basic pattern is, for A-stems, H on the first two syllables, and L on all the remaining syllables; and for B-stems it is L on all syllables, beginning, in this case, with monosyllabic stems.

/... These
These longer stems show no deviation from quadrisyllabic ones in tonal inflexion either. The only reason for bringing in quadrisyllabic stems which, as already indicated, are all derivative forms, is to show that the addition of a fourth syllable to a trisyllabic A-form has the effect of lowering final M of trisyllabic stems to L, so that where one would have expected the tone pattern of a quadrisyllabic A-form to be HHMX, one finds that it is, in actual fact, HHLX.

**Tones of verbal derivative suffixes**

4.252 The tones assumed by the verbal derivative suffixes used with some of the above verb stems, show that these suffixes are in fact a-tonal, and that they take a specific set of tones according to the tonal nature of, and the number of syllables in, the verb stem to which they are suffixed. One suffix can, therefore, occur with more tone patterns than one, and all suffixes are affected tonally in a similar manner by the verb stems with which they are used.

4.253 Some verbal derivative suffixes are disyllabic. The following list includes the more commonly used ones, which make up the majority of these disyllabic suffixes:

- causative: -isa (-esá with some monosyllabic stems)
- applicative: -ála (-étsa with some stems)
- reciprocal: -ana
- neuter: -éha
- passive: -ewa, -owa, -uwa (long passive)
- reverse: -oha (intransitive)
  - ola (transitive)
- extensive: -eka
- perfect: -ilá (-ele with some monosyllabic stems).

/... Other

---

Because the addition of X removes M of the trisyllabic stem from final position.
Other verbal derivative suffixes are trisyllabic. These are:

neuter: -ahala
intensive: -aisa (essisa with some monosyllabic stems) 
perfective: -ëlla
-ëlëtaa (causative)
associative: -ahana
reversive: -oloa (intransitive)
-olla (transitive)
-olosa (causative)
augmentative: -oloa (intransitive)
-olla (transitive)
-olosa (causative)

4.254 The short passive suffix -wa and the hypothetical short causative suffix *wa are monosyllabic. These do not add an additional syllable to the stem. Instead they merge with the final syllable of the original stem, and are tonally assimilated to that syllable. We therefore need mention them no further in this connection.

4.256 All disyllabic and trisyllabic suffixes commence with a vowel, which constitutes the first syllable of the suffix. When such a suffix is suffixed to a verb stem, this initial vowel replaces the final vowel of the stem, thus becoming part of the final syllable of the original stem. A disyllabic suffix, therefore, adds only one syllable to the stem to which it is suffixed, and not two, while a trisyllabic suffix adds two syllables to such a stem.

4.256 The tones assumed by these suffixes when used with verb stems are as follows:

1. With all B-stems, all suffixes have L on all their syllables. Disyllabic suffixes therefore have tones (L)L, and trisyllabic suffixes (L)LL, as in the following /... examples
examples:

Examples:

\[ \text{tswana (disown each other) LL, } \text{tsa (disown, go out)} \]

\[ \text{tswêllä (succeed) LLL, } \text{tsa} \]

2. With A-forms, the tones of the suffixes are as follows:

(a) When suffixed to a monosyllabic stem,

(i) a disyllabic suffix has tone pattern (H)L.

Examples:

\[ \text{jëla, applicative of } \text{jä (eat)} \]

\[ \text{nweæ, causative of } \text{nwe (drink)} \]

\[ \text{kgæhe, neuter of } \text{kgæ (draw (water))} \]

\[ \text{jowä, passive of } \text{jä (eat)} \]

\[ \text{fuwe, passive of } \text{fæ (give)} \]

\[ \text{fæng, reciprocal of } \text{fæ} \]

The tone pattern of the derived stem in each of the above examples is HL.

N.B. The long perfect suffix -ľllä (or -ele) is irregular here, taking tones (H)M and not (H)L as the other suffixes do. But with longer stems, it behaves like the other suffixes, as will be seen in subsequent illustrations.

(ii) a trisyllabic suffix has (H)HM. Only one or two of the trisyllabic suffixes may be used with monosyllabic stems.

Examples:

\[ \text{kgællä, applicative of } \text{kgæ (draw)} \]

\[ \text{hlwêllä, perfective of } \text{hlwæ (climb)} \]

\[ \text{pshêllä, intensive of } \text{pshæ (dry up)} \]

The tone pattern of the derived stem in each of the above examples is HHM.

(b) When suffixed to a disyllabic stem,

(i) a disyllabic suffix has (H)M.

Examples:

\[ \ldots \text{Examples:} \]
Examples:
ratēla, applic. of rāta (love, like)
rekīsa, caus. of rēka (buy)
rūtēha, neuter of rūta (teach)
hāpuwa, pass. of hēpa (capture)
tσēbāna, recip. of tσēba (know)
ūtlwīlē, perfect of ūtlwa (hear)

The tone pattern of the derived stem in each of the above examples is HHM, which is the same as that of derivatives from monosyllabic stems by trisyllabic suffixes in (a) (ii) above.

(ii) a trisyllabic suffix has (H)LL.

Examples:
bōnēghāla, neuter of bōna (see)
ūtlwīsīsa, intensive of ūtlwa (hear)
rēnēlla, perfective of kēna (enter)
tohāphūhēna, associative of tahōpha (entangle)
bōfōloha, reversion-neuter of bōfa (tie)
tlāmōlōla, reversion-trans. of tlāma (tie)

The tone pattern of the derived stem in each of the above examples is HHLL.

(c) When suffixed to a trisyllabic stem,

(i) a disyllabic suffix has (L)LL.

Examples:
hōpolāla, applic. of hōpolā (think, remember)
māmēlla, applic. of māmēla (listen)
ārabīsa, caus. of ārāba (answer)
nyēfōlēna, recip. of nyēfōla (despise)
fēfōloha, neuter of fēfōla (blow away)
fēfērīlē, perfect of fēfēra (winnow)

The tone pattern of the derived stem in each of the above examples is HHLL, which is the same as that of derivatives from disyllabic stems by trisyllabic suffixes in (b) (ii) above.
above.

(ii) a trisyllabic suffix has (L)LL.

Examples:

āhlāməloqha, augmentative-intr. of āhlāma (gape)

fūpərlə, reversive of fūpəra (hold in closed hand)

The tone pattern of the derived stem in each of the above examples is HHLLL.

N.B. With stems of four syllables and more, all the above suffixes have L on all their syllables as is the case when they are used with trisyllabic stems.

Tonal conjugation of the verb

Outline of procedure, and other preliminary observations.

Grammatical divisions followed in tonal analysis.

4.257 In the following treatment, the verbs are placed in the various moods and tenses and their tonal behaviour observed for each of these situations. This method of treatment, while making a certain amount of repetition inevitable, and is, to that extent, imperfect, has been found to be the best one that can be applied to the data being analysed. For it has been found that the inter-influence of tone upon tone often does not, by itself, cause the various tonal inflexions observed, but rather that the juxtaposition of certain tones operates in conjunction with other factors to produce the results obtained. For instance, high-toned S.C.s have been found to partly instrumental, in some cases, in bringing about the tonal behaviour of the verb stems with which they are used. But only partly so. There are the factors of mood, tense, conjugation, syntactical position, among others, which, either together with the S.C. or without its aid, help to bring about a given tonal behaviour of the verb stem.

4.258 Here are a few illustrations:—
First let us illustrate with the verb stem *rūta*, an A-stem with inherent tone pattern HL. Compare the following:

1. *Barūta kamēhla* (They teach everyday) *rūta*: HL
2. *Barūta bāna* (They teach the children) *rūta*: HH
3. *Hābarūta kamēhla* (If they teach everyday) *rūta*: L/HH
4. *Hābarūta bāna* (If they teach the children) *rūta*: L/HH
5. *Habārūta kamēhla* (They do not teach everyday) *rūta*: HH
6. *Habārūta bāna* (They do not teach the children) *rūta*: HH

Taking these examples in pairs, we find that in illustrations 1 and 2 the verb is in the Indicative Mood primary modality present tense positive. The verb stem *rūta* in illustration 1 has tone pattern HL, and in illustration 2 HH. But since the mood, tense, aspect, conjugation, etc., are the same in both sentences, we must look elsewhere for the cause of the difference in tonal behaviour between the two occurrences of *rūta* here. The obvious difference between the two sentences is in the adjuncts used, and the conclusion is inevitable that the difference of tonal behaviour can be put down to the substitution of the adverbial *kamēhla* and the noun object *bāna*.

In illustrations 3 and 4 the verb is in the Indicative participial present positive. The verb stem has tone pattern L/HH in both cases, even though the adjunct substitution *kamēhla/bāna* is found here also. In this case, we cannot avoid the conclusion that the participial modality dominates in the conditioning of the tonal behaviour of the verb stem. That is to say that the substitution of the primary and the participial modalities is sometimes responsible for contrasting tonal inflexions of the verb stem. In illustrations 5 and 6, the verb is in the Indicative primary present negative. The verb stem in each case has tone pattern HH.

/... we
we compare this pair with the pair 1 and 2, we find that the only difference between them is that the one (pair 1-2) is in the positive conjugation, while the other (pair 5-6) is in the negative conjugation, involving the prefixing of the low-toned negative formative ha and the changing of the final vowel of the verb stem to a. In the pair 5-6, therefore, the negative conjugation must be the dominating factor in the determination of the tonal behaviour of the verb stem.

And so on.

4.259 Our next illustration is based on the verb stem bala, a B-stem with inherent tone pattern LL. Compare the following:

1. Bābaḷa būka (They read a book) bala : HL
2. Bābaḷa kāmehla (They read everyday) bala : HL
3. horē bābaḷa būka (that they should read a book) bala : HH
4. horē bābaḷa kāmehla (that they should read everyday) bala : HL

The grammatical difference between the verbs in the pair 1-2 and the pair 3-4 is that of mood, the verb in the first pair being in the Indicative, while that in the second pair is in the Subjunctive. This coincides with a difference in the tonal behaviour of the verb stem, and we must conclude, from this evidence, that it is the difference of mood which here decides whether or not the adjunct will have an influence on the tone of the final syllable of the stem. In the Indicative Mood the adjunct has no such influence, while in the Subjunctive the noun object (here būka) coincides with H on the final syllable of the stem, and the adverbial of time (here kāmehla) coincides with L on this syllable.

4.260 A few situations will, of course, be found where identical tonal behaviour of a verb stem coincides with /... the
the use, with this stem, of elements with identical tones; in other words, where the juxtaposition of tones, rather than grammatical situation, may be said to be responsible for the particular kind of tonal behaviour on the part of the stem. Compare the following examples:

Examples:
- *hobala būka* (to read a book) *hobala* : L|LL
- *Kebala būka* (I read a book) *Kebala* : L|LL
- *Obala būka* (You read a book) *Obala* : L|LL
- *Obala būka* (He reads a book) *Obala* : H|HL
- *Ha kebala būka* (When I read a book) *kebala* H|HL

In the first three examples, *bala* is used with low-toned formatives preceding it, viz. the Infinitive prefix *ho*, the basic S.C. of the 1st pers. singular *ke*, and the basic S.C. of the 2nd pers. singular *o*. In all three cases, *bala* has tone pattern LL. In the fourth and fifth examples this stem is used with high-toned S.C.s, viz. *o* of Class 1, and the participial form of *ke* of the 1st pers. singular. With this change of the tone of the preceding formative, we observe a change also in the tonal behaviour of the stem, inherent LL being replaced by HL.

But this apparent pure relationship of tones, is no more than just apparent. It is restricted to a few grammatical situations only, among them the Indicative Mood. In the past tense of the Subjunctive Mood, this type of difference of tonal behaviour is not found, even though there are high-toned and low-toned S.C.s here also.

Examples:
- *Rabala būka* (We read a book) *Rabala* : L|LL
- *Babala būka* (They read a book) *Babala* : H|LL

Here, as these examples show, *bala* has tone pattern LL whether the preceding S.C. be low-toned or high-toned.
Nor do low-toned S.C.s always coincide with the same tone pattern of a following verb stem. In the habitual tense of the Indicative Mood, for instance, all S.C.s (1st, 2nd, and 3rd persons) have low tone. Yet the tones of *bale*, used with these low-toned habitual S.C.s, are not LL as in the above examples, but LH.

**Examples:**

Reyê rebale ḫuğa (We usually read a book)

rebale : L|IH

Bayê babale ḫuğa (They usually read a book)

babale : L|IH

These irregularities in the pure relationship of juxtaposed tones, taken together with the examples with *ruke* and *bale* given at the beginning of this section, show that no rules can be formulated purely on the basis of tonal relationships, but that grammatical relationships must be given a prominent place as conditioning factors of tonal behaviour.

From the above observations, the conclusion is inevitable that tonal behaviour is but a part of grammatical inflexion. An outstanding example is that of the formation of the Imperative Mood positive singular with non-monsoyylabic stems, where tonal inflexion, and tonal inflexion alone, is employed.

**Examples:**

Bala! (Read!) LH, cf. inherent LL of *bala*

Rôlea! (Sleep!) LHL, cf. inherent LLL of *róbala*

Atémêla! (Come near!) LHHL, cf. inh. LLLL of *atémêla*

Sèbêtsa! (Work!) HHL, cf. inherent HHH of *sèbêtsa*

In these examples, the morpho-phonetic structure of the verb stem is unchanged, when the Imperative positive singular is formed from it. Tonal change is seen here to be all-important in bringing about a change of grammatical significance.
In view of all this, it would appear that tonal study must not (indeed cannot) be divorced from grammatical study. The two are complementary to each other, and sometimes even synonymous.

Syntax Contexts

4.253 It has been found that sometimes the tonal behaviour of a verb stem is partly determined by the adjunct (objectival or descriptive) following it. This may be a single word, or a phrase, or even a clause. On the basis of the type of influence they exert, these adjuncts have been divided into two large groups, which will be referred to as Context 1 and Context 2 respectively.

Examples: with a Context 1 adjunct

\[ \text{Lejé bohobô} \quad \text{You must eat bread} \quad \text{Lejé: H|H} \]

with a Context 2 adjunct

\[ \text{Lejé kemehlô} \quad \text{You must eat everyday} \quad \text{Lejé: H|L} \]

As these examples show, where the Contexts mentioned have an influence at all on the tonal behaviour of the preceding verb stem, such influence is restricted to the final syllable of the stem. The tonal relationships are of the following kinds:

Context 1 coincides with H on the final syllable of the stem.

Context 2 coincides with L on the final syllable of the stem.

When a verb stem in a particular situation is said to have H-L alternation, therefore, this must be understood to mean that there is a tonal modification of the final syllable of such verb stem by any adjunct that may follow.

Adjuncts, as used to provide the Contexts described here, are closely linked to the verbs preceding them. That is to say, that there is no emphasis on the verb, as this would loosen the syntactical link between it and /... the
the following adjunct, giving the verb tonal and other characteristics associated with final occurrence.1

Context 1. 4.264 Any one of the following adjuncts, used with a verbal predicate immediately preceding it, constitutes Context 1 for such a predicate:—

4.265 -- 1. Objectival expressions
(a) nouns, e.g. bëghëbhë (bread)
(b) absolute pronouns, e.g. wëna (you)
(c) possessive qualificative pronominals, e.g. wëka (mine)
(d) enumerative qualificative pronominals, e.g. bësële (wrong ones)

4.266 -- 2. Extensions of the predicate
(e) the Locative Noun Group of adverbials, e.g. hë (home).

This group includes all locatives derived from substantives, both by prefix and by suffix; all place-indicating substantive expressions (which, by their nature, easily lend themselves to place-adverbial function) as hë (home), ìrë (hearth), mësë (side of river or sea), mëroë (back, behind), thëkë (aside), ngë as in ngë (wrong one), ñëngë (other spot or side), ñëña (near), thëse (down, below), hare (centre, middle), pële (front), ñëngë (there), ñële (outside); all proper names of places; all nouns of the locative classes (16, 17, and 18), and qualitative expressions related to them.2

(f) the Temporal Noun Group of adverbials, e.g. meëbangë (yesterday)

This group includes all nouns denoting time (which, by their nature, easily lend themselves to time-adverbial function)

1 See §4.68 above.
2 With the exception of demonstratives of Class 18 which belong to Context 2.
function) as notsheare (day-time), bosiu (night-time),
maoba (day before yesterday), maobane (yesterday),
ngwabiya (last year), marİha (winter), selema (spring),
hlabula (summer), hwétila (autumn), monongwaha (this year),
hosêng (morning)

N.B. hosâna (tomorrow; morning) and hosêcanê (tomorrow),
even though related to the above group in meaning, belong
to Context 2 and not to Context 1. Further reference is
made to this seeming irregularity in the observations on
the list of adjuncts (§§4.270 et seq.).

(g) manner-adverbials from low-toned ha + adjectival stem,
e.g. hahöle (much)

N.B. Adverbials of this group formed from high-toned ha +
adjectival stem belong to Context 2. See observations on
the list of adjuncts.

Context 2.

4.267 Any one of the following adjuncts, used with a verbal
predicate immediately preceding it, constitutes Context 2 for
such a predicate.

4.268 — 1. Objective expressions

(a) demonstrative qualificative pronominals, e.g. sôna (this one)
(b) quantitative qualificative pronominals, e.g. tsêhîlê
(all of them)

N.B. kôfïla, which can replace the quantitative qualificative
based on hlê in most situations, also belongs to this Context.

(c) relative qualificative pronominal clauses,
e.g. yës fichîlêng (the one who has arrived)

4.269 — 2. Extensions of the predicate

(a) the Locative Demonstrative Group of adverbials,
e.g. môia (over there)

/... This
This group includes all demonstrative qualificatives of Class 18 viz. mō, mōna (here); mō, mōna, mōno (there near you); mōla, mōne, mōnene (over there). It also comprises the locative demonstratives kwano (here, this way), kō, kō, kōno (there, near you; that way, towards you); kwa, kwane (over there, that way), hōle (far), hōhle (everywhere), and kā? (where?). are also in this group. The manner-adverbial clause introduced by kamo, and usually rounded off by kā, also belongs here.

(e) manner-adverbials from high-toned ha + adjectival stem,
    e.g. hāmanate (pleasantly)

(f) manner-adverbials from ka + substantive,
    e.g. kalerumō (with a spear)

N.B. This includes all formations of this type irrespective of their meaning.

(g) the time-indicating expressions hōsam (in the morning; tomorrow) and hōsasan (tomorrow).

(h) adverbial clauses of time and condition introduced by ha- (if, when) and of concession introduced by le ha- (even if, even when),
    e.g. ha kadumela (if they agree)

(i) conjunctive adverbials,
    e.g. le Pulane (with Pulane)

(j) manner-comparison adverbials incorporating jwale ka, thānka etc. (like, in the manner or) and hakale ka, haka ka etc. (as much as, to the same degree as), + substantive,
    e.g. jwale ka Pulane (like Pulane)

Some observations on the above lists of adjuncts

It is tempting to conclude, on a superficial
examination of the above lists of adjuncts, that the chief means of identifying these adjuncts in their tonal relation to the preceding verb, is their grammatical function. Yet such a conclusion will be found to be premature, and to leave many loopholes, and a number of important questions unanswered. One such question is posed by the fact that adverbials of manner formed from adjectival stems by prefixing a low-toned ha, belong to a different context from adverbials of manner formed from adjectival stems by prefixing a high-toned ha. The elements which go into the formation of these two subgroups of adverbials are functionally identical, while, in addition, the prefix ha is exactly the same morphophonetic element in both cases. Neither manner of formation, nor grammatical function, is, in this case, of any help in telling us to which of the two contexts an adverbial of this type belongs, and least of all, why. We are thus compelled to look for some other differential. And the important thing is that we find it. In fact, it is suggested by the nature of the problem itself. This factor is the difference of tone between the two ha's used with these two sub-groups of adverbials. The reason, if any, why this ha has low tone in some formations and high tone in others, is a problem of little relevance here, one that must wait to be discussed in its proper place, viz. in the section devoted to the analysis of the tones of adverbials.  

4.271 The discovery that when ha of this adverbial (this ha being the first syllable after the preceding verb) has low tone, it affects the tones of the preceding verb in a different way from the way in which it affects this verb when it has high tone, leads one to surmise that the grouping of adjuncts into two contexts probably has a
tonal, rather than a grammatical, orientation. And when, following this suggestion, we examine the tones of the first syllables of the various adjuncts, the results seem to point in the same direction.

4.272 *hosea* and *hosasone* present exactly the same problem as the adverbials with *ha*. In meaning and function these adverbials differ from other time-adverbials derived from time-indicating nouns (group (f) in §4.266 above) in one respect only, viz. that they have high tone on the first syllable, while the others have low tone on this syllable. Presumably for this reason, these two belong to a different Context from the other adverbials mentioned.

An examination of the tones of the first syllables of the adjuncts in the two lists above reveals the following facts:

4.275 -- Adjuncts of Context 1.

(a) nouns. Most nouns have an expressed prefix which in all cases, with the exception of one, has low tone. But there are many nouns where the prefix is disguised, or is simply not traceable, and where the first syllable of the noun in its current form has high tone. Yet these prefixless nouns belong to the same Context as those which retain their prefixes. Some examples of nouns which have no expressed prefix are:

- *pula* (rain)
- *thota* (veld)
- *pina* (song)
- *torg* (dream)
- *kutlwisa* (understanding)
- *thuto* (education)

All of which are nouns of Class 9, four of them (*pina*, *torg*, *kutlwisa*, and *thuto*) being derived from verb stems. In these deverbal nouns, the prefix of Class 9 has gone into the making of the new initial sound. As a

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1 bo of Class 2a.
separate entity -- a separate, low-toned syllable -- this prefix has disappeared where the stem is non-monomorphemic. But it is legitimate to assume, as a reasonable probability, that the effect of these nouns on the tones of preceding verbs, is a relic of the time when this prefix was actually expressed. Besides, such nouns are comparable with nouns of Classes 5, 7, 8, 10, and 14, where the prefixes, which are still patent, may be left out where an immediately following concord reflects the class to which the noun belongs. But even when their prefixes are thus omitted, nouns of these classes still affect the tones of a preceding verb in the same way as when their prefixes are expressed. The only difference between these nouns and those of Class 9 mentioned earlier, is that in the case of the Class 9 nouns the omission of the prefix is compulsory and permanent, while in the other cases this omission is optional and temporary.

4.274 There are also those Class 9 deverbal nouns, the verbs corresponding to which begin with sounds which are not liable to strengthening, which are illustrated by the following examples:

- $\text{thab}ô$ (joy) $< \text{thaba}$ (rejoice)
- $\text{qalô}$ (beginning) $< \text{qala}$ (begin)
- $\text{kopô}$ (request) $< \text{kopa}$ (beg)
- $\text{tlêmô}$ (obligation) $< \text{tlêmâ}$ (bind, tie up)

Here too, we are justified in assuming the latency, rather than the complete absence, of the prefix of Class 9, since none of these nouns begins with a sound which is liable to strengthening and is yet unstrengthened.

4.275 We are now left with $\text{pûla}$ and $\text{thôtê}$ which represent a quite imposing list of primitive nouns of Class 9 the nature of whose evolution must forever remain a matter of conjecture. Yet even here, intelligent and well-founded conjecture such as that of Meinhof, among

/... others
others, suggests that in at least most of these cases also, the prefix was probably expressed originally.

4.276 This brief analysis of the nature of the noun in respect of its prefix, suggests that nouns, occurring as objects, affect (if they do) the tones of the verbs preceding them by reason of their low-toned prefix, whether actually expressed, or temporarily or permanently omitted.

4.277 -- (b) absolute pronouns. All A.P.s have low tone on the first syllable.

4.278 -- (c) enumerative qualificatives. All enumerative qualificatives have low tone on the first syllable, which consists of the enumerative concord.

4.279 -- (d) the Locative Noun Group of adverbials. Many of these are place-indicating nouns with a low-toned prefix like other nouns. Examples are moše, morao, nqā, ntlē, hodimo. Others have first syllables which are not noun prefixes, but which have low tone. Examples are haufi, tlase, hare, pele, teng, fatehe. With regard to hare, pele, and ntlē, which in any case, as already indicated, begin with a low tone, it must also be pointed out that their Nguni equivalents have prefix pha of Class 16 (corresponding to Sotho fa) -- phakathi, phambili, and phandle, respectively -- suggesting that the Sotho equivalents also at one time probably employed one or other of the locative prefixes with these forms.

4.280 Locatives formed from nouns by means of suffix -ng retain the low-toned prefix of the original noun, and what has been said in connection with nouns holds good for them as well.

4.281 hāe, īfō, and thōkō have prefix le when their nounal characteristics are emphasized, and are normally used without this prefix when it is sought to focus attention on their place-adverbial qualities.
4.282 Locatives formed with prefix ho of Class 17 constitute an exception in that, in this formation, this prefix has a high tone and not a low one. No possible explanation can be advanced for this behaviour.

4.283 (e) manner-adverbials from adjectival stems by prefixing low-toned ha. These obviously have low tone on the first syllable.

4.284 (f) the Temporal Noun Group of adverbials. These are mainly time-indicating nouns which, like other nouns, normally have a low-toned prefix for their first syllable. Examples of these are motsheare, bošio, maoba, maobane.

4.285 Against the above adjuncts, which have low tone on their first syllable, must be placed the possessive qualificative pronominal which has high tone on its first syllable, viz. the P.C.; locatives from high-toned ho + substantives; nouns of Class 2a which have high-toned prefix ho; and those primitive Class 9 nouns which have high tone on their first syllables. All these behave like other adjuncts of Context 1, in spite of their high-toned initial syllable which cannot be explained away.

4.286 Adjuncts of Context 2. Except for the interrogative demonstratives of Position I, which constitute one-eighth of the total number of demonstratives, all eleven adjuncts of Context 2 have high tone on the first syllable.

4.287 We see from the above that in Context 1 the great majority of adjuncts have low tone on the first syllable, and that, in respect of many of those with H on this syllable, a reasonable explanation of this apparent irregularity can be given. There are, of course, the few whose H on the first syllable cannot be explained.

In Context 2, only one-eighth of one group of adjuncts...
out of a total of eleven groups, has L on the first syllable. And even this small percentage of irregular Context 2 adjuncts could probably be explained.

4.288 It would be wrong to dismiss these occurrences of L and H on the first syllables of the adjuncts of Contexts 1 and 2 respectively as a mere coincidence. What may well be the case is that we have here a rule which was probably originally strictly observed, but which may now be in a process of disintegration, viz. that an adjunct having L on its first syllable affects the tones of an immediately preceding verb consistently in a certain way, and differently from one having H on its first syllable. In fact, one may go so far as to suggest that not only adjuncts, but any following element within the same breath-group, may be expected to affect the tones of a preceding verb according to the tone of its (i.e. this element's) first syllable. So, for instance, where the main verb is followed by a participial clause, which has H on its S.C., the effect of this immediately following H will be the same as that of the H on the first syllable of an adjunct of Context 2.

4.289 For practical purposes, however, it may, in certain cases, be more convenient to identify adjuncts of these two Contexts by their grammatical function rather than by their tone. But in fact, these two criteria of classification, far from being mutually exclusive, are complementary to each other, and may be used together to much advantage.

Nature of tonal modification of the verb by a following adjunct, and the circumstances under which it may be expected to operate.

4.290 In certain circumstances, a verb followed by a Context 1 adjunct has H on its final syllable to...
coincide with the use of this adjunct after it. The same verb, when followed by a Context 2 adjunct, without any other change of grammatical circumstance, has L on its final syllable. Where, therefore, final H on the verb stem when followed by a Context 1 adjunct corresponds to final L on that verb when it is followed by a Context 2 adjunct, the two contexts can be said to have a modifying influence on the tonal behaviour of the verb in respect of its final syllable.

4.291 There are situations where, as it will become apparent later on, final H on the verb is found irrespective of whether the adjunct following constitutes Context 1 or Context 2. There are situations also, where final L on the verb is found whether the adjunct following constitutes Context 1 or Context 2. In these two situations, it is to be understood that the following adjunct has no modifying influence, as a specific Context, upon the tonal behaviour of the verb. The only effect which a following adjunct has in those circumstances is that of removing the verb from final occurrence, thus avoiding penultimate length and its attendant effects.

4.292 The alternation of H and L on the final syllable of the verb when followed by Context 1 and Context 2 respectively, is possible only when the prefinal syllable of the verb as a whole -- i.e. not necessarily of the verb stem -- has H. That is, taking the last two syllables together, such alternation will be found to occur only as HH-HL with Contexts 1-2 respectively, and never as LH-LL. In other words, LH will be found in all situations, and is not linked up with the occurrence after the verb, of any specific Context. Again, final L on the verb may be due solely to factors other than the Context with which it occurs -- non-final occurrence is one such /... factor
factor, lowering final H of the verb to L. Here also, either Context may follow the verb without a change on the tonal behaviour of such verb. In that case, final L, even where preceded by H, does not alternate with H. There are cases also where HH on the last two syllables is found irrespective of the Context with which it occurs. The only possible explanation of this is the observable fact of grammatical change. This will be adequately illustrated as such circumstances arise.

4.293. Prefinal syllable not necessarily to be part of stem. It was stated that prefinal H, making the alternation of H and L on the final syllable possible, need not be part of the verb stem, but must be part of the verb as a whole. The reason for specifically focussing attention on this is that, with monosyllabic stems, the prefinal syllable of the verb must of necessity belong to a form or formative other than the verb stem itself, such as the S.C., the O.C., the Potential formative ka, etc.

The Infinitive Form


Monosyllabic stems. Monosyllabic A-stems have H. Together with the L of the immediately preceding Infinitive prefix ho, the complete verb form has tone pattern L|H, which is not modified by following adjuncts.

Examples:

\[ \text{hoj} \text{a b} \text{ho} \text{b} \text{a} \text{ (to eat bread)} \]
\[ \text{hoj} \text{a k} \text{am} \text{e} \text{l} \text{a} \text{ (to eat everyday)} \]

Disyllabic stems. Disyllabic A-stems have H on the first syllable. The final syllable has H when followed by an adjunct constituting Context 1, and L when the following adjunct constitutes Context 2.

Examples:

\[ \text{ho} \text{r} \text{u} \text{t} \text{a p} \text{a} \text{n} \text{a} \text{ (to teach the children)} \]
\[ /... \text{ho} \text{r} \text{u} \text{t} \text{a} \]
horuta ba baholo (to teach the big ones) L|HL
From trisyllabic stems on: The pattern of behaviour throughout for A-stems here is: H on the first two syllables and L on all the remaining syllables. No modifying influence is exerted on these tone sequences by a following adjunct.

Examples:

hohopola bani (to remember the children) L|HHL
hohonola kamehla (to remember everyday) L|HHL
hohopotsana melsamu (to remind each other of the sticks) L|HLHLL
hohopotsana kamehla (to remind each other everyday) L|HHL
hohobela na dipotsa (to answer questions for each other) L|HLHLLL
hohopolana bobo (to think evil of each other) L|HHLLL
hohopolana kamehla (to suspect each other everyday) L|HLHLLL
etc.

4.295 B-stems. These have L on all syllables, irrespective of the number of such syllables. Following adjuncts have no modifying influence on the tone patterns of forms incorporating these stems.

Examples:

hotswa medi (to bleed) L/L
hotswa kamehla (to go out everyday) L/L
hobaisa buka (to read a book) L|LL
hobaisa kgolo (to read a big one) L|LL
hobaisa boli (to play football) L|LLL
hobaisa kamehla (to play everyday) L|LLL
hophopholotsana mato (to touch each other’s feet) L|LLLLL

/...4.296
Monosyllabic stems:  
3.296 With object concords. / When preceded by an O.C., the stem, whether A or B-form, alternates H and L on its final syllable according to whether the adjunct following constitutes Context 1 or Context 2 respectively. This alternation is made possible by the fact that the immediately preceding O.C. has H in these circumstances.

