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THE

PHONETICS

OF THE

ZULU LANGUAGE

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NOTE

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C. M. D.

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THE PHONETICS OF THE ZULU LANGUAGE

INTRODUCTION

THE value of a study of the general principles of phonetics, and of their application to any particular language, cannot be overestimated when a knowledge of that language is required. The acquirement of a correct pronunciation depends to a very great extent upon the ability to imitate, and, for this reason, the unconscious imitation of young children makes it possible for them to acquire any language at first hand very rapidly and with native correctness of pronunciation and intonation. For a person more mature, however, the ability to imitate unconsciously has, in most cases, passed partially if not completely away. For this reason it is very necessary, if pronunciation approximating to the correct be desired, to investigate the phonetics of the language very minutely. It has been well said¹ that when a new language is undertaken, one hitherto unreduced to writing, it must not be expected that a single sound will be found corresponding exactly to any in one's mother tongue, and one may consider it fortunate if, after investigation, half-a-dozen sounds are found so to correspond.

Now in the study of Bantu languages, attention to the phonetics, while it is as necessary as in that of any other language group, is of the utmost practical utility. Until the advent of the Christian missionary among Bantu peoples, Bantu languages, with the possible exception of Arabic-written Swahili on the East Coast, were unwritten languages. It is only in recent years that the task of reducing them to writing has been undertaken, and there are still large numbers of them in which no printed book has been issued. In this reduction to writing the Roman alphabet has generally been used, with a greater or less degree of success. The Roman alphabet, however, has its limitations, and only those who have participated in the task of reducing a language to writing can realize the difficulties of adapting such a limited number of symbols to the varieties of sound which present themselves. The Lepsius alphabet and that of Dr. Steere have gone a long way to meet these difficulties.

¹ By Professor Daniel Jones, of London University.

But by far the greatest difficulty of the untrained investigator is to recognize when his imitation of the native sound is wrong. His ear needs training along phonetic lines; and then, when he is able to hear correctly, he needs the knowledge of sound mechanism that will enable him to record correctly such sounds, describe them to others, and produce them himself.

Many men who have lived twenty, thirty, or even forty years among Bantu peoples, and who can understand the language of their particular tribe perfectly, talk, to this day, with a pronunciation, intonation and general "accent" entirely foreign to the language. Others again, who are authorities on the grammatical structure and idioms of the language, have not, to this day, realized the true pronunciation of many of the most essential sounds. For instance, though numbers of works have been published on Swahili, I have not seen one in which the true nature of the **b**-sound has been recorded, viz. that it is the bi-labial implosive, similar in type to that appearing in Zulu and Xosa. How many years passed by before the importance of Intonation in Bantu languages was realized? The discovery has but recently been made that the questionable Central Bantu **b-v-w** sound is simply the bi-labial voiced fricative. It has not yet been generally recognized that the peculiar Suto sound, found only with the vowels *i* and *u*, and represented as *li*, *lu*, is *d* with a velarized stop, a sound very easy to acquire if its nature is once understood. The riddle of the so-called interchangeable **l-d-r** sound of Central Bantu has yet to be solved.¹ These few instances will give an idea of the value and importance of a scientific knowledge of phonetics in approaching a Bantu language, and I trust that the pages to come will throw some light onto the true nature of Zulu speech-sounds.

The Bantu languages are still in a state practically uninfluenced by spelling-pronunciation; but I have already noticed that, both in Zulu and in Suto, the influence of written language is *beginning* to have its effect on the spoken, and this influence may become a strong factor in the evolution of any language. Since the influence of spelling on pronunciation may be regarded as an artificial one, I think we have every right to try to minimize that influence as much as possible. This can only be done by encouraging phonetic writing. There is at present a limited amount of literature in the Bantu languages, and an alteration in the orthography which would become well nigh impossible

¹ This may prove to be retroflex-*l*, and such is the opinion of W. Bourquin; cf. *Neue Ur-Bantu Wortstämme* (Berlin, 1923), notes on pp. 10, 14, 15, etc.

in a few years would be possible now. I shall, after discussing in detail the nature of the sounds in Zulu, make some suggestions as to necessary and possible improvements in the present Zulu orthography.

Now, quite apart from the value of phonetics in any individual Bantu language, it is impossible to do any comparative Bantu work of real value until the individual languages to be compared have been reduced to some common phonetic basis. For instance, the Portuguese writers, in recording Mbundu and Kongo words, use *q* to denote the unvoiced velar explosive (**k**) when in combination with **w**, and **x** to denote the phonetic *f*; in Zulu and Xosa these two symbols are used to signify the palato-alveolar and the lateral clicks respectively. Again the symbol *r*, which in Suto stands for the rolled lingual, is, in Zulu, used for the velar fricative (phonetic **x**), the sound of **g** in Afrikaans; then again the symbol **g**, which in most Bantu languages is used to indicate the voiced velar explosive, is, in Chwana, used to indicate what *r* does in Zulu. The use of **h** to mark aspiration is widely adopted by some orthographists, but the ignoring of aspiration by most makes comparative work very difficult. The use of **h**, however, to indicate something other than aspiration, as in the **bh** of current Zulu, is certainly a step in the wrong direction.

* * * * *

H. N. Riis, in his *Grammatical Outline of the Oji Language*, made the following statement:—

“To fix the sounds of a language which has never before been written, and to represent them in such a way as really to correspond with the peculiar nature of the language, is a much more difficult task than on a first glance might appear. It requires not only a long, patient, and careful attention, but also a thorough knowledge of the grammatical structure of the language, especially of its etymological part, with which the nature of its sounds is most intimately connected. Even the alphabet, therefore, cannot be considered as definitely settled till the whole of the language in all its parts has been thoroughly investigated.”¹

The very close connexion between the phonetics of a language and its morphological and syntactical structure is a thing that is readily realized even in languages which have possessed their written form for many centuries; and it is only reasonable to expect that this connexion is even closer in those languages, which, like the Bantu,

¹ *Grammatical Outline and Vocabulary of the Oji Language, with especial reference to the Akwapim Dialect*, by Rev. H. N. Riis (Basel, 1854), p. 4.

have not, until very recently, been in any way dependent on writing. It is the *sound* which conveys the meaning, and naturally modifications of that *sound* convey modifications of the meaning. Whilst a thorough knowledge of the grammar of a language undoubtedly throws great light on its phonetics, a statement of the converse is even more true. *A thorough knowledge of the phonetics of a language throws great light upon its grammar.* It will be part of my task in this work to indicate how great a part the phonetics of Zulu plays in the morphology and syntax of the language, and to point out that many of the hitherto puzzling "exceptions" to grammatical rules which have been formulated without special attention to the phonetics are not exceptions at all when the phonetic laws are known.

Now in the study of Zulu phonetics, the more deeply one probes into the subject, the more convinced one becomes that, throughout, the speech of these people is regulated by a wonderfully exact set of phonetic laws. We shall see how wonderfully *length* and *stress* dovetail one into the other, are dependent one upon the other, and together exercise their influence upon the sounds surrounding them or upon which they operate. The exact laws which govern the quality of the mid-forward and mid-back vowels savour of the precision of mathematical science. The presence or absence of a consonant in the subjectival concord with the verb is the determining factor in the forms of the objectival concord, of certain contracted verb tenses, and of certain possessives. The presence of a bi-labial consonant in certain roots is the signal for pre-palatalization to take place, according to prescribed rules, when a verb-passive, a noun-diminutive, or a locative-adverb is to be formed. Throughout the Bantu languages the forms of the nasals and their influence on surrounding consonants present a marked feature; and in this Zulu is no whit behind her sister tongues.