Examples:  
A-stems  
\[\text{homofa bohse} (\text{to give him bread}) \quad \text{LH|H}\]  
\[\text{homofa kamehla} (\text{to give him everyday}) \quad \text{LH|L}\]  
B-stems  
\[\text{homotswa lekgoting} (\text{to disown him in court}) \quad \text{LH|H}\]  
\[\text{homotswa kamehla} (\text{to disown him everyday}) \quad \text{LH|L}\]

3.297 From disyllabic stems on: (a) B-stems follow the following pattern of behaviour: -- H on the first syllable and L on all the remaining syllables. Following adjuncts have no modifying influence on the verb. The O.C. may have either H or L depending on the individual speaker. The raising of L to H on the first syllable is due to the presence of the immediately preceding O.C.

Examples:  
\[\text{homohlatswa mesto} (\text{to wash his feet}) \quad \text{LH|HL}\]  
\[\text{homohlatswa kamehla} (\text{to wash him everyday}) \quad \text{LH|HL}\]  
\[\text{homobatlela dij} (\text{to find food for him}) \quad \text{LH|HLL}\]  
\[\text{homophopholatosi kamehla} (\text{to fondle him everyday}) \quad \text{LH|HLLL}\]  

etc.

(b) Disyllabic A-stems have H on the first syllable. The final syllable is subject to H-L alternation according to the adjunct that follows. Here also the O.C. may have either H or L. All examples are given with H.

\[\ldots\]  
\[\ldots\]  
\[\ldots\]  

1 I use H in my own speech, and will therefore mark the O.C. H in these situations.
Examples:

- **homorutša Seðošo** (to teach him Sotho) LH|HH
- **homorutša hahle** (to teach him well) LH|HL

From trisyllabic stems on, A-stems have H on the first two syllables and L on all the remaining syllables. Once again the O.C. may have either H or L. Following adjuncts have no modifying influence on the tone pattern of the verb.

Examples:

- **homohopotsa baná** (to remind him of the children) LH|HHL
- **homohopotsa kemehla** (to remind him everyday) LH|HHL
- **hobaarabe dipotsö** (to answer the questions for them) LH|HHL
- **hobaebélëtsa kemehla** (to work for them everyday) LH|HHL

 etc.

4.298 From the above analysis, it is seen that, in the positive Infinitive A-stems have the same tonal behaviour both without and with O.C.s. B-stems, on the other hand, are tonally affected by the presence of the O.C. by having the tone of the first syllable raised from L to H.

4.299 **Negative. Without O.C.s.** This form is characterized by the negative formative se which has L, and is placed immediately after the Infinitive prefix.

4.300 **Monosyllabic stems.** Both A and B stems have H. There is no modifying influence by following adjuncts. The tone pattern is therefore always LL|H

Examples: A-stems

- **hoseje bohobë** (not to eat bread)
- **hoseje hahle** (not to eat well)

B-stems

- **hosestwë madì** (not to bleed)
hosebale kamehla (not to quarrel everyday)

4.301 From disyllabic stems: (a) A-stems observe the following patterns of behaviour: - H-L alternation on the final syllable corresponding to adjuncts of Contexts 1 and 2 respectively; H on all the remaining syllables.

Examples:

- hosebale baka (not to teach the children) LL|HH
- hosebale bantle (not to teach well) LL|HL
- hosebale botsa (not to answer the question) LL|HHH
- hosebale bantle (not to answer well) LL|HHL
- hosebopitsane baka (not to remind each other about the children) LL|HHH
- hosebopitsane kamehla (not to remind each other everyday) LL|HHHL
- hosebopitsane lekgötleng (not to have exchanges in court) LL|HHHHH
- hosebopitsane kamehla (not to quarrel everyday) LL|HHHHH

etc.

(b) Disyllabic B-stems have L on the first syllable and H on the second syllable. Following adjuncts have no modifying influence on the verb. The complete tone pattern is therefore always LL|HH.

Examples:

- hosebale bula (not to read a book)
- hosebale bantle (not to read well)

From trisyllabic stems on, B-stems go according to the following pattern: - L on the first syllable; H-L alternation on the final syllable depending on the Context; and H on all the remaining syllables.

Examples:

- hosebopale bula (not to play football) LL|HHH

... hosebopale
4.302 With O.C.s. Monosyllabic stems. Both A and B-stems observe H-L alternation. This is made possible by the fact that the O.C., which immediately precedes the stem, has H in these circumstances.

Examples: A-stems

hosemofe dijo (not to give him food) LH\H

hosemofe kamehl\o (not to give him everyday) LH\L

B-stems

hosemotswe lekgot\eng (not to disown him in court) LH\H

hosemotswe kamehl\o (not to disown him everyday) LH\L

4.303 From disyllabic stems on: The position here, regarding the stem, is exactly as it is where no O.C.s are used, in respect of both A and B-stems, viz. that A-stems have H-L alternation on the final syllable and H on all the remaining syllables; and disyllabic B-stems have pattern LH which is not modified by following adjuncts, while from trisyllabic forms on B-stems have L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables. As regards the O.C. itself, its tonal behaviour is as follows:—It has H throughout with predicates incorporating B-stems, and H or L, depending on the speaker, with predicates incorporating A-stems.

/... Examples:
Examples:  
A-stems

hosemorūte Semōtho (not to teach him Sotho) LH|HH
hosemorūte hāntlē (not to teach him well) LH|HL
hosemohopotse banā (not to remind him of the children) LH|HHH
hosemohopotse kāmehlē (not to remind him everyday) LH|HHL
hosemorābēle pōtsā (not to answer the question for him) LH|HHHH
hosemorābēle ę tikāta (not to answer the difficult one for him)
LH|HHL
etc.

B-stems

hosemohlatse mātō (not to wash his feet) LH|H
hosemohlatse hāntlē (not to wash him properly)
LH|HL
hosemohbatēle dijō (not to find food for him)
LH|LH
hosemohbatēle kāmehlē (not to search everyday on his behalf) LH|LHL
hosemohphohlošē mātō (not to fondle his feet)
LH|LHHH
Hosemohphohlošē ęmēnēte (not to fondle him pleasantly) LH|LHL
etc.

Summary

4.304 Here now is a summary of the tonal behaviour of the verb in the Infinitive in all the situations analysed above.

Positive. Without O.C.s (N.B. Infinitive prefix has L)
/... Monosyllabic
Monosyllabic stems:

A-stems: H; no modification by adjuncts; complete form L|H

B-stems: L; no modification by adjuncts; complete form L|L

Disyllabic stems:

A-stems: HH with Context 1; complete form L|HH
HL with Context 2; complete form L|HL

B-stems: LL; no modification; complete form L|LL

Trisyllabic stems:

A-stems: HHL; no modification; complete form L|HHL

B-stems: LLL; no modification; complete form L|LLL

N.B. From this point on, A-stems follow the pattern: H on the first and second syllables, and L on all the remaining syllables. B-stems are seen to follow a regular pattern, viz. L on all syllables, right from the monosyllabic stage.

4.305 With O.C.s

Monosyllabic stems: N.B. O.C. has H here.

A-stems: H with Context 1; complete form LH|H
L with Context 2; complete form LH|L

B-stems: H with Context 1; complete form LH|H
L with Context 2; complete form LH|L

Disyllabic stems: N.B. From this point on, O.C. has H or L.

A-stems: HH with Context 1; complete form LH|HH
HL with Context 2; complete form LH|HL

B-stems: HL; no modification; complete form LH|HL

Trisyllabic stems:

A-stems: HHL; no modification; complete form LH|HHL

B-stems: HLL; no modification; complete form LH|HLL

N.B. From this point on, A-stems follow the pattern: H on the first and second syllables, and L on all the remaining syllables. B-stems follow a regular pattern from the disyllabic stage, viz. H on the first syllable, and L on...
all the remaining syllables.

4.306 Negative. Without O.C.s. N.B. The negative formative se has L, and it comes immediately after the Infinitive prefix.

**Monosyllabic stems:**

- **A-stems:** H; no modification; complete form LL|H
- **B-stems:** H; no modification; complete form LL|H

**Disyllabic stems:**

- **A-stems:** HH with Context 1; complete form LL|HH
  HL with Context 2; complete form LL|HL
- **B-stems:** LH; no modification; complete form LL|LH

**Trisyllabic stems:**

- **A-stems:** HHH with Context 1; complete form LL|HHH
  HHL with Context 2; complete form LL|HHL
- **B-stems:** LHH with Context 1; complete form LL|LHH
  LHL with Context 2; complete form LL|LHL

N.B. B-stems continue, from this point on, along the pattern L on the first syllable, H-L alternation on the final syllable, and H on all intervening syllables; **A-stems** follow a regular pattern from the disyllabic stage, viz. H-L alternation on the final syllable and H on all the remaining syllables.

4.307 With O.C.s. N.B. The O.C. has H throughout with B-stems. With A-stems, it has H with monosyllabic stems and H or L from disyllabic stems on.

**Monosyllabic stems:**

- **A-stems:** H with Context 1; complete form LL|H
  L with Context 2; complete form LL|L
- **B-stems:** H with Context 1; complete form LL|H
  L with Context 2; complete form LL|L

**Disyllabic stems:**

- **A-stems:** HH with Context 1; complete form LL|HH
  HL with Context 2; complete form LL|HL

/... B-stems
B-stems: IH; no modification; complete form LHH\HI.

Trisyllabic stems:

A-stems: HHH with Context 1; complete form LH|H HH

HHL with Context 2; complete form LH|HH H L

B-stems: LHH with Context 1; complete form LH|L H HH

IHL with Context 2; complete form LH|IH L H

N.B. From this point on B-stems continue on the pattern: L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables. A-stems go according to the pattern which emerges at the disyllabic stage, viz. H-L alternation on the final syllable, and H on all the remaining syllables.

The Imperative Mood


Monosyllabic stems. In formal structure, monosyllabic stems may behave in one of two ways in the formation of the Imperative Mood, positive, singular. Either the final syllable of the stem is lengthened, a process which may, for practical purposes, be regarded as the suffixing of an additional suffix to the stem; or e is prefixed to the stem. In either case, the resulting form is disyllabic. Whichever method of formation of the Imperative is followed, the tone pattern of the resulting disyllabic form is IH with both A and B-stems. This pattern is not subject to modification by following adjuncts. It is interesting to observe that here, neither the verb stem nor the formative attached to it either by prefixing or by suffixing, has a constant tone. Rather, the whole resulting verb form is cast into a fixed mould, so to speak, which is inelastic, with each of the two syllables taking the one or the other tone solely according to whether it (the syllable) comes first or second.

/... Examples:
Examples:  

A-stems

\[ \text{Jaa bəhəbə (Eat the bread) } \text{ L|H} \]
\[ \text{Eja bəhəbə (ditto) } \text{ L|H} \]
\[ \text{Jaa bəntlə (Eat properly) } \text{ L|H} \]
\[ \text{Eja bəntlə (ditto) } \text{ L|H} \]

B-stems

\[ \text{Tawə mədi (Bleed) } \text{ L|H} \]
\[ \text{Etswə mədi (ditto) } \text{ L|H} \]
\[ \text{Tawə kəməhlə (Go out everyday) } \text{ L|H} \]
\[ \text{Etswə kəməhlə (ditto) } \text{ L|H} \]

4.309 From disyllabic stems on: (a) A-stems have H-L alternation on the final syllable and H on all the remaining syllables.

Examples:

\[ \text{Ruta bənə (Teach the children) } \text{ HH} \]
\[ \text{Ruta bə bahəlo (Teach the big ones) } \text{ HL} \]
\[ \text{Hopələ bənə (Remember the children) } \text{ HHH} \]
\[ \text{Hopələ bəntlə (Think properly) } \text{ HHL} \]
\[ \text{Arəbələ pləsə (Answer the call) } \text{ HHHH} \]
\[ \text{Arəbələ yəə obətsəŋ (Answer to the one who is calling you) } \text{ HHHL} \]

(b) Disyllabic B-stems have tone pattern LH, and are not modified by following adjuncts.

Examples:

\[ \text{Bala bəksa (Read the book)} \]
\[ \text{Bala bəntlə (Read well)} \]

From trisyllabic stems on, B-forms go according to the following pattern of behaviour: - L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables.

Examples:

\[ \text{Bapələ bəlo (Play football) } \text{ LHH} \]
\[ \text{Bapələ kəməhlə (Play everyday) } \text{ LHL} \]

\[ \text{Atəmələ} \]
Atamēlo mollong (Go near the fire) LHHL
Atamēlo hantlē (Go near carefully) LHHL
Atoloseētaa mosadi ntlo (Extend the house for the woman) LHHL
Atoloseētaa yeo omoratang ntlo (Extend the house for the one you love) LHHL

4.310 With O.C.s.

Monosyllabic stems: Both A and B-stems have H-L alternation, a behaviour made possible by the fact that the O.C. here has H.

Examples: A-stems

Morē nama (Give him meat) H|H
Morē kamehla (Give him everyday) H|L

B-stems

Motswe lekgotleng (Disown him in court) H|H
Motswe kamehla (Disown him everyday) H|L

4.311 From disyllabic stems on: (a) A-stems follow the following pattern of behaviour: - H-L alternation on the final syllable, and H on all the remaining syllables. The O.C. has H throughout.

Examples:

Morutē Sesâtho (Teach him Sotho) H|HH
Morutē kante (Teach him properly) H|HL
Mokadimē pitsa (Lend him a pot) H|HHH
Mokadimē e kgolo (Lend him the big one) H|HHL
Mohlaloseētaa dipalē (Explain the sums to him) H|HHHH
Mohlaloseētaa kahlokē (Explain to him carefully)

(b) Disyllabic B-stems have LH, which is not modified by following adjuncts. The O.C. has H, and the complete form is therefore H|LH.

Examples:

Mohlaloseē matsēhē (Wash his hands)

// Mohlaloseē
Mbhlatswe hältle (Wash him properly)

From trisyllabic stems on, B-stems go according to the following pattern of behaviour: - L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables. In other words, the behaviour of B-stems here is exactly the same as where no O.C.s occur. The O.C. has H throughout.

Examples:

Mohlakolê molâmo (Wipe his mouth) H|LHH
Mohlakolê hältle (Wipe him well) H|LHL
Moatamêtse mollong (Take him near the fire) H|LHH
Moatamêtse köpele (Take him near quickly) H|LHL
Moatolosêtsê  nto (Extend the house for him) H|LHHH
Moatolosêtsê ë_ntshô (Extend the new one for him) H|LHL

4.31c Plural. The plural suffix -ng has L throughout. This L is added at the end of all immutable patterns, i.e. those which are not modified by following adjuncts. As regards forms with H-L alternation, the L of the plural suffix is added to final-H forms, i.e. those occurring with Context 1. It will have been noticed that all immutable forms treated above have H on the final syllable.

The inference from this is that -ng always demands H on the syllable immediately preceding it. It thus obliterates all distinctions based on the presence or absence of H-L alternation in the corresponding singular forms.

This rule applies to all the singular forms treated above -- both A and B-forms, both without and with O.C.s, and with any number of syllables. The tone pattern of the plural form is itself not modified by following adjuncts.

Examples: where singular form is immutable.

Balâng bûka (Read the book) LH|L

/... Jæng
Eat meat

Go out everyday

Wash him properly

Teach the children

Teach properly

Play football

Play well

Give him meat

Give him the nice one

Explain the sums to him

Explain to him well

Take him near the fire

Take him near slowly

Do not eat bread

Do not eat everyday

Do not come out of the water

Do not come out quickly

A-stems have H-L alternation on the final syllable, and H on all the remaining syllables.
Examples:
Sebese Sesotho (Do not speak Sotho) L|HH
Sebese kepotlae (Do not speak fast) L|HH
Sekadine buka (Do not borrow a book) L|HHH
Sekadine kego (Do not borrow the big one) L|HHL
Sesotholetse Masopha (Do not work for Masopha) L|HHH
Sesotholetse yea tšimang (Do not work for the stingy one) L|HHL
Sesotholetse ditho tsê (Do not hanker after those things) L|HHLH
Sesotholetse tsê (Do not hanker after those) L|HHLHL
(b) Dicillary B-stems have LH, which is not modified by following adjuncts.
Examples:
Sebale buka (Do not read a book)
Sebale kampile (Do not read everyday)

From trisyllabic stems on, B-stems go according to the following pattern of behaviour: L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables.
Examples:
Sebale bêle (Do not play football) L|LHH
Sebale mapo (Do not play badly) L|LHL
Sekgaramote naqwa (Do not push the child) L|LHHH
Sekgaramote tse (Do not push that one) L|LHL
Sekgaramote mozia ntlo (Do not extend the house for the woman) L|LHHH
Sekgaramote emma ntlo (Do not extend the house for this one) L|LHHHL

A.315 With O.C.s.
Monosyllabic stems: Both A- and B-stems have H-L alternation on the final syllable, which is made possible here by the fact that the O.C. has H.
Examples: A-stems
Semofe nama (Do not give him meat) LH|H
Semofe biseitsweng (Do not give him the roasted one)LH|L
B-stems
Semotse lekgotleng (Do not disown him in court) LH|H
Semotse kampile (Do not disown him everyday) LH|L

/... 4.316
From disyllabic stems on: (a) A-stems go according to the following pattern of behaviour: H-L alternation on the final syllable and H on all the remaining syllables. In other words the stem here has the same tonal behaviour as when it occurs without an O.C. The O.C. itself may have either H or L.

Examples:
- Semorutse Sesetho (Do not teach him Sotho) LH|HH
- Semorutse kâmele (Do not teach him everyday) LH|HL
- Semohapelâ dikômgô (Do not capture cattle for him) LH|HHH
- Semohapelâ kâmele (Do not capture for him everyday) LH|HHL
- Semorâlele potâ (Do not answer the question for him) LH|HHH
- Semorâlele âô thatô (Do not answer the difficult one for him) LH|HHHL

(b) Disyllabic B-stems have LH. The O.C. has H. No modifying influence is exerted by following adjuncts. The complete verb form, therefore, always has the pattern LH|LH.

Examples:
- Semohlatse maotô (Do not wash his feet)
- Semohlatse hangata (Do not wash him often)

From trisyllabic stems on, B-forms go according to the following pattern of behaviour: L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables. The O.C. has H throughout.

Examples:
- Semohloalo molômo (Do not wipe his mouth) LH|LHH
- Semohloalo kâmele (Do not wipe him everyday) LH|LHL
- Semophofîtse maotô (Do not fondle his feet) LH|LHHH
- Semophofîtse kâmele (Do not fondle him everyday) LH|LHHH
- Sematolôtse milô (Do not extend the house for him) LH|LHHHH
- Sematolôtse ëmûtô (Do not extend the new one for him) LH|LHHHHL

4.3.17 Plural In the plural, the position is exactly as it is with verbs without O.C.s. That is the L of the plural suffix ng is simply added at the end of immutable forms, but is added only to final - H...
forms where the verbs have H-L alternation on the final syllable. The resulting plural form is itself not modified by following adjuncts. Only a few additional examples are provided.

Examples: where singular form is immutable

Semohlatšweng ma tc (Do not wash his feet) LN | LH | L

where singular form has H-L alternation

Semohlatšweng kips (Do not lend him a knife) LH | HNH | L
Semohlatšweng dj e (Do not find food for him) LH | LNH | L
Semohlatšweng m j i (Do not take him near the fire) LH | LNH | L

Summary

4.116 Positive Singular. Without O.C.s.

Monosyllabic stems:

A-stems: L or H, depending on whether formation is by suffix or prefix, respectively; no modification; complete form always LH
B-stems: L or H, depending on whether formation is by suffix or prefix respectively; no modification; complete form always LH

Disyllabic stems:

A-stems: HH with Context 1; no formatives; complete form HH
HL with Context 2; no formatives; complete form HL
B-stems: LH; no modification; no formatives; complete form LH

Trisyllabic stems:

A-stems: HHH with Context 1; no formatives; complete form HHH
HHH with Context 2; no formatives; complete form HHL
B-stems: LHH with Context 1; no formatives; complete form LHH
LHL with Context 2; no formatives; complete form LHL

N.B. From disyllabic stems on, A-stems follow the pattern: H-L alternation on the final syllable and H on all the remaining syllables. B-stems follow a regular pattern from the trisyllabic stage, viz. L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables.

/... Fith
With O.C.s. The O.C. has H throughout.

**Monosyllabic stems:**

- A-stems: H with Context 1; complete form H
- L with Context 2; complete form H
- B-stems: H with Context 1; complete form H
- L with Context 2; complete form H

**Disyllabic stems:**

- A-stems: HH with Context 1; complete form H
- LM with Context 2; complete form H
- B-stems: LH; no modification; complete form H

**Trisyllabic stems:**

- A-stems: HHH with Context 1; complete form H
- HHL with Context 2; complete form H
- B-stems: LHHL with Context 1; complete form H
- LHHL with Context 2; complete form H

N.B. From disyllabic stems on, A-stems follow the pattern: H-L alternation on the final syllable and H on all the remaining syllables. B-stems follow a regular pattern from the trisyllabic stage, viz. L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables.

4.319 **Plural.** The plural suffix has L.

**Without O.C.s.**

**Monosyllabic stems:**

- A-stems: L or H as above; complete form L or H; no modification
- B-stems: L or H as above; complete form L or H; no modification

**Disyllabic stems:**

- A-stems: HH; complete form HH; no modification
- B-stems: LH; complete form LH; no modification

N.B. Beginning here, each syllable added to the stem has H, and the final syllable (the plural suffix -ng) has L. There is, throughout, no modification by following adjuncts.

**With O.C.s.** The O.C. has H.

**Monosyllabic stems:**

- A-stems: H; complete form H; no modification
- B-stems: H; complete form H; no modification

**Disyllabic stems:**

- A-stems: HH; complete form HH; no modification
- B-stems: LH; complete form LH; no modification

/// N.D.
N.B. Beginning with monosyllabic stems in respect of A-forms, and with disyllabic stems in respect of B-forms, each syllable added to the stem has H, and the final syllable (the plural suffix -ng) has L.

4.320 Negative. Singular. Without O.C.s. The negative formative has L.

**Monosyllabic stems:**
- A-stems: H; no modification; complete form: L|E
- B-stems: H; no modification; complete form: L|R

**Disyllabic stems:**
- A-stems: HH with Context 1; complete form: L|HH
- HL with Context 2; complete form: L|HL
- B-stems: LH no modification; complete form: L|LH

**Trisyllabic stems:**
- A-stems: HHH with Context 1; complete form: L|HHH
- HHL with Context 2; complete form: L|HHL
- B-stems: LH with Context 1; complete form: L|LHH
- LHL with Context 2; complete form: L|LHL

N.B. From disyllabic stems on, A-stems follow the pattern: H-L alternation on the final syllable and H on all the remaining syllables. B-stems follow a regular pattern from the trisyllabic stage, having L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables.

**With O.C.s.**

**Monosyllabic stems:** The O.C. has H here.
- A-stems: H with Context 1; complete form: L|EH
- L with Context 2; complete form: L|EH
- B-stems: H with Context 1; complete form: L|EH
- L with Context 2; complete form: L|EH

**Disyllabic stems:** From this point on, the O.C. has H with B-stems, and H or L with A-stems.
- A-stems: HH with Context 1; complete form: LH|EH
- HL with Context 2; complete form: LH|HL
- B-stems: LH no modification; complete form: LH|LH

**Trisyllabic stems:**
- A-stems: HHH with Context 1; complete form: LH|HHH
- HHL with Context 2; complete form: LH|HHL
- B-stems: LH with Context 1; complete form: LH|LHH
- LHL with Context 2; complete form: LH|LHL

/... N.B.
N.B. From disyllabic stems on, A-stems follow the pattern:
H-L alternation on the final syllable and H on all the
remaining syllables. B-stems follow a regular pattern from
the trisyllabic stage, viz. L on the first syllable, H-L
alternation on the final syllable, and H on all the remaining
syllables.

4.321 Plural. Without O.C.s.
Monosyllabic stems:
A-stems: H; complete form L|H|L; no modification
B-stems: H; complete form L|H|L; no modification

Disyllabic stems:
A-stems: HH; complete form L|HH|L; no modification
B-stems: LH; complete form L|LH|L; no modification

N.B. Beginning with monosyllabic forms in respect of A-stems,
and with disyllabic forms in respect of B-stems, each syllable added
to the stem has H, and the final syllable (the plural suffix -ng)
has L.

With O.C.s.
Monosyllabic stems: The O.C. has H here.
A-stems: H; complete form LH|H|L; no modification
B-stems: H; complete form LH|H|L; no modification

Disyllabic stems: From this point on the O.C. has H with B-stems,
and H or L with A-stems.
A-stems: HH; complete form LH|HH|L; no modification
B-stems: LH; complete form LH|LH|L; no modification

N.B. Beginning with monosyllabic forms in respect of A-stems,
and with disyllabic forms in respect of B-stems, each syllable
added to the stem has H, and the final syllable (the plural
suffix -ng) has L.

Indicative Mood, Present tense.

4.322 Positive. Without O.C.s. Primary modality.

With low-toned S.C.s. (a) B-stems have L throughout when used
with low-toned S.C.s. (i.e. 1st and 2nd persons S.C.s. in this
case). This pattern is not modified by following adjuncts.

Examples:
Ketawa mad (I bleed) L|L
Ketawa kamələ (I go out everyday) L|L
Kekwala monyako (We shut the door) L|L

/... Kekwala
(b) A-stems behave in the following ways:

**Monosyllabic stems**: These have H which is not modified by following adjuncts as it is immediately preceded by a low-toned syllable (the S.C.). The complete pattern is L H.

**Examples**:
- Keja bokobë (I eat bread)
- Keja kamehla (I eat everyday)

**Disyllabic stems**: These have H on the first syllable, and H-L alternation on the final syllable.

**Examples**:
- Rehita bana (We teach the children) L H H
- Rehita be bahllo (We teach the big ones) L H L

From trisyllabic stems on: A-stems follow the following pattern of behaviour: H on the first two syllables and L on all the remaining syllables. The resulting tone sequences are not modified by following adjuncts.

**Examples**:
- Rehobólo bana (We remember the children) L H H L
- Rehobólo ba banyane (We remember the little ones) L H H L
- Kesrabólo pitso (I answer the call) L H H L
- Kesrabólo kamehla (I answer everyday) L H H L
- Rebélílúna ditaba (We tell each other the news) L H H H L
- Rebélílúna banonäte (We tell each other pleasantly) L H H H L

4.3.23 With high-toned S.C.s.

**Monosyllabic stems**: Both A- and B-stems have H-L alternation, which is made possible by the fact that the immediately-preceding S.C. has H.

**Examples: A-stems**
- Efa basädi (They give the women) H H
- Efa ba batle (They give the beautiful ones) H L

/... B-stems
In my own pronunciation this syllable has H.
I therefore mark it H throughout.
Participial modality. All S.C.s. have H.

Monosyllabic stems: Both A- and B-stems have H which is not modified by following adjuncts. There are two alternative tone sequences of the complete verb form, viz. H H and HL H. The alternative H H, in spite of its prefinal H, does not have H-L alternation on the final syllable. The alternative tone pattern HL H may be the clue to this seeming anomaly. The extra syllable in this alternative is a low-toned e which is sometimes prefixed to the stem in this modality; and I believe this alternative to be the older of the two. This e sometimes degenerates into a mere lengthening of the final vowel of the immediately preceding S.C. This compensatory extra length, which may, for all practical purposes, still be regarded as a separate syllable, retains the L of the now-abandoned e. Now this low-toned intervening syllable gives LH as the pattern on the last two syllables of the verb, a pattern which does not adapt itself to following adjuncts. On the ultimate complete submergence of this low-toned prefinal syllable, the high-toned S.C. comes immediately before the stem, thus giving the sequence HH on the last two syllables of the verb. It is probably due to a "feeling" that the low-toned intervening syllable is not completely or permanently lost, that even in the alternative HH, no H-L alternation takes place on the final syllable. I must emphasize, however, that this is only a possible explanation, one which later investigation may prove to be ill-founded.

Examples: A-stems

10 ba' ba' ba' ba' ba' ba' (even though they eat bread) H H
alt.10 ba' ba' ba' ba' ba' ba' (" " " " " ) HL H
10 ba' ba' ba' ba' ba' ba' (even though they eat every day) H H
alt.10 ba' ba' ba' ba' ba' ba' (" " " " " ) HL H

B-stems

10 ba' ba' ba' ba' ba' ba' (even though they bleed) H H
alt.10 ba' ba' ba' ba' ba' ba' (" " " " " ) HL H
10 ba' ba' ba' ba' ba' ba' (even though they go out everyday) H H
alt.10 ba' ba' ba' ba' ba' ba' (" " " " " " ) HL H

From disyllabic stems on: (a) B-stems have H on the first syllable and L on all remaining syllables. There is no modification by following adjuncts.

/... Examples
Examples:
16 ḍa ḍa ḍa ḍa ḍa ḍa (even though they read a book) H L U.
16 ḍa ḍa ḍa ḍa ḍa ḍa (even though they read everyday) H L U.
16 ḍa ḍa ḍa ḍa ḍa ḍa (even though they play football) H L U.
16 ḍa ḍa ḍa ḍa ḍa ḍa (even though they play everyday) H L U.
16 ḍa ḍa ḍa ḍa ḍa ḍa (even though we fondle the feet) H L U.
16 ḍa ḍa ḍa ḍa ḍa ḍa (even though we fondle pleasantly) H L U.

(b) Disyllabic A-stems have either LI or LI. There is no alternation even with the second alternative, probably because L/H on the presinal syllable is a later development.

Examples:
16 ḍa ḍa ḍa ḍa ḍa ḍa (even though we teach the children) H LI or H LI.
16 ḍa ḍa ḍa ḍa ḍa ḍa (even though we teach the big ones) H LI or H LI.

From trisyllabic stems on, A-stems have LI on the first two syllables and I on all remaining syllables. The resulting tone sequences are not modified by following adjuncts.

Examples:
16 ḍa ḍa ḍa ḍa ḍa ḍa (even though they remember the children) H LI.
16 ḍa ḍa ḍa ḍa ḍa ḍa (even though they remember everyday) H LI.
16 ḍa ḍa ḍa ḍa ḍa ḍa ḍa (even though they answer the call) H LI.
16 ḍa ḍa ḍa ḍa ḍa ḍa ḍa ḍa (even though they answer eagerly) H LI.
16 ḍa ḍa ḍa ḍa ḍa ḍa ḍa ḍa (even though they answer questions for each other) H LI.

Y.B. From the above illustrations it is observed that high-toned S.C.s. of the participial modality are followed by A-stems with the tone on the first syllable lowered from inherent H to secondary L.

A.126 With S.C.s. Primary modality
With low-toned S.C.s. Monosyllabic stems: The O.C. here has H.
Both A- and B-stems have S-L alternation, which is made possible by the H of the immediately preceding O.C.
Examples: A-stems

Ya'ala' (I gave him bread) LH|H
Ya'ala' (I give him everyday) LH|L

B-stems

Ya'ala' (I dismiss him in court) LH|H
Ya'ala' (I dismiss him everyday) LH|L

4.37 From disyllabic stems on: The O.C. has either H or L with both A and B forms. (a) A-stems have H on the first syllable and L on all remaining syllables. The resulting tone patterns are not modified by following adjuncts.

Examples:

Ya'ala' (I wash his hands) LH|H
Ya'ala' (I wash him well) LH|L
Ya'ala' (I find food for them) LH|LH
Ya'ala' (I search on their behalf every day) LH|LH
Ya'ala' (I take them near the fire) LH|LH
Ya'ala' (I take them near with care) LH|LH

(b) Disyllabic B-stems have H on the first syllable and H-L alternation on the final syllable.

Examples:

Ya'ala' (We tell him the news) LH|H
Ya'ala' (We tell him joyfully) LH|H

From trisyllabic stems on, A-forms have H on the first two syllables, and L on all the remaining syllables. There is no modification on the resulting tone patterns by following adjuncts.

Examples:

Ya'ala' (We milk the cows for him) LH|HLL
Ya'ala' (We milk for him with pleasure) LH|HLL
Ya'ala' (We answer the questions for them) LH|HLL
Ya'ala' (We answer the difficult ones for them) LH|HLL
Ya'ala' (We open their eyes) LH|HLL
Ya'ala' (We open their eyes everyday) LH|HLL
With high-toned S.C.s. The position regarding the tones of the stems is the same here as it is with low-toned S.C.s., which suggests that the S.C., which is now separated from the stem by the O.C., has no direct influence on these stems. There are, however, differences in respect of the tonal behaviour of the O.C. It has been observed that, with low-toned S.C.s., the O.C. has H with monosyllabic stems, both A and B-form; and H or L with non-monosyllabic stems of any length, both A and B-form. On the other hand, with high-toned S.C.s. of the primary modality, the O.C. has L with monosyllabic A-stems followed by Context 1 adjuncts, H alternating with L/H with monosyllabic A-stems followed by Context 2 adjuncts, and B with all monosyllabic B-stems. From disyllabic stems on, the O.C. in this case has L without an alternative H with both A and B-stems.

Examples: A-stems

Bamofa bohobé (They give him bread) H | H

Bamofa kámghla (They give him everyday) HH | L or HL/H | L

Bamoruta kohála (They teach him to read) HH | HH

Bamoruta kámghla (They teach him everyday) EL | HL

Bamohopotsas bâná (They remind him of the children) HL | HLL

Bamohopotsa kámghla (They remind him everyday) EL | HLL

Bamohopotsa tótsi (They answer the question for him) HL | HULL

Bamoharabba téta (They answer the difficult one for him)

Bamotutúbóla méló (They open his eyes) HL | HLLL | H | HLLL

Bamotutúbóla kámghla (They open his eyes everyday) HL | HLLL

B-stems

Bamotswa jološténg (They disown him in court) HH | H

Bamotswa kámghla (They disown him everyday) HH | L

Bamohlátswa matshó (They wash his hands) HL | HL

Bamohlátswa kámghla (They wash him everyday) HH | HL

Bamobálíla dišë (They find food for him) HL | HLL

Bamobálíla kámghla (They search on his behalf everyday) HH | HLL

Bamohopofólasa mëto (They fondle his feet) HL | HLLL

Bamohopofólasa kámghla (They fondle him everyday) HH | HLLL
A.329 Participial modality. All S.C.s. have H. The position regarding the tonal behaviour of the stem is the same here also as it is in the corresponding primary modality forms, with one exception, viz. that while in the primary modality disyllabic A-stems have H-L alternation on the final syllable preceded by H on the prefinal syllable, in the participial modality the final syllable has an immutable H even though it is, as in the primary modality, preceded by H on the prefinal syllable. The only other difference is observed in the O.C. which here has L with both A and B-stems of any length.

Examples: A-stems

10 haj-kömọta bolọbọ (even though I give him bread) HI H
10 haj-kömọta pọtsad (even though I ask him a question)HH HI
10 haj-kömọta ìf thọta (even though I ask him a difficult one) HI HH
10 haj-kömọhẹpẹla dikgọọ (even though I capture cattle for him) HL/HUL
10 haj-kömọhẹpẹla kẹmọlọ (even though I capture for him everyday) HL/HUL
10 haj-bẹrekarababa pọtsad (even though they answer the question for us) HL/HULL
10 haj-bẹrekarababa mosọtẹj (even though they make the work lighter for us) HL/HULL

B-stems

10 haj-kömọtsẹalakgotiŋ (even though I disown him in court)HILL
10 haj-kömọtsẹalakẹmọlọ (even though I disown him everyday)HL H
10 haj-kömọnlatunwọntọ (even though I wash his feet) HL HI
10 haj-kömọhẹpẹla dijọ (even though they find food for him) HL HL
10 haj-kömọhẹpẹla mọlọn (even though they bring him near the fire) HL HLL

4.330 Negative. Without O.C.s. Primary modality. The negative formative ha, which immediately precedes the S.C., has L; all S.C.s. have H.

Monosyllabic stems: Both A and B-stems have H, giving the tone pattern LH H, which is not modified by following adjuncts.

Examples: A-stems

Hakọsi bolọbọ (I do not eat bread)
Hakọsi kẹmọlọ (I do not eat everyday)
B-stems

Haketswe madì (I do not bleed)
Haketswe kamehla (I do not go out everyday)

4.331 From disyllabic stems on: (a) A-stems have H on all syllables. The resulting tone patterns are not modified by following adjuncts.

Examples:

Hakörute bana (I do not teach the children) LH|HH
Hakörute ba bhopolo (I do not teach the big ones) LH|HH
Hakesebeta ba bhopolo (I do not work much) LH|HH
Hakearebele pita (I do not answer the call) LH|HHHH
Habaarabisane kamehla (They do not exchange words everyday) LH|HHHH

(b) B-stems have L on the first syllable and H on all the remaining syllables. There is no modification of the resulting tone patterns by following adjuncts.

Examples:

Hakebule monyanë (I do not open the door) LH|LH
Hakebule mamehla (They do not play everyday) LH|LHH
Hakebule bana (They do not play with the children) LH|LHH
Hakebule kamehla (They do not fondle each other's feet) LH|LHHHH

N.B. The most conspicuous thing in the above examples is the absence of H-L alternation on the final syllable, even though (except in one case) all necessary conditions for its occurrence are fulfilled.

4.332 Participial modality The negative formative ma, which comes immediately after the S.C., has L; all S.C.s. have H.

Monosyllabic stems: Both A- and B-stems have H which is not modified by following adjuncts. The tone pattern of the complete form is therefore HL|H.

Examples: A-stems

15 lekposto kamehla (even though I do not eat meat)
15 lekposto kamehla (even though I do not eat everyday)

B-stems

15 lekposto madì (even though I do not bleed)
15 lekposto kamehla (even though I do not go out everyday)
4.333 From disyllabic stems on: (a) A-stems have H-L alternation on the final syllable and H on all the remaining syllables.

Examples:
1° hā kesangile bula (even though I am not writing a book) H|HH
1° hā kesangile kamehla (even though I do not write everyday) H|H
1° hā kesahopole bana (even though I do not remember the children) H|HHH
1° hā kesahopole kamehla (even though I do not remember everyday) H|HHH
1° hā kesanāmāle mmutla (even though I do not stalk the hare) H|HHHH
1° hā kesanāmāle 6 moñlo (even though I do not stalk the big one) H|HHH

which is not modified by following adjuncts. The complete verb form has tone pattern H|H.

Examples:
1° hā kesakwale monyale (even though I do not shut the door)
1° hā kesakwale kamehla (even though I do not close everyday)

From trisyllabic stems on, B-stems have L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables.

Examples:
1° hā kesabapale bɔlō (even though I do not play football) H|LHH
1° hā kesabapale kamehla (even though I do not play everyday) H|LHH
1° hā kesatamále molông (even though I do not go near the fire) H|LHHH
1° hā kesatamále hɔं hā (even though I do not go near at all) H|LHHH
1° hā kesakaramstāne bañolo (even though they do not push each other much) H|LHHHH
1° hā kesakaramstāne kāmatla (even though they do not push each other violently) H|LHHHH

4.334 With object concords

Primary modality. The position regarding the tonal behaviour of the stem is here exactly as it is where no O.C.s. are used in this modality. To give it again in summary form, it is as follows:

/... (a)
(a) H on all syllables of A-stems comprising any number of syllables, with the resulting tone patterns not subject to modification by following adjuncts. The O.C. has L with all these stems.

Examples:
- \(\text{HakamoFE} \downarrow \text{di}s\) (I do not give him food) \(\text{LHH}_H\)
- \(\text{Hakemotswa} \downarrow \text{kamehla} \) (I do not teach him everyday) \(\text{LHL}_H\)
- \(\text{Hakemohloato} \downarrow \text{ban}a \) (I do not remind him of the children) \(\text{LHL}_H\)
- \(\text{Hakemoarabale} \downarrow \text{pots}e\) (I do not answer the question for him) \(\text{LHL}_H\)

(b) H on monosyllabic B-stems. From disyllabic stems on, B-stems have L on the first syllable and H on all remaining syllables. The resulting tone patterns are not modified by following adjuncts.

Examples: Monosyllabic stems. (The O.C. here has L.)
- \(\text{Hakemotswe} \downarrow \text{lekgotlen} \) (I do not disown him in court) \(\text{LHH}_H\)
- \(\text{Hakemotswe} \downarrow \text{kamehla} \) (I do not disown him everyday) \(\text{LHL}_H\)

From disyllabic stems on. (The O.C. here has H.)
- \(\text{Hakemohlatswe} \downarrow \text{ma}to \) (I do not wash his feet) \(\text{LHH}_H\)
- \(\text{Hakemohlatswe} \downarrow \text{kamehla} \) (I do not wash him everyday) \(\text{LHL}_H\)
- \(\text{Hakemohlatswe} \downarrow \text{di}s\) (I do not find food for him) \(\text{LHH}_H\)
- \(\text{Hakemohloato} \downarrow \text{ma}to \) (I do not fondle his feet) \(\text{LHH}_H\)
- \(\text{Hakemoarabale} \downarrow \text{pots}e\) (I do not extend the house for him) \(\text{LHH}_H\)

4.335 Participial modality. The O.C. here has H with all B-stems; H with monosyllabic A-stems, and H or L with non-monosyllabic A-stems.

Monosyllabic stems: Both A- and B-stems have H-L alternation which is made possible by the immediately preceding H of the O.C.

Examples: A-stems
- \(\text{kosamo}FE \downarrow \text{di}s\) (even though I do not give him food) \(\text{HHH}_H\)
- \(\text{kosamo}FE \downarrow \text{kamehla} \) (even though I do not give him everyday) \(\text{LHH}_L\)

B-stems
- \(\text{kosamotswe} \downarrow \text{lekgotlen} \) (even though I do not disown him in court) \(\text{HHH}_H\)
- \(\text{kosamotswe} \downarrow \text{kamehla} \) (even though I do not disown him everyday) \(\text{LHH}_L\)

/... 4.336
A-336 From disyllabic stems on: Here the tonal behaviour of the stem is exactly the same as it is where no O.C.s. are used in the participial modality, viz. that (a) A-stems have H-L alternation on the final syllable and H on all the remaining syllables. The O.C. here has either H or L.

Examples:
16 ha kesamorute Seerho (even though I do not teach him Sothe) HLH HH
16 ha kesamorute ka mehla (even though I do not teach him everyday) HLH HL
16 ha basekopotee bana (even though they do not remind us of the children) HLH HHH
16 ha basekopotee ka mehla (even though they do not remind us everyday) HLH HHL
16 ha asarehlolele nywe (even though he does not decide the case for us) HLH HHHH
16 ha asarehlolele kateg (even though he does not decide our case justly) HLH HHHH.

(b) Disyllabic B-stems have LH which is not modified by following adjuncts. The O.C. with all non-mono-syllabic B-stems has H. The complete disyllabic verb has therefore the tone pattern HLH LH.

Examples:
16 ha aserehlatwe macto (even though he does not wash our feet)
16 ha aserehlatwe kamehla (even though he does not wash us everyday)

From tri-syllabic stems on, B-stems have L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables.

Examples:
16 ha kesamobatle dijo (even though I do not find food for him) HLH LHH
16 ha kesamobatle kamehla (even though I do not search on his behalf everyday) HLH LHL
16 ha basekantse malling (even though they do not take him near the fire) HLH LHHH
16 ha basekantse kamehla (even though they do not take him near everyday) HLH LHLH
16 ha rebasekantse ntlo (even though we do not extend the house for him) HLH LHHH
16 ha rebasekantse ntsha (even though we do not extend the new one for him) HLH LHHH

... Indicative
Indicative Mood, Future Tense

4.337 The future tense of this mood is formed by placing the future-forming verb stem \( \text{tla} \) after the S.C. This \( \text{tla} \) is followed by a submerged (latent) infinitive prefix \( \text{ho} \). The verb stem behaves tonally as if it were preceded in actual fact by this \( \text{ho} \) rather than by \( \text{tla} \). As the tonal behaviour of the stem in the Infinitive has already been discussed, no further discussion will be entered into here.

4.338 What may well come in for analysis at this point is the tonal behaviour of \( \text{tla} \) itself. Both as an independent, non-deficient verb stem, and as a future-forming verb stem, \( \text{tla} \) has an inherent L. As a non-deficient verb, this stem will therefore be found to follow the same tonal behaviour pattern as other monosyllabic B-stems. As a deficient, future-forming verb stem in the Indicative Mood, it behaves in the following ways:

When preceded by a low-toned S.C. it has a low-level tone. But when it is preceded by a high-toned S.C. — 3rd person primary modality S.C.s. and all participial modality S.C.s. — it has long length and a high-falling-to-low tone.

Examples: With low-toned S.C.

- \( \text{Katla₁₉ bok̂b̂e} \) (I shall eat bread) \( \text{LL} \mid \text{N} \)
- \( \text{Katla₁₉ bůk̂a} \) (We shall write a book) \( \text{LL} \mid \text{HH} \)

With high-toned S.C.s.

- \( \text{Katla₁₉ nama} \) (They will eat meat) \( \text{HK₃} \mid \text{H} \)
- \( \text{Otlá̱ra₃ bana} \) (He will teach the children) \( \text{HK} \mid \text{L} \mid \text{HH} \)
- \( \text{Katla₁₉pala ból̂a} \) (They will play football) \( \text{HK} \mid \text{L} \mid \text{LLL} \)
- \( \text{Otlá̱twa mafi} \) (He will bleed) \( \text{HK} \mid \text{L} \mid \text{L} \)

The H in the dynamic tone \( \text{HL} \) results from the tonal assimilation of L of \( \text{tla} \) by the H of the preceding S.C. The extra length (or duration) of \( \text{tla} \) and the fall of tone from H to L are mechanisms of compensation for the lost low-toned Infinitive prefix \( \text{ho} \). In other words, the lost syllable \( \text{ho} \) is replaced by another syllable in the nature of the extra length on the vowel of \( \text{tla} \), and its (i.e. the lost syllable's) L is taken over by this extra length.

4.339 Where the preceding S.C. has L, and \( \text{tla} \) therefore also has L, the need for extra length is not felt as the lost \( \text{ho} \) and the preceding \( \text{tla} \) have the same tone, and the gap occasioned by the omission of \( \text{ho} \) is filled by bringing \( \text{tla} \) and the verb stem closer, \( \text{tla} \) therefore retaining its normal length.
As already indicated above, the verb stem, for its part, behaves exactly as it would if the **o** were expressed. The full tone pattern of a verb in the future indicative is thus obtained by placing the Infinitive tone pattern of the verb after either of the two tone patterns just outlined for future-forming tia.

**Indicative Mood, Past Tense**

There is no grammatical form which may be described as a past tense of the Indicative Mood. The meaning of a past tense is, of course, conveyed in various ways which will come in for tonal analysis in the sections where they properly belong by reason of their grammatical form.

**Summary**

<table>
<thead>
<tr>
<th>Present Tense</th>
<th>Positive</th>
<th>Without O.C.s.</th>
<th>Primary modality</th>
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</thead>
<tbody>
<tr>
<td><strong>Monosyllabic stems:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>A-stems:</strong></td>
<td>H; no modification; complete form</td>
<td>L</td>
<td>H</td>
</tr>
<tr>
<td><strong>B-stems:</strong></td>
<td>L; no modification; complete form</td>
<td>L</td>
<td>L</td>
</tr>
<tr>
<td><strong>Disyllabic stems:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>A-stems:</strong></td>
<td>HH with Context 1; complete form</td>
<td>L</td>
<td>HH</td>
</tr>
<tr>
<td><strong>B-stems:</strong></td>
<td>LL; no modification; complete form</td>
<td>L</td>
<td>LL</td>
</tr>
<tr>
<td><strong>Trisyllabic stems:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>A-stems:</strong></td>
<td>HHL; no modification; complete form</td>
<td>L</td>
<td>HHL</td>
</tr>
<tr>
<td><strong>B-stems:</strong></td>
<td>LLL; no modification; complete form</td>
<td>L</td>
<td>LLL</td>
</tr>
</tbody>
</table>

N.B. B-stems have **L** on all syllables from monosyllabic stems.

A-stems only begin to assume a regular pattern of behavior from trisyllabic stems. This is: **H** on the first two syllables, and **L** on all the remaining syllables.

**With high-toned S.C.s.**

| **Monosyllabic stems:** | | | |
| **A-stems:** | H with Context 1; complete form | H|H | |
| **B-stems:** | L with Context 2; complete form | H|L | |
| **Disyllabic stems:** | | | |
| **A-stems:** | HH with Context 1; complete form | H|HH | |
| **B-stems:** | LL with Context 2; complete form | H|LL | |
| **Trisyllabic stems:** | | | |
| **A-stems:** | HHL or LHL; no modification; complete form | H|HHL or H|LHL | |
| **B-stems:** | LLL; no modification; complete form | H|LLL | |

N.B. From disyllabic stems on, B-stems have **L** on each syllable after the first, which has **H**. From trisyllabic stems on, A-stems have **L** on each syllable after the first two, which have **HH**.
4.344 Participle modality (All S.C.s. have H.)

Monosyllabic stems:
A-stems: H; no modification; complete form H H or H H H
B-stems: H; no modification; complete form H H or H H H

Disyllabic stems:
A-stems: LH or L HH; no modification; complete form H H H or H L H H
B-stems: HL; no modification; complete form H H H

Trisyllabic stems:
A-stems: L L L; no modification; complete form H L L
B-stems: H L L; no modification; complete form H H H

N.B. 1. From disyllabic stems on, B-stems have L on each syllable after the first, which has H. From trisyllabic stems on A-stems have L on each syllable after the first two, which have LH.

N.B. 2. A high-toned S.C., whether of the primary or the participial modality, raises the tone of the first syllable of a B-stem. If the stem is monosyllabic, then it has H-L alternation when preceded by a high-toned S.C. of the primary modality, but no such alternation when the preceding high-toned S.C. is of the participial modality. Again, a high-toned S.C. of the participial modality has the effect of lowering the tone of the first syllable of an A-stem from H to L.

4.345 With O.C.s.

Primary modality

With low-toned S.C.s.

Monosyllabic stems: (The O.C. has H.)
A-stems: H with Context 1; complete form L H H
L with Context 2; complete form L H H
B-stems: H with Context 1; complete form L H H
L with Context 2; complete form L H H

Disyllabic stems: (From this point on, O.C. may have either H or L)
A-stems: HH with Context 1; complete form L H H H
HL with Context 2; complete form L H H L
B-stems: HL; no modification; complete form L H H L

Trisyllabic stems:
A-stems: H L L; no modification; complete form L H L L
B-stems: L H L; no modification; complete form L H L L

N.B. From disyllabic stems on, B-stems have L on each syllable after the first, which has H. From trisyllabic stems on, A-stems have L on each syllable after the first two, which have HH.

4.346 With high-toned S.C.s.

Monosyllabic stems:
A-stems: H with Context 1; complete form H H H
L with Context 2; complete form H H H
B-stems: H with Context 1; complete form H H H
L with Context 2; complete form H H H

/... Disyllabic
### Disyllabic stems:

<table>
<thead>
<tr>
<th>A-stems</th>
<th>HH with Context 1; complete form</th>
<th>HL with Context 2; complete form</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-stems</td>
<td>HL; no modification; complete form</td>
<td>HL; no modification; complete form</td>
</tr>
</tbody>
</table>

### Trisyllabic stems:

<table>
<thead>
<tr>
<th>A-stems</th>
<th>HHL; no modification; complete form</th>
<th>HLL; no modification; complete form</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-stems</td>
<td>HL; no modification; complete form</td>
<td>HL; no modification; complete form</td>
</tr>
</tbody>
</table>

N.B. From disyllabic stems on, B-stems have H on each syllable after the first, which has L. From trisyllabic stems on, A-stems have L on each syllable after the first two, which have HH.

### Participle modalities (All S.C.s. have H; O.C. has L throughout)

#### Monosyllabic stems:

<table>
<thead>
<tr>
<th>A-stems</th>
<th>H; no modification; complete form</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-stems</td>
<td>H; no modification; complete form</td>
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#### Disyllabic stems:

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<tr>
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<tbody>
<tr>
<td>B-stems</td>
<td>HL; no modification; complete form</td>
<td>HL</td>
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</table>

#### Trisyllabic stems:

<table>
<thead>
<tr>
<th>A-stems</th>
<th>HHL; no modification; complete form</th>
<th>HLL; no modification; complete form</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-stems</td>
<td>HL; no modification; complete form</td>
<td>HL; no modification; complete form</td>
</tr>
</tbody>
</table>

N.B. Additional syllables as above.

### Negative. Without O.C.s.

#### Primary modality: The negative formative has L, and it comes before the S.C.; all S.C.s. have H.

#### Monosyllabic stems:

<table>
<thead>
<tr>
<th>A-stems</th>
<th>H; no modification; complete form</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-stems</td>
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#### Disyllabic stems:

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<th>A-stems</th>
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<th>HH</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-stems</td>
<td>LH; no modification; complete form</td>
<td>LH</td>
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</tbody>
</table>

#### Trisyllabic stems:

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<th>A-stems</th>
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<th>HLL; no modification; complete form</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-stems</td>
<td>LH; no modification; complete form</td>
<td>LH; no modification; complete form</td>
</tr>
</tbody>
</table>

N.B. A-stems have H on each syllable from monosyllabic stems on. From disyllabic stems on, B-stems have H on each syllable after the first, which has L.

### Participial modality. (The negative formative has L and it comes after the S.C.; all S.C.s. have H)

#### Monosyllabic stems:

<table>
<thead>
<tr>
<th>A-stems</th>
<th>H; no modification; complete form</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-stems</td>
<td>H; no modification; complete form</td>
<td>H</td>
</tr>
</tbody>
</table>

/* Disyllabic */
### Disyllabic stems:

**A-stems:**
- HH with Context 1; complete form: \( \text{H} \)
- HL with Context 2; complete form: \( \text{H} \)

**B-stems:**
- LH; no modification; complete form: \( \text{H} \)

### Trisyllabic stems:

**A-stems:**
- HHH with Context 1; complete form: \( \text{H} \)
- HHL with Context 2; complete form: \( \text{H} \)

**B-stems:**
- LHH with Context 1; complete form: \( \text{H} \)
- LHL with Context 2; complete form: \( \text{H} \)

N.B. From disyllabic stems on, A-stems have H-L alternation on the final syllable, and all preceding syllables have H. From trisyllabic stems on, B-stems have H-L alternation on the final syllable, L on the first syllable, and H on all the remaining syllables.

### 4.350 With O.C.s.

**Primary modality.** (O.C. has L with A-stems and H with B-stems.)

### Monosyllabic stems:

**A-stems:**
- H; no modification; complete form: \( \text{L} \)

**B-stems:**
- H; no modification; complete form: \( \text{L} \)

### Disyllabic stems:

**A-stems:**
- HH; no modification; complete form: \( \text{L} \)

**B-stems:**
- LH; no modification; complete form: \( \text{L} \)

### Trisyllabic stems:

**A-stems:**
- HHH; no modification; complete form: \( \text{L} \)

**B-stems:**
- LHH; no modification; complete form: \( \text{L} \)

N.B. A-stems have H on all syllables from monosyllabic stems on. B-stems have pattern L on the first syllable and H on all remaining syllables from disyllabic stems on.

### 4.351 Participle modality.** (O.C. has H throughout with B-stems; H with monosyllabic A-stems, and H or L with all non-monosyllabic A-stems.)

### Monosyllabic stems:

**A-stems:**
- H with Context 1; complete form: \( \text{H} \)

**B-stems:**
- H with Context 1; complete form: \( \text{H} \)

### Disyllabic stems:

**A-stems:**
- HH with Context 1; complete form: \( \text{H} \)

**B-stems:**
- LH with Context 1; complete form: \( \text{L} \)

### Trisyllabic stems:

**A-stems:**
- HHH with Context 1; complete form: \( \text{H} \)

**B-stems:**
- LHH with Context 1; complete form: \( \text{H} \)

N.B.
N.B. From monosyllabic stems on, A-stems have H-L alternation on the final syllable, and H on all preceding syllables in non-monosyllabic forms. From trisyllabic stems on, all B-stems go according to the pattern: L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables.

Subjunctive Mood, Present Tense

In the present tense, all S.C.s. have H.

Positive. Without O.C.s.

Monosyllabic stems: Both A- and B-stems have H-L alternation, which is made possible by the H of the immediately-preceding S.C.

Examples: A-stems

hore koLoJama (that I should eat meat) $ H$

hore koLo] bSeiswâng (that I should eat the roasted one) H L

B-stems

hore koiLo] bâ (that I should come home) $ H$

hore koiLo] kmeghlâ (that I should come everyday) H L

Disyllabic stems: Both A- and B-stems have H on the first syllable, and H-L alternation on the final syllable.

Examples: A-stems

hore kerrô] bana (that I should love the children) $ HH$

hore kerrô] bâ bangônyango (that I should love the little ones) H H H

B-stems

hore kebâ] mashe (that I should count the eggs) H H H

hore kebâ] mâtshâ (that I should count the fresh ones) H H H

From trisyllabic stems on: The pattern of behaviour which is followed by both A and B-stems, is as follows: H on the first syllable, H on the final syllable, and L on all the remaining syllables. The resulting tone patterns are not modified by following adjuncts.

Examples: A-stems

hore koLo] bana (that I should remember the children) $ H H H$

hore koLo] kmeghlâ (that I should remember everyday) H H H H

hore bârâbâlê] pitsô (that they should answer the call) H H H H H H H

hore bârâbâsanô] nthô yeô (that they should exchange words over that thing) H H H H H H H H

B-stems

hore bahiLswâng matsuô (that they should wash each other’s hands) H H H H H H H

hore bôphôholô] matsuô (that they should fondle the feet) H H H H H H H H

hore bôphôholô] matsuô (that they should fondle each other’s hands) H H H H H H H H

/... It
It is interesting to note that in the present Subjunctive positive A- and B-stems behave in exactly the same way throughout.

4.355 With O.C.s. The O.C. has L with all A-stems. With B-stems, the O.C. has L with monosyllabic stems, and H with all non-monosyllabic stems.

Monosyllabic stems: Both A- and B-stems have H. There is no modification by following adjuncts. The complete verb form therefore always has tone pattern HL|H.

**Examples:**
- A-stems
  - *hore bāreša dijš* (that they should give us food)
  - *hore bāreša kāmphša* (that they should give us everyday)
  - *hore bāmōtsēa lekgōtšēng* (that they should disown him in court)
  - *hore bāmōtsēa kāmphša* (that they should disown him everyday)

4.356 From disyllabic stems on: (a) A-stems have H-L alternation on the final syllable, and H on all the remaining syllables.

**Examples:**
- *hore bāmōrūtē hobala* (that they should teach him to read)
- *hore bāmōrūtē kāmphša* (that they should teach him everyday)
- *hore arēkādēmē šukā* (that he should lend us a book)
- *hore arēkādēmē s kgōlo* (that he should lend us the big one)
- *hore bāmōaṛābēlē pōtsō* (that they should answer the question for him)
- *hore bāmōaṛābēlē ē thāta* (that they should answer the difficult one for him)

(b) Disyllabic B-stems have LH which is not influenced by following adjuncts. The complete form therefore always has tone pattern HH|IH.

**Examples:**
- *hore bāmōchlateswē mǎqtō* (that they should wash his feet)
- *hore bāmōchlateswē hantša* (that they should wash him well)

From trisyllabic stems on, B-stems behave according to the following pattern: L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables.

**Examples:**
- *hore bāmōbatsēmē dijš* (that they should find food for him)
- *hore bāmōbatsēmē kāmphša* (that they should search everyday on his behalf)
- *hore māmphepholētsē mǎqtō* (that we should fondle his feet)
4.357 Negative. The negative formative *ne*, which comes immediately after the S.C., has L. Only the simple (i.e. uncompounded) negative is discussed here. A remark on the compound negative will be found at the end of the treatment of the Subjunctive.

4.358 Without C.C.s.

Monosyllabic stems: Both A- and B-stems have H. There is no modification by following adjuncts. The tone pattern is therefore always HL [H].

Examples: A-stems

- **hore baseši nebá** (that they should not eat meat)
- **hore baseši kámpělā** (that they should not eat everyday)

B-stems

- **hore baseši hašę** (that they should not come home)
- **hore baseši kámpělā** (that they should not come everyday)

4.359 From disyllabic stems on: (a) A-stems have H-L alternation on the final syllable, and H on all the remaining syllables.

Examples:

- **hore basešište pôteř** (that they should not ask a question) HL HM
- **hore basešište šš thāta** (that they should not ask a difficult one) HL [H]
- **hore basešarāba pôteř** (that they should not answer the question) HL [H]
- **hore basešarāba šš bonōlō** (that they should not answer the easy one) HL HL
- **hore basešarābači dipôteř** (that they should not answer questions for each other) HL [H] [H]
- **hore basešarābači thāta** (that they should not answer the difficult ones for each other) HL [H] [H] HL

(b) Disyllabic B-stems have LH,

which is not modified by following adjuncts. The tone pattern of the complete form is therefore HL [LH].

Examples:

- **hore ašešalā pūka** (that he should not read a book)
- **hore ašešalā šš kōlo** (that he should not read the big one)
From trisyllabic stems on, B-stems go according to the following pattern of behaviour—L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables.

**Examples:**

<table>
<thead>
<tr>
<th>B-stem</th>
<th>Meaning</th>
<th>H-L Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>hore basebapele bôlô (that they should not play football)</td>
<td>HLH</td>
<td></td>
</tr>
<tr>
<td>hore basebapele kamphlô (that they should not play everyday)</td>
<td>HLH/L</td>
<td></td>
</tr>
<tr>
<td>hore baseatamle kapatlakô (that they should not go near in haste)</td>
<td>HLH/L</td>
<td></td>
</tr>
<tr>
<td>hore basephopholetsane maqto (that they should not fondle each other’s feet)</td>
<td>HLH/HH</td>
<td></td>
</tr>
<tr>
<td>hore basephopholetsane kamphlô (that they should not fondle each other everyday)</td>
<td>HLH/LHHL</td>
<td></td>
</tr>
</tbody>
</table>

With O.C.s. The O.C. here has H throughout with B-stems. With A-stems, it has H with monosyllabic stems, and H or L with non-monsoyllabic stems.

**Monosyllabic stems:** Both A- and B-stems have H-L alternation made possible by the H of the immediately preceding O.C.

**Examples:**

<table>
<thead>
<tr>
<th>A-stem</th>
<th>Meaning</th>
<th>H-L Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>hore basebôlô dijô (that they should not give him food)</td>
<td>HLH</td>
<td></td>
</tr>
<tr>
<td>hore basebôlô kamphlô (that they should not give him everyday)</td>
<td>HLH/L</td>
<td></td>
</tr>
<tr>
<td>hore baseatswe lekgotlêng (that they should not disown him in court)</td>
<td>HLH</td>
<td></td>
</tr>
<tr>
<td>hore baseatswe kamphlô (that they should not disown him everyday)</td>
<td>HLH/L</td>
<td></td>
</tr>
</tbody>
</table>

**Examples:**

<table>
<thead>
<tr>
<th>B-stem</th>
<th>Meaning</th>
<th>H-L Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>hore basephopholetswe bôlô (that we should not answer the question for them)</td>
<td>HLH</td>
<td></td>
</tr>
<tr>
<td>hore basephopholetswe pôtaô (that we should not answer the difficult one for them)</td>
<td>HLH</td>
<td></td>
</tr>
</tbody>
</table>

/... (b)
(b) Disyllabic B-stems have LH which is not modified by following adjuncts. The pattern is therefore always HLH|LH.