The foregoing examples touch but the fringe of the phonetic influence on Zulu morphology and syntax. This part of the subject is dealt with in some detail in the latter part of this work. A knowledge of the grammar of a language is most necessary if the phonetics of the language is to be studied scientifically. *Grammar and phonetics must go hand in hand.*

* * * * *

The phonetic laws, which have a bearing on the grammar of a language, are not to be picked up like surface diamonds. A cursory survey of consonants and vowels will not reveal them. If a phonetic

study is to be of real value it must be scientific, and it must be carried out with scientific minuteness. There are ways of writing Zulu which will serve certain purposes. The present orthography has proved of immense value in providing for the people a certain amount of literature, in opening the hitherto closed door of reading, and in providing a means of communication and a means of record. But it does not pretend to be exact. It has palpable errors and palpable compromises. For a scientific study of the Zulu language the present orthography is of little value. Further, there is by no means unanimity in the present writing of Zulu. There are those who follow Bishop Colenso's method of writing. There are those who abide by the decisions of the Zulu Orthography Conference of 1907; and there are those who use the symbols advocated by Father Bryant. Then again, there are those who *prefer* the conjunctive method of writing (joining all the component parts of verb tenses, etc. into single words), and there are those who *prefer* the disjunctive method, and write all those particles and auxiliaries as separate words. In each of these camps are inconsistencies, and in many instances their promoters are unable to decide how words should be divided.

Now, as I hope to make clear, a minute scientific inquiry into Zulu phonetics shows that the division of word-groups is dependent upon the operation of stress, tone, elision and coalescence; hence, a careful study of these questions will give us, *not what we might prefer to write, but what it is correct to write*. It will give us the true Zulu divisions of spoken Zulu into words and sentences, and it will give us the true spoken punctuation of sentences, quite apart from the influence of European modes of thought and European grammatical structure.

At the risk of appearing, to some, to be too pedantically minute in this phonetic study, I have decided to record in all my examples every phonetic phenomenon which presents itself.¹ I shall leave nothing to deduction. For example it will be found that *n* before *z* always implies the presence of *d* between them; I shall write *ndz*. Again *nd* in current Zulu, when analysed, is found to be *nnd*, except when in initial position; the latter is the form I shall use to indicate this sound. In other words, I am adopting the principle of a *close transcription* throughout; though I shall also indicate wherein I consider a *broad transcription* may be used with impunity for practical purposes. For the purposes of a minute scientific analysis, apart from carefully recording each separate sound-type and variation of

¹ Except that of concomitant nasalization of vowels, cf. Chapter II, § 12.

production, I also mark carefully the tone of each syllable, the recurrence of stress, both main and secondary, and the presence of length and half-length in syllables.

In order to further the comparative study of Bantu phonetics, it is important that one Bantu language at least should be studied with the minutest detail, so that it may form the basis of comparison. It is hoped also that such a minute study of one language may stimulate similar research in other Bantu languages. The Bantu languages, as a whole, unveil to us many speech-sounds and types of speech-sound otherwise unknown to the European phonetician; and in this feature Zulu is by no means behind other Bantu languages. The more precise scientific knowledge we can have regarding these sounds the better in the interests of science and the advancement of knowledge, and I make no further apology for the scientific minuteness of this study.

* * * * *

My methods of investigating Zulu phonetics have been, in the main, three. The first, and by far the most important, has been that of *the ear*. The second and third methods have been employed principally in testing that of which I could not be absolutely certain by relying merely on hearing. These methods are that of *applying phonetic rules* which the ear has already established and that of *experimental phonetics*.

(1) The most important method of investigating speech-sounds must necessarily be by *the ear*, attentive hearing to catch the slightest variation in sound-form, in tone, and in stress. Phonetic training gives a trained ear, and a trained ear brings one as near to the possibility of unconscious imitation as any adult can get. Along with careful attention to hearing the sound, the eye is often a most useful helpmate in watching the movements of the lips. In addition to hearing the sounds carefully, they should be imitated and the correctness of the imitation tested by ear. In this way it is possible to feel what is going on in the mouth during the production of the sound.

(2) There are, however, often minute differences of sound which the ear, while it may sometimes detect them, is powerless to define, or to decide wherein lie those differences. By *the establishment of working phonetic laws*, and by their application these variations may often be decided. It will be seen later how the laws of length, stress and surrounding vowel influence have sometimes been used to determine the quality of certain vowels, especially when they are

short; and vice-versa how the quality of certain vowels has been used to determine the syllabic or other nature of certain nasals. This method, however, has principally been employed for purposes of checking results obtained directly by the ear.

(3) *Experimental phonetics* is a most valuable part of the study, and one which should not be neglected if it is at all possible to employ it. While laboratory work in this connexion is most valuable in checking and confirming results, it very often opens up new avenues of research, and sometimes unexpectedly indicates the nature of sounds, which might otherwise have remained in oblivion. For instance, a kymograph tracing revealed the close connexion between the implosive and the click consonants. The most important instruments and experimental methods of research which I have employed in the analysis of Zulu sounds are the following:—

The Kymograph.—The kymograph is a large metal cylindrical drum which is revolved by means of an electric motor at a uniform speed. On this drum is stretched glazed paper, which is smoked by a benzol gas flame. A sensitive “tambour” with quilled stylo is fixed in such a position that it can be adjusted to touch the drum when required and scratch a graph thereon as the drum revolves. To the tambour is connected, by means of rubber tubing, a mouth-piece into which the sound is spoken, and thus a tracing of the sound is recorded on the drum. Other tambours may be connected to a nasal-olive for the recording of nasalization in any sound, to a larynx-piece in order to detect the slightest vibration caused by voicing, or to an electric tuning-fork in order to obtain a wave of a certain fixed pitch with which may be compared the length of the vibration-waves of the vowels, etc., and thus fix definitely the tone of any given syllable. Similarly, by means of an india-rubber bulb placed between the chin of the speaker and some firm base, the stylo of yet another tambour may be used to record variations of stress on the kymograph. Examples of kymograph tracing will be given in illustration of various Zulu sounds, and they will indicate clearly the value of this method of investigation and testing.

Palatography.—For ascertaining exactly the tongue position in the pronunciation of certain sounds, the employment of an artificial palate, made to fit the native subject, has been found of great use. A thin vulcanite plate, closely fitting the palate from the gum extremes to the commencement of the velum, is worn by the native subject until he becomes thoroughly used to it. The plate is then removed,

dusted over with chalk powder, reinserted, and the required sound enunciated. On removing the plate the chalk taken off by the tongue shows exactly where the tongue has touched the palate, while the chalk adhering to the tongue shows what part of the tongue has touched the palate. These results may conveniently be recorded on numerous blue-print copies of the palate and the tongue, and compared with similar results from subjects speaking other languages.

X-rays.—In investigating the physiological mechanism of the clicks, for instance, the true tongue-positions cannot be ascertained by any of the above methods, the artificial palate going no further back in the mouth than the limit of the hard palate and the front of the tongue obstructing any vision of the back of the mouth. In such cases an experiment under X-rays, such as that described in Chapter XI, is found to be of great assistance.

Dictaphone.—This instrument has proved of immense value in recording Zulu narrative, folk-tales and songs, and allowing of careful analysis of sound and tone, when reproduced repeatedly.

Gramophone.—The records of Zulu speech and songs, prepared in Johannesburg and bought widely by the natives, have proved useful in checking conclusions come to from personal contact with natives.

Photography.—The camera I found useful for recording the lip-positions of various sounds, especially for the rounding and spreading of lips in the enunciation of vowels sounds.

Ocular.—Observation with the eye must, as far as possible, accompany all experiments. The position and movements of the tongue can in many cases be watched, also the formation of the lips and the movements of the larynx, as in comparing explosive consonants with implosives.

* * * * *

CHAPTER I
THE ZULU LANGUAGE

§ 1. The Place of Zulu among the Bantu Languages

Zulu belongs to the south-eastern group of the great family of languages in Africa called Bantu. The Bantu languages are distinguished by a wonderful prefix-system for the nouns with concordial prefixal agreements of the adjectives, relatives, possessives, and verbs brought into grammatical relationship with them; and by a very full suffix-system of verbal derivatives. In addition to their being agglutinative tending to inflexional, the Bantu languages are, with the possible exception of Swahili, distinctly tone languages. A further outstanding characteristic of this group is the wide use of onomatopœic radicals as an integral part of speech. Perhaps the main phonetic tests for a Bantu language are to ascertain whether every syllable ends in a vowel or a syllabic consonant, and whether the stress is normally on the penultimate syllable of each word-group. It will be seen that Zulu adheres to these rules.