Examples:

hora ṭesemhlatša me to (that we should not wash his feet)
hora ṭesemhlatša ke mēla (that we should not wash him everyday)

From trisyllabic stems on, B-stems go according to the following pattern of behaviour: L on the first syllable, R-L alternation on the final syllable, and H on all the remaining syllables.

Examples:

hora ṭesemhlatša ui (that we should not find food for him) HLH|LHH
hora ṭesemhlatša ka mēla (that we should not search on his behalf everyday) HLH|LHL
hora ṭesemphoholātše mo to (that we should not fondle his feet) HLH|LHH
hora ṭesemphoholātše ke mēla (that we should not fondle him everyday) HLH|LHL
hora ṭesematoiloša pīlo (that we should not extend the house for him) HLH|LHHH
hora ṭesematoiloša 8 nyēnyē (that we should not extend the small one for him) HLH|LHHH

Subjunctive Mood, Past Tense

4.362 In this tense, there are two sets of S.C.s., one with L and the other with H. All S.C.s. of the 1st and 2nd persons, singular and plural, as well as the S.C. of the 3rd person Class 1, have L. The remaining S.C.s. (all 3rd person) have H.

4.363 Positive. Without O.C.B. Here B-stems behave according to one pattern, whatever the number of syllables. We shall therefore dispose of them first. All B-stems have L on all syllables, irrespective of whether the preceding S.C. has L or H. There is no modification of the resulting tone patterns by following adjuncts.

Examples:

Katswe magā (I bled) ‖ L
Na ya hā (They went home) ‖ L
Abula moyaka (He opened the door) ‖ LL
Babula moyaka (They opened the door) ‖ LL
Baatamāla mōllōn (We went near the fire) ‖ LLLL
Baatamāla mōllōn (They went near the fire) ‖ LLLL
4.364 A-stems, on the other hand, behave in the following ways:

Monosyllabic stems have H, irrespective of whether the S.C. has N or L. Where the S.C. has H, the modern tendency is to have this S.C. placed immediately before the verb stem. Yet it must be noted that some speakers prefix a low-toned ə to the monosyllabic stem. A later development from this stage is to drop this ə and lengthen the vowel of the preceding high-toned S.C. The H of this S.C. is then replaced by H|L. This is a compensatory process identical with that observed with high-toned tin in the formation of the future of the Indicative. Many speakers, however, simply drop the low-toned syllable between the S.C. and the stem, thus bringing two H's into juxtaposition.

The tonal relationship between the verb and the following adjunct differs according to whether or not the low-toned syllable just referred to is retained. If it is retained, the tone pattern of the complete verb form is H|H, and a following adjunct has no modifying influence on it.

**Examples:**

\[ \text{Tseajə milə} \] (They ate the millet)
\[ \text{Tseajə həntə} \] (They ate well)

But where the low-toned element is discarded, and the prefinal syllable (the S.C. now) therefore has H, the stem has H-L alternation.

**Examples:**

\[ \text{Tənə nama} \] (They ate meat) H|H
\[ \text{Tənə s təna} \] (They ate the raw one) H|L

Where the S.C. has L, it is always placed immediately before the verb stem, and the complete tone pattern is then L|H, and following adjuncts have no modifying influence on it.

**Examples:**

\[ \text{Kənə nama} \] (I ate meat)
\[ \text{Kənə nəmonətorə} \] (I ate pleasantly)

4.365 Non-monosyllabic A-stems behave in the following ways:

(a) with high-toned S.C.s. Disyllabic stems used with high-toned S.C.s. have H-L alternation on the final syllable. The first syllable has L, which I consider to be the original form, and which occurs only with Context 1 adjuncts. This L gives rise to the dynamic form L-H, which is finally replaced by H. All three varieties of tone pattern on this syllable are still in use. The two series of tone patterns of the complete verb form, as used with adjuncts of the two Contexts, are then H|LH or H|L-HH or H|HH with Context 1 adjuncts, and H|L-HH or H|HH with Context 2 adjuncts.

**Examples:**

\[ \text{bərəjə or bərəjə or bərəjə gənə} \] (They taught the children)
\[ \text{bərəjə or bərəjə həntə} \] (They taught well)
From trisyllabic stems on, A-stems used with high-toned S.C.s. have LH on the first two syllables and L on all the remaining syllables. The resulting tone patterns are not modified by following adjuncts:

**Examples:**
- Basabetsa masimong (They worked in the fields) H|HLL
- Basabetsa kamatllo (They worked hard) H|HLL
- Basabetsa nantle (They answered each other well) H|HLLL
- Basabetsa nantle (They understood each other well) H|HLLL

(b) with low-toned S.C.s. Disyllabic stems have H-L alternation on the final syllable and H on the first syllable.

**Examples:**
- Raruta pana (We taught the children) L|HH
- Raruta ba baholo (We taught the big ones) L|HL

From trisyllabic stems on, the first two syllables of an A-stem have $R$, and all the remaining syllables have $L$. There is no modification by following adjuncts.

**Examples:**
- Rarutshala pana (We remembered the children) L|HHL
- Rarutshala pita (We answered the call) L|HLLL
- Ratutubolo ha mahlolo (Our eyes were opened) L|HLLL

4-366 With O.C.s.

**Monosyllabic stems:** When the S.C. has $L$, then the O.C. always has $R$.

In this case, the stem, whether A- or B-form, has H-L alternation.

**Examples:**

- **A-stems**
  - Ramofa die (We gave him food) LH|H
  - Ramofa kathabo (We gave him with pleasure) LH|L

- **B-stems**
  - Ramotswa lekgotleng (We disowned him in court) LH|H
  - Ramotswa kapotlakgo (We disowned him quickly) LH|L

When the S.C. has $H$, then the O.C. has either $L-H$ or $H$ from original $L$.

In the examples, it is marked as a low-rising tone. The stem here also has H-L alternation whether it be A- or B-form.

**Examples:**

- **A-stems**
  - Ramofa die (They gave him food) HL/H|H or H|HH
  - Ramofa kathabo (They gave him with pleasure)HL/H|L or H|H|L

- **B-stems**
  - Ramotswa lekgotleng (They disowned him in court)HL/H|H or H|H|H
  - Ramotswa kapotlakgo (They disowned him quickly)HL/H|L or H|H|L

/... 4.367
4.367 From disyllabic stems on: (a) B-stems follow one pattern of behaviour throughout, as follows: H on the first syllable of the stem and L on all the remaining syllables. This pattern remains the same irrespective of whether the S.C. used has L or H. There is no modification by following adjuncts. The O.C. has L throughout.

Examples:
- *Bemchlatse maqto* (They washed his feet) H|L
- *Bemchlatse hantle* (They washed him well) H|L
- *Bamorutse kôbô* (They covered him with a blanket) H|L/L
- *Bamophohloetsa maqto* (They fondled his feet) H|L/L/L
- *Bamokotlalase pto* (They extended the house for him) H|L/L/L

(b) Disyllabic A-stems have H on the first syllable and H-L alternation on the final syllable. The O.C. has L throughout when the preceding S.C. has H, and either H or L when this S.C. has L.

Examples:
- *Bamoruta Sesôtho* (They taught him Sotho) H|H
- *Bamoruta hantle* (They taught him well) H|L
- *Bamoruta hoqala* (We taught him to read) L|H
- *Bamoruta kaôshesêtô* (We taught him with eagerness) L|H

From trisyllabic stems on, A-stems go according to the following pattern of behaviour: H on the first syllable and L on all the remaining syllables. Here again the O.C. has L always when the preceding S.C. had H, and H or L when the S.C. has L. There is no modification by following adjuncts.

Examples:
- *Barehobotsa bana* (They reminded us of the children) H|L/L
- *Barehobotsa bana* (We reminded them of the children) L|H/L
- *Barekotlalâ pôtsô* (They answered the question for us) H|H/L/L
- *Barekotlalâ pôtsô* (We answered the question for them) L|H/L/L
- *Barekotlalase pôle* (They guided us on) H|L/L/L
- *Barekotlalase pôle* (We guided them on) L|H/L/L

4.368 Negative. Only the compound negative is found in the past tense. The second verb in this compound, which is in fact the one whose tone is under investigation, occurs in the positive Subjunctive past tense, which has just been done. Under this head, therefore, only the first portion of the compound negative, which is the same for both the present and the past tenses, is treated.
4.369 First portion of the compound negatives of the Subjunctive Mood, present and past. In both the present and the past, the verb stem used in the first part of the compound is kë (possibly a negative of ka). This stem (which is a primary deficient verb stem) is preceded by the negative formative as which has L. The only difference which obtains between the present and the past in this connection, is that in the present tense all S.C.s. have H, giving, as the tone pattern of the first portion of the compound in this tense, HL | H. In the past tense, on the other hand, some S.C.s. have H and others L. There are, therefore, two possible tone patterns of the first part of the compound in this tense, viz. HL | H as in the present, and LL | H. To complete the compound, for both present and past compound negatives, the tone pattern of the positive of the past Subjunctive form of the complementary verb is placed after the pattern of the deficient verb. O.C.s. if any, always come in the second part of the compound, immediately before the complementary verb stem.

Examples: Present negative

\[\text{Leseké la} ñ \text{ bobé} (You must not eat bread) \text{ HL | H - L | H}\]
\[\text{Leseké ráya} ñ \text{ kumphi} (You must not speak everyday) \text{ HL | H - L | H}\]

Past negative

\[\text{Leseké ráya} ñ \text{ bë} (We did not go home) \text{ LL | H - L | L}\]
\[\text{Leseké bëbëla} ñ \text{ bûka} (They did not read the book) \text{ HL | H - R | LL}\]

Summary

4.370 Present. Positive. Without O.C.s. (All S.C.s. have H)

Monosyllabic stems:

A-stems: H with Context 1; complete form H | H
L with Context 2; complete form H | L

B-stems: H with Context 1; complete form H | H
L with Context 2; complete form H | L

Disyllabic stems:

A-stems: HH with Context 1; complete form H | HH
HL with Context 2; complete form H | HL

B-stems: HH with Context 1; complete form H | HH
HL with Context 2; complete form H | HL

Trisyllabic stems:

A-stems: HHH; no modification; complete form H | HHL
B-stems: HHL; no modification; complete form H | HHL

N.B. From this point on, both A- and B-stems continue on the pattern: H on the first syllable, H on the final syllable, and L on all the remaining syllables.
4.371 With O.C.s.

Monosyllabic stems:

A-stems: H; no modification; complete form HL|H
B-stems: H; no modification; complete form HL|H

Disyllabic stems:

A-stems: HH with Context 1; complete form HL|HH
HL with Context 2; complete form HL|HL
B-stems: LH with Context 1; no modification; complete form HL|LH
LHL with Context 2; complete form HL|LHL

N.B. From disyllabic stems on, A-stems have H-L alternation on the final syllable and H on all the remaining syllables; and from trisyllabic stems on B-stems have L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables.

Negative

4.372 Without O.C.s.

Monosyllabic stems:

A-stems: H; no modification; complete form HL|H
B-stems: H; no modification; complete form HL|H

Disyllabic stems:

A-stems: HH with Context 1; complete form HL|HH
HL with Context 2; complete form HL|HL
B-stems: LH with Context 1; no modification; complete form HL|LH
LHL with Context 2; complete form HL|LHL

N.B. From disyllabic stems on, A-forms have H-L alternation on the final syllable, and H on all the remaining syllables. B-stems follow a regular pattern from the trisyllabic stage, viz. L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables.

4.373 With O.C.s.

Monosyllabic stems:

A-stems: H with Context 1; complete form HLH|H
L with Context 2; complete form HLH|L
B-stems: H with Context 1; complete form HLH|H
L with Context 2; complete form HLH|L
Dicisyllabic stems:
A-stems: HH with Context 1; complete form HLH|HH
HL with Context 2; complete form HLH|HL
B-stems: LH; no modification; complete form HLH|LH

Trisyllabic stems:
A-stems: HHH with Context 1; complete form HLH|HHH
HHL with Context 2; complete form HLH|HHL
B-stems: LHH with Context 1; complete form HLH|LHH
LHL with Context 2; complete form HLH|LHL

N.B. From disyllabic stems on, A-forms have H-L alternation on the final syllable, and H on all the remaining syllables. B-stems follow a regular pattern from the trisyllabic stage, viz. L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables.

With low-toned S.C.s.
Monosyllabic stems:
A-stems: H; no modification; complete form L|H
B-stems: L; no modification; complete form L|L

Disyllabic stems:
A-stems: HH with Context 1; complete form L|HH
HL with Context 2; complete form L|HL
B-stems: LL; no modification; complete form L|LL

Trisyllabic stems:
A-stems: HHH; no modification; complete form L|HHH
LLL; no modification; complete form L|LLL

N.B. From this point on, A-stems go according to the pattern: H on the first two syllables and L on all the remaining syllables. B-stems follow a regular pattern from the monosyllabic stage, viz. L on all syllables.

With high-toned S.C.s.
Monosyllabic stems:
A-stems: H with Context 1; complete form H|H or HL|H
L with Context 2; complete form H|L or HL|H
B-stems: L; no modification; complete form H|L

Disyllabic stems:
A-stems: LH or L/HH with Context 1; complete form H|LH or H|L/HH
or H|HH
L/HL or HL with Context 2; complete form H|L/HL or H|HL
B-stems: LL; no modification; complete form H|LL

/... Trisyllabic
Trisyllabic stems:
A-stems: HLL; no modification; complete form H|HLL
B-stems: LLL; no modification; complete form H|LLL

N.B. From trisyllabic stems on, A-forms go according to the pattern: LH on the first and second syllables respectively, and L on all the remaining syllables. B-forms follow a regular pattern from the monosyllabic stage, viz. L on all syllables.

4.175 With O.C.s. The tones of the stem are the same with both high- and low-toned S.C.s. Only forms with high-toned S.C.s. are given here, the others being easily deducible from them.

Monosyllabic stems: (The O.C. has L|H or H.)
A-stems: H with Context 1; complete form HL|H or H|H
L with Context 2; complete form HL|L or H|L
B-stems: H with Context 1; complete form HL|H or H|H
L with Context 2; complete form HL|L or H|L

Disyllabic stems: (From this point on, O.C.s. have L)
A-stems: HH with Context 1; complete form HL|HH
L with Context 2; complete form HL|L
B-stems: HL; no modification; complete form HL|L

Trisyllabic stems:
A-stems: HHL; no modification; complete form HL|HHL
B-stems: HLL; no modification; complete form H|LLL

N.B. From trisyllabic stems on, A-forms go according to the pattern: H on the first two syllables and L on all the remaining syllables. B-forms follow a regular pattern from the disyllabic stage, viz. H on the first syllable and L on all the remaining syllables.

The Habitual Tense

4.176 In this tense, the verb whose tone is analyzed (i.e. the verb in the habitual tense) usually occurs as part of a compound verbal construction of which it constitutes the complement. The first of the two verbs comprising this compound can be any one of a number of deficient verbs, all of which end in the vowel ə when used in this construction. All S.C.s. in this mood have L.

4.177 Positive. Without O.C.s.

Monosyllabic stems: Both A- and B-stems have H, which is not modified by following adjuncts. The tone pattern of the complete verb form is therefore always L|H.

Examples: A-stems

beāø pōhēb (they eat the bread)
beāø kōmghē (they eat everyday)

B-stems

batēsw mā_google (they bleed)
batēsw kōmghē (they go out everyday)
4.378 From disyllabic stems on: (a) A-stems have H-L alternation on the final syllable, and H on all the remaining syllables.

Examples:

\[
\begin{align*}
\text{barutē bane} & \quad (\text{they teach the children}) \quad \text{L} \mid \text{HH} \\
\text{barutē ba baholo} & \quad (\text{they teach the big ones}) \quad \text{L} \mid \text{HL} \\
\text{bapho po bane} & \quad (\text{they remember the children}) \quad \text{L} \mid \text{HHH} \\
\text{bapho po kamehla} & \quad (\text{they remember always}) \quad \text{L} \mid \text{HHL} \\
\text{basebēlētse mo rena} & \quad (\text{they work for the king}) \quad \text{L} \mid \text{HHH} \\
\text{basebēlētse} \, \text{è mo ho lo} & \quad (\text{they work for the great one}) \quad \text{L} \mid \text{HHHL}
\end{align*}
\]

(b) B-stems behave as follows: Disyllabic stems have LH which is not modified by following adjuncts. The complete pattern is therefore always L\mid LH.

Examples:

\[
\begin{align*}
\text{babale buka} & \quad (\text{they read a book}) \\
\text{babale} \, \text{è kgolo} & \quad (\text{they read a big one})
\end{align*}
\]

From trisyllabic stems on, B-stems have L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables.

Examples:

\[
\begin{align*}
\text{babale bolo} & \quad (\text{they play football}) \quad \text{L} \mid \text{LHH} \\
\text{babale hemonate} & \quad (\text{they play pleasantly}) \quad \text{L} \mid \text{LHL} \\
\text{bastamele mollong} & \quad (\text{they go near the fire}) \quad \text{L} \mid \text{LHHH} \\
\text{bastamele kamehla} & \quad (\text{they go near everyday}) \quad \text{L} \mid \text{LHL} \\
\text{bastoloṣeṣaŋe matlo} & \quad (\text{they extend houses for each other}) \quad \text{L} \mid \text{LHHH} \\
\text{bastoloṣeṣaŋe} \, \text{è matshu} & \quad (\text{they extend the new ones for each other}) \quad \text{L} \mid \text{LHHHL}
\end{align*}
\]

4.379 With O.C.s.

Monosyllabic stems: The O.C. has H here with both A- and B-stems. Both A- and B-stems have H-L alternation. This is made possible by the H of the immediately preceding O.C.

Examples: A-stems

\[
\begin{align*}
\text{bamotē dijō} & \quad (\text{they give him food}) \quad \text{L} \mid \text{H}
\end{align*}
\]

B-stems

\[
\begin{align*}
\text{bamotse lekgotlēn} & \quad (\text{they disown him in court}) \quad \text{L} \mid \text{H}
\end{align*}
\]

/... 4.380
From disyllabic stems on: (a) A-stems have H-L alternation on the final syllable, and H on all the remaining syllables. The O.C. has either H or L.

Examples:
- bamorutse Sesotho (they teach him Sotho) LH EH
- bamorutse kæsæhla (they teach him everyday) LH EH
- bemohiptse bana (they remind him of the children) LH HHH
- bemohiptse kæmeshla (they remind him everyday) LH HHL

(b) B-stems behave as follows:
Disyllabic stems have LH, which is not modified by following adjuncts. The O.C. has H. The complete tone pattern is therefore always LH EH.

Examples:
- bemohiatse motsæh (they wash his hands)
- bemohiatse kæsædpæ (they wash him with soap)

From trisyllabic stems on, B-stems have L on the first syllable, H-L alternation on the final syllable, and H on all the remaining syllables.

Examples:
- bemohiatse dji5 (they find food for him) LH LHH
- bemohiatse kæsæheh (they search with eagerness on his behalf) LH LIH
- bemohiptse matsæh (they fondle his hands) LH LHHH
- bemohiptse kæmesh (they fondle him everyday) LH LIHL
- bemohiptse pto (they extend the house for him) LH LHHH
- bemohiptse mïtshã (they extend the new one for him) LH LIHL

4.381. Negative. The negative is a compound verbal form incorporating the deficient verb stem LI with H. This is preceded by the negative formative EH which has L, and this is in turn preceded by the S.C. which has L also. The first part of the compound, therefore, always has tone pattern LH EH. The remainder of this compound consists of the habitual positive of the complementary verb, which has just been discussed. The O.C., if any, comes in the second part of the compound, immediately before the complementary stem.

Examples:
- basekä bai bokëbë (they do not eat bread) LL H - LH
- basekä bazwëpaz (they do not bleed) LL H - LH
- basekä banëtse hantë (they do not work well) LL H-L HHL
There is an alternative negative in which the first part of the original positive compound is negatived. Here the negative consists of low-toned negative formative \( \text{th} \), followed by high-toned S.C., followed by \( \text{ke} \) with high tone also. This gives tone pattern \( \text{LH} \text{H} \) which is then followed by the complementary verb in the habitual positive as before. Sometimes a verb stem \( \text{he} \) is added to the first part of the compound form. This \( \text{he} \) has \( \text{L} \), and the complete tone pattern of the first part of this compound is then \( \text{LH}\text{HL} \).

**Examples:**

\[
\text{Habaké baruté bana} \quad \text{(They never teach the children)} \\
\downarrow \quad \downarrow \\
\text{Habakobé baruté bana} \quad \text{(They never teach the children)}
\]

\[
\text{LH}\text{HL - LHH}
\]

**Summary**

\[4.381 \text{ Positive Without O.C.s.}\]

**Monosyllabic stems:**

- A-stems: \( \text{H} \); no modification; complete form \( \text{LH} \)
- B-stems: \( \text{H} \); no modification; complete form \( \text{LH} \)

**Disyllabic stems:**

- A-stems: \( \text{HH} \) with Context 1; complete form \( \text{LHH} \)
  - \( \text{HL} \) with Context 2; complete form \( \text{LHL} \)
- B-stems: \( \text{LH} \); no modification; complete form \( \text{LHL} \)

**Trisyllabic stems:**

- A-stems: \( \text{HHH} \) with Context 1; complete form \( \text{LHH} \)
  - \( \text{HHL} \) with Context 2; complete form \( \text{LHL} \)
- B-stems: \( \text{LHH} \) with Context 1; complete form \( \text{LHL} \)
  - \( \text{LHL} \) with Context 2; complete form \( \text{LHH} \)

**N.B.** From this point on, all final syllables of both A- and B-forms have \( \text{H} - \text{L} \) alternation.

\[4.384 \text{ With O.C.s.}\]

**Monosyllabic stems:** (O.C. has \( \text{H} \))

- A-stems: \( \text{H} \) with Context 1; complete form \( \text{LH} \)
  - \( \text{L} \) with Context 2; complete form \( \text{LHL} \)
- B-stems: \( \text{H} \) with Context 1; complete form \( \text{LH} \)
  - \( \text{L} \) with Context 2; complete form \( \text{LHL} \)

**Disyllabic stems:** (From this point on, O.C. has \( \text{H} \) with all B-stems, and \( \text{H} \) or \( \text{L} \) with A-stems).

- A-stems: \( \text{HH} \) with Context 1; complete form \( \text{LHH} \)
  - \( \text{HL} \) with Context 2; complete form \( \text{LHL} \)
- B-stems: \( \text{LH} \); no modification; complete form \( \text{LHL} \)

**Trisyllabic stems:**

- A-stems: \( \text{HHH} \) with Context 1; complete form \( \text{LHH} \)
  - \( \text{HHL} \) with Context 2; complete form \( \text{LHL} \)
- B-stems: \( \text{LHH} \) with Context 1; complete form \( \text{LHL} \)
  - \( \text{LHL} \) with Context 2; complete form \( \text{LHH} \)
1. From this point on, all final syllables of both A- and B-stems, have H-L alternation.

2. The only difference in the tonal behaviour of the stem with and without O.C.s. is encountered in monosyllabic stems, where the stem has immutable H when used without an O.C., and H-L alternation when used with an O.C. From disyllabic stems on, the tones of the stems are the same in both situations.

**4.385 Negative.**

This is a compound form of which the first part may be either LH or LH H or LH HL. The second part of the compound is identical with the habitual positive.

**The Potential Mood**

**4.386 All S.C.s. here have L in the primary modality and H in the participial modality.** The Potential formative ka contrasts tonally with the preceding S.C., having H when the S.C. has L, and L when the S.C. has H.

**4.387 Positive. Without O.C.s.** All B-stems behave according to one pattern, as follows: The stem has L on all syllables. The tone pattern of the stem is preceded by the sequence S.C. + ka, which, as already indicated, may have either LH or HL, according to whether the verb is in the primary or participial modality, respectively. There is no modification by following adjuncts.

**Examples:**

**Primary modality**

- Bakatswa mada (They might bleed) LH L
- Bakatswa kângâlâ (They may go out everyday) LH L
- Bakabala bûka (They may read a book) LH LL
- Bakabapala bôlô (They may play football) LH LLL

**Participial modality**

- Bakatswa mada (It being possible that they may bleed) HL L
- Bakabala bûka (They being in a position to read a book) HL LL
- Bakabapala bôlô (They being in a position to play football) HL LLL

**4.388 A-stems behave in the following ways:** Monosyllabic stems in the primary modality have H-L alternation, made possible by the fact that, in this modality, the Potential formative ka, which immediately precedes the stem, has H.

**Examples:**

- Bakâlô bôbôlô (They may eat the bread) LH H
- Bakâlô kângâlâ (They may eat everyday) LH L
In the participial modality, since the prefinal syllable (ka) has L, following adjuncts have no modifying effect on the final syllable of the verb, which then has immutable H. The complete tone pattern is then always H L H.

**Examples:**

- *Rekaña bọbọba* (They being entitled to eat the bread)
- *Rekaña kāmplāa* (They being entitled to eat everyday)

4.389 Disyllabic A-stems in the primary modality have H-L alternation on the final syllable. Where the verb is followed by an adjunct of Context 1, three alternative tone patterns are found, viz. LH, L-HH and HH. The form HH is seen to have been derived ultimately from LH via L HH.

**Examples:**

- *Rekaruta bana* (We can teach the children) LH LH or LH L-HH
- *Rekaruta kāmpāla* (We can teach everyday) LH NL

In the participial modality, the stem has H-L alternation on the final syllable and H on the first syllable.

**Examples:**

- *Rekaruta bana* (We being able to teach the children) HL HH
- *Rekaruta kāmpāla* (We being able to teach everyday) HL HL

4.390 From trisyllabic stems on, A-stems behave in the following ways:

- In the primary modality the first two syllables have LH, and all the remaining syllables have L. There is no modification by following adjuncts.

**Examples:**

- *Rekahọtela bana* (We may remember the children) LH LHL
- *Rekahọtela bana* (We may remind each other of the children) LH LLLL
- *Rekaarēblāla dipōtsē* (We may answer the questions for each other) LH LLLL

In the participial modality, the first two syllables have H, and all the remaining syllables have L. Here also, following adjuncts have no modifying influence on the tone pattern of the verb.

**Examples:**

- *Rekahọtela bana* (We being in a position to remember the children) HI HHL
- *Rekahọtela bana* (We being able to remind each other of the children) HI RHHL
- *Rekaarēblāla dipōtsē* (We being able to answer the questions for each other) HI REHHL

/... 4.391
4.391 With O.C.s.

Monosyllabic stems: The O.C. here has either H or L-H with both A- and B-stems in the primary modality. It is tone-marked low-rising. The existence of L-H on the O.C. suggests that it originally had L, from which the alternative H evolved via L-H. In the participial modality the O.C. has a non-derivative H.

In both the primary and the participial modalities the stem, whether A- or B-form, has H-L alternation, which is made possible by the fact that the O.C., which immediately precedes the stem, has, or ends in, H.

Primary Modality

Examples: A-stems

Rekamọfa ɗiƙo (We can give him food) LHH|H or LHH/ H|H
Rekamọfa kamaŋhla (We can give him everyday) LHH|L or LHH/ H|L

B-stems

Rekamọtaswa lekọtţọng (We can disown him in court) LHH|H or LHH/ H|L
Rekamọtaswa kamaŋhla (We can disown him everyday) LHH|L or LHH/ H|L

Participial Modality

A-stems

Rekamọfa ɗiƙo (We being able to give him food) HHH|H
Rekamọfa kamaŋhla (We being able to give him everyday) HHH|L

B-stems

Rekamọtaswa lekọtţọng (We being able to disown him in court) HHH|H
Rekamọtaswa kamaŋhla (We being able to disown him everyday) HHH|L

4.392 From disyllabic stems on:

(a) B-stems follow one pattern of behaviour, viz. H on the first syllable, and L on all the remaining syllables. This pattern obtained in both the primary and the participial modalities. The O.C. has L in the primary modality, and either H or L in the participial modality.

Examples: Primary Modality

Bakamọhatsawa matsaƙo (They can wash his hands) LHH|NL
Bakamọhatsiela ɗiƙo (They can find food for him) LHH|HLH
Bakamọpo-popupolọtsa maƙo (They can fondle his feet) LHH|HLH

Participial Modality

Bakamọhatsawa matsaƙo (They being in a position to wash his hands) HHH|NL or HHH|HL
Bakamọhatsiela ɗiƙo (They being in a position to find food for him) HHH|HLH or HHH|HL
Bakamọpo-popupolọtsa maƙo (They being in a position to fondle his feet) HHH|HLH or HHH|HLH

//
(b) A-stems behave in the following ways: In both the primary and the participial modalities disyllabic A-stems have H-L alternation on the final syllable. The O.C. has L in the primary modality, and either H or L in the participial modality.

Examples:

**Primary Modality**

![Image](image-url)

**Participial Modality**

![Image](image-url)

From trisyllabic stems on, A-stems have H on the first two syllables and L on all the remaining syllables. Here also the O.C. has L in the primary modality, and either H or L in the participial modality.

Examples:

**Primary Modality**

![Image](image-url)

**Participial Modality**

![Image](image-url)

4.394 **Negative.** The negative is a compound verbal form. There are two such forms which are used interchangeably. The second part of the compound, i.e. the complementary verb, has, in both alternatives, a form which both grammatically and tonally, is identical with the Subjunctive Past.

4.395 **First portion of the compound negative of the Potential.** There are two alternatives. The longer of these consists of the negative formative ha which has L, the S.C. which has H, the Potential formative ke with L, and the deficient verb stem ke which has H; i.e.

![Image](image-url)
The other (shorter) alternative consists of the S.C. which has L, kë with H, and deficient verb stem kë with either H or L.

**Examples:**

- *Rakšaka raya Lesoto (We shall not go to Basutoland)* \( \text{LH} \H \text{L} \)
- *Rakšaka bangwëte a ditaba (They will not tell him the news)* \( \text{LH} \H \text{LH} \)

In both these compounds, the O.C., if any, comes in the second portion, immediately before the complementary verb stem, the verb incorporating this stem then being identical with the past Subjunctive positive with an O.C.

### Summary

**4-396 Positive. Primary Modality. Without O.C.s. (All S.C.s. have L.)**

**Monosyllabic stems:**

<table>
<thead>
<tr>
<th>Type</th>
<th>Stem</th>
<th>Context 1</th>
<th>Complete Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-stems</td>
<td>H</td>
<td>complete</td>
<td>LH H</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>complete</td>
<td>LH L</td>
</tr>
</tbody>
</table>

**Disyllabic stems:**

<table>
<thead>
<tr>
<th>Type</th>
<th>Stem</th>
<th>Context 1</th>
<th>Complete Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-stems</td>
<td>LH</td>
<td>complete</td>
<td>LH LH</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>complete</td>
<td>LH L</td>
</tr>
</tbody>
</table>

**Trisyllabic stems:**

<table>
<thead>
<tr>
<th>Type</th>
<th>Stem</th>
<th>Context 1</th>
<th>Complete Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-stems</td>
<td>LH</td>
<td>complete</td>
<td>LH LH</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>no modification</td>
<td>LH L</td>
</tr>
</tbody>
</table>

**4-397 With O.C.s.**

**Monosyllabic stems:** (O.C.: H or L+H with both A- and B-stems, with additional alternative L for B-stems).

<table>
<thead>
<tr>
<th>Type</th>
<th>Stem</th>
<th>Context 1</th>
<th>Complete Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-stems</td>
<td>H</td>
<td>complete</td>
<td>LH H H or LH H L</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>complete</td>
<td>LH H L or LH L L</td>
</tr>
<tr>
<td>B-stems</td>
<td>H</td>
<td>complete</td>
<td>LH H H or LH H L</td>
</tr>
</tbody>
</table>

**Disyllabic stems** (From this point on the O.C. has L with both A- and B-stems)

<table>
<thead>
<tr>
<th>Type</th>
<th>Stem</th>
<th>Context 1</th>
<th>Complete Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-stems</td>
<td>HH</td>
<td>complete</td>
<td>LH L HH</td>
</tr>
<tr>
<td></td>
<td>HL</td>
<td>complete</td>
<td>LH L HL</td>
</tr>
</tbody>
</table>

**Trisyllabic stems**

<table>
<thead>
<tr>
<th>Type</th>
<th>Stem</th>
<th>Context 1</th>
<th>Complete Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-stems</td>
<td>HHH</td>
<td>no modification</td>
<td>LH L HHL</td>
</tr>
<tr>
<td></td>
<td>HLL</td>
<td>no modification</td>
<td>LH L HLL</td>
</tr>
</tbody>
</table>

---

**N.B.**
N.B. From this point on, A-stems follow the pattern H on the first two syllables, and L on all the remaining syllables. B-stems follow a regular pattern from the disyllabic stage, viz. H on the first syllable and L on all the remaining syllables.