Zulu is by no means a "pure" Bantu language. Outside influences have been brought to bear upon it, affecting more especially vocabulary and phonetics. Here, however, we are only concerned with the phonetic aspect, and the intrusion of the foreign clicks into Zulu, Xosa, and, to some extent, Suto is the most noteworthy outside influence on the phonetics. Whether the use of the implosive consonants in Zulu, Xosa, Suto, Swahili, and other East Coast Bantu languages is due to an Asiatic influence or not is a question it is impossible to answer with our present limited knowledge.

Nevertheless Zulu has so much in common with other Bantu languages in grammar, vocabulary and phonetics, that a detailed study of the language will make comparative work, whether in grammar or phonetics, extremely profitable; but, until languages are reduced in a scientific manner to a common basis, any comparative work will be very unsatisfactory.

§ 2. Geographical position, distribution, dialectal and other influences

The Zulu language, ^{3 2 9 9}isizú:lu, is now spoken by the natives of Zululand, and of the greater part of Natal, though naturally there are dialectal differences within that area, differences which become more pronounced as the borders are approached.

J. L. Döhne, in his *Zulu-Kafir Dictionary* of 1857, wrote:

“Generally speaking the Zulu distinguishes only two dialects, the high language—Ukukuluma, and the low—Amalala. To the first belong the Zulu, Tembu and Xosa, to the second the languages of all the other tribes of Natal, the frontier Fingoes, the Sutos, etc. Another specification of the dialects is the Ukukuluma, high language; the Ukuteta, a clear, sharp pronunciation; the Ukutekeza, which usually omits the nasal sounds and transmutes some consonants; the Ukutefula, which changes some labials and liquids; and the Amalala, using none except low, broad, and flat sounds. But this classification is merely nominal, and the Zulu itself bears the stamp of the Tekeza and Tefula in many practical points, as in its soft form *ngi*,—*ngi ya tanda*, *ngukuhla*, and *yi*—*yisibi*, etc. And in these points it again differs from the Xosa, which has the sharp sounds *ndi*, *ku*, *si*, etc.”¹

Bishop Colenso, in his introduction to the *First Steps in Zulu-Kafir*,² made the following observations: “The *amaTefula* dialect is spoken by many of the Natal Kafirs, especially by the *amaQwabe* tribe. Its chief peculiarity consists in putting *y* (or rather a sound which resembles that of *y*, but is really a softening of the *l*) in the place of *l*, and changing *ny* into *n* as shown in the following examples:—

Zulu	amaTefula
<i>lapo</i> , there, when	<i>yapo</i>
<i>lezi</i> , these	<i>yezi</i>
<i>umbilo</i> , fire	<i>umyiyo</i>
<i>inniyama</i> , meat	<i>innama</i>
<i>inniyoni</i> , bird	<i>innoni</i>

The *amaLala* dialect differs much from the Zulu. The name (*amaLala*) is given collectively to certain tribes in this district (the *amaNclosi* and others), who were conquered by the Zulus, and of whom many are said to *tekeza* in their speech, whereas the tribes along the Zulu coast to the north-east of Natal, as far as Delagoa Bay and beyond, generally *tefula*. A few examples of the peculiarity of this dialect are here given:—

Zulu-Kafir	amaLala
<i>inkomo</i> , bullock	<i>iyomo</i>
<i>inkunzi</i> , bull	<i>iyudi</i>
<i>inkomokazi</i> , cow	<i>iyomwadi</i>
<i>inkonyana</i> , calf	<i>iyomwane</i>

. . . The *amaLala* use very freely the harsh guttural represented

¹ Preface, p. xv.

² P. 3.

by *r* . . . which practice is called *ukuradula*. Many of the tribes, however, in Natal, which formerly used to *tekeza*, are Zuluized.”

Furthermore, Callaway's folk-tale *Ubabuze*, written in the Baca dialect, shows that in that dialect the affricates *tsh* and *dz* are frequently used, the former taking the place of the regular Zulu *th*, and the latter found as *nz* instead of the Zulu *nd*. This is similar to what occurs in the Swazi language, where *tʰinzá:ḡa zá:m* is used for Zulu ^{6 6-3 3 8 8 8-3 9} *izinndá:ḡa zá:m*, and *ùkutshá:nza* is used for Zulu ^{3 3-4 3 3 9} *ùku thá:nnda*. The Swazis, as do the amaLala, also have the habit of using the dental click where the Zulus use the palato-alveolar or lateral.

Swazi.	Zulu.
<i>ḡní:sa</i>	^{3 2 9} <i>ḡní:sa</i>

A close examination of the geographical distribution of the Zulu-speaking peoples, shows that “King's” Zulu, called ^{2 2-4 4 3 9} *ùkukhulú:ma*, is spoken principally by the inhabitants of the lower Tugela basin, and northward therefrom into Zululand, stopping, however, considerably short of the Portuguese border. ^{2 2-4 4 3 9} *ùkukhulú:ma* is the Zulu word for “to speak”, and, to the Zulu, the only true speech is that of the Zulus—^{3 2 9 9} *isizú:lu*. As we have observed from the records of Döhne and Colenso, there are two main dialectal-forms of Zulu. ^{2 2-4 4 3 9} Of these, the first, called *ùkuthéfú:la*, a term signifying “to be oily, slippery”, is spoken by the ^{2 2-4 3 9} *amaḡwá:ḡe* and other clans, living along the eastern seaboard, abutting on the territory where the purest Zulu is spoken. The second dialect is called ^{2 2-4 4 3 9} *ùkutʰéké:za*, a term signifying “to quiver, to speak in a quavering voice”. The dialects ^{3 2 8 3} included under this term are *isibá:ḡa*, spoken on the south-eastern seaboard of Natal, south of the territory under “tefula” influence, and ^{3 3-4 3-5 4} *isilá:la*, spoken between the Tugela River and the Swazi border, abutting on the pure Zulu area. The Swazi language, which is considered to be a distinct language from that of Zulu, is also said to be ^{2 2-4 4 3 9} *ùkutʰéké:za*.¹

¹ A most useful map, illustrating the pure Zulu area and the various dialectal influences, is to be found at the end of Mr. Carl Faye's recent book, *Zulu References* (City Printing Works, Pietermaritzburg, 1923).

Along the southern border of Natal, there is a strong influence, from the Cape Province side of the border, of a group of languages which are called ^{2 2-4 3 9} *ùkuthé:tha*, a term meaning "to speak sharply, to scold". The principal tribes speaking ^{2 2-4 3 9} *ùkuthé:tha* are the amaMpondo, the amaXosa, the amaMpondomisi, the amaTembu, and the amaGcaleka. One of the outstanding phonetic differences between Zulu and Xosa is that the latter uses the alveolar nasal combination *nd*, where the former uses the velar *ŋg* in the 1st person singular subjectival (or objectival) concord with the verb, Xosa *ndi*, Zulu ^{6 6} *ŋgi*, I. To the west of Natal is the ^{4 3 9} *kuβú:wa* influence of the Suto language; *hubú:a* is the Suto word for "to speak". To the extreme north of Zululand the influence of the Thonga peoples of Delagoa Bay is felt. One branch of these, the ^{5 5 3 3 9 9} *àmqemmbá:ne*, speaks a language called ^{5 5 5 3 5-8 9} *ùkuvù:lavú:la*, the Thonga term for "to speak".¹

The amaHlubi and the amaMfengu tribes used to speak the ^{2 2-4 4 3 9} *ùkukhulú:ma*, but since they revolted and left Zululand to settle among the amaXosa, they now "teta".

There is, of course, throughout Natal a great amount of influence on the speech of the natives, exercised by the two principal European languages, English and Dutch. This is becoming more and more marked, as the natives assimilate more and more of European civilization. In this work I have tried, as far as is possible in these days, to record, the phonetics of the Zulu proper, but I realize that there is far less opportunity of doing so than there was fifty years ago.

Before leaving this subject, two of the most noteworthy offshoots from the Zulu language, due to the migration of the Zulu impis, must be noticed. These are the Matebele (Sindebele) and the Ngoni (Chingoni) languages, spoken in southern Rhodesia and Nyasaland respectively, in the latter of which a gradual displacement of the clicks seems to be taking place.