4.398 Partial modality. Without O.C.s.

Monosyllabic stems:

A-stems: H; no modification; complete form H/H
B-stems: L; no modification; complete form H/L

Disyllabic stems:

A-stems: HH with Context 1; complete form H/H
       HL with Context 2; complete form H/L
B-stems: LL; no modification; complete form H/L

Trisyllabic stems:

A-stems: HHL; no modification; complete form H/H/H
       HLL; no modification; complete form H/L/L

N.B. From this point on, A-stems follow the pattern H on the first two syllables, and L on all the remaining syllables. B-stems follow a regular pattern right from the monosyllabic stage, viz. L on all syllables.

4.399 With O.C.s.

Monosyllabic stems: (The O.C. has H with both A- and B-stems)

A-stems: H with Context 1; complete form H/L/H
       L with Context 2; complete form H/L/L
B-stems: H with Context 1; complete form H/L/H
       L with Context 2; complete form H/L/L

Disyllabic stems: (From this point, the O.C. has either H or L with both A- and B-stems)

A-stems: HH with Context 1; complete form H/L/H/H
       HL with Context 2; complete form H/L/H/L
B-stems: HL; no modification; complete form H/L/H/L

Trisyllabic stems:

A-stems: HHL; no modification; complete form H/L/H/H
       HLL; no modification; complete form H/L/L/L

N.B. From this point on, A-stems follow the pattern H on the first two syllables, and L on all the remaining syllables. B-stems follow a regular pattern from the disyllabic stage, viz. H on the first syllable and L on all the remaining syllables.

4.400 Negative

This is a compound form of which the first part may be either LHL|H, LH|H or LH|L. The second part of the compound is identical with the past Subjunctive positive.

/... Tone
From the above analysis of the tonal behaviour of the verb, we arrive at the following Tone Conjugation Patterns based on the tones of verb stems, exclusive of accompanying formatives:

**TONE CONJUGATION I**

**Monosyllabic stems:**
- A-stems: H; no modification
- B-stems: L; no modification

**Disyllabic stems:**
- A-stems: HH with Context 1
  - HL with Context 2
- B-stems: LL; no modification

**Trisyllabic stems:**
- A-stems: HHL; no modification
- B-stems: LLL; no modification

From trisyllabic stems on, the stem, both A- and B-form, continues the pattern established at the trisyllabic stage by adding L.

In this Conjugation are found the following grammatical forms:

1. The Infinitive positive without O.C.s.
2. The Indicative Mood, Primary Modality, Present Tense, Positive, without O.C.s., with L-toned S.C.s.

N.B. While all S.C.s. have H here, the element immediately preceding the verb stem is the Potential formative ka which has L in the Participial Modality.

A common feature of the verbs in T.C.I is the fact that the verb stem is here immediately preceded by a low-toned formative element. These elements, taken in the order in which their corresponding grammatical forms are listed above, are:

1. The Infinitive prefix ho-
2. The 1st and 2nd person S.C.s. of the Indicative, Primary, Present, Positive.
3. The 1st and 2nd person, as well as the 3rd person Class I, S.C.s. of the Subjunctive, Past, Positive.
4. The Potential Participial formative ka. The S.C. here has H.
4.404 TONE CONJUGATION Ia

Monosyllabic stems:
A-stems: H with Context 1
L with Context 2
B-stems: L; no modification

Disyllabic stems:
A-stems: LH or L/HH with Context 1
HL with Context 2
B-stems: LL; no modification

Trisyllabic stems:
A-stems: LHL; no modification
B-stems: LLL; no modification

From trisyllabic stems on, the stem, both A- and B-form, continues the pattern established at the trisyllabic stage by adding L.

In this Conjugation are found the following grammatical forms:

1. The Subjunctive past positive, without O.C.s. with H-toned S.C.s.
2. The Potential primary positive, without O.C.s.
   (N.B. While all S.C.s. have L here, the element immediately preceding the verb stem is the Potential formative kn which has H in the primary modality.)

A common feature of the verbs in T.C.Ia. is the fact that the verb stem is here immediately preceded by a H-toned formative element. These elements are, respectively:

1. The S.C.s. of the 3rd person, with the exception of the S.C. of Class I, in the Subjunctive past positive.
2. The Potential primary formative kn. The S.C. here was L.

4.405 TONE CONJUGATION II

Monosyllabic stems:
A-stems: H with Context 1
L with Context 2
B-stems: H with Context 1
L with Context 2

Disyllabic stems:
A-stems: HH with Context 1
HL with Context 2
B-stems: H; no modification

Trisyllabic stems:
A-stems: HHL (Sometimes also LHL); no modification
HLL; no modification

From trisyllabic stems on, the stem, both A- and B-form, continues the pattern established at the trisyllabic stage by adding L.

/... 4.407
4.407 In this Conjugation are found the following grammatical forms:—

1. The Infinitive positive, with O.C.s.
2. The Indicative primary present positive, without O.C.s., with H-toned (3rd person) S.C.s.
3. The Indicative primary present positive, with O.C.s., with both L-toned (1st and 2nd persons) and H-toned (3rd person) S.C.s.
4. The Subjunctive past positive, with O.C.s., with both L-toned and H-toned S.C.s.
5. The Potential primary positive, with O.C.s., with both L-toned and H-toned S.C.s.

4.408 Leaving out the Indicative without O.C.s. for a while, we find that the common feature of the verbs in this Conjugation consists in the fact that all the verb stems are immediately preceded by O.C.s. The O.C. will be found here to have H always with monosyllabic stems, and H alternating with L, according to individual speaker's preference, when used with non-monosyllabic stems. Regarding this apparently irregular behaviour of the O.C. with non-monosyllabic stem, a note will be found further down.

The Indicative without O.C.s. in this T.C. is found to have an H-toned S.C. as the formative element immediately preceding the stem.

4.409 TONE CONJUGATION III

Monosyllabic stems:
A-stems: H; no modification
B-stems: H; no modification

Disyllabic stems:
A-stems: HH with Context 1
       H1 with Context 2
B-stems: LH; no modification

Trisyllabic stems:
A-stems: HHH with Context 1
       HHL with Context 2
B-stems: LHH with Context 1
       LHL with Context 2

From trisyllabic stems on, the stem, both A- and B-form, continues the pattern established at the trisyllabic stage, by having H on the prefinal syllable and H-L alternation on the final syllable.
In this Conjugation are found the following grammatical forms:

1. The Infinitive negative, both without and with O.C.S.
2. The Imperative positive singular, both without and with O.C.S.
3. The Imperative negative singular, both without and with O.C.S.
4. The habitual positive, both without and with O.C.S.

Three of the above grammatical forms have a L-toned formative element immediately preceding the verb stem. The exception is the Imperative positive where the stem is not preceded by any formative element, except for monosyllabic stems, which may be preceded by such an element.

4.410 TONE CONJUGATION IIIa

Monosyllabic stems:
A-stems: Either H, immediately preceded by a L-toned formative, or L immediately followed by an H-toned formative.
B-stems: (As for A-stems)

Disyllabic stems:
A-stems: HH
B-stems: LH

Trisyllabic stems:
A-stems: HHH
B-stems: LHH

From disyllabic stems on, the stem, both A- and B-form, continues the pattern by adding H.

Only one grammatical form is found here, viz. the Imperative plural both positive and negative, without and with O.C.S. The complete form is obtained by adding the L of the plural suffix -ng to the patterns given above. These patterns are not modified by following adjuncts.

4.411 TONE CONJUGATION IV

Monosyllabic stems:
A-stems: H; no modification
B-stems: H; no modification

Disyllabic stems:
A-stems: LH or L-HH; no modification
B-stems: HL; no modification

Trisyllabic stems:
A-stems: LHL; no modification
B-stems: HLL; no modification

From trisyllabic stems on, the stem, both A- and B-form, continues the pattern established at this stage by adding L.

Only one grammatical form is found here, viz. the Indicative participial present positive, without O.C.S. All S.C.S. here have H.
4.412 TONE CONJUGATION IVa

Monosyllabic stems:
A-stems: H; no modification
B-stems: H; no modification

Disyllabic stems:
A-stems: HU; no modification
B-stems: HU; no modification

Trisyllabic stems:
A-stems: HHL; no modification
B-stems: HHL; no modification

From trisyllabic stems on, the stem, both A- and B-form, continues the pattern established at this stage by adding L.

Here also, only one grammatical form is found, viz. the Indicative participial present positive, with O.C.S. Once again all S.C.s. have H.

4.413 TONE CONJUGATION V

Monosyllabic stems:
A-stems: H; no modification
B-stems: H; no modification

Disyllabic stems:
A-stems: HH; no modification
B-stems: LH; no modification

Trisyllabic stems:
A-stems: HHH; no modification
B-stems: LHH; no modification

From disyllabic stems on, the stem, both A- and B-form, continues the pattern established at the disyllabic stage by adding immutable H.

Only one grammatical form is found in this Conjugation, viz. the Indicative primary present negative, both without and with O.C.S.

4.414 TONE CONJUGATION VI

Monosyllabic stems:
A-stems: H; no modification
B-stems: H; no modification

Disyllabic stems:
A-stems: HH with Context 1
HL with Context 2
B-stems: LH; no modification

Trisyllabic stems:
A-stems: HHH with Context 1
HHL with Context 2
B-stems: LHH with Context 1
LHL with Context 2

/... From
From trisyllabic stems on, the stem, both A- and B-form, continues the pattern established at this stage by having H on the prefinal syllable and H-L alternation on the final syllable.

In this conjugation are found the following grammatical forms:

1. The Indicative participial present negative, both without and with O.C.s. All S.C.s. here have H.
2. The Subjunctive present positive, with O.C.s. All S.C.s. have H.
3. The Subjunctive present negative, both without and with O.C.s. All S.C.s. have H.

The above forms have H-toned S.C.s. in common. The S.C. is in all cases separated from the verb stem by another formative, in some cases by two formatives. These formatives vary in their tones between H and L.

4.415 TONE CONJUGATION VII

Monosyllabic stems:
A-stems: H with Context 1
            L with Context 2
B-stems: H with Context 1
            L with Context 2

Disyllabic stems:
A-stems: HH with Context 1
            HL with Context 2
B-stems: HH with Context 1
            HL with Context 2

Trisyllabic stems:
A-stems: HLE; no modification
B-stems: HLE; no modification

From trisyllabic stems on, the stem, both A- and B-form, continues the pattern established at this stage by having H on the first syllable, H on the final syllable, and L on all intervening syllables. This pattern is not modified by following adjuncts.

Only one grammatical form is found here, viz. the Subjunctive present positive, without O.C.s. All S.C.s. have H.

A striking feature of this Conjugation is the identical tonal behaviour of A- and B-stems. While this is found in most T.C.s. with monosyllabic stems, it is not encountered with non-monosyllabic stems except in the present situation.

The Relative Modality

4.416 Because of its additional syllable on the verb stem, and also because of the fact that it often seems to differ quite radically in its tonal behaviour from other modalities, it has been found convenient to treat the relative modality of the Indicative and Potential Moods by itself.
The relative modality of verbal predicates is characterized by a relative suffix -mg which in most situations has L, but which in one or two cases has H-L alternation, and sometimes even immutable H. Relative clauses are used with relative connectives, which may be either direct or indirect. Direct connectives are sub-divided into simple and compound connectives. Simple connectives have H. Compound connectives have H,H which is heard as a gliding tone beginning at H and moving in the direction of L. As already indicated elsewhere, however,1 in these compound connectives, the movement of tone is from a higher H to a lower H — from H of the original simple connective, through a dom-step to the H of an immediately following relative S.C. which has, in Southern Sotho, largely merged with the preceding simple connective. In direct relative clauses based on verbal predicates, the compound connective is used to the exclusion of the simple one. In the positive, this connective comes immediately before the verb stem with its relative suffix -mg, while in the negative it is separated from the verb stem by the negative formative se.

In indirect relative constructions, the relative connective is identical with the demonstrative second position, unemphatic, both in form and in tone. This connective never comes immediately before the verb stem, being separated from it at least by the S.C., but often by the substantival subject and its S.C., and sometimes by a whole clause or even a number of clauses. For this reason, it is not possible to give in all situations a tone pattern including the tones of the relative connective. In all cases, therefore, only the tones of the stem, as followed by the relative suffix, are given. This can be done without inconveniencing the reader, as the tones of the various relative connectives are now known, and are immutable.

The tones of all relative S.C.s., including what remains of this element in compound relative connectives, are H.

A regular feature, with few exceptions, of this modality is the pattern L/H, often leading to H, on the syllable of the stem coming just before -mg.

**The Indicative Mood, Relative Modality**

**4.421** Positive. **Without and with O.C.Cs.**

N.B. Where the O.C. is used, it has L throughout with both A- and B-stems.

Monosyllabic stems: When no O.C.C. are used, both A- and B-stems have either L-D or H. Together with the suffixed L-toned relative suffix -mg, therefore, they have tone pattern L|L or H|L.

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1 See § 4.82 above.
Examples:  

**A-stems**

- baa lang bohôbê (those who eat bread)
- baa lang kamehlâ (those who eat everyday)

**B-stems**

- baa tswang madî (those who are bleeding)
- baa tswang kamehlâ (those who go out everyday)

When occurring with O.C.S., the stem, whether A- or B-form, always has H, the complete form together with the suffix thus being H|L only.

Examples:  

**A-stems**

- baa mofang bohôbê (those who give him bread)
- baa mofang kamehlô (those who give him everyday)

**B-stems**

- baa motswang lekgotîêng (those who disown him in court)
- baa motswang kamehlô (those who disown him everyday)

From this point on, the stem has the same tone pattern both without and with O.C.S. Disyllabic-stemmed A- and B-forms here also have the same tone pattern, viz. H|L or HHL|L.

Examples:

**A-stems**

- baa rutang bana (those who teach the children)
- baa rutang kamehlô (those who teach everyday)

**B-stems**

- baa balang bûka (those who read a book)
- baa balang kamehla (those who read everyday)

From trisyllabic stems on:  

(a) From this point on, B-stems have a regular pattern, viz. H on the first syllable, L-H or H on the final syllable, and L on all remaining syllables.

Examples:

- baa bâpalang bâlô (those who play football) HLLH|L or HHL|L
- baa âtemâlang mellîng (those who go near the fire) HLLLH|L or HLLH|L

(b) Trisyllabic A-stems have HIL|L or HIL|L

Examples:

- baa hopôlang bana (those who remember the children)
- baa hopôlang kamehlô (those who always remember)
From quadrisyllabic stems on, A-forms go according to a regular pattern, viz. H on the first two syllables, L–H or H on the final syllable, and L on all the remaining syllables.

Examples:

- **bāa sēbēletsang mošēna** (those who work for the king)  
  \[\text{HILL} \cdot H | L\text{ or } \text{HILL} | L\]

- **bāa sēbēletsang hāntśë** (those who work well for each other)  
  \[\text{HILL} \cdot H | L\text{ or } \text{HILL} | L\]

- **bāa nongnébëtsang kāmehla** (those who always give each other cause for complaint)  
  \[\text{HILL} \cdot H | L\text{ or } \text{HILL} | L\]

4.424 Negative. Without and with O.C.s.

The O.C. has H throughout with D-stems. With A-stems, it has H with monosyllabic stems, and H or L with non-monosyllabic stems. The negative formative sa has L, and is placed immediately after the S.C., or what remains of it in compound connectives.

4.425 Monosyllabic stems: Both A- and B-stems have H. Where no O.C.s. are used, there appears to be H-L alternation on the relative suffix. Also, where this suffix has H, there is a tendency for it and the preceding B-toned monosyllabic stem to merge into one syllable.

Examples: **A-stems**

- **bāa sajēng bohōbē** (those who do not eat bread)  
  \[H | H \text{ or } H \]

- **bāa sajēng kāmehla** (those who do not eat everyday)  
  \[H | L\]

**B-stems**

- **bāa satswēng madī** (those who do not bleed)  
  \[H | H \text{ or } H \]

- **bāa satswēng kāmehla** (those who do not go out everyday)  
  \[H | L\]

When O.C.s. are used, however, -ag has an immutable L.

Examples: **A-stems**

- **bāa samōfēng bohōbē** (those who do not give him bread)  
  \[L / H | L\text{ or } \text{H} / L\]

- **bāa samōfēng kāmehla** (those who do not give him everyday)  
  \[H / L\]

**B-stems**

- **bāa sāmōtsēng lekgōtlēng** (those who do not disown him in court)  
  \[L / H | L\text{ or } \text{H} / L\]

- **bāa sāmōtsēng kāmehla** (those who do not disown him everyday)  
  \[H / L\]

4.426 From disyllabic stems on: (a) From here on, A-stems behave according to a regular pattern, viz. H or H on the final syllable and H on all the remaining syllables. The relative suffix has L throughout. This pattern is the same both without and with O.C.s.

Examples:

- **bāa sārētēng hobūa** (those who do not like to speak)  
  \[H \cdot H | L\text{ or } \text{HH} | L\]

- **bāa sāmōretēng Sesōtho** (those who do not teach him Sotho)  
  \[H \cdot H | L\text{ or } \text{HH} | L\]
baa saarabeng potsæ (those who do not answer the question) HH|L or HHH|L
baa saarabæng hantlæ (those who do not answer each other well) HHH|L or HHH|L
baa samonrabæng hantlæ (those who do not answer well for him) HHH|L or HHH|L
baa samonrabæng kamehla (those who do not always give him cause for complaint) HHH|L or HHH|L

(b) With disyllabic B-stems, the pattern on the stem itself is LH. There is a suggestion of H-L alternation on -ng which, however, is not so marked. Often, instead of this H-L alternation, this syllable has immutable H here. Here also the tendency is for -ng, where it has H, to be pronounced as one syllable with the preceding syllable, which has H. This behaviour is the same both without and with O.C.s.

Examples:

baa sabalæng buka (those who do not read a book) LH|H or LH
baa sabalæng kamehla (those who do not read everyday) LH|L or LH|H or LH

From trisyllabic stems on, there is a regular pattern for B-stems, viz. L on the first syllable, LH or H on the final syllable, and H on all the remaining syllables. This pattern is the same both without and with O.C.s.

Examples:

baa sabalæng hantlæ (those who do not play well) LH|H|L or LH|L
baa samohalæng dijæ (those who do not find food for him) LH|H|L or LH|L
baa saamælæng mellæng (those who do not go near the fire) LH|H|L or LH|L
baa samotælætsæng mellæng (those who do not take him near the fire) LH|H|L or LH|L
baa sa morbælætsæng tilæ (those who do not extend the house for him) LH|H|L or LH|L

Summary

4427 Positive. Without and with O.C.s.: The only difference in the behaviour of the verb stem as between forms without, and forms with O.C.s. is found with monosyllabic stems. Both A and B monosyllabic stems, when occurring without O.C.s., have two alternative tone patterns, viz. L/H and H, giving complete forms L/H/L and H/L respectively. When O.C.s. are used, on the other hand, only H is found on the stem, both A and B form, giving H/L as the complete form. From disyllabic stems on, there is no difference between patterns of the stem without and with O.C.s.

... Monosyllabic
Monosyllabic stems: Without O.C.S.

A-stems: \( L.H \) or \( H \); with relative suffix \( L.H | L \) or \( H | L \)

B-stems: \( L.H \) or \( H \); with relative suffix \( L.H | L \) or \( H | L \)

With O.C.S.

A-stems: \( H \); with relative suffix \( H | L \)

B-stems: \( H \); with relative suffix \( H | L \)

Disyllabic stems:

A-stems: \( H.L | H \) or \( H.H | H \); with relative suffix \( H.L | L \) or \( H.H | L \)

B-stems: \( H.L | H \) or \( H.H | H \); with relative suffix \( H.L | L \) or \( H.H | L \)

Trisyllabic stems:

A-stems: \( H.H.L | H \) or \( H.H.H | H \); with relative suffix \( H.H.L | L \) or \( H.H.H | L \)

B-stems: \( H.L.L | H \) or \( H.L.H | H \); with relative suffix \( H.L.L | L \) or \( H.L.H | L \)

Quadrisyllabic stems:

A-stems: \( H.H.H.L | H \) or \( H.H.H.H | H \); with relative suffix \( H.H.H.L | L \) or \( H.H.H.H | L \)

B-stems: \( H.L.L.L | H \) or \( H.L.H.H | H \); with relative suffix \( H.L.L.L | L \) or \( H.L.H.H | L \)

From trisyllabic stems on, B-stems continue on the pattern \( H \) on the first syllable, \( L-H \) or \( H \) on the final syllable, and \( L \) or all the remaining syllables. A-stems have a regular pattern from quadrisyllabic stems on, viz. \( H \) on the first two syllables, \( L-H \) or \( H \) on the final syllable, and \( L \) on all the remaining syllables.

4.428 Negative. Without O.C.S.

Monosyllabic stems: The relative suffix here has \( H \), and there is a tendency for it and the verb stem to merge into one syllable.

A-stems: \( H \); with relative suffix \( H | H \) or \( H \)

B-stems: \( H \); with relative suffix \( H | H \) or \( H \)

Disyllabic stems:

A-stems: \( H.L | H \) or \( H.H | H \); with relative suffix \( H.L | L \) or \( H.H | L \)

B-stems: \( L.H | L \); with relative suffix which here has \( H \), and tends to merge into one syllable with preceding \( H \)-toned syllable \( L.H | H \) or \( L.H \)

Trisyllabic stems:

A-stems: \( H.H.L | H \) or \( H.H.H | H \); with relative suffix \( H.H.L | L \) or \( H.H.H | L \)

B-stems: \( L.H.L | L \) or \( L.H.H | L \); with relative suffix \( L.H.L | L \) or \( L.H.H | L \)

Quadrisyllabic stems:

A-stems: \( H.H.H.L | H \) or \( H.H.H.H | H \); with relative suffix \( H.H.H.L | L \) or \( H.H.H.H | L \)

B-stems: \( H.H.L.H | H \) or \( H.H.H.H | H \); with relative suffix \( H.H.L.H | L \) or \( H.H.H.H | L \)

Regular tone patterns for both A- and B-stems emerge at the trisyllabic stage, being, for A-stems \( L-H \) or \( H \) on the final syllable, and \( H \) on all the remaining syllables; and for B-stems \( L \) on the first syllable, \( L-H \) or \( H \) on the final syllable, and \( H \) on all the remaining syllables.

4.429 With O.C.S. The O.C. has \( H \) throughout with B-stems. With A-stems, it has \( H \) with monosyllabic stems, and \( H \) or \( L \) with non-monosyllabic stems.
The only tonal differences resulting from the use of the O.C. are on the relative suffix, and there are two of these, viz.

1. *ng* has L with monosyllabic stems, as against the H on this syllable when these stems are used without O.C.s.

2. With disyllabic B-stems, *-ng* now has H-L alternation, which is not the case when no O.C.s. are used.

The rest of the tones are the same here as where no O.C.s. occur.

**The Potential Mood, Relative Modality**

4.430 The Potential formative *ka* which always contrasts tonally with an immediately preceding formative, has L throughout as the S.C., which immediately precedes it, has H.

4.431 Positive. Without O.C.s.

Monosyllabic stems: (a) A-stems have H. The relative suffix appears to vacillate between H and L here, but has definite L when followed by an adjunct of Context 2. There is a tendency here also for *-ng*, where it has H, to be pronounced as one syllable with the immediately preceding H-toned monosyllabic stem.

Examples:

- baka'kajang bohšté (those who can eat the bread) H|H or H|L
- baka'kajang kamehlá (those who can eat everyday) L|L

(b) B-stems have either L-H or H. The relative suffix here always has L.

Examples:

- baka'katwang mačí (those who can bleed) L|H|L or H|L
- baka'katwang kamehlá (those who can go out everyday) H|L|L or H|L

4.432 From disyllabic stems on: (a) From this point on B-stems go according to a regular pattern, viz. L-H or H on the final syllable and L on all the remaining syllables.

Examples:

- baka'kabalan getá (those who can read the book) L|H|L or L|L|L
- baka'kabalan béló (those who can play football) L|L|H|L or L|H|L
- baka'katwašan mólông (those who can go near the fire) L|L|H|L or L|H|L

(b) Disyllabic A-stems have H-L or HH. The complete form is then always H-L-H or HH-L.

Examples:

- baka'kautan Sešošî (Those who can teach Sošošî)
- baka'kautan kamehlá (Those who can teach everyday)

/... Tri syllabic
Trisyllabic A-stems have HHL, H or HHH. The complete form is therefore always HHL H L or HHH L.

Examples:
- baa kaarabang potsɔ (those who can answer the question)
- baa kaarabang thata (those who can answer the difficult one)

From quadrasyllabic stems on, A-stems go according to a regular pattern, viz. H on the first two syllables, L- H or H on the final syllable, and L on all the remaining syllables.

Examples:
- baa kaarabolang potsɔ (those who can answer the call) HLLL H L or HLLL L
- baa kaarabolang dipotsɔ (those who can answer questions for each other) HLLL H L or HLLL L
- baa kancetshisanang baholo (those who can give each other much cause for complaint) HLLL L L or HLLL L L

4.433 With O.C.s. Monosyllabic stems: Both A- and B-stems have L- H or H. The complete form is then always either L- H L or H L.

Examples: A-stems
- baa kamofang botsho (those who can give him bread)
- baa kamofang kamehla (those who can give him everyday)

B-stems
- baa kamotswang lekgotleng (those who can discern him in court)
- baa kamotswang kamehla (those who can discern him everyday)

4.434 Disyllabic stems: Both A- and B-stems have either HL- H or HH. The complete form is then always HL- H L or HH L. The O.C. from here on has either H or L.

Examples: A-stems
- baa kamorutang Sesotho (those who can teach him Sotho)
- baa kamorutang kamehla (those who can teach him everyday)

B-stems
- baa kamolatswang matshe (those who can wash his hands)
- baa kamolatswang matlhe (those who can wash him well)

4.435 From trisyllabic stems on: (a) B-stems now go according to a regular pattern, viz. H on the first syllable, L- H or H on the final syllable, and L on all the remaining syllables.

Examples:
- baa kamoatselang dija (those who can find food for him) HLL H L or HLL L
- baa kamatsalemang moliing (those who can take him near the fire) HLLL H L or HLLL L

/... baa
baka kamosološatsang ntlo (those who can extend the house for him) HLLL/H L or HLLL L

(b) Trisyllabic A-stems have HHL-H or HHH. The complete form is therefore always HHL-H L or HHH L.

Examples:

baka kamosološatsang bana (those who can extend him of the children)

baka kamosološatsang kamehla (those who can extend him everyday)

From quadrissyllabic stems on, A-forms follow a regular pattern of behaviour, viz. H on the first two syllables, L/H or H on the final syllable, and L on all the remaining syllables.

Examples:

baka kamosabale boš pote (those who can answer the question for him) HLLL-H L or HLLL L

baka kamosabale boš balelo (those who can give him much cause for complaint) HLLL-H L or HLLL L

4.436 Negative. The negative of the Potential Mood is a compound form as indicated above. The second portion of the compound, comprising the verb under analysis, is in form and tone identical with past Subjunctive.

Summary

4.437 Positive. Without O.C.s.

Monosyllabic stems:

A-stems: H; with relative suffix (The relative suffix here has either H or L, but definitely L with Context 2, where the suffix has H, there is a tendency for it and the H-toned monosyllabic stem to merge into one syllable.) H H or H L

B-stems: L/H or H; with relative suffix L/H L or L L

Disyllabic stems:

A-stems: HL/H or HH; with relative suffix HL/H L or HH L

B-stems: LL/H or LH; with relative suffix LL/H L or LH L

Trisyllabic stems:

A-stems: HHH/H or HHH; with relative suffix HHH/H L or HHH L

B-stems: LLL/H or LLH; with relative suffix LLL/H L or LLH L

Quadrissyllabic stems:

A-stems: HLLL/H or HLLL; with relative suffix HLLL/H L or HLLL L

B-stems: LLLL/H or LLLH; with relative suffix LLLL/H L or LLLH L

B-stems continue from disyllabic stems on the regular pattern L/H or H on the final syllable, and L on all the remaining syllables. A-stems only assume a regular pattern from quadrissyllabic stems on. The pattern is: H on the first two syllables L/H or H on the final syllable, and L on all the remaining syllables.
With O.C.s. The O.C. has H with all monosyllabic stems, and H or L with non-monosyllabic stems. This applies to both A- and B-forms.

Monosyllabic stems:
A-stems: L-H or H; with relative suffix L-H|L or H|L
B-stems: L-H or H; with relative suffix L-H|L or H|L

Disyllabic stems:
A-stems: HL-H or HH; with relative suffix HL-H|L or HH|L
B-stems: HL-H or HH; with relative suffix HL-H|L or HH|L

Trisyllabic stems:
A-stems: HHL-H or HHH; with relative suffix HHL-H|L or HHH|L
B-stems: HHL-H or HHH; with relative suffix HHL-H|L or HHH|L

Quadrisyllabic stems:
A-stems: HLLL-H or HLLH with relative suffix HLLL-H|L or HLLH|L
B-stems: HLLL-H or HLLH with relative suffix HLLL-H|L or HLLH|L

B-stems continue from trisyllabic stems on, on the regular pattern: H on the first syllable, L-H or H on the final syllable, and L on all the remaining syllables. A-stems have a regular pattern from quadrisyllabic stems on, viz. H on the first two syllables, L-H or H on the final syllable, and L on all the remaining syllables.

Tone Conjugation Patterns of verb stems
in predicates in the Relative Modality.

Relative modality forms of the verb add another three to the list of tone conjugation patterns. This is because the tone patterns of verb stems in verbal predicates in the relative modality are so fundamentally different from all other patterns, that they constitute a group by themselves. One characteristic which these patterns do not share with those of non-relative verbs is the almost universal L-H (which alternates with H) on the final syllable of the stem. Probably this syllable originally had L which, as we have seen in a number of cases involving, inter alia, O.C.s. sometimes develops into L-H and ultimately into H.

Verb stems in the relative modality always end in H, having either L-H or H on the final syllable. Now, when (as happens in a few cases) the relative suffix has H, there is always a tendency for this suffix to merge with the preceding syllable, the two being thus pronounced as one syllable.

The tonal conjugation patterns of verb stems in relative predicates are as follows:
4.441  TONE CONJUGATION VIII

Monosyllabic stems:

- A-stems: L-H or H; relative suffix has L
- B-stems: L-H or H; relative suffix has L

Disyllabic stems:

- A-stems: HL-H or HH; relative suffix has L
- B-stems: HL-H or HH; relative suffix has L

Trisyllabic stems:

- A-stems: HHL-H or HHH; relative suffix has L
- B-stems: HHL-H or HHH; relative suffix has L

Quadrisyllabic stems:

- A-stems: HHHH-H or HHHH; relative suffix has L
- B-stems: HHHH-H or HHHH; relative suffix has L

From disyllabic stems on, B-stems continue on the pattern H on the first syllable, L-H or H on the final syllable, and L on all the remaining syllables. A regular pattern for A-stems emerges at the quadrisyllabic stage. It is: H on the first two syllables, L-H or H on the final syllable, and L on all the remaining syllables.