§ 3. Sources of Information

My two principal informants regarding Zulu pronunciation have been the Rev. John L. Dube and Mr. Frank Nxele. I worked with Mr. Dube in London for several months during the year 1922, and with Mr. Nxele in Johannesburg throughout the year 1923 and part of 1924.

¹ A fuller examination of these varieties will be found in Appendix VII.

John Langalibalele Dube is the son of James Dube. His grandfather was a chief in Zululand near Nkandhla, and was treacherously killed by Dingaan. The tribe, the Ngcobo tribe—the real surname of these Dubes—then removed to Natal, and is still of considerable importance in Natal under the chieftainship of Mandhlakayise, a cousin of J. L. Dube. John Dube's father embraced Christianity while still a boy under the Rev. D. Lindley, and became a Minister of the Gospel. John Dube was born at Inanda Mission Station in the year 1871, and received his early education there and at Amanzimtoti. Later he went to America for education, where he spent several years. He himself became a minister; and, in addition to his having charge of the Ohlange Mission and school at Phoenix, Natal, Mr. Dube edited the Zulu weekly newspaper, *Ilanga la s'e Natal*.

Frank Nxele was born at Mpapala Mission Station in the Eshowe District of Zululand on 5th October, 1886. His father was Thomas Nxele, son of Qanda Nxele, son of Tsibande Nxele. A close cousin (called in Zulu "sister") of Qanda Nxele's, a woman bearing the patronym of uManxele, married the chief Cetshwayo and became the mother of Dinuzulu. Frank Nxele lived in and about the district of Eshowe until 1913, during that time visiting as far as Imfolozi, Nkandhla, Etaleni, and Indulinde. In November, 1913, he left Zululand for the first time and went to Durban, repeatedly returning home until 1918, when he came to Johannesburg. Here he stayed for sixteen months and then went back to Zululand for five weeks, returning in 1920. He has subsequently visited Zululand on three other occasions, in November, 1921, July, 1923, and December, 1923. His "Zulu" was well stabilized before he left Zululand in the first instance and, though he has had considerable contact with the numerous Bantu languages and perversions of language spoken on the "Rand", he has shown considerable ability in differentiating between innovations from them and the pure Zulu.

Azon Dhlomo has been used by me for checking purposes. He is the son of Nogwajana Dhlomo, and was born at Inkandhla, the place of Cetshwayo's grave, just after the battle of Isandhlwana in 1879. Dhlomo, though a pure Zulu of Zululand proper, is somewhat influenced by *isilala* speech. He first went to Pietermaritzburg to work during the Boer War, and though working off and on for short periods ever since at Maritzburg, and later in Johannesburg, his Zululand home has been his headquarters. Dhlomo speaks no English, and I have used him mostly to test the correctness of the tones given me by Nxele.

§ 4. The Classification of Zulu Speech sounds

In Zulu, speech sounds are divided into two main classes, vowels and consonants. Vowels are divided into pure vowels and semi-consonants, while consonants are divided into plain consonants and click consonants. For the sake of convenience the semi-consonants, which are consonants having syllabic, and hence vowel, qualities, are treated together with the plain consonants. It will be seen that, for purposes of tabulating in two dimensions, i.e. according to manner and position, three sound charts are necessary: one for the pure vowels, another for the plain consonants including the semi-consonants, and a third for the clicks.

In the use of the clicks, Zulu, together with its sister-tongue of Xosa, stands almost unique among Bantu languages. Clicks are found in the Suto language, and these are probably due to a certain extent to Zulu or Xosa influence, though, as I shall point out later, there is also evidence of direct Bushman influence in the Suto clicks. Nevertheless, in Suto the clicks are rarely met with, and are by no means a feature of the language, as they are in Zulu and Xosa. The words in the Thonga and Ronga languages which contain clicks are directly borrowed from Zulu; while those in Sindebele and Chingoni have already been accounted for. The question of the distribution of the clicks in African languages and of the probable origin from which Zulu derived them will be discussed in Appendices V and VI.

Zulu, in common with almost every other Bantu language, possesses a remarkably simple system of vowel sounds, for a sufficiently correct representation of which five, or at the most seven, symbols only are required; but the difficulty in the way of the foreign student's acquirement of the language lies in the consonantal sounds, some of which, especially the ejectives, the bilabial implosive, the voiced lateral fricative, the voiced glottal fricative, and the clicks are entirely foreign to European speech-sounds.

§ 5. The Orthography Used

In dealing with the phonetics of this language, the symbols of the International Phonetic Association¹ have been used, and where they have been insufficient new symbols have had to be invented. The reasons for having adopted entirely new symbols in several cases are explained when the particular sounds are analysed.

¹ A critical examination of the orthographies of Lepsius, Steere, Meinhof and the International Phonetic Association is given in Appendix I.

The Zulu language contains seven¹ simple vowel sounds, represented by the symbols :

i, e, ε, a, ə, o, u,

four diphthongs, represented by the symbols :

iī, əe, əa, ou,

thirty-six elementary plain consonant sounds, represented by the symbols :

p, p̄, b, b̄, q̄, q̄̄, t, d, t̄, d̄, k, g, ʔ, β, m, ŋ, n, p̄, ŋ̄, fi, f̄,
v, s, z, ʃ, ʒ, x, h, fi, r, l, ɬ, ʒ̄, ʒ̄̄, j, w,

and nine click consonants represented by :

ɰ, ʘ, ɱ, ɮ, ɛ, ɓ, ɔ, ɔ̄, ɔ̄̄.

Aspiration of explosives and clicks is marked by the addition of h thereto ; thus in addition to the above consonantal sounds, Zulu employs the seven aspirated sounds :

ph, th, kh, tʃh, ɰh, ɮh, sh.

Ejection of explosives and affricates is marked by the addition of the " glottal stop ", ʔ, forming the following combinations :

pʔ, tʔ, kʔ, q̄ʔ, tsʔ, tɬʔ, tʃʔ, kxʔ, kɬʔ.

The elementary consonants, q̄, q̄̄, t, d, ʔ, ŋ, r, and ɬ, are not used in their elemental forms in Zulu but in affricate or other consonantal groups, as : ŋq̄ʔ, ŋq̄̄ʔ, tʃʔ, tʃh, dʒ, ndr, phr, kɬʔ.

Syllabification of consonants, giving them vowel value, is indicated by a bar beneath them, e.g., m, n, ŋ.

Vibration of the epiglottis accompanying certain vowel and syllabic nasal sounds is indicated by the sign ̤ placed beneath, e.g., ɔ̤, m̤.

Nasalization of vowels, when necessary to be marked, is indicated by the diacritic ̃ (tilde) placed above, e.g. ĩ.

Full length of vowels or semi-consonants is indicated by : placed after them, e.g. ɑ, r, ε, m; while half-length is shown by ˘, e.g. ɑ˘, u˘, r˘; and abnormally protracted length by ::, e.g., ɑ::. All vowels with no length-mark after them are short.

Stress is indicated by accents above the vowel concerned. Main stress is marked by the acute accent, thus á, ím; é, í; secondary stress is marked by the grave accent, thus à, î, ù.

The method employed to mark tone will be fully explained in Chapter XVII, the nine " tones " being marked by numerals 1 to 9, placed above the syllable concerned, falling and rising tones being indicated by the numbers of both extremes thus : ɑ, ɑ, ɑ.

¹ Also an eighth, the " neutral vowel " ɔ̄, found in modified form under rare circumstances. The existence of this was originally brought to my notice by Mr. Carl Faye. For Lateral Vowels, see Chapter VIII, § 6, and Appendix III.

CHAPTER II

THE VOWELS

§ 1. The Vowel Chart and General Observations

The accompanying chart is designed to compare the positions of the Zulu vowels with what are known as the "Cardinal Vowels". The black dots on the chart, indicated by the numbers (1) to (8), represent the positions for the highest point of the tongue for the eight primary cardinal vowels.¹ Nos. (1) to (4) are front vowels, and Nos. (5) to (8) are back vowels. The Zulu vowels, marked in red, are not so "close" as the Cardinal vowels, being, in each case, below the cardinal position on the chart. The Zulu *ɑ*-sound is intermediate in position between Nos. (4) and (5), but it is distinctly a back vowel.

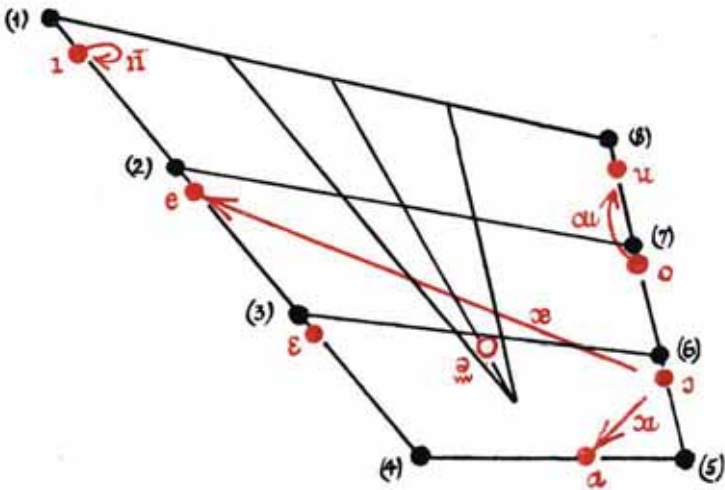
With all Bantu languages there are three basic vowels, viz. : *ɪ*, *ɑ*, and *u*. As will be noticed when we come to deal with the question of coalescence in Chapter XIV, the vowel *ɑ* is the real base; and, under certain circumstances, when followed by the vowel *ɪ*, *ɑ* + *ɪ* coalesce to form the mid-forward vowel represented as either *e* or *ɛ*; similarly, when followed by the vowel *u*, *ɑ* + *u*, under certain circumstances coalesce to form the mid-back vowel represented as either *o* or *ɔ*.

Now, in Zulu, the vowels *ɪ*, *ɑ*, and *u* have but one fixed and definite quality, a quality which does not alter whatever the circumstances of length, stress or surrounding vowel influence may be. The mid-forward and the mid-back vowels, on the other hand, alter their quality to the high positions of *e* and *o*, or to the low positions of *ɛ* and *ɔ*. For this reason it is convenient to refer to these vowels by the terms "mid-forward" and "mid-back". There are very definite rules which govern the occurrence of these vowels with their high or their low qualities, and these rules will be stated and exemplified in a later paragraph.

It will be seen that each of the seven vowels may occur short, or with half-length or with full length; and it must be remembered that when a long vowel, owing to alteration in the position of stress, loses its length, the general rule is that it does not alter its quality. There is, however, a special case where the quality of the mid-forward

¹ For an explanation of the "Cardinal Vowels" and the use of the Vowel Chart cf. *The Pronunciation of Russian*, by M. V. Trófimov and Daniel Jones (Cambridge, 1923), pp. 27-41, 54-6.

THE VOWEL CHART



[To face p. 16.]

and mid-back vowels may alter with change of stress, and this will be fully explained. Half-long vowels always have secondary stress.

Regarding length and stress in relation to the vowels, it will be seen that the main rule is that the vowel (or syllabic nasal) which has the main stress is long, other vowels being short. In the case of certain duosyllabic onomatopœic radicals, the vowel bearing main stress is found to be short; and in the case of certain contractions the long vowel resulting is often found in a position where there is no main stress. Secondary stress may fall on long vowels, on half-long vowels, or on short vowels. This whole question will be considered in detail when dealing with the subject of Length and Stress in Chapter XVI.

Though hitherto unnoticed by writers on Zulu, there are several distinct diphthongs in the language. The commonest of these are found in certain locative and diminutive formations, while one exceptionally rare diphthong, *iĩ*, occurs in a number of plurals of nouns of Class 6.

§ 2. The High Forward Vowel—1



The Zulu *i* has a tongue-position somewhat lower than that for Cardinal Vowel No. 1. The lips are decidedly spread, though tending to neutral. In Zulu *i* is a pure oral vowel, differing distinctly from the

diphthongic *i* of normal Southern English, as heard in such words as *see*, *feed*, etc. In Zulu this vowel may be either long, half-long, or short, but with the diminution of length, there is no alteration in the quality of the vowel. English speakers must guard against altering the quality of the vowel, as is done in English, where the long vowel in *peat*, *bead* is *i:*, but the short vowel in *pit*, *bid* is *i*. Zulu short *i* resembles more closely the French short vowel.—

Examples of the Zulu high forward vowel :

- i:* (long *i*) ^{4 2}
 n⁴i:na (you).
 ^{3 2 9}
 isi:lo (leopard).
 ^{2-6 3-8 9}
 i:gá:ma (name).
 ^{2 2-8 8 8 7 8-3-8 9}
 i:lâ mmbá:ki:i:ɛ (a slight thin person).

i (half-long *i*) ^{4 3 3-8 8 9}
 thi:ná:nt⁹u (we people).
 ^{3 2-6 8-3}
 khi:phí:ndza (take out the dog).

i (short *i*) ^{3 3 9 9}
 mndó:da (man).
 ^{6 6-3 3 3-8 8 9}
 izimmbá:mmbə (ribs).
 ^{3 3-5 4 4 9}
 isihá:mmbi (visitor).

Long *i* (*i:*) is usually found in positions of main stress, and short *i* either where there is no stress or only secondary stress. However, as is seen in two of the examples above, long *i* may occur without stress. This is the case when it is the contracted form of the Class 2 singular prefix *il-* or of the plural prefix *izim-* (or *izim-*, etc.) or *izi-*,

e.g. ^{8 8 2-4 3} i:nk³ó:mə (cattle). In onomatopœic radicals, usually¹ preceded by some form of the verb ^{3 2 9} ukú:thi, a short *i* is often found in the position of main stress. When, however, a regular verb is formed from such a radical, containing a short vowel with main stress, that vowel becomes lengthened if the stress is retained, e.g.

^{3 2 2-4 8 8-9 3 2 2-8 9}
 ukú:thi s³ípi > ùku:thi:pa (to writhe).

¹ Although it is generally thought that in Zulu all such radicals must be preceded by some form of the verb ^{3 2 9} ukú:thi, there is also a wide use with other verbs, such as ^{2-4 4 4 4 4 3} wanámathé:la né: (he stuck it on tightly).

- ^{3 3-5 8 8 8 3-8 8 9}
 a' (half-long a) ùkùhà mmbahá:mmba (to walk about a little).
^{8 3 3 7 3 3 9}
 uçà mmbamá:nyga (you tell lies!)
^{5 5 6-3}
 a (short a) lí:nda (guard).
^{3 3-5 8-3-5 9}
 àmazí:mu (cannibals).
^{3 2 2-4 8 8-9} ukú:thi ^{8 8-9} báfu (to patch up) > ^{4 2 6-8 9} isi bá:fu (a patch).

§ 4. The High Back Vowel—u



The tongue-position for u in Zulu is somewhat lower than that for Cardinal Vowel No. 8, but the lips are fully rounded. It is a pure vowel unlike the diphthongic vowel heard in the English words *too*, *food*. As with the other vowels, long, half-long, and short forms of this vowel are found according to stress, with the usual exceptions. Long u (u:) may occur in unstressed positions if it is the contracted form of the Class 6 prefix ulu-.

Examples of the Zulu high back vowel :

- u: (long u) ^{2 9} thú:ma (send).
^{3 3 9 9} inndú:ku (walking stick).

	^{3 3-5 4 9}	ùkufú:na (to want).
	^{2 2-8 9}	u:khé:zə (spoon).
	^{3-5 4-8 9}	u:nwá:ǂa (chamelion).
u' (half-long u)	^{3 5 5 3-8 9}	safù:nafú:na (we searched a little).
	^{8 8 8 3-8 9}	udù:nygamá:ndzi (thou befoulest the water).
u (short u)	^{3 3-5 4 9}	ùǂuǂé:lə (kindness).
	^{3 3-5 4-8 9}	ùlukhú:ni (piece of firewood).
	^{3 3-5 4-8 9}	àmálá:u (Hottentots).
	^{3 2 2-4 8 8-9 3 2 2-8 9}	ukú:thi ǂúne > ùkuǂú:na (to fade).
	^{3 2 2-4 8 8-9 3 2 2-8 9}	ukú:thi búǂu > ùkubù:ǂa (to rot off).
	^{3 2 2-4 8 8-9 3 2 2-8 9}	ukú:thi phúǂu (to shave the head) > ùkuphú:ǂa (to use the razor).