In this conjugation are found the following grammatical forms:-

1. The Indicative Mood, relative modality present tense positive, without and with O.C.s. Note, however, that when O.C.s. are used, there is a slight difference in regard to monosyllabic stems, in that they now have H exclusively, without the alternative L-H.

2. The Potential Mood, relative modality positive, without O.C.s.

4.442  TONE CONJUGATION IX

Monosyllabic stems:

- A-stems: H; relative suffix has H
- B-stems: H; relative suffix has H

Disyllabic stems:

- A-stems: HL-H or HH; relative suffix has L
- B-stems: LH; relative suffix has H

Trisyllabic stems:

- A-stems: HHL-H or HHH; relative suffix has L
- B-stems: LHL-H or LHH; relative suffix has L

Quadrisyllabic stems:

- A-stems: HHHH-H or HHHH; relative suffix has L
- B-stems: LHHH-H or LHHH; relative suffix has L

From disyllabic stems on, A-stems continue on the pattern L-H or H on the final syllable, and H on all the remaining syllables. B-stems assume a regular pattern from the trisyllabic stage. It is: L on the first syllable, L-H or H on the final syllable, and H on all the remaining syllables.

/... Only
Only one grammatical form is found in this conjugation, viz. the Indicative Mood, relative modality present tense negative, without and with O.C.s. Note, however, that when O.C.s. are used, the relative suffix has L with monosyllabic stems, and H-L alternation with disyllabic B-stems.

4.443 TONE CONJUGATION X

Monosyllabic stems:
- A-stems: H; relative suffix has H or L
- B-stems: L/H or H; relative suffix has L

Disyllabic stems:
- A-stems: HL/H or HH; relative suffix has L
- B-stems: LL/H or LH; relative suffix has L

Trisyllabic stems:
- A-stems: HHL/H or HHH; relative suffix has L
- B-stems: LLL/H or LLL; relative suffix has L

Quadrisyllabic stems:
- A-stems: HLL/H or HLLH; relative suffix has L
- B-stems: LLLL/H or LLLL; relative suffix has L

From disyllabic stems on, B-stems continue on the pattern L/H or H on the final syllable, and L on all the remaining syllables. A-stems assume a regular pattern from quadrisyllabic stems on. It is: H on the first two syllables, L/H or H on the final syllable, and L on all the remaining syllables.

Only one grammatical form is found in this conjugation, viz. the Potential Mood relative modality positive, without O.C.s.

Tonal behaviour of primary deficient verbs

4.444 Since, by reason of their being defective, primary deficient verbs are restricted in their occurrence in the various grammatical situations of mood, tense, conjugation, etc., and they never occur with adjuncts immediately following them, it has been found best to treat each deficient verb in the concrete situations in which it occurs, and not to attempt to determine inherent tone patterns for them as was done in the case of non-deficient verbs. In other words, contextual forms are going to be given without any reference to abstract forms. Furthermore, no attempt will be made to arrange deficient verbs into tone conjugation patterns, since the uneven (or random) distribution of deficient verbs referred to above makes such grouping impossible.

4.445 The deficient verbs nê and bê (as used in past continuous compound verbal constructions), bê (meaning as usual) and sê (meaning already).

/*.. These
These show common tonal behaviour patterns in identical grammatical situations. The grammatical situations in which they occur, and their tonal behaviour in these situations, are as follows:

1. The Indicative Mood primary modality present tense positive. Here, all these deficient verbs have L with both L-toned and H-toned S.C.s. The complete tone patterns are therefore L|L and H|L respectively.

**Examples:**
- With low-toned S.C.s. (L|L)
  - Kenē kēsēbētsa (I was working)
  - Rebē rēsatsēbe (We did not know)
  - Lebē letsamaya? (Are you going away as usual?)
  - Resē rērobētsa (We are already sleeping)

- With high-toned S.C.s. (H|L)
  - Kenē bēbāpala (They were playing)
  - Rebē bēsatsēbe (They did not know)
  - Rebē bākathētse (They are tired as usual)
  - Resē bēfihilli (They have already arrived)

2. The Indicative Mood participial modality present tense positive. Here all S.C.s. have H, and the above deficient verbs also have H. The complete tone pattern is therefore always H|H.

**Examples:**
- lē ha kēnē kēsēbētsa (even though I was working)
- lē ha rebē kēsēbētsa (even though I did not know him)
- lē ha rebē bāsatsēbe (even though they have not come as usual)
- lē ha rebē bēfihilli (even though they are already sleeping)

4.446 Tense-forming bē, as used in past continuous constructions above, may also occur in future continuous tenses. In this usage, this deficient verb is immediately preceded by the future forming verb tīla which, as already indicated above, has a submerged (or latent) ho (Infinitive prefix) immediately following it. The tonal behaviour of bē in this case is thus seen to be controlled by this latent Infinitive prefix which has L. bē also has L in both modalities. The future forming verb tīla, as pointed out above, has L when preceded by L-toned S.C.s., and H|L when preceded by H-toned S.C.s.

**/... Examples:**

1 See 4.337 et seq. above.
Examples:  primary modality

Ketlabé kešibésa (I shall be working) LI|L

Ketlabé babapala (They will be playing) III|L

participial modality

Iš ha ketlabé kerobésa (even though I shall be sleeping) II|II|L

4.447 nē, exhortive to cultivation of habit of acting in a certain way.

This nē is found in the Subjunctive present positive. All S.C.s. here have H. nē itself has L where the following verb (i.e., the complementary verb) is in the participial modality, and H where the complementary verb is in the Infinitive. N.B. In the latter case the Infinitive prefix contracts with nē to form nē which has a dynamic tone beginning at the H of nē (now nē) and ending at the L of the Infinitive prefix, represented by the relic 6.

Examples:

Lenē lādumēdissa (You must cultivate the habit of greeting) II|L

Lenē dūmēdissa (You must cultivate the habit of greeting) H|E|L

4.448 bē, thereupon.

It occurs in the Subjunctive past, positive. In this situation, bē has L with both L-toned and H-toned S.C.s.

Examples:

Abē akēna (Thereupon he entered) LL

Tsēbē dirēla (Thereupon they ran away) H|L

4.449 ba, eventually, until.

It is found in the following situations:

1. Subjunctive present positive, where it occurs as bē. It has L throughout.

Examples:

Loēlabē abē afihē (You must sleep until he arrives) II|L

Loēpālē kēbē kēkgūlē (You must play until I return) H|L

2. Subjunctive past positive, where it occurs as ba. It has H with both L-toned and H-toned S.C.s.

Examples:

Rēlē raēbey refēna (We eventually went in) L|H

Rēlē raēbey bābēla (They eventually arrived) II|H

3. Indicative primary and participial future positive. It occurs here as bē, and has H with both modalities.
ka, a little, once upon a time.

It is found in the following grammatical situations:

1. Indicative primary present positive, progressive implication with sa. Here sa has H and ka (occurring as kô) has L.

Examples:
- Ketsâbê ḱe Comparatorala (I am just resting a little) LH|L
- Ketsâbê bunotshakala (They are just visiting him awhile) HH|L

2. Indicative primary future positive. The future-forming verb ta has L or H\|L, depending on the tone of the preceding S.C., and ka (occurring as kô) has H.

Examples:
- Ketlâbê ḱe Comparatorala (I shall rest a bit) LL|H
- Ketlâbê baphomâlê (They will rest a bit) HH\|L

3. Subjunctive present positive. All S.C.s. have H and ka (as kô) has L.

Example:
- Bâkê baphomâlê (They must rest a bit) H|L

4. Subjunctive past positive. Here ka has L with both L-toned and H-toned S.C.s.

Examples:
- Reilâ kâs raphomâlê (We rested a little) L\|L
- Reilâ bâkê baphomâlê (They rested a little) H\|L

5. Habitual positive. All S.C.s. have L and ka (as kô) has H.

Example:
- Bâkê bâkê baphomâlê (They usually rest a little) L\|H

6. Potential primary and participial positive. Here ka has L. Potential formative ka which immediately precedes this stem has H in the primary modality and L in the participial, but this does not affect the tonal behaviour of the verb stem ka.

Examples:
- Rekâkâ raphomâlê (We may rest a bit) LH\|L
- Le ha rekâkê raphomâlê (even if we should rest a while) HL\|L

ka, occurring in certain compound negatives, in the first portion. It is found in the following grammatical situations:

1. Indicative primary remote past positive. ka itself is in the negative of the Indicative perfect, primary or participial as the case may be, and it has H.
Examples:

- Basekē rasēbētse (We did not work) LHL | H
- le ha basekē rasēbētse (even though we did not work) HL | H

2. Subjunctive present negative where ka (occurring as kē) has H.

Example:

- Basekē lasēbētse (You must not work) HL | H

3. Subjunctive past negative where ka (as kē) has H.

Examples:

- Basekē rasēbētse (We did not work) LL | H
- Basekē basēbētse (They did not work) HL | H

4. Habitual negative where ka (as kē) has H.

Example:

- Basekē basēbētse (They usually do not work) LL | H

5. Potential negative. There are three alternatives here, in each of which ka occurs as kē, and has H, as follows:

Examples:

(a) Basekē rasēbētse (We cannot/shall not work) LHL | H
(b) Rebasekē rasēbētse (We cannot/shall not work) LHL | H
(c) Rebasekē rasēbētse (We cannot/shall not work) LL | H

4452 ka, seem, appear to be, resemble.

It occurs in the following grammatical situations:

1. Indicative primary and participial present positive.

In both modalities ka has L.

Examples:

- Eka basēmotsēba (It looks as if they know him) H | L
- le ha eka basēmotsēba (even though it looks as if they know him) H | L

2. Subjunctive present positive where ka (as kē) has L.

Example:

- Eka lemgotša (You must be quick) H | L

N.B. This ka may be followed by re in the Indicative, in which case it has H in the primary modality, while it retains L in the participial modality.

Examples: primary modality

- Eke orēbētse (It looks as if he is sleeping) L | H | L

participial modality

- le ha eke orēbētse (even though it looks as if he is sleeping) H | L | L

... 3.

1 Probably contracted from rekasekē of the immediately preceding alternative.
3. Subjunctive past positive where ka has L.
   Example:
   "Ya ka orobêse (It looked as if were sleeping) H L"

4. Habitual positive, where ka (as kô) has H.
   Example:
   "Eêkê orobêse (It usually looks as if he were sleeping) L H"

5. Potential primary and participial positive where ka has L.
   Example:
   "Eêkê orobêse (It would then look as if he were sleeping) L H L"

   le ha eêkê orobêse (Even though it may then appear as if he were sleeping) H L L

4.453  ha, would that (expressing a wish)

It occurs in the following situations:

1. Indicative primary present positive where ka has L.
   Example:
   "Ekê akatla (I wish he would come) H L"

2. Subjunctive past positive where ka has L.
   Example:
   "Ya ka akatsamaya (I wished that he might go) H L"

3. Indicative primary and participial future positive, where ka has L in both modalities.
   Examples:
   "Etêkâ bakaipolâyâ (They will feel like killing themselves) H H L L"
   "Le ha etêkâ bakaipolâyâ (even though they will feel like killing themselves) H H L L"

4.454  hîê, immediately, really.

It occurs in the following situations:

1. Infinitive positive where it has L.
   Example:
   "Obatla hohle âtsamaya (He wants to go at once) L L"

2. Imperative positive where it occurs as hîê in the singular with tones L H, and hîêng in the plural with tones L H L.
   Examples: singular
   "Hîê âtsamaye (Go at once)
   "plural
   "Hîêng âtsamaye (Go at once)

In the negative, it occurs as hîê in the singular and has H, and hîêng in the plural with H L.
   Examples: singular
   "Sehîê watsamaya (Do not go right away) L H
   "plural
   "Sehîêng latsamaya (Do not go right away) L H L"
3. Indicative primary present perfect positive, where it occurs as hliš and has either HL or LH.

Examples:
- Kehliš (or Kehliš) kemorata (I really love her) L | HL or L | LH
- Kehliš (or Kehliš) bemorata (They really love her) H | HL or H | LH

4. Indicative participial present perfect positive, where it occurs as hliš with tones LH.

Example:
- le hē kehliš bemorata (even though they really love her) H | LH

5. Subjunctive present positive, where it occurs as hle and has L.

Example:
- Lehlē lebu leyēna (You must actually speak with him) H | L

6. Subjunctive past positive, where it occurs as hla with L.

Example:
- Behlē babēla (They spoke immediately) H | L

7. Habitual positive, where it occurs as hle with H.

Example:
- Behlē babēla (They usually speak at once) H | H

8. Potential primary and participial where it occurs as hla with L.

Example:
- Lekahla labēla (You may speak at once) LH | L
- le hē lekahla batsameya (even though they may go immediately) HL | L

4.55. mpa, simply, merely, rather (preference).

1. Infinitive positive, where it has HL.

Example:
- Behatla hompa basale (They would rather stay behind) L | HL

2. Imperative positive, where it occurs as mpa in the singular (sometimes mpā by assimilation to the following S.C. of the 2nd person singular) with tones LH or HL. In the plural the form is mpēng with tones HL | L or HH | L.

Example:
- bihlē kēbēlē nhēlē (You may speak at once) L | HL

1 mpa when the 2nd person singular S.C. is expressed after the deficient verb, and mpā when there is not only assimilation but also contraction, and the S.C. is not expressed. This deficient verb in this situation is followed by a down-step. For that reason the following S.C. which, being in a predicate in the Subjunctive present, has H, has an H which is, in absolute pitch, lower than the H of the preceding syllable, viz. 'pē of mpā. Now, where the deficient verb and the following S.C. contract, the deficient verb acquires additional length on its final vowel, and on this additional length the lowered H of the now-latent S.C. is heard.
Examples: singular
Urā (or Ùrā) OCKET (You had better go) LH or HL
Urā (or Ùrā) OCKET (You had better go) LH or HL
plural
Mpāng (or Mpāng) OCKET (You had better go) LH L or HL L

In the negative, the singular is always mpā with either HL or HH. The plural here always has HH followed by L of the plural suffix.

Examples: singular
Sempā (or Sempā) wabūa (You had better not speak) \ H L or \ HH

plural
Sempā labūa (You had better not speak) \ L HH L

3. Indicative primary present positive where mpā has HL.

Examples:
Kempā kërātā hoyā (I just feel like going) \ H L
Kempā bārātā hoyā (They just feel like going) \ H L

5. Indicative participial present positive where mpā has LH or HH.

Example:
le ḷa Kempā (or Kempā) kërātā hoyā (even though I just feel like eating) \ H LH or \ H HH

6. Indicative primary present perfect positive where it occurs as mpilē with HH L.

Example:
Bampilē batsamaya (They had no choice but to go) \ H HH L

7. Indicative participial present perfect positive where it occurs as mpilē with either HLH or EHH.

Example:
le ḷa Bampilē (or Bampilē) bānglokolle (even though they had to decide on freeing him) \ H LH L or \ H HH

8. Indicative primary and participial future positive where it occurs as mpē with HL or HH.

Examples: primary modality
Hatlampē (or Hatlampē) batsamaya (They will rather leave) \ H HL L or \ H HH

9. Subjunctive present positive where it occurs as mpē with HL.

Example:
Lempē lētlē (You must please come) \ H L

10. Subjunctive past positive where it has either LH or HH when used with a H-toned S.C., and HH when used with an L-toned S.C.

Examples: with H-toned S.C.s.
Nēlē bampa (or bampa) bāka (They thought it better to give him) \ H LH L or \ H HH

with L-toned S.C.s.
Nēlē kampa bāka (I thought it better to give him) \ H HH
11. Habitual positive where it occurs as mpê and has HL.

Example:
Reps repsa remâfe (We usually think it better to give him) LH|HL

12. Potential where mpa has LH or HH in the primary modality and HH in the participial modality.

Examples: primary modality
Lekamaa (or Lekama) latsamaya (You had better go) LH|HH or LH|HL

participial modality
lo ba bokama bampitse fêshê (even if they were only to deceive him) HH|HH

4.456 saô, not yet

It occurs in the Indicative primary and participial present negative. This verb stem incorporates the following (now latent) Infinitive prefix with which it has contracted, and whose tone is carried by the extra length on the final vowel of this verb. The tone pattern of this longer form is LH-L in both modalities.

Examples: primary modality
Habasaô fihae (They have not yet arrived) LH|HH-L

participial modality
lo ba bosaô fihale (even though they have not yet come) HH-LH-L

Sometimes this deficient verb occurs simply as saô, in which case it has H-L which results from the omission of the L of e in the longer form. It is used in the same circumstances as the longer form.

4.457 sale, since, ever since.

It occurs in the Indicative primary and participial modalities present positive with the invariable S.C. e which has H, sale itself having LH.

Examples: primary modality
Esalô batsamaya mobâne (They left as long ago as yesterday) H|LH

participial modality
le ha esalô kabanitsa mobâne (even though I called them as long ago as yesterday) H|LH

4.458 nyafa, fortunately, in the nick of time

It occurs in the following situations:

1. Indicative primary and participial present perfect positive, where it occurs as nyafâle. In the primary modality it has LHL, and in the participial LH_{1}H.

Examples: primary modality
Lenyafâle leemône (It was fortunate that you saw him) L|LHL

Enyafâle bâle (It was fortunate that they came) H|LHL

participial modality
Loheja enyafâle ababona (even though he luckily saw them) H|LH_{1}H
2. Subjunctive past positive where (as nyafa) it has LL.

   Examples:
   - Anyafa atsamaya (Fortunately he left) L LL
   - Anyafa babölna (Fortunately they saw each other) H LL

4.459 nne, do continuously.

   It occurs in the following situations:

1. Infinitive positive where it has HL.

   Example:
   - Retbatla honna röëbbötsa (We want to continue working in the meantime) L LL

2. Imperative positive and negative, singular and plural. In the positive singular, nne may occur as nnô but usually has its vowel assimilated to the following S.C. of the 2nd person singular, viz. o, the resulting form being nno. Both these forms (i.e. nnô and nno) have either LH or HL.

   Examples:
   - Ñnô (or Ñno) ötsamô (Walk on in the meantime) LH or HL
   - Nnô (or Ñno) ötsamô (Walk on in the meantime) LH or HL

   Sometimes, in addition to the assimilation referred to above, there is also contraction of the deficient verb stem with the following S.C., resulting in nnôô whose extra length carries the (lowered H) tone of the now-latent S.C. o.

   Example:
   - Nnônöö ötsamô (Walk on in the meantime) LH LL

   In the plural the form is nnông which has HHL.

   Example:
   - Nnông ötsamô (Walk on in the meantime) HHL

   In the negative singular, this deficient verb occurs as nne with either HL or HH, with the latter possibly more commonly used.

   Example:
   - Sene (or Senô) wëbëa (Do not go on speaking) LHLL or LH HH

   In the negative plural nne has HH followed by the L of the plural suffix.

   Example:
   - Sennông labëa (Do not keep on talking) L HH L

3. Indicative primary and participial present perfect positive where it occurs as nnilô. In the primary modality nnilô has either HHL or HLL, but especially the former, when used with H-toned S.C.s., and only HHL with L-toned S.C.s.

   Example:
   - Nnilô (or Nnilô) ötsamô (Walk on in the meantime) HHL or HLL

---

1. The 2nd person singular S.C. here has H as it occurs in the present Subjunctive.
4.461 *ntö*, and then

Assimilation and contraction have taken place here between the original stem *ntö* and the following infinitive prefix. The extra length on the stem thus carries the L of the now-latent ho. It occurs in the following situations:

1. **Subjunctive present and past positive.** In the present tense, *ntö* has LN-L.

   **Examples:**
   
   Lejö *lentö* tamaya (You must eat and then go) L\[H-L\]
   
   In the past tense, it has LN-L with H-toned S.C.s. and HH-L with L-toned S.C.s.

   **Examples:**
   
   With H-toned S.C.s.
   
   Baañbëtöa *bantö* phëmöla (They worked and then rested) H|LH-L
   
   With L-toned S.C.s.
   
   Baañbëtöa *rantö* phëmöla (We worked and then rested) L|HH-L

2. **Habitual positive where it has HH-L.**

   **Examples:**
   
   *Ntö* has an alternative with which it is strictly interchangeable, viz. *ntanö* from assimilation and contraction of *ntane ho*. *Ntanö* occurs in all the situations enumerated for *ntö* with tone pattern HH-L throughout. No additional examples are provided therefore.

4.462 *tswatswa*, engage in repeated, yet fruitless, efforts

It occurs in the following situations:

1. **Indicative primary and participial present positive.** In the primary modality it has LL with L-toned S.C.s., and HL with H-toned S.C.s.

   **Examples:**
   
   With L-toned S.C.s.
   
   Ketswatswa *kebitsa* ömpa ha\[kapëkàrame\] (I call and call and yet he does not answer me) L|LL
   
   With H-toned S.C.s.
   
   Batswatswa *babitsa* ömpa ha\[kapëkàrame\] (They call and call and yet he does not answer them) H|HL

   In the participial modality where all S.C.s. have H, *tswatswa* always has HL.

   **Example:**
   
   Baañ tswatswa *babitsa* ömpa ha\[kapëkàrame\] (They used to call and call and yet he would not answer them) H|HL

   In the present perfect where it occurs as *tswatswilö*, it has LHL in the primary modality with both L-toned and H-toned S.C.s., and LHH in the participial modality.

   /*  Examples: */
3. Indicative, e.g. Kebe mōnha (I become a man) L|H
   le ha kebe motle (even though I am becoming handsome) HL|H
   Hakebe motle (I am not becoming handsome) LH|H
   le ha kasebe motle (or motle) (even if I do not become handsome) HL|H

In the perfect, the disyllabic form bilē has either LH or HH with
I-toned S.C.s., and either LH or HL with R-toned S.C.s. in the
primary modality. In the participial modality bilē always has LH.

Examples: 

With I-toned S.C.s.
   Kebilē (or Kebile) mōna hararo (I have been here three times)
   le ha kēbīlē mōna hararo (even though I am becoming handsome)

With R-toned S.C.s.
   Kēbilē (or Kebile) mōna hararo (They were here three times)
   le ha kebilē mōna hararo (even though they were here three times)

Indicative future, e.g. bētalāba mōna hosasane (They will be here
tomorrow) HH-L|H

4. Subjunctive present positive, e.g.
   Lebe mōna hosasane (You must be here tomorrow) H|H
   nega motsele (You must not be lazy) HL|H

Subjunctive past positive, e.g. Aha mōnaro (He was greedy) L|H

5. Habitual positive, e.g.
   Lebe bātīle (They usually become pretty) L|H

6. Potential primary positive, e.g. Akaba mōbē (He would become ugly)

participial positive, e.g. le ha akaba mōbē (even though he may become ugly) HH|H

4.465 na. It occurs in the Indicative Mood only. In the
primary modality it has L with both I-toned and R-toned S.C.s. e.g.,
   Kena lēdikgomo (I have cattle) L|L
   Bana lēdikgomo (They have cattle) H|L

In the participial modality it has H.
   le ha beka (or bana) lēdikgomo (even though they have cattle)
   HL|H or H|H

... 4.466
4.466  *le* and *se*. These two occur only in the Indicative participial, *le* in positive and *se* in negative constructions. They both have ḫ.

**Examples:**

*le ha kele morena* (Even though I am a king) ḫ ḫ

*le ha kese morena* (even though I am not a king) ḫ ḫ

### The Copulative and various Copulative Constructions

4.467  Reference has already been made, in various parts of this tonal study, to the tones of components of most of the various types of copulatives and copulative constructions. No special tonal analysis of these is therefore necessary, except to refer the reader to the relevant sections above. The references follow the sequence in which these various aspects are treated. They are as follows:

1. **Impersonal copulatives in the Indicative Mood, primary modality present tense negative, based on the nouns *motho* and *lėtho* (§§ 4.110 - 4.113).

2. The copulative verb *hè* as an Influencing preceding element (§§ 4.114 - 4.117).

3. Copulatives based on *D*-form nouns used as weak adjectival stems with 3rd person subjects - i.e. where 3rd person S.C.s. appear as Influencing preceding elements. See under Influencing preceding elements (§4.106, and §4.109).


5. Copulatives based on weak adjectives with 3rd person subjects (§4.218).

6. Tones of *hè* which may be used as a constituent of copulative constructions in the past tense (§4.445).

7. Tones of *hè* which may be used as a constituent of past (§4.445) and future (§4.446) copulative constructions.

8. Tones of the copulative verbs:

(a) *hè* (§4.464);

(b) *mè* (§4.465);

(c) *le* and *se* (§4.466)

4.468  To complete the survey of the tonal behaviour of copulatives and copulative constructions, the following information is appended—

**Copulatives with 1st and 2nd person S.C.s.** Low-toned preceding elements are non-influencing. When, therefore, 1st and 2nd person basic S.C.s. are used immediately before words occurring as copulative bases, the tone pattern of the complete copulative so formed is simply a succession of the L of the S.C. and the inherent tone pattern of the word constituting the copulative base.
Examples:
OmorSna (You are a king) LLLL, cf. inherent LLL or morSna

Lobangata (You are many) LLLL, cf. inherent LLL of bangata

Rebaholo (We are big) LHLL, cf. inherent LHLL of baholo

Lehóle (You are far) LHLL, cf. inherent HL of holé

Rebalá1ílé (We are tall) LHLM, cf. inherent LHLM of balá1ílé

Impersonal copulatives with ke + noun or pronominal. The formative ke causes a down-step to occur on the first syllable of most nouns, and also on possessive qualitative pronominals, when these are placed immediately after it.

Examples:
Kethl todavía (It is a shield) HAHL
Ketsaka (They are mine) HAHL

Again, this formative ke, in conjunction with final occurrence of an immediately following A.P. (i.e. where the A.P. is used as a copulative base), causes inherent final H of the A.P. to be replaced by L.

Example:
Kobána (It is they) HLLL, cf. inherent LH of bána

Impersonal copulatives with base + noun or pronominal. The copulative forming expression base causes a down-step on all nouns and pronominals which are placed immediately after it.

Examples:
Hasébúla (It is not rain) LHJHL
Hasétsaka (They are not mine) LHJHL
Hasébáhlé (It is not everybody) LHJHM
Hasétséé (It is not those) LHJHL
Hasédisílé (They are not different ones) LHJHL

Unlike ke, however, base does not lower inherent final H of an A.P. in final occurrence.

Example:
Hasébána (It is not they) LHJLEH, cf. inherent LH of bána

4.469 The copulative verbs le and se in copulative construction.

These occur in copulative constructions in the participial modality. They cause a down-step to occur on the first syllable of nouns, pronouns, pronominals and adverbials placed immediately after them as copulative complements.

/... Examples:
Examples:
1. le ha elō thebē (even though it is a shield) HH HL
2. le ha seō thebē (even though it is not a shield) HH HL
3. le ha elō tekā (even though they are mine) HH HL
4. le ha seō tekā (even though they are not mine) HH HL
5. le ha elō kolo (even though they are big ones) HH HL
6. le ha seō kolo (even though they are not big ones) HH HL
7. le ha elō holē (even though it is far) HH HL
8. le ha seō holē (even though it is not far) HH HL

On the other hand, these copulative verbs do not affect inherent final H of A.P.s. occurring immediately after them in final sentence position.

Examples:
1. le ha elō teśō (even if it is they) HH LH
2. le ha seō teśō (even if it is not they) HH LH

4.470 The copulative verb ba in copulative construction.
For this, see §§4.106 and 4.464 above.

4.471 The copulative verb na in copulative construction.
This copulative verb is followed by conjunction le in the positive. This le is not tonally affected in this sequence when the predicative is in the primary modality. When the predicative is in the participial modality, on the other hand, there is a down-step on le occurring after na.

Examples: primary modality
Harena ledikōmo (We have cattle) LH HHLL

participial modality
le ha renea ledikōmo (even though we have cattle) HL LH HHLL

N.B. na has L in the primary modality and H in the participial modality.

In the negative, le is dropped, and na is immediately followed by the copulative complement, which is either a noun, a pronoun or a pronominal. These complements are down-stepped in this occurrence.

Examples: Hakana buka (I have no book) LH HH

Harena teśānte (We do not have genuine ones) LH HHLL

Hakana teśā ntle (They do not have beautiful ones) LH LH

na does not lower final H of an A.P. in final occurrence.

Example: Hakana teśā (They do not have them) LH LH

/... The Ideophone
Much has been said about the abnormal nature of the attributes of length, stress, tone, and voicing as occurring with ideophones. In respect of tone, we take the view here that, while H is sometimes heard to be higher, and L lower, than usual, there is no significant difference of tonemic relationships observed in ideophones as against other parts of speech. We still have here the two tone-mes H and L as in other cases. The only difference is that the interval between H and L in ideophones is sometimes greater—in certain cases very much so—than in other occurrences of these two pitch-values. This, however, is a non-significant difference. Besides, in fairness to ideophones, it must be pointed out that this greater interval is also sometimes found with demonstratives and very often with conjunctives also, which makes it a not-so-unusual phenomenon after all, in any case one which is not restricted to ideophones.

Then there is the frequent devoicing of the final vowel in ideophones ending in L, particularly where this L is preceded by another L. But here, too, there is a parallel. It was observed, in our phonetic analysis, that devoicing of a final syllable when a word ending in L occurs finally in a non-interrogative non-interjective expression is quite frequently found. Devoicing is therefore also discounted as a feature peculiar to the ideophone.

If extra-low tones, resulting in devoicing, and extra-high tones, occur more often in ideophones than in other parts of speech, then it is the frequency of such occurrences, rather than the occurrences themselves, which constitutes a divergence in the tonal behaviour of ideophones as compared with that of other speech forms.

Ideophones sometimes have the length of the final syllable prolonged to any desired extent. This happens mainly in the case of ideophones indicating state—colour, smell, state of silence or noise, temperature, posture or attitude. It also happens with ideophones indicating action which is slow and persistent. The prolonging of this final syllable is an attempt to convey the idea or picture of the enduring nature of the state or action predicated about, and also sometimes to emphasise the intensity of such state or action. If the prolonged syllable has L, the extra length is always devoiced, the tone therefore being Lm, and the syllable whispered. This extraordinarily long duration of a syllable is, like the other attributes, not restricted to ideophones, being found in demonstratives and conjunctions, but not necessarily on the final syllable in these two cases. It can also be heard on the penult of vocatives of nouns and of other words used in vocal communication shouted across a great space interval.

1 See §§2.20-2.25 and 2.64 above.

Classification
Classification of Ideophones

4.474 Ideophones are here classified according to number of syllables, and each group so arrived at is subjected to a tonal analysis, resulting in tonal sub-groupings. No classification into A and B forms, or equivalents of these, is considered necessary here since ideophones are not tonally inflected, and such a classification would therefore be to no purpose. The main tonal groupings are therefore based on complete tone patterns of ideophones, rather than on the tones of specific syllables.

4.475 The foregoing statement puts across a view which is directly opposed to that of Letele on this point. He says (Tone in S. Sotho, pp. 122-3): "In grouping Ideophones (as well as Interjectives) no attempt is made to distinguish sub-groups within the major Tone Groups X and Y [any A- and B-forms]. In the first place Ideophones do not consist of more than one essential Tone Pattern although the speech tones vary so widely from one speech context to another. For instance, the tonal level of the last syllable of an ideophone such as tlule $tie$ is not significant since ideophones do not give rise to tonal transitions with succeeding words. But since they occur in syntax relations with preceding words, it is necessary to group them tonally in order to be able to determine the kind of tone-step which occurs in such syntax relations. In the second place ideophones have such extreme features of length, tone, etc., so that it is often difficult to decide the number of syllables, the tonal level, etc."