§ 5. The Mid-forward and the Mid-back Vowels—e, ε, ə, and o

The mid-forward and the mid-back vowels have each two qualities, a half-close and a half-open. With both the forward and the back vowels, the two types are evidently but different manifestations of the same and there are definite rules which govern their occurrence as such. It is impossible to say whether the half-close or the half-open form is the original one, for neither the mid-forward nor the mid-back vowel is basic with the Bantu languages. In Zulu grammatical and lexicographical works the two qualities of each of these vowels are unnoticed, and it cannot be insisted upon too strongly that the rules for their use should be carefully applied when reading from non-phonetic script. But before examining these rules, which govern the occurrence of the high and low qualities of these vowels, it will perhaps be well to examine each vowel separately.

(i) *The Mid-forward Vowel, High quality—e*

In Zulu **e** is a little lower in tongue position than Cardinal Vowel No. 2. The lips are decidedly spread and slightly more open than for **ɪ**. In Zulu **e** is a pure vowel, and must be carefully distinguished from the normal Southern English diphthong **eɪ**, as in *way*, *play*. This vowel

belongs to the same phoneme as the vowel ϵ , and, in a broad transcription, its distinction therefrom may not be necessary, provided the laws governing its occurrence are observed. e is used in Zulu long, half-long, and short, and is subject to the rules of stress.



Examples of the Zulu mid-forward vowel, high quality :

- e (long e) ^{4 9} lé:li (this).
 ^{5-2-6-6-3 9} ne:fá:fá (with a horse).
 e (half-long e) ^{3 3-4 3 9} fè:kisí:tfʔa (put the plate down).
 ^{5 2 2-8 9} phè:kipá:ma (cook the meat).
 e (short e) ^{3 9 9} phezú:lu (above).
 ^{5 5 5 2-8 9} èndukʔwí:ní (on the walking-stick).
 ^{3 2 8 6-3 9} èmgodí:ní (in the mine).
 ^{2 2-3 3 2 9} ùkuthéfú:la (to be slippery).
^{3 2 2-4 8 8-9 3 3 2 9 9} ukú:thi kʔébu > ùkukʔébu:ka (to tear with a noise).
^{3 2 2-4 8 8-9 3 3 2 9 9} ukú:thi bédu > ùkubedu:ka (to stream forth in numbers).

e is never found in final short position.

(ii) *The Mid-forward Vowel, Low quality—ε*

This vowel in Zulu has but a slightly lower tongue-position than that for Cardinal Vowel No. 3, but it must be rigorously differentiated from the diphthong used in such English words as *air*, *care*. It is a pure vowel. The lips are well spread and slightly more open than with Zulu *e*. In Zulu *ε* is used in long, half-long and short forms, and is subject to the same rules of stress as obtain in the case of the vowels *i*, *a*, and *u*, viz., in unstressed positions it is short; in positions of main stress it is long, except in the case of certain onomatopœic radicals used with the verb *ukú:thi*; but when these words are used as regular verb forms, the short stem-vowel *ε* becomes long if the position of main stress is not altered.

Examples of the Zulu mid-forward vowel, low quality :

- ϵ : (long ϵ) ⁵ ⁴ w^é:na (thou).
 ⁵ ⁴ b^é:ka (look).
 ⁵ ⁴ ⁹ thum^é:la (send for).
 ⁶⁻³ ⁹ lé:tha (bring).
 ϵ (half-long ϵ) ³ ³⁻⁵ ⁴ ùkulè:tha ² ²⁻⁸ ⁹ lé:tha (to bring a little).
 ⁶⁻³ ³⁻⁴ ³ ⁹ lè:thom:pe (bring another).

ϵ (short ϵ) ^{2 2-8 9} **elá:khe** (his).
 ^{3 3-8 6-3 9} **èŋwadi:ni** (in the book).
 ^{5 3 3 9} **jethé:mmba** (trust).
^{3 2 2-4 8 8-9 3 2 2-8 9} **ukú:thi tʔéβε** > **ùkutʔé:βa** (to be weighed down).¹
^{3 2 2-4 8 8-9 3 2 2-8 9} **uku:thi phé:ε** > **ùkuphé:ɿa** (to fold over).

(iii) *The Mid-back Vowel, Low quality—ɔ*



In Zulu ɔ has but slightly lowered tongue-position as compared with that of Cardinal Vowel No. 6. The lips are well rounded and somewhat protruding, but very distinct in degree of openness and roundness from Zulu o . ɔ may be either long, half-long, or short, according to the rules of stress, with the usual exception of the onomatopœic radicals. ɔ belongs to the same phoneme as the vowel o , and, in a broad transcription, its distinction therefrom may not be necessary, provided the laws governing its occurrence are observed. ɔ is a pure vowel and its acoustic effect is very much that of the vowel in the Southern English pronunciation of *or*.

^{3 2 2-8 9}
¹ **ùkutʔé:βa** has the more usual meaning of "to sway to and fro".

Examples of the mid-back vowel, low quality :

- o: (long o) ^{5 9} bó:na (see).
^{2 2 2-6 5} ukʰó:má (head of cattle).
^{3-2 2-8 9} i:thó:lɛ (male calf).
^{3 3-5 4} uβó:ja (wool).
- o· (half-long o) ^{6 3 3-4 3 3 9} ngiβó·naβá:ntʰu (I see people).
^{3-4 4 4 3 9} sathò·lamá:ndʒa (we found strength).
- o (short o) ^{5 3-5 4} nóbá:βa (and my father).
^{3 2 9 9} isiǵó:ǰó (King's enclosure).
^{3 3-5 4} uji:ǰó (thy father).
^{4 9} ndǰá:lɔ (thus).
- ^{3 2 2-4 8 8-9 3 2 2-8 9} ukú:thi bósó > ùkubó:sa (to squelch in mud).
^{3 2 2-4 8 8-9 3 2 2-8 9} ukú:thi mókʰʰó > ùkumó:kʰʰa (to break).
^{3 2 5-6 6 5 3 3-5 6-3 9} ukú:thi góǰó > ùkugó:ǰa (to fold).

(iv) *The Mid-back Vowel, High quality—o*



In Zulu, o has a tongue-position not quite as high as that for Cardinal Vowel No. 7. The lips are fully rounded and well protruding. In the

case of this vowel again the English speaker must carefully avoid the English diphthong *ou*, as in the words *no*, *though*. In Zulu *o* is a pure vowel. It is used in long, half-long, and short forms, subject to the rules of stress already stated, though the mid-forward and the mid-back vowels depend on further phonetic rules, which are given in the next paragraph.

Examples of the mid-back vowel, high quality :

- o:** (long o) ^{4 9} ló:lu (this).
^{3 3 3-8 8 7} mtʔó:mmbɪ (maiden).
^{5-3-22-8 8 9} no:ʃá:mmbɔ (and a rib).
^{3-4 4 3 9} ò:khuní:m (on the piece of firewood).
- o'** (half-long o) ^{6 3 3-6 6-3 9} ŋgɪʃò:ni:ʃá:ʃɪ (I see the horse).
^{3-4 4 3 4 4 9} sa:thò:lumfá:na (we found the boy).
- o** (short o) ^{5 3-5 4} nomú:thi (and the tree).
^{3 4 4 3 9} òluʃisí:nɪ (in the milk).
^{3 2 2-4 8 8-9 7 2 9} ukú:thi bóŋu > boŋú:la (to pull out of mud).
^{3 2 2-4 8 8-9 5 2 9} uku:thi móŋu > mopú:la (to pull out a nail).

§ 6. Rules governing the quality of Mid-forward and Mid-back Vowels

(1) If the vowel of the succeeding syllable be *i* or *u*, or if the succeeding syllable be m or n, the mid-forward and the mid-back vowels are of high quality.

- Examples of **e**—^{5 3-5 4} nelí:fa (with the inheritance).
^{5 3 6-8 8 9} ðfelú:ŋgu (white people).
^{5-3 9} né:ɣhi (with contradiction).
^{5 3-6 8-3 9} nëntʔi:zi:jo (with heart).
^{5-3-8 8-3} né:zwɪ (and the word).
^{5-3-4 8-3-4 9} ne:zi:mu (and the cannibal).
^{5 3-8 8 9} nentsʔi:mmbɪ (with metal).
^{4 3 6-8 9} ðfelú:sɪ (herdsmen).

^{3 2 2-8 8 9}
 èmpá:ηγγə (in the doorway).
^{2 3 6 8-3 9}
 èmthəpɔ́zɛ:ni (in the well).
^{3 3 8 8 6-3 9}
 èmmbəndé:ni (in the flute).
^{4 4 4-5 3-8 9}
 èndəβé:ni (during the affair).
^{5 5 3-8 9}
 nentʔá:mə (and the neck).
^{5 5 3-8 9}
 nempʔá:ka (and the witch's cat).
^{5 3-4 3}

Examples of o—nomú:thi (and the tree).

^{3 3-5 8-3 9}
 ðboví:ni (in the pus).
^{3-5 5 3 9}
 ò:βisi:ni (in the milk).
^{3 2 8 8-3}
 nòmɔ́:di (and the mine).
^{5 7 4}
 nokhú:lu (with the grandmother).
^{3-4 3 9}
 o:thi:ni (in the stick).
^{8-3 3 9}
 nó:ntʔu (and the stomach sack).

(2) If the vowel of the succeeding syllable be other than i or u, or if the succeeding syllable be η, the mid-forward and mid-back vowels are of low quality.

Examples of ε—léthé:la (bring for).

^{5 3 9}
^{5 4}
 wé:na (thou).
^{5 5 3-5 4}
 neηkʔó:mə (and the beast).
^{2 2-3 4 4-8 9}
 ùmsεβé:ndzi (work).
^{5-3-4 3}
 né:fa (and the inheritance).
^{5-3-6 8-3}
 né:pdza (and the dog).
^{3 3-4 2-8 9}
 àβetʔwá:na (the Chwanas).
^{3 3-5 4}
 phejé:ja (on the other side).
^{3 3-4 4 2 9}
 èmaqetʔé:ni (in the falsehoods).
^{3 3-4 4 6-3 9}
 sìtheηγγí:le (we have bought).
^{5 5 3-5 4}
 neηkʔá:mε (and a centipede).

Examples of *o*—^{5 3-5 4} *nǒǒ:ǰa* (and wool).
^{5 3-5 4} *nǒǒ:ǂa* (and my father).
^{5 2-8 9} *nǒtʃʔá:nǐ* (and grass).
^{3 2 2-88 9} *ǔkuǒǒ:ǰǰga* (to praise).
^{4 9} *lǒ:wǒ* (that).

(3) If the mid-forward or mid-back vowel be long and in a position where there is no main stress, it is always of high quality, despite the quality of the succeeding vowel or semi-consonant.

Examples of *e*—^{5-2-3 3-8 8 9} *ne:khá:ǰnda* (and the head).
^{5-2-6 3-8 9} *ne:gá:ma* (with the name).
^{5-2-6 6-3 9} *ne:ǂá:fǐ* (and the horse).
^{5 4} *le:já* (yonder one—Class 3s).
^{2 6-3 3 8 8-3} *e:ǰà'khwǐzǐ:ǰǰǰa* (thy dogs).
^{2 3 3 3-8 9} *e:ǰà'khwǐǰá:ma* (thy meat).

Examples of *o*—^{5-2-2-8 8 9} *no:ǂá:mmbǒ* (and the rib).
^{5-2-6 6-3 6-3 9} *nǒ:veǰǰǰǰǰá:ne* (and the butterfly).
^{3-4 4 2 9} *ǒ:khunǐ:nǐ* (in the piece of firewood).
^{5-2 2-8 9} *no:ǂá:nǐ* (with lightning).
^{3-5 5 4} *o:ǂá:ǂa* (our fathers).
^{2 2-4 3 3-5 4} *o:ǂà'luǂá:sǒ* (its face).
^{2 6 3 6-3 9} *ǒ:dwamaǂá:fǐ* (only horses).

Most of the above instances are taken from nouns having the contracted prefixes *i:* (of Class 2) or *u:* (of Class 6). All plurals of Class 1a take the prefix *o:*. From this rule it is noticeable that *ɛ:* and *ɔ:* are never found apart from main stress.

(4) Mid-forward and mid-back vowels, when long and in position of main stress, or half-long in position of secondary stress, are not influenced by m (of the combinations mp[?] and mmb), n (of the combinations nt[?] and nnd), or ŋ (of the combinations ŋk[?] and ŋŋg): their quality is determined by the vowel of the syllable succeeding that nasal.

- Examples :
- ^{5-3-4 4 3}
né:ntʔo (with something).
^{33-4 3-8 8 9}
ùmthó:mmbó (a well).
^{33 3-8 8 6-3}
intʔó:mmbi (a maiden).
^{33-4 3-8 8 9}
ùmthó:nyga (a Thonga).
^{3 22-8 8 9}
isibó:nnda (a pole).
^{2 3 3 9}
intsʔwé:mpʔe (quail).
^{33-4 3 3 9}
ùmkhó:mmbi (one who points).
^{3 22-8 8 9}
ùmló:nndi (guardian).
^{3 3 3 3 52-8 8 9}
ùkulò:nndaló:nnda (to keep a little).
^{2 2-3 8 8 8 2-8 8 9}
ùkwethè:mmbathé:mmba (to trust a little).

The following examples further illustrate the working of the above rules :—

In the Demonstratives :

^{4 9} lé:li (this).	^{4 9} lé:lo (that).
^{4 9} lé:si	^{4 9} lé:só
^{4 9} lé:zi	^{4 9} lé:zó
^{4 9} ló:lu	^{4 9} ló:ló
^{4 9} ló:fu	^{4 9} ló:fó
^{4 9} ló:khu	^{4 9} ló:kho

In the Verbs :

(Simple Stem.) (Perfect Stem 1st pers. pl.) (Pres. Neg. 1st pers. s.)

^{4 9} çé:da (finish).	^{5 5 6-3 9} síčedí:le	^{6 6 6 2 9} ànygíçé:di
^{4 3 9} sébé:ndza (work).	^{5 5 5 6-3 9} sísébéndzí:le	^{6 6 6 6 2 9} ànygísebé:ndzi
^{2 2 9} thé:nyga (buy).	^{5 5 5 6-3 9} sithenygí:le	^{6 6 6 2 2 9} ànygíthé:nygi
^{5 9} bóna (see).	^{5 5 3 9} siboní:le	^{6 6 6 2 9} ànygíbó:ní
^{5 5 9} khó:mmba (point).	^{5 5 5 6-3 9} sikhommbí:le	^{6 6 6 2 2 9} ànygíkhó:mmbi

In the Formation of Nouns :

^{7 6-3} jé:ndza (make).	^{3 2 9} umé:ndzi (maker).
-------------------------------------	---------------------------------------

^{5 3}
phé:ka (cook).

^{4 3 9}
seβé:ndza (work).

^{3 2 2-8 9}
ùmphé:ki (cook).

^{2 2-3 4 4-8 9}
ùmseβe:ndzi (work).

The following are examples of words differentiated by the qualities and length of the vowels, illustrative of the above rules :—

^{5 5 3 3 9 9}
{ nè:ŋkʰɛŋgá:nɛ (with famine).

^{5-3 3 3 9 9}
{ nè:ŋkʰɛŋgá:nɛ (with a poor man).

^{7 7 4}
{ noβá:nɪ (with so-and-so).

^{5-2-3 3-8 9}
{ no:βá:nɪ (with lightning).

^{3 3-6 6-3 9}
{ ò:βoví:nɪ (in the bog).

^{3 3-6 6-3 9}
{ ðβoví:nɪ (in the pus).

Certain cases of the vowels e, ε, ə, and o all being found in final positions of main stress in certain onomatopœic radicals are discussed in the next section. In these cases the vowels are all long, and are uninfluenced by the quality of any other vowel.