While it is true that ideophones "do not consist of more than one essential Tone Pattern", which I interpret to mean the same thing as my statement that ideophones "are not tonally inflected", i.e. that they have the same tone pattern in all contexts, we would yet like to know what these immutable tone patterns are, a fact which Letele appears to attach little importance to; and it is with a view to satisfying this requirement that I have found it necessary to group ideophones into tone-pattern groups. Regarding tonal transition, I do not agree with Letele when he says that "ideophones do not give rise to tonal transitions with succeeding words". They do in fact. Let us take the sentence Twēba yare tshōbē kāmōkoting (The mouse suddenly disappeared into the hole). In this sentence, as the marking shows, there is a down-step after the last syllable of the ideophone tshōbē, i.e. beginning on ka of kāmōkoting. In this particular example, the down-step is the more easy to perceive because the two syllables between which the transition takes place both have H. Apart, therefore, from the simple, yet important, requisite of informing the reader about the tonal structure of tshōbē as a whole, there is the absolutely indispensable information...
regarding the tonal relationship between the two syllables مة and ِلا، i.e., in general application, between the ideophone and the following word. On the other hand, some of the relationships between the ideophone and the word preceding it, are up-step transition which, as pointed out elsewhere, is not essential to good pronunciation, and is in most cases even imperceptible.

Letelo's remark concerning the difficulty in determining the number of syllables and the tone levels of ideophones, I must say, surprises me, because it has not seemed to me that it is any more difficult to analyze ideophones in these two respects than it is to apply the same treatment to some other classes of words which are not ideophones. This attitude of mind must be due largely to the over-emphasis placed on the so-called "peculiarity" or "unusualness" of the nature and/or degree of the prosodic features of length, tone, stress, etc., as occurring with ideophones, and this we have already had occasion to remark about.

Seeing that the tones of ideophones are never inflected, there is no need to determine inherent tone patterns for ideophones, since no deviations of tonal behaviour are found, and the need for a norm does not arise; which means that all the tone patterns given here are in fact contextual patterns.

Monosyllabic ideophones.

(a) Ideophones with dynamic tone. There are two groups of these, viz. the H-L and the L-H groups.

(i) The H-L group. By far the majority of these begin at normal H and end at normal L, except where the final syllable is prolonged as indicated above.

Examples:
- pô (strike, as with stick on body)
- ِلا (slap)
- ِلا (strike one hard object with another - as stone with iron)
- ِلا (same as ِلا)
- ِلا (pure white) - prolongation possible; state
- ِلا (break, intrans.) - prolongation possible; sound enduring for a few seconds
- ِلا (slap)

(ii) The L-H group. Here also most ideophones begin at normal L and end at normal H.

Examples:
- ِلا (be soaking wet)
- ِلا (fall asleep)
- ِلا (become submerged under water)
- ِلا (go out)
- ِلا (die)

See 4.47 above
It would be quite legitimate, in my opinion, to treat the ideophones in the above two groups as disyllabic, and to place them in the HL and LH groups respectively, under disyllabic ideophones.1

(b) Ideophones with static (or level) tone. These are also divided into two groups, viz. those with H and those with L.

(i) The H group. In some cases the H may be somewhat higher than normal, but not markedly so, nor often. Where prolongation occurs, the tone on the extra length is maintained strictly at H, no perceptible fall or rise, however slight or non-significant, being allowed.

Examples:

ня (disappear under water)
 tá (be all alone)
 tá (be completely silent) — prolongation possible; state
 pá (be ice-cold) — prolongation possible; state
 ká (strike one hard object with another)
 ngá (be completely dry)
 tá (be hot, of the sun) — prolongation possible; state

(ii) The L group. In a number of ideophones of this group there is devoicing throughout the articulation. Sometimes, however, the voice begins above whisper level, i.e. at L. Where this is the case, there is often a tendency for the voice to move from L to Lm, giving the effect of a glide D-Lm. While, therefore, the tone-marking reflects only an L, it must, in many of these cases be interpreted as D-Lm. Where prolongation takes place, at least the additional length has no voicing.

Examples:

râyâ (be full)
 tawy (stand erect)
 phu (smell strongly — bad smell) — prolongation possible; state
 fï (go out, of lights)
 tabo (be pitch dark) — prolongation possible; state
 thô (drip)
 fu (be dead-drunk)

Disyllabic ideophones

A+479 There are four tonal groups here, viz. HH, LL, HL and LH.

(a) The HH group. Most of the ideophones in this group have normal H on both syllables. Where prolongation takes place on the final syllable, H is maintained throughout the additional length.

... Examples

1 Attention is drawn to the remarks in § 4.29 above re ideophones with H-L. See also Doke and Mofokeng

§ 649.
Examples:

- **tn̂sɔ** (go out quickly)
- **hlw̃r̃** (strike lightly, esp. with hard object)
- **kg̃r̃** (be completely dry)
- **k̃j̃** (strike hard object with another; ring of bell, i.e. striking of metal on metal)
- **nỹk̃r̃** (be completely quiet or still) - prolongation possible. state

- **t̃b̃r̃** (jingle, intrans.)
- **p̃m̃g̃** (meet suddenly)
- **q̃õg̃** (strike, of bell) prolongation possible; enduring sound

N.B. It is interesting to note that all mid vowels of the lower mid phonemes in the above ideophones are of the raised variety. Also, many of the ideophones in this group indicate sound, some of them a hollow sound. There may be here an unconscious association of the sound heard and the vowel considered most suitable for conveying the idea of such a sound.

4.480 (b) The LL group. In by far the majority of cases here, the second syllable is devoiced. Where prolongation of the second syllable occurs, at least the additional length is voiceless, but, as already stated, in most cases the whole of the second syllable is devoiced. It would appear, however, that most of the ideophones in this group indicate actions, and mainly actions of short duration, for which reason prolongation is a rare occurrence here. Regarding the tones of the two syllables in this group, the second syllable always has a lower L than the first one. Strictly, therefore, the tonal sequence here is **L̃L̃** rather than just **LL**, and this means that in theory we can here legitimately expect devoicing of the second syllable to be universal.

Examples:

- **ph̃r^s^** (glitter)
- **tãk^e** (glitter, flash)
- **kãt^u** (swallow mouthful of liquid)
- **th̃e^** (appear suddenly)
- **fõo^** (rise, of column of smoke)
- **rẽf^o** (stand up, of many people or animals at the same time)
- **sw̃ãh̃^^a** (rustle, as of leaves)
- **q̃ãh^f^u** (slush)
- **r̃õp^o** (suddenly come into view, of many advancing or rising things)
- **hĩw̃a^t^a** (fall, of light object)
- **k̃g^a^l^e** (collide)
- **ph̃k^e^g^e** (splash)

/... The
The tentative suggestion is made here that devoicing on the final syllable always occurs where the consonant (if any) of this syllable is a voiceless one; and that where this consonant is voiced, or the syllable consists solely of a vowel (normally always voiced) this syllable may or may not be devoiced. In all the above examples the final syllable contains a voiceless consonant and is therefore devoiced. Here are examples with a voiced consonant in the final syllable, or where this syllable consists of a vowel only.

**Examples:**

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>bura</td>
<td>(collapse, of e.g. a house)</td>
</tr>
<tr>
<td>hele</td>
<td>(of meal, to fall off the mill-stone)</td>
</tr>
<tr>
<td>habo</td>
<td>(take a mouthful of liquid)</td>
</tr>
<tr>
<td>phuru</td>
<td>(to flutter or fly away, of a bird)</td>
</tr>
<tr>
<td>qheme</td>
<td>(to crumble or fall, of e.g. a wall)</td>
</tr>
<tr>
<td>bjaara</td>
<td>(crush, squash)</td>
</tr>
<tr>
<td>rwanye</td>
<td>(squeak, of e.g. shoes)</td>
</tr>
<tr>
<td>qhau</td>
<td>(snatch, seize)</td>
</tr>
<tr>
<td>hédì</td>
<td>(catch a glimpse of)</td>
</tr>
<tr>
<td>lei</td>
<td>(leap)</td>
</tr>
<tr>
<td>nyaro</td>
<td>(get a start)</td>
</tr>
</tbody>
</table>

There is, in these cases, sometimes a vacillation between voicing and devoicing on the final syllable by the same speaker, some articulations being, in fact, just on the threshold of voicelessness. The tendency, however, is always towards devoicing the final syllable, and it will be found that even where a voiced consonant occurs in this syllable (or where the syllable consists of a vowel only) it (the syllable) is more often devoiced than not.

**4.6c3 (c) The HL group.** The final syllable is sometimes devoiced here also, though this is apparently not as common as where this syllable is preceded by another L. Where prolongation takes place, however, devoicing of this syllable is always found, and persists throughout the additional length.

**Examples:**

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>tiëra</td>
<td>(be red, esp. with blood) — prolongation possible; state</td>
</tr>
<tr>
<td>sëhì</td>
<td>(be yellow or silver-coloured) — prolongation possible; state</td>
</tr>
<tr>
<td>swëu</td>
<td>(be pure white) — prolongation possible; state</td>
</tr>
<tr>
<td>fëba</td>
<td>(be red) — prolongation possible; state</td>
</tr>
<tr>
<td>thuëw</td>
<td>(fall asleep)</td>
</tr>
<tr>
<td>phëuw</td>
<td>(be blown away)</td>
</tr>
<tr>
<td>talá</td>
<td>(be green) — prolongation possible; state</td>
</tr>
</tbody>
</table>

As shown by these examples, disyllabic ideophones indicating colour are found in this tone group. With all these colour indicating ideophones, prolongation is not only possible, but often actually takes place.
As indicated under monosyllabic ideophones with dynamic tone, these may be described as disyllabic. In that case, those having H\-J as monosyllabic ideophones must, if taken as being disyllabic, be grouped here, e.g. ts\={\text{ma}} (be pure white).

4.482 (d) The LH group. Where prolongation of the final syllable occurs — which is by no means frequent in this group — the H of this syllable is maintained throughout the additional length.

Examples:
- t\={\text{ba}}\={\text{ma}} (disappear quickly into, e.g. hole, house, etc.)
- k\={\text{ma}} (be snapped)
- k\={\text{al}}\={\text{o}} (pay flying visit)
- d\={\text{i}}\={\text{k\={a}}} (disappear quickly)
- r\={\text{ya}}\={\text{m\={a}}} (disappear quickly behind something, as d\={\text{i}}\={\text{k\={a}}, vanish)
- p\={\text{he\={u}}} (plunge)
- p\={\text{et\={e}}} (disappear round corner)
- q\={\text{\={e}}}\={\text{m\={u}}} (break surface of water, of small object, e.g. stone, frog, etc.; sound made by the water)

4.483 Ideophones derived from disyllabic verb stems are found in this tone group, irrespective of whether the verb stem is A-form (with inherent tone-pattern HL) or B-form (with inherent tone pattern LL).

Examples:
- k\={\text{\={e}}}\={\text{\={n}}} (enter quickly)
- h\={\text{l\={a}}}\={\text{\={a}}} (appear suddenly)
- \={\text{s\={m}}} (stand up quickly)
- t\={\text{la\={d}}} (become full)
- b\={\text{u\={a}}} (open)
- h\={\text{la\={t\={w}}}a} (wash)
- k\={\text{\={n}}} (enter)
- h\={\text{\={l\={a}}}\={\text{\={a}}} (appear)
- \={\text{\={s\={m}}} (stand)
- t\={\text{la\={d}}} (become full)
- b\={\text{u\={a}}} (open)
- h\={\text{la\={t\={w}}}a} (wash)

4.484 Dynamic-toned monosyllabic ideophones having the tone pattern L-H must, if taken as being disyllabic, be grouped here. This includes all ideophones from monosyllabic verb stems which have L-H as monosyllabic forms, or LH as disyllabic forms, irrespective of whether the verb stems from which they come are A-form (inherent H) or B-form (inherent L).

Examples:
- t\={\text{w}i\={\text{i}}} (go out)
- j\={\text{i}} (eat)
- m\={\text{a}} (drink)
- \={\text{s\={w}}} (die)
- t\={\text{i\={l}}} (come)
- w\={\text{i}} (fall)
- t\={\text{wa}} (go out)
- j\={\text{a}} (eat)
- m\={\text{a}} (drink)
- \={\text{s\={w}}} (die)
- t\={\text{la}} (come)
- w\={\text{a}} (fall)

- t\={\text{\={e}}}\={\text{\={a}}} (be soaking wet)
- q\={\text{\={e}}}\={\text{\={e}}} (become submerged under water)

/... Trisyllabic
Trisyllabic ideophones

There are six tone groups here, viz. HHH, LLL, HHL, LLH, HHH and LHH.

(a) The HHH group. Where prolongation of the final syllable takes place, the H of this syllable is maintained throughout the additional length.

Examples:

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>hlwerpêkê</td>
<td>(strike lightly with e.g. a stick)</td>
</tr>
<tr>
<td>kgwêkê</td>
<td>(be completely dry)</td>
</tr>
<tr>
<td>kgêrêu</td>
<td>(strike hard surface with e.g. a spade)</td>
</tr>
<tr>
<td>qêlêü</td>
<td>(peal, of bell) — prolongation possible; floating sound</td>
</tr>
<tr>
<td>nyêlêü</td>
<td>(be perfectly still) — prolongation possible; state</td>
</tr>
</tbody>
</table>

From the above illustration, it must be concluded that most trisyllabic ideophones in this group are derived from disyllabic ideophones with HH. The most commonly used technique of derivation consists in suffixing, to the disyllabic form, a syllable consisting of H + vowel identical with that of the immediately preceding syllable. The tone of this additional syllable is identical with that of the immediately preceding one. Further examples of this formation are:

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>kêtêkê</td>
<td>(make metallic but non-ringing sound)</td>
</tr>
<tr>
<td>tshêrêkê</td>
<td>(jingle, intrans.) cf. tshêrê (same)</td>
</tr>
<tr>
<td>phuruêkê</td>
<td>(flutter, fly away) cf. phuruê (same)</td>
</tr>
</tbody>
</table>

nyêlêü is also seen to be related to nyêlê, both having the same meaning.

(b) The LLL group. Devoicing of the final syllable is mostly found. Where prolongation of this syllable occurs, it (the syllable) is always devoiced.

Examples:

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>tshalâla</td>
<td>(rub with ointment or oil)</td>
</tr>
<tr>
<td>qêlêlê</td>
<td>(step aside to avoid attacker)</td>
</tr>
<tr>
<td>qobatbâa</td>
<td>(stay or sit for only a short while)</td>
</tr>
<tr>
<td>thêlêlêe</td>
<td>(dodge about among many people or things)</td>
</tr>
<tr>
<td>tlabâba</td>
<td>(ooze, e.g. blood from wound) — prolongation possible; slow and persistent action</td>
</tr>
<tr>
<td>shôrê</td>
<td>(pouring out of water, as from tap) — prolongation possible; persistent action. N.B. Prolongation is here effected by drawing out the prefinal syllable (syllabic y) rather than the final one.</td>
</tr>
<tr>
<td>hmalâla</td>
<td>(become dark after sunset)</td>
</tr>
</tbody>
</table>
Many ideophones in this group are derived from disyllabic ones with tone pattern LL by suffixing the syllable k + appropriate vowel as in the previous group. This additional syllable takes the tone of the immediately preceding one.

**Examples:**
- phuhlaka (sink to earth) cf. phula (same)
- kwatlaka (make sound as of galloping horse) cf. kwatla (same)
- bathaka (arrive unexpectedly) cf. batha (same)
- bôthôkê (subside, as of swelling) cf. bôthô (same)
- phêthoko (roll over to other side) cf. phêthô (same)

(c) **The HHL group.** There is only one example here, viz. pûdû (be grey). The final syllable may be prolonged since the ideophone indicates a colour, i.e. a state. This syllable is devoiced.

(d) **The LLH group.** This group consists mainly (perhaps entirely) of ideophones derived from trisyllabic verb stems. As with ideophones from monosyllabic and disyllabic stems, the tone pattern of the ideophone is the same no matter whether it is derived from an A-form (inherent tone pattern HHM) or a B-form (inherent tone pattern LLL) verb stem.

**Examples:**
- sêbêtai (work) \(\nearrow\) sêbêtsa (work)
- bapadi (play) \(\nearrow\) bapala (same)
- tabodi (tear) \(\nearrow\) tabola (same)
- blakodi (wipe) \(\nearrow\) blakola (same)
- fêrêri (winnow) \(\nearrow\) fêrêra (same)
- arâbi (answer) \(\nearrow\) arâba (same)

No prolongation ever takes place on the final syllable in these ideophones, the reason being that they indicate swift and only momentary action.

(e) **The HLH group.** It would appear that no cases of prolongation of the final syllable occur here. If any do exist, the theoretical possibility regarding the tone of this drawn-out syllable is that it would sustain original H throughout, as in analogous cases.

**Examples:**
- tôsêkête (throw away)
- kwâditô (swallow with difficulty, almost, or actually audibly)
- swâditô (blow or sweep past, as whirlwind)
- swalâla (be overflowing, as river)
- qwelâle (reach summit)
4.490

(r) The LHH group. There is no prolongation of the final syllable in ideophones of this group, it would seem.

Examples:

tshēbēkē (disappear suddenly into, e.g. hole, house)
   cf. tshēbē (same)

kgalōkō (pay flying visit) cf. kgalō (same)

pōtēkē (disappear quickly round corner) cf. pōtē (same)

nyanēkē (disappear behind, or vanish) cf. nyanē (same)

kamōkō (be snapped) cf. kamō (same)

phōsūkū (plunge) cf. phōsū (same)

ētsīkē (slumber) cf. ētsī (same)

All the ideophones in the above examples are derived from disyllabic ones by suffixing the syllable k + appropriate vowel, viz. the vowel of the immediately preceding syllable. This derived ideophone is found in this group almost (perhaps entirely) to the exclusion of the non-derivative type.

Quadrisyllabic ideophones.

4.491 There are three tone groups here, viz. HHHH, LLLL and LLLH.

(a) The HHHH group. Prolongation of the final syllable occurs with many of these. In that case, the H of this syllable is maintained throughout.

Examples:

tilēkēlē (be at a loss) - prolongation possible; state

tīlēmēlē (be at a loss) - prolongation possible; state

thēmēlē (stand as if rooted to the ground) - prolongation possible; posture

qōkēlē (be clear, of sky) - prolongation possible; state

qwēkēlē (reach summit)

Some of these ideophones have alternative tone pattern HLLH, notably qwēkēlē, themēlē, and possibly also tilēkēlē.

4.492 (b) The LLLL group. The final syllable is always devoiced. Where prolongation of this syllable occurs, the additional length is obviously also devoiced.

Examples:

būhlēlē (subside, become flat) - prolongation possible; gradual action.

kōkēlē (subside, of pain or anxiety) - prolongation possible; gradual action.

bothalala (be or become level) - prolongation possible; state

phūhlala (flop down)

tēlahala (come together in great numbers and sit or stand in silence) - prolongation possible; state

thathalala (be stretched straight out) - prolongation possible; state

phōhlālā (subside, e.g. swelling)
halabahla (enter suddenly and forcefully)
kgckgendé (come to sudden stop)
palakaq (arrive at a place)
polopoq (fall hard)

Many of the above ideophones are current derivations from shorter forms; others show signs of historical derivation.

4.493 (c) The LLLH group. This group consists almost exclusively of ideophones derived from quadrasyllabic verb stems. As before, the tone pattern of the ideophone is the same whether the verb stem from which it comes is A-form (inherent tone pattern HHLL) or B-form (inherent tone pattern LLLL).

Examples:

phopholétsa (feel, grope, fondle) << phopholétsa (same)
atamédi (go near) << ataméla (same)
photholehi (have one's evil intentions exposed) << photholeba (same)
holochorehi (fall off, e.g., leaves from tree) << hohlochoreba (same)

Quinquesyllabic ideophones

4.494 There are four tone groups here, viz. HHHHH, LLLLL, LLHHL, and LLLLL.

(a) The HHHHH group. There seem to be very few ideophones with prolongation on the final syllable in this group. When they do occur, the tone of the additional length follows the rule that final H is maintained throughout.

Examples:

kókótkótkótkó (make clanking sound) cf. kótkó (same)
nóchóganóganó (make jingling sound) cf. nóchóganó (same)
kókókókgókókó (make sound as of falling dry hide)

kókókókó (same)
qóqóqó (peal, of many bells) cf. qóó (peal, one stroke only)
prolongation possible; lingering sound
theñgtheñgtheñg (turn sharply and retake one's steps)

(b) The LLLLL group. Here ideophones with a prolonged final syllable appear to be completely lacking. Devoicing occurs on the final syllable, and very often also on the third syllable. Any ideophones with prolonged final syllable which may come to light will therefore have devoicing on the entire length of this syllable.

Examples:

tótsótsótsótsótsó (glitter - repeated flashes) cf. tótsó (flash)
kakatukatu (swallow many mouthfuls of liquid) cf. kakatu (swallow once)

1 Often heard as three syllables, with ng in each of its two occurrences merging with the immediately preceding syllable.
**446**

fegetethe (make sound as of many hurled stones)
cf. fege (sound of one falling stone)

bijabjarabjara (crush or squash, repeated many times)
cf. bijara (crush, once only)

tahetshethetshethe (jump off height, of many people or animals) cf. tahethe (jump off, one only)

kakamakam (gobble up) cf. kama (throw quickly into mouth)

(c) **The LLLLH group.** There is apparently no prolongation of the final syllable here. If any, the ideophone concerned will follow the rule of maintaining H throughout.

**Examples:**

totlolotlou (jump into something, of many people or things)
cf. tolou (jump in, of one)

phophoapho (jump into water, of many) cf. phapho (of only one)

nyanyamanyam (disappear or vanish, of many things)

protepote (disappear round corner, of many things)
cf. poto (of one only)

nyenyedy (glitter, many flashes) cf. nedy (glitter once only)

All the examples given in groups (a), (b) and (c) above have one common structural pattern, viz. a reduplicated disyllabic form, with the first syllable of the original form placed at the beginning of the reduplicated form to make it quinquessyllabic. By far the majority of these still have current disyllabic forms corresponding to them.

(d) **The LLLLL group.** This group consists entirely of ideophones derived from verb stems. Again, as in all the previous cases, the tone pattern of the ideophone is the same whether the verb stem from which it comes is an A-form (inherent tone pattern HLLL) or a B-form (inherent tone pattern LLLL). Formations of this kind are rare with the longer type of stem — from quatrisyllabic on, as primitive stems of more than three syllables are very few.

**Examples:**

tlamollani (untie one another) cf. tlamollana (same)

atametsana (bring each other near) cf. atametsana (same)

It will have become clear, from the illustrations given above, that ideophones derived from verb stems by changing final a of the stem to i, follow the same pattern of tonal behaviour, viz. H on the final syllable and L on all the remaining syllables; or, if they are monosyllabic, they have a dynamic tone pattern rising from L to H, which is seen to be merely a variation of the same pattern as followed by non-monosyllabic stems.
Examples:
- tswî (go out) LH or LH, cf. tswa
- kəna (go in) LH, cf. këna
- fœre (wallow) LLH, cf. fœra
- atoloha (become extended) LLLE, cf. atoloha
- tlamollana (untie one another) LLLLL, cf. tlamollana

Repeated ideophones

4.499 Ideophones are repeated where the action they denote occurs over and over, as the dripping of water (thô-thô-thô), the sound of running footsteps (pâ-pâ-pâ), someone talking away (pshâ-pshâ-pshâ), etc. There are usually about three repetitions, sometimes more and sometimes fewer, depending on the speaker and also on the demands of the situation. But it must be understood that the number of repetitions is not intended to coincide with the number of times the action is actually repeated — they merely give an idea that a repetition takes place. Normally, this repetition of the ideophone does not affect the tones of the single, un-repeated form. Therefore, in the ideophone predating the dripping of a liquid, where the monosyllabic form thô has LLM, this pattern occurs unchanged with each repetition of this monosyllable. Thus (with narrow tone-marking): thô-thô-thô. Some rare usages occur which do affect the tones of some of the repetitions. So, for instance, where it is sought to convey the idea of uneven dripping, some syllables would be syncopated, their duration being reduced, and the fall on their tone arrested, as in the following (with the shorter intervals represented by the omission of the hyphen): thô-thôthô-thô-thôthô-thô. Another example (indicating many lights going out at irregular intervals): fi-fifi-fi, etc.

4.500 When disyllabic forms are employed in this manner, that is, to indicate repetition of the action at uneven (but mostly short) intervals, the shorter intervals are indicated by the omission of the second syllable. It is this kind of repetition of disyllabic ideophones which results in quinquesyllabic forms. Thus (the hyphen is retained here):

fe-fe-thêfe L-LLm-Lm
ge-gëw-gëw H-HH-HH
phô-phôsû-phôsû L-LH-LH
4.501 Sometimes even where the intervals are even, if their duration is reduced considerably, increasing the speed at which the repetitions follow each other, a fall (in the case of monosyllabic ideophones with L) which normally occurs on the single, unrepeated ideophone, or an Lm on the final syllable (in the case of non-monosyllabic ideophones with LL on the last two syllables), is suspended until the last repetition. For instance, the idea of regular, but quick drips might be conveyed as follows:-
th3-th3-th3-th3-th3-th3. Again, the disyllabic ideophone tiaka (always repeated at least three times), indicating trembling, has L on the first syllable and Lm on the second. But in quick repetitions, each occurrence other than the last one has LL, and only the last one has Lm. Thus: tiaka-
tiaka-tiaka-tiaka-tiaka, i.e. LL-LL-LL-LLm.

4.502 These remarks are made in the interests of completeness, but it must be emphasized that these are non-significant modifications, even though their omission would result in noticeably bad intonation.

The Adverb and the Adverbial

4.503 Inherent tone patterns. The inherent tone patterns of adverbs and adverbials are obtained according to the general rule by placing these forms in final position in an ordinary statement and removing such tonal modification as may be occasioned exclusively by their placement in this position.

4.504 Classification. Adverbs and adverbials are classified here according to the tonal behaviour of the last syllable as governed by the position the adverb occupies in the sentence, i.e. whether it occurs non-finally (initially or medially) or finally. The tone patterns so obtained are compared with the inherent tone patterns of these adverbs. Classification according to number of syllables is not important here, as specific tonal behaviour does not necessarily, even though in some cases it may, coincide with a given number of syllables. Again, while it has been found useful to indicate the kind of adverb or adverbial under consideration (i.e. as to whether it indicates time, manner, etc.) as and when it occurs, yet this has been found to be of no importance to the problem of tonal analysis, and it therefore obviously does not figure as one of the criteria of classification employed.
4.505 Locative adverbials. For the tonal behaviour of these, the reader is referred to the section on Influencing preceding elements for formations with the prefix ha, and to the section on Influencing succeeding elements for formations with the suffix nág.

4.506 Other Adverbs and Adverbials.
Where tonal behaviour differs with sentence-position.

1. Where the last syllable has H non-finally and L finally:
N.B.1. This alternation of H and L on the final syllable is possible only when the prefinal syllable has H.
N.B.2. Such of the adverbs here listed as may be immediately followed by possessive qualificatives referring to them, are tonally affected by the possessive concord, which means that they in fact have two tone patterns in non-final occurrence — one where they are not immediately followed by a P.C., and one where they are. Whenever these two alternatives are possible in non-final occurrence, this is indicated in the examples.

The position here regarding tonal behaviour is therefore briefly as follows:

The last two syllables of adverbs of more than two syllables, or the two syllables of a disyllabic adverb, have
H H in non-final occurrence with no P.C. following
H L in non-final occurrence with a P.C. following, and
L L in final occurrence.

4.507 The adverbs and adverbials found here are:

(a) With inherent tone pattern HL

kae ? (where?) (place), in both direct and indirect questions
hole (far) (place)
thsokê (aside) (place)
lev (on the hearth or fire) (place)
zung ? (when?) (time), in both direct and indirect questions
kgêlê (long ago) (time)
swang ? (how?) (manner) in both direct and indirect questions
butê (slowly) (manner)

(b) With inherent tone pattern LHL

hanfi (near) (place)
hodimo (up, above, on top) (place)
morañ (behind, at the back of, after) (place and time)
newaholê (last year) (time)
marìha (winter, in winter) (time)
bosìo (night time, at night) (time)
bhelo (much, a great deal) (manner - degree)
(c) **With inherent tone pattern LLHL**

*maobane* (yesterday) (time)

*10101010* (at length) (manner)

(d) **With inherent tone pattern LLHHL**

*mantsibonya* (evening, in the evening) (time)

A few examples in sentences are:

`Leya kae banna?` *(Where are you going fellows?)*

`Leya kae?` *(Where are you going?)*

`Batlafihla neng hane?` *(When shall we arrive home?)*

`Batlafihla neng?` *(When will they arrive?)*

`Lebala jwang sekolieng?` *(How do you read at school?)*

`Lebala jwang?` *(How do you read?)*

`Batsamaya butile hahelo` *(They are walking too slowly)*

`Redula haufi lethatha yanwe` *(We live near yonder mountain)*

`Basile haufi` *(They are already near)*

`Usekwe waya 161616 hobaaraba` *(You must not speak at length when you answer them)*

**4.508** Among the adverbs in this group, the following may be followed by the P.C. ha of Class 17:

- **thoké** *(aside)*
- **hodimo** *(up, above, on top)*
- **morao** *(behind; after)*.

This P.C. has the effect of giving these adverbs L on the final syllable in non-final occurrence, as already indicated, as in

- **thoké hayéna** *(next to it)*
- **hodimo hayéna** *(on top of it)*
- **morao hanaaké** *(after the time, late)*

**N.B. re: kzálé.** When this adverb occurs as the base of a copulative or as the complement of a copulative verb in a copulative construction, it has pattern HL, and not HH, in non-final occurrence, even though not followed by a P.C.

**Examples:**

- **Kozaalé kóbitaq** *(I have long been calling you)*
- **Ené élé kzálé bántséba** *(They had known him for a long time)*

*/... 4.509*
4.509 2. Where the last syllable has L non-finally and M finally.
N.B. M is always immediately preceded by H. So therefore, in this
group, as in the previous one, the prefinal syllable has H.

In brief, the position here regarding tonal behaviour is as
follows:— The last two syllables of adverbs of more than two
syllables, or the two syllables of a disyllabic adverb, have
HL in non-final occurrence, and
HM in final occurrence.

4.510 Some adverbs and adverbials found here are:

(a) With inherent tone pattern HM
    ṭeše (at first, before) (time)
    ḷwālè (now) (time)
    ḷwālè (like that) (manner)
    ṭaš (home) (place)
    ṭaš, with alternative inherent pattern LL (four times)
      (numeral adverbial)
    ṭaš (once) (numeral adverbial)
    ṭlše, with alternative inherent pattern L/HM (tłše)
      (down, below, under) (place)
    ṭạšše, with alternative inherent pattern L/HM (tạšše)
      (down, on the ground) (place)

(b) With inherent tone pattern HHM
    ṭaš (today) (time)

(c) With inherent tone pattern H/LLHM
    ṭạšše (openly, publicly) (manner)

(d) With inherent tone pattern LLHM
    boholo-holo (long, long ago) (time)

N.B. All adverbials formed by means of an adverbial formative
prefixed to some other part of speech (e.g. a noun) whose last two
syllables have HM may be classified here, e.g. ṭạšše (with
respect) ṭạšše/HHM. There would, however, be no point in enumerating
such adverbials here since the parts of speech on which they are
based will have been treated elsewhere.

A few examples in sentences are:

Ketlařišla ṭeše hōwōna (I shall arrive before you)
Ketlařišla ṭeše (I shall arrive first)
Ūsekš wabapala ḷwālè lōbanā bā ṭaš (You must not play like that
    with other children)
Ūsekš wabapala ḷwālè (You must not play like that)
Lōbuš phạštalāštə hə ḷalenkə (You must speak openly when they
    they ask you)
Lōbuš phạštalāštə (You must speak openly)

/... 4.511
4.511 3. Where the tone of the final syllable is the same in both non-final and final occurrence.

This incorporates all cases where the tone of the prefinal syllable is L.