§ 7. Vowel Signification

In Zulu, as in most Bantu languages,¹ the vowels constitute the simplest part of the phonology of the language; nevertheless they form a very important part.² The root vowel of every regular Zulu verb is immutable.³

Even though the verb be altered to form verbal derivatives or nouns, the root-vowel remains unaltered; e.g. from ^{2 2-4 3 3 9} ùkuthá:nda

¹ An exception is usually made in the case of the Suto-Chwana group. This, however, in the case of Suto, is questionable. Owing to a grave misunderstanding of the consonantal value of **gd** (written **l** before **l** and **u**), the French missionaries have interpreted that there are two values to **l** (viz., **l** and **ē**), and two to **u** (viz., **u** and **ō**).

² Any system of "shorthand" for Zulu (or other Bantu languages) would have to reckon very seriously with the vowels, for instance: ^{8 3 3 9} zìjaphá:la (they scrape off), ^{8 3 3 9} zìjaphé:la (they come to an end), ^{8 3 8 9} zìjaphí:la (they are well), ^{8 3 3 9} zìjaphó:la (they cool), ^{8 3 3 9} zìjaphú:la (they break).

³ This statement does not hold with verbs of monosyllabic stem, e.g. ^{6 4} jí:pha (give) > ^{3 9} phé:la in the Applied Form; and such doubtful forms as ^{7-4 9} lá:la (sleep), ^{5 9} á:la (sit), ^{3 9} phá:tha (take), and ^{3 9} thwá:la (carry) form their perfects in ^{2 3 9} ulé:le, ^{2 2-8 9 2 2 9 2 3 9} ufé:zi, ^{2 2-8 9 2 2 9 2 3 9} uphé:the, ^{2 2-8 9 2 2 9 2 3 9} uthwé:le.

(to love), where the first *a* is the vowel of the root *thā₅₅nd-*, are formed
^{55 6-3 9} *thā₅₅ndé:ka* (be loveable), ^{55 5 3 9} *thā₅₅ndisi:sa* (love greatly), ^{3 8 88 8-3 9} *izithā₅₅ndá:ni*
 (lovers), ^{3-5 3-88 9} *u:thā₅₅ndo* (love) and ^{33 3-88 9} *int₃₃ʔá:ndo* (love charm) among many
 derivatives. Similarly with the verb ^{2 2-43 9} *ùku₂ina* (to be strong), where
i is the vowel of the root *çin-*. From this are formed ^{5 2 9} *çini:sa* (make
 firm), ^{5 5 3 9} *çinisé:la* (persevere), ²⁻⁴³³⁻⁸⁹ *i:çini:sə* (truth), etc. *u* is the root-vowel
 of the verb ^{2 2-4 3 9} *ùkuphú:ma* (to go out), and this vowel persists in all its
 derivatives—^{5 3 9} *phumé:la* (come out at), ^{33 5 44-88 9} *imp₃₃ʔùmalá:ngga* (the east, where
 the sun comes out), ^{5 5 3 9} *phùmelé:la* (come right through), ^{5 3 9} *phumí:sa* (bring
 out). If this were done with several roots, it would be noticed that in
 each case the root vowel, if *a*, *i*, or *u*, remains the same, while other
 vowels may alter.

In the case of words having for root-vowel a mid-forward or a
 mid-back vowel, the special rules concerning stress and the quality
 of the succeeding vowel determine whether the quality of the root-
 vowel is to remain constant or to change. For instance ^{3 3-5 4 9} *ùku₃ó:na*
 (to see) is the infinitive of the simple stem formed from the root *çon-*
 or *çon-*, and the following derivatives show both high and low qualities
 of mid-back vowel: ^{5 3 9} *çoné:la* (see for), ^{5 5 3 9} *çonisi:sa* (see clearly), ³³⁻⁵⁵⁻⁸⁹ *ù₃₃çonó*
 (apparition), ^{3-55 5 3 9} *ù₃₋₅₅mboni:sə* (land-mark). Again, *ùkukhwé:la* (to mount)
 is the infinitive of the simple stem formed from the root *khwel-* or
khwel-, and the following derivatives show both high and low qualities
 of mid-forward vowel: ^{5 3 9} *khwelí:sa* (cause to mount), ^{6 3 3-5 4} *mà₆sikhwé:le*
 (let us mount), ^{33-5 4 9} *ù₃₃₋₅khwé:l* (rider). From many words having a
 mid-forward or a mid-back root-vowel, it is extremely difficult to
 decide what is the primitive quality of the vowel. Many verbs are
 derived, as has been seen already, from onomatopœic radicals, and
 these show instances of root-vowels in all four forms, *e*, *ɛ*, *ə*, and *o*.
 But here again, a reference to the examples already given will show
 conclusively that these qualities are dependent upon the quality of
 the succeeding vowel. Nevertheless certain onomatopœic radicals,
 ending in long vowels with main stress, show these vowels to be some-
 times high in quality, sometimes low; and in none of these cases
 is there any succeeding vowel influence; for example:—

$\eta k^2 \text{é}:$ (clang).	$\eta \overset{6}{\theta} \overset{6}{v} \overset{3}{\epsilon} \text{nené}:$ (tingling).
$\eta \phi f^2 \text{é}:$ (sound of flute).	$n\overset{2}{\epsilon}:$ (sticking fast).
$nt^2 \overset{8-9}{w\acute{e}}:$ (sailing along).	$nt^2 \overset{3-8}{\acute{\epsilon}}:$ (splitting right down).
$mb^2 \overset{6-3}{\acute{o}}:$ (being covered over).	$nt^2 \overset{2}{\acute{\epsilon}} \overset{2}{\acute{o}}:$ (feinting to poke in the eye).
$nt^2 \overset{3-8}{\acute{o}}:$ (going straight).	$nt^2 \overset{8-9}{\acute{\epsilon}} \overset{2}{\acute{o}}:$ (being born).

In the conjugation of the Zulu verb, the vowel **a** terminates the simple stem, i.e. the form of the verb found in the present indicative affirmative, the singular of the imperative and the infinitive. This is the regular rule for normal Bantu languages, though there are Bantu languages, such as some of those in the Congo Belge, which follow a different system of vowel harmony:¹ and even in Zulu there are three defective verbs, which depart from this rule.² **ε** is the distinctive vowel of the Dependent Mood,³ and the final vowel of the regular perfect suffix. In the contracted perfects, the whole suffix **-ile** contracts to **-é**. Similarly the perfects of such derived forms of the verbs as end in **-ama**, **-ala**, **-atha**, **-ana**, etc., are formed by changing these suffixes to **-εμε**, **-ελε**, **-εθε**, **-ενε**, etc. In Zulu, **i** is the mark of the negative in certain tenses, and it is found so in many Bantu languages.

In the formation of nouns from verbs, the most common suffixes are **i** and **o**, the former being used principally to form nouns denoting persons and agents, and the latter being significant of instruments and abstract ideas.

In examining the system of noun-prefixes in Zulu, it is instructive to note that in all the regular forms only the three vowels, **i**, **a**, and **u**, are used: cf. **umu-**, **aḃa-**, **ili-**, **ama-**, **in-**, **izun-**, **isi-**, **izi-**, **imi-** **ulu-**, **ufu-**, **uku-**. In the case of the plural of the rather exceptional Class Ia, there are two forms, **o**: and the less used **ao-** (or **ao-**); this latter form seems to indicate that a more primitive form was **au-**, which would have been the singular prefix **u-** of this Class, with the plural formative **a** as a pre-prefix. From this, **ao-** and then **o**: would have evolved by more recent growth.

Vowel-influence in the process of pre-palatalization will be noticed in Chapter XII.

¹ See Chapter XV.

² Viz., **ukú:thi** (to say), **ukú:fo** (to say), and **ukwá:zi** (to know).

³ Commonly called the Subjunctive Mood.

§ 8. Vowels with Epiglottal Friction¹

There is an instance of the neutral vowel ə being used in Zulu in the case of the onomatopœic radical² $\overset{9}{b}\underset{\sim}{a}$, e.g. $\overset{3\ 2}{wam:} \overset{2-4}{\underset{\sim}{thi}} \overset{9}{b}\underset{\sim