(a) Where the last two syllables have LH

- tië (outside) (place) inherent pattern LH
- tèng (there) (place) inherent pattern LH
- hare (centre, in the centre) (place) inherent pattern LH
- lose (beyond river or sea) (place) inherent pattern LH
- tèso ?(like this ?) (manner) inherent pattern LH
- tèm (like this) (manner) inherent pattern LH
- tìwa (like this) (manner) inherent pattern LLH
- kòsasane (tomorrow) (time) inherent pattern LLH

(b) Where the last two syllables have LL

- pele (in front, ahead, forward) (place) LL
- maoba (day before yesterday) (time) LL
- bohle (stab with spear held in hand, without throwing the spear) (manner) LLL

N.B. All adverbials formed by means of an adverbial formative prefixed to some other part of speech whose last two syllables have either LH or LL may be classified here. See, however, 4 below.

A few examples in sentences are:

- K̄h̄s̄k̄s̄ (They come from overseas) LH
- Reysa t̄ëng k̄ane (We go there everyday) LH
- Āf̄s̄s̄s̄s̄e (Let us walk in front) LL
- K̄f̄h̄k̄m̄a, k̄f̄l̄̄ (They all arrived the day before yesterday) LLL

4.512 4. Where adverbials behave like nouns of Declension 1 and la and absolute pronouns, having H non-finally and L finally (some always, others conditionally).

A number of these are, in fact, nouns of Declension la used adverbially either without any modifications, or with an adverbial formative prefixed.

Examples:

- notshk̄a (day-time, during the day)
- mantsbo (evening, in the evening)
- t̄r̄t̄m̄a (noun: evening), used with the time-adverbial formative ka (high-toned) to form a time-adverbial meaning in the evening.
bosula (noun: unpleasantness, tastelessness), used with the manner-adverbial formative ha (high-toned when used with bosula) to form a manner-adverbial meaning unpleasantly.

The expression monongwâha may, for all practical purposes also be regarded as a noun of Declension I a, even although its etymology shows that this is not wholly true. In any case, the noun ngwâha (with LH non-finally, and LH finally with Influencing preceding element, otherwise LL in this position) has gone into the composition of this word, constituting the last two syllables thereof.

Other adverbials in this group are adverbials of manner derived from strong adjectival stems by prefixing the adverbial formative ha. The tonal behaviour of their final syllable must, therefore, not be attached to these forms as adverbials, but rather to the strong adjectival stems within their composition, which stems retain the same tonal behaviour even when used in other contexts.

A few examples, in sentences, of adverbials of this group, are:

Reithuta motsheare rona (We, for our part, learn during the day)
Rona reithuta motsheare (We learn during the day)
Ha leya kaphirimane letlamarumâna (If you go in the evening you will find him)
Kerâbala babosula kâmehâ (I sleep uncomfortably everyday)
Kerâbala babosula (I sleep uncomfortably)
Eaîhîlîe monongwâha kàorfela (They all arrived this year)
Eaîhîlîe monongwâha (They arrived this year)
Nâja hanyënâye fêâla (They eat only a little)
Nâja hanyënâye (They eat a little)

4.513 5. Itânâna is in a class by itself, as it has the same tone pattern both non-finally and finally in spite of the fact that its prefinal syllable has H.

Examples:
Kebatla hore oôbatsê tânâna ngwanâka (I want you to work like this my child)
Kebatla hore oôbatsê tânâna (I want you to work like this)

4.514 It is interesting to compare the adverb (and adverbial) with the verb in one respect, viz. tonal behaviour in context. It will be recalled that the final syllable of a verb may be subject to H-L alternation with Context 1 and Context 2 adjuncts respectively, only when its prefinal syllable is H. As shown by the above treatment of the adverb, a kind of H-L alternation takes place here as well, and, as with verbs, this alternation is possible only when the prefinal syllable is H, exception, of course, being made of those adverbials
which behave like nouns of Declensions I and Ia. The H-L alternation of adverbials is, however, brought about solely by sentence position - i.e. whether the adverbial occurs non-finally or finally - whereas with verbs, both the H and the L alternatives on the final syllable are found in non-final occurrence of the verb, but coincide with the use of adjuncts constituting specific contexts.

**Tonal behaviour of the manner-adverbial formative ha.**

4.515 This formative always contrasts tonally with the immediately following syllable, to wit the first syllable of the form to which it is prefixed. It is seen from this that ha has no inherent tone of its own, but may have H or L as occasion demands. It is for this reason that, in the classification of adjuncts in accordance with their tonal influence on immediately preceding verbs, adverbials formed from adjectival stems by prefixing ha were found to belong to either of the two groups according to whether they had H-toned or L-toned ha.

**The Conjunctive**

4.516 Conjunctives all occur non-finally. There is no tonal influence exerted on conjunctives by either preceding or succeeding elements. No need exists, therefore, for a determination of inherent tone patterns for these forms, as their contextual patterns are immutable.

4.517 This treatment covers only the tonal behaviour of primitive conjunctions, as well as that of other words which may unquestionably be used in conjunctive function. The view is taken here (even though this is hardly the occasion to go into a detailed argument on this point) that all verb stems used with the S.C. e in all its various tense and mood forms, are deficient verbs (either primary or secondary) functioning as deficient verbs. A tonal analysis of such forms is therefore excluded here.

4.518 Following are the various conjunctives and their tone patterns:

**With tone pattern H**

<table>
<thead>
<tr>
<th>Formative</th>
<th>Meaning</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>ha</td>
<td>(if, when)</td>
<td>e.g. Ha-ba-thla jarti-se-ta (You must tell me when they arrive)</td>
</tr>
<tr>
<td>le</td>
<td>(and, with, even, also)</td>
<td>e.g. mosadi-le motha (a woman and a man)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Baithuta le bala le hongila (We learn to read and write)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Léti le long (You too must come)</td>
</tr>
</tbody>
</table>

N.B. 1 These two conjunctives are often used together in the order le ha meaning even if or even though. They both retain their H, the sequence HH being the result.
Lo ba basatile hopokile (Even if they do not come it is all right)

N.B. 2 Sometimes *lo* with *hi* is used with *ha* to form the sequence *ka ha* (*Hi*), meaning seeing that, since.

E.g. *ka ha basatile* .... (Seeing that they are not coming)

4.519 With tone pattern *HH*

*hape* (besides, and, also)

E.g. *#'qotile, hapè ompa* (She is beautiful and kind)

4.520 With tone pattern *LL*

*hore* (that, so that)

E.g. *'atsieba hore keatla* (He knows that I am coming)

*kapa* (or)

E.g. *muma kapa mosadi* (a man or a woman)

*Kenang kapa letsamayê* (Come in or go away)

4.521 With tone pattern *HL*

*hola* (if, if only, you should have, he should have, etc.; while)

E.g. *hola laya* (You should have gone)

*Aka bë asawala hola wanothiga* (He would not have fought

If only you had stopped him)

*Yare hola reëma jwalé aPhiLe* (While we were standing thus, he arrived)

Hôla —— this is an alternative to *hola*, with the same tone pattern and the same meaning.

Jwalê (now)

Jwalê raëma ratsamaya (And now we stood up and left)

Empa (but)

N.B. This form may be pronounced with a non-syllabic *m*, giving two syllables with *HL*. Where *m* is syllabic, the resulting trisyllabic form has *HHL*. It is more often heard as a disyllabic than as a trisyllabic form, except in emphatic speech.

E.g. *Kemëmilwë empâ hakëye* (I am invited, but I am not going)

1 When functioning adverbially, *hape* has *HH* in non-final occurrence and *HL* finally.

2 Based on the verb stem *re*, but functioning exclusively as a conjunctive.
With tone pattern LH

atha (whereas, and yet)
e.g. Bare kebāhola, atha kēparāta (They say that I hate them whereas I like them)

N.B. In the alternatives anthe and kanthe, the n is often non-syllabic, particularly in rapid speech. The resulting disyllabic forms then have the same tone pattern as atha, viz. LH. Where n is given syllabic value, it has L, and the tone pattern of the resulting trisyllabic forms is then LNH.

mmē (and, and yet)
e.g. ūmpītsa, mmē keaya (He calls me and I go)

With tone pattern HHL

kahē (therefore)
e.g. ūmpītsa, mmē kahē keaya (He calls me, and therefore I go)

With tone pattern HLN

hōmē (and yet)
e.g. Ketlaya, hōmē kenē kēsārāta (I shall go, yet I do not feel like it)

The suffixed ne has H, and therefore these forms have HHL.

With tone patterns LHL and L/H

hōbāne (because)
e.g. Kēmorata hōbāne omētlē (I love her because she is beautiful)

fēla (only, but)

N.B. Often in rapid speech fēla is heard with a static tone (H) on the first syllable, giving tone pattern HL.
e.g. Ketlēkē fēla hakētsēbe (I shall try, but I don't know - i.e. whether I shall succeed)

With tone pattern LHLH

mohlēpē (perhaps)
e.g. Mohlēpē batlētelē (Perhaps they will come)

athēbāne is an alternative to atha, with the same meaning. Other alternatives are anthēbāne and kantēbāne, where the n coming after the first syllable is often non-syllabic, giving a quadrisyllabic form with the same tone pattern as athēbāne, viz. LHLH. When n is given syllabic value, it has L, and the resulting quinquesyllabic form has LLHLH.

... mohlēmēng
mohl\i_mong (perhaps). Note the down-step. The original expression from which mohl\i_mong is contracted is mohl\i_\i_mong. The simple connective is, as stated in discussing down-stepping, followed by a down-step. That is why the ng in mohl\i_mong is lower than that of hl\i. e.g. Mohl\i_mong b\i_lil\i (Perhaps they will come)

The Interjective

Interjectives are completely isolated, syntactically, from other words in the expressions in which they occur. Indeed, they very often occur alone. For this reason they are not tonally affected by, nor do they affect, any words, either preceding or succeeding.

Again, interjectives are not affected as to their penultimate syllable when they occur alone or at the end of a sentence. Their tone patterns are thus not affected by the position they occupy in the sentence.

All this can be explained in terms of the meaning of interjectives. These speech forms are used as forceful expressions of the emotions of the speaker. They are intended to jolt the listener into an immediate grasping of the speaker's subjective reaction to certain stimuli. Their suddenness, abruptness, stronger stresses, extra high and (sometimes) extra low tones, etc., must be understood in terms of their meaning, which, in so far as non-vocative, non-imperative interjectives are concerned, can be conveyed by means of an ordinary predicative sentence — i.e. be predicated about.

Letele (Tone, p. 121) makes the statement that "Many... Interjectives are monosyllabic units. It is therefore difficult to classify them as high or low in tone since tone is relative."

I do not agree with Letele here in two respects. Firstly, monosyllabic interjectives are very few in S. Sotho in comparison with non-monosyllabic ones, so that, even if the argument were valid that monosyllabic interjectives could not be tonally classified by reason of their isolation in the sense of being neither preceded nor followed by another syllable with which tonal comparison could be made, that would still be no justification for a sketchy treatment of the Interjective as a whole, which I think is a legitimate appraisal of Letele's treatment. Secondly, and more important, is the fact that the validity of Letele's argument that the tones of monosyllabic interjectives cannot be determined as tone is relative is here seriously questioned. Such an argument could be interpreted to mean that the pitch of a syllable can only be determined by comparison with the pitch of another syllable in the same "word".

1 See § 4.37 above
But this author makes it clear, by implication, that this is not his meaning. "In the case of monosyllabic Ideophones," he says, "it is possible to classify them tonally by comparing their tonal level with that of other words to which they are syntactically related in a sentence. Interjectives, however, do not form syntax relations with other words." It is contended here that syntax relationship has nothing to do with the problem, and that two syllables, syntactically unrelated, said by the same speaker under the same conditions, and showing a pitch contrast, would be adequate in helping to determine the relative high and relative low relationship between those syllables. Another point which may be adduced in this argument is that most, if not all, S. Sotho monosyllabic interjectives have a dynamic tone, thus providing a pitch contrast within the unit itself.

4.529 Following are some of the more common interjectives and their tone patterns:

**With tone pattern D-Jas:**

- **ụụ** (yes)
  - e.g. ụụ, kešla (Yes, I am coming)

- **hẹhẹ** (hello-surprise)
  - e.g. ọtsha kaši (Hallo! Where do you come from?)

**4.530 With tone pattern H-L**

- **ụụ** (Is that so?)
  - e.g. ụụ, ketilẹ? (So? They have come have they?)

- **ọọ** (Alas)
  - e.g. ọọ, ketilẹtsa jwanga? (Alas, what shall I do?)

- **hẹhẹ** (Gracious)
  - e.g. ọọ, ngwana, ankẹla! (Gracious, what a mess this child has put me in!)

**4.531 With tone pattern L-H**

- **ọọ** (no)
  - e.g. ọọ, lesayị lọtla (No, you must not come)

- **ụụ** (Yes? — in response to a call) — Normally occurs alone.

Even though these forms are best regarded as monosyllabic with dynamic tone (as is reflected in the way their tones are marked) it appears to be more practical, in an orthography, to represent each syllable with two vowels instead of one.

The interjective ọọ is often used with the A.P. ụọ, repeated once or more than once, following it. This A.P., where used once only, or the last repetition of it where it is repeated a number of times, has a lengthened final syllable with a fall from H to L, viz. H-L. If the duration of the syllable is maintained after the fall, it is continued on L. The interjective itself, where followed by ụọ, has a static H.
4.532  With tone pattern HL

**kele**  (Good gracious)

* e.g. **kele**, lešatsangā jwāle? (Good gracious, why do you do that?)

N.B. *kele*, when used with the meaning you are lying, it is not so, has HH.

* e.g. **kele**, Thulare! (What lies, Thulare!)

When used with a meaning which may be paraphrased Fancy, you doing a thing like that!, it often has the tone pattern HH H.

* e.g. Tichēle hōhorala kāmokgwā wōnō, **kele**! (Stop playing in that manner! Fancy!)

Alternatives to *kele*, and falling within the same tone pattern, are *hēle*, *kēdi*, *hidi*.

**hēi**  (Truly, I tell you)

* e.g. **hēi**, atla atshpe! (I tell you he was frightened)

**lo**  (said in contempt)

* e.g. **lo**, obē nolē esēle (Rubbish! You are talking nonsense)

**tēshu**  (also **tēni**)  (ouch)

* e.g. **tēshu**, oamthēsa (Ouch! You are burning me)

**lu**  (Go! - starting off a race) - Normally occurs alone

* e.g. 4.533  With tone pattern LL

**ao?**  (Really? Is that so?)

* e.g. **ao**, māa 4hīlē 4i16? (Really? Has he really gone?)

N.B. Even with this meaning, this interjective could have tone pattern HL when emphasized.

4.534  With tone pattern LH

**lu**  (Really? So?)

* e.g. **lu**, leatsēbān! (So, you know each other!)

**wēi**  (contempt)

* e.g. **wēi**, ore 4kātsē? (Shame, what do you think you can do?)

**hēhē**  (that's right!)

* e.g. **hēhē**, 4eintsē mantēlē (That's right! You have done well!)

...
4.535  With tone pattern H'JH

heìa (I say!)
e.g. héìa wēna! (I say, you!)

4.536  With tone pattern HLH

kə̱ˈdidiə̱, lə̱ˈdidiə̱, kə̱ˈdidi, hə̱ˈdidi, all belong here tonally, but are in
meaning, alternatives of kə̱ˈdidi, kə̱ˈdidi, etc., already given above.

ala (surprise, despair).

N.B. This interjection sometimes has a falling tone on the final
syllable, thus HLH'.
e.g. ə́lalè ! Lepètsètse, həpè, ṭšē? (My word! Why do you do that
to us?)

4.537  With tone pattern LHL

mə́lè (surprise).

N.B. It may occur with the first nasal non-syllabic, resulting in a
disyllabic form with tone pattern HL.
e.g. mə́lè, ralə̀bə̀na! (Oh my! What a calamity we are in!)

4.538  With tone pattern LLH

hə́lə́ (Serves you right! I told you so!)

N.B. Sometimes the first two syllables, viz. hə́lə́, are heard as one
syllable containing a diphthong. The trisyllabic form resulting from
such articulation has tone pattern HLH.
e.g. hə́lə́, wamə̀hə́ (There you are, you fell as you deserved to)

4.539  Some of the above tones may be varied, as I have sometimes
shown, in order to express finer points on the emotional scale.
Final Occurrence

4.540 When a word occurs finally in a non-interrogative statement or phrase or clause, the prefinal syllable acquires a longer length than the other syllables, and also a falling tone. The fall may begin at H or at L. A fall beginning at H may end either at M or at Lm, depending on the tone of the syllable immediately following, viz. the final syllable.

Examples: with H\M on the prefinal syllable

Omotile (She is beautiful) H\H\Im\M
Kemosadi (She is a woman) H\LH\Im\M
Regebetsa (We are working) L\LH\N\M
Kesebetsa malo (I work like that) H\N\M
Beaguta (They are teaching) H\L\H\M
batho boho (all the people) H\N\M

with H\N\M on the prefinal syllable

Ömoholo (He is big) H\LH\Im\M
Kesefate (It is a tree) H\N\L\M\M
Arutu (He taught) L\H\Im\M
Oya sabela (He sometimes plays) L\LH\Im\M
Ösebetsa mintle (He works well) H\H\L\M\M
ngwana wake (my child) H\N\M\M

A fall beginning at L ends at Im. 1 The final syllable may have either Im or H. A H on this syllable is often considerably lower than ordinary H.

Examples: with Im on the final syllable

Kemorena (He is a king) H\L\A\Im\M\M
Kesapala (I am playing) L\L\L\N\M\M
Babangata (They are many) H\H\N\M\M

with H on the final syllable

Kebana (They are children) H\N\M\M

/... Hakebale

1 In tone-marking, it is difficult to represent Im. For that reason it is marked like ordinary L.
Hakebalé (I do not read) LHL\LmH
Hammobé (She is not ugly) LHL\LmH

In questions, the prefinal syllable has the same
duration as the other syllables, and its tone is level.
The final syllable has the same tone as it has in an ordi-
nary statement. However, the interval between final M
and immediately preceding H₁ is so drastically reduced
that the two are almost indistinguishable one from the
other.

4.541 Prefinal syllable of a verb in the relative modality

As indicated in dealing with the relative modality,
the prefinal syllable of a verb occurring in a relative
clause (i.e. the syllable immediately preceding the rela-
tive suffix -ng) has L\H. When such verb occurs finally
in an ordinary statement, there is no falling tone on the
prefinal syllable, and only L\H is in evidence.

1 M is always preceded by H.
APPENDIX

A.1 In view of the fact that the tonal study presented in the body of this work constitutes the greatest single contribution towards an understanding of the sound system of Southern Sotho, a few criticisms, which could not be conveniently made elsewhere, of previous writers on this topic, are appended here.

A.2 Let me begin with Letele, as his is the fullest treatment of the subject of tone. It is to be regretted that the arrangement and general classification of the material in Letele's work leave much to be desired. This is due partly, no doubt, to the fact that it was only after his death that his book was prepared for publication, and, as far as I am aware, without any competent editorship. Related material is often scattered in different parts of the book, without adequate cross-references to link it up. There is no index. Tabulation, on the whole, is most unsatisfactory. One often feels that there is a lack of coherence in the presentation of the material analysed.

A.3 Another major fault with Letele's work is that it seems to lack direction. The attitude taken by the present writer, as stated in the introduction and also in the body of this thesis, is that tone is a part of the grammar of Southern Sotho. Let us take one illustration of this relationship: In the utterance Babula monwaka, if babula is pronounced with tone pattern HHL, then the tense of the verb is present, and the whole sentence means They open the door. But if the tone pattern of babula is HLL, then the tense is past, giving the sentence the meaning They opened the door. Distinctions of tense are thus brought about here by tonal modification without a change of the morpho-phonetic structure of the utterance.

A.4 Down-stepping
A.4 Down-stepping provides another illustration of this inter-relationship, where syntax relations are associated with its occurrence or non-occurrence.

A.5 Failure to make the most of relationships such as the two illustrated above -- almost, one might say, a deliberate suppression of their existence -- is one of the shortcomings of Letele's work. For example, on pages 88-103, he lists tense-forms of the verb in order to show the coincidence of these forms with certain tonal behaviour patterns. But instead of using full grammatical names for these tense-forms, he simply lists them as A-forms, B-forms, C-forms, and so on up to K-forms.

A.6 This author often withholds important detail. An outstanding example of this is provided by his references to the various contexts in which he places his nouns and verbs. These contexts are simply used without being defined. We are here given only concrete situations, and if the word phopho is used as a "context" to a verb, (See p.89) we do not know whether it affects the tone pattern of the verb the way it does because it is a noun, or because it is an object, or because it is a noun object, or because it has L on its first syllable, or because it has inherent tone pattern LL, or simply because it is the word phopho. In other words, we cannot create analogous situations because we do not know the theoretical basis for his employment of this particular form in this particular situation. It is, indeed, unfortunate that so much that is of value in this book is so overshadowed by these and other defects, that one feels, that in order for it to be of the greatest possible use, its material would have to be thoroughly reorganized and supplemented.

A.7 The treatment by Doke and Mofokeng is handicapped
mainly by its brevity, with consequent insufficient detail. In some instances, however, there are factual inaccuracies also. These two are sometimes related. So, for instance, when these authors say, in §79, that gêka has tone pattern HH whose final syllable is lowered to L in final occurrence, they imply that this syllable never has L in non-final occurrence. The fact, however, is that in many cases of non-final occurrence this syllable has H-L alternation. The effect, on tone, of non-final and final occurrences needs, therefore, to be studied in greater detail, taking into account the possible effect of surrounding elements. For example, Titima (Runi) whose tones are given by these authors as LHH non finally and LHL finally (§81), could also have LHL non finally in given circumstances, as amply demonstrated in the body of this thesis. Again, when in §72 they mention the possessive concord, the conjunction le, and the locative prefix ho as impliedly the only formatives which, when prefixed to a noun the initial syllable of whose stem has L, cause the prefix of that noun to be raised from L to H; and in §76 they state that "when a 3rd person subjectival concord is prefixed to an adjectival copulative base, whose stem commences with a low tone, the tone of the nominal element of the adjectival concord ... is raised to a high tone"; and they make a similar statement in §77 regarding third person subject concords preplaced to the so-called relatives --- we see here a lack of co-ordination, resulting in imperfect classification, due to insufficient ground-work. The third person basic subject concords, together with 8 other formatives including the three mentioned by Doke and Mofokeng in §72, are Influencing preceding elements which affect the \... tones
tones of nouns and adjectives in an identical manner.

A.8 Two examples of factual inaccuracy are, firstly, the description of the tone pattern of the nouns mosadi, lsha-kwe, mosem3, and borikwe, in §69 as being LHH, while it is, in fact, LHM (narrowly) or IHL (broadly). In no situation does any one of these nouns have LHH. Non-final occurrence always results in their having L on the final syllable, giving IHL; with influencing succeeding elements they always have IHL; in final occurrence in questions they have their H quite low, so low, in fact, that it is very near the pitch level of the following M. In this case, casual observation might give one the impression of two Hs instead of H followed by M.

A.9 Secondly, in §592 number (a) Doke and Mofokeng state, in a note on the comparison of relative and non-relative copulatives based on strong adjectives, that "With such a form as batho ba-baholo, the difference between 'big people' and 'the people are big' is indicated merely by tone, the 'relative' (i.e. relative connective) always being higher in tone than the corresponding subjectival concord". The tones of batho ba-baholo are then given as LL H LHL for the "relative" (big people), and LL I LHL for the "copulative" (the people are big). This is not so. The position is that both the relative connective and the relative subject concord in such constructions have H, thus giving the tonal sequence LL H LHL for both "the big people" and "the people are big". The real difference (a tonal difference) consists in the fact that the relative connective is followed by a down-step while the subject concord is not, thus : LL H LHL for "big people", and LL H LHL for "the people are big". Thus it will be found that baholo is lower in absolute height (especially noticeable on the high tone in this word) when the

/... expression

1 My tonal representation is an interpretation of Doke-and-Mofokeng's graphic symbols.
expression means **big people** than it is when it means the people are big. The same criticism holds also for the reference to tone in §592 number (b). The occasion for this error is difficult to understand since in §84 these authors state that (in the indicative mood present tense positive) "All 3rd person subjectival concords have a high tone". In the absence of an explanation, §§84 and 592 are therefore seen to contradict each other.
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SYNOPSIS

Description of the S. Sotho sounds

8.1 The solution to the problem of the relationship of the S. Sotho vowels has been taken a step forward in this work by following Cole's classification of the Tswana vowels. Additional arguments have been advanced to justify this classification. For example, it has been shown that there is an upper limit beyond which no further raising of mid vowels can take place, and this has been interpreted as indicating a natural phonemic boundary. Tucker's and van Eeden's argument regarding the so-called lack of consistency among the Sotho speakers in distinguishing \( \text{e} \) from \( \text{e} \) and \( \text{o} \) from \( \text{o} \), which argument is used in support of a classification different from Cole's, is proved to be unsound.

Again, most of the occurrences of \( \text{e} \) and \( \text{o} \) which Tucker was unable to associate with any specific phonetic context, have been shown to coincide unmistakably with phonetic contexts requiring the use of those phonemic variants.

8.2 Diphthongal articulation of juxtaposed vowels which are organically unlike, has been found to be a commonplace occurrence in S. Sotho in utterances where neither of the two vowels occurs in prefinal or final position.

8.3 Nasals and laterals have been reclassified in the light of the manner of their articulation. Nasal is shown to be the opposite of oral, and the consonants are accordingly divided into two large groups, viz. oral consonants in whose articulation the air escapes either partly or wholly through the mouth, and nasal consonants in whose articulation the air escapes only through the nose. As a result of this approach, the term nasal is removed from among the auditory terms (e.g. explosive, fricative, etc.)
in our description and charting of the consonants.

Similarly, the term lateral reflects the direction of the air-stream within the oral cavity. Most lateral sounds have an alveolar tongue position; one lateral sound has a velar tongue position. This has necessitated a subdivision of alveolar and velar consonants into medial and lateral. Unlike Pike, I do not distinguish only continuants in this manner, but all alveolars and velars.

8.4 Affricates are redefined in the light of evidence showing that the explosive element is articulated at the point of articulation of the fricative element. In other words, the explosive element is always hypothetical, being found only in combination with the fricative element.

It is also suggested, as a possible future line of approach, that affricates might be regarded, not as combinations, but as single sounds. This has already been done in the case of the voiceless ejective alveolar lateral affricate $\text{tu}$, which has been referred to as "a laterally exploded t".

8.6 It is suggested that the so-called clicks are in fact implosive sounds, differing only in the extent of their vacuum-range (the space between the front and the back closures) from other implosives. Doke has, in fact, made references to this similarity in a number of his works, chief among which are The Phonetics of the Zulu Language, Comparative study in Shona Phonetics, and a Textbook of Zulu Grammar. Beach gives a fuller comparison in his Phonetics of the Hottentot Language, and actually classifies "clicks" and implosives together.

The Sound Changes

8.6 These are given a fuller treatment than hitherto. In many cases changes which have not been described before
for S. Sotho, are described here for the first time, as, for example, progressive assimilation, especially of vowels, but also of consonants. The result, in some cases, has been that new light has been thrown on morphological units which were little understood before, e.g. the evolution of the passive suffixes *we < *we and *we < *we.

3.7 Devoicing of the final vowel of a syllable having Lm tone, as well as the devoicing of a voiced consonant or semivowel occurring in the same syllable as the devoiced vowel, are also noted here for the first time.

3.8 Strengthening is reduced to two main processes, viz. Devoicing and Aspiration, which are specially defined for use in this context. Other processes accompanying these two in strengthening, are incidental, and are not given prominence.

3.9 The term affrication is used to describe the substitution of an affricative consonant for a non-affricative one. The processes covered by this term are called alveolar transference by Doke, and palatalization by Cole and others. These names are found to be unsuitable for describing what actually takes place.

Length

3.10 It is shown that penultimate length is not restricted to the prefinal syllable of a sentence in its conventional definition, but is employed with utterances of various types and sizes --- word, phrase, clause (principal or subordinate), etc., as well as sequences of these. A new definition of penultimate length is thus arrived at. The close association of the length of the penult with the interrogativeness or non-interrogativeness of the utterance made, is emphasized.

Other significant uses of length are also listed and /... illustrated
illustrated. They include --

1. the emotional significance of length in demonstratives and interjections;

2. the use of length in communication across a distance; and

3. the use of length (with ideophones) to convey the ideas of state and/or pervasiveness, and continuous action.

Stress

9.11 The question, What is stress? has received a great deal of attention in this work, especially in view of the fact that previous writers on this topic have tended to content themselves with determining the position of stress as revealed by the speaker when speaking emphatically, and to neglect the question relating to the nature of stress. The method employed here in an attempt to determine the nature of stress has been to take the various types of sounds and to state what happens in their articulation when strong stress is applied. This investigation was, of necessity, restricted to emphatic speech where it is easiest to observe the various contractions and relaxations of the muscles concerned. One important discovery was that, in S.Sotho, vowels are incapable of carrying emphatic stress, the consonant being the part of the syllable on which strong stress is placed when such is necessary. Before a V-type syllable can be given strong stress, therefore, it must be converted into a CV-type syllable.

There were found to be three degrees of stress, in S.Sotho, referred to here as main, secondary, and tertiary stresses. The distribution of these stresses in various categories of words, has been determined.

9.12 Stress-patterns are divided into two main groups, viz. inherent and emphatic. Inherent patterns are the sole ones... used
used in non-emphatic speech. In emphatic speech, however, the emphasized syllable (i.e. the one articulated with greater energy than the others) may be either the one bearing inherent main stress (thus leaving the inherent stress-pattern unmodified, except for more energetic articulation) or some other one. The latter is quite often the penult, and this is taken as a possible explanation of Doke's conviction (which is here challenged) that (inherent) main stress is on the penult. In most words, in fact, inherent main stress has been found to be on the root-syllable.

Tonal Study

S.13 Despite references to tone by Tucker (Comparative Phonetics and Sotho-Nguni) and Doke and Mofokeng (Textbook of S.Sotho Grammar), and a full treatment of tone by Letele (Role of Tone in S.Sotho), I have felt that there was still a need for a fresh treatment. The theme in my treatment is that tone is a part of grammar, and that any treatment which attempts to separate the two into water-tight compartments is bound to fail. This is one of the main weaknesses of Letele's treatment of tone. The importance of down-stepping, which, in a study of syntax, makes possible a theory of close and loose syntactical links between juxtaposed words; its coincidence with emphasis or lack of emphasis on the various constituents of a clause or phrase; its possibilities in the delimitation of word-boundaries; the great part played by tone in general in changes in the grammatical function of words and formatives, as when the imperative positive singular is formed from certain types of verb stem by means of tone alone, etc., etc. --- these go to show that tone (in Southern Sotho at any rate) is complementary to the whole linguistic form, and that its study can only be meaningful and beneficial if this relationship is constantly borne in mind, and even sought out, if necessary,
rather than deliberately suppressed.

8.14 The various morphological and functional classes of words have been related to various preceding and/or following elements which were found to have a tonal influence on them, and their tono-grammatical relationship described. Nouns and adjectives have been divided into Declension Groups, verbs into Conjugation Patterns, in the light of their tonal behaviour.

8.15 Right at the beginning of the description of tone, the necessity for a tonal norm is emphasized, and it has been considered wise to make such a norm unnatural in the sense that it must not be one of the contextual tone patterns of the word concerned. This way, contextual patterns are related to this hypothetical form, arrived at by a method described in the text.

8.16 In many cases, Leetele's treatment has been shown to be superficial, and sometimes even faulty.

8.17 The treatment by Doke and Mofokeng has been shown to be imperfect in a number of respects, largely because of its brevity, but also, in a few cases, purely because of factual inaccuracies.

8.18 It is felt by the present writer that the method of approach followed here gives full scope for a more thorough description of the overall linguistic form of Southern Sotho.

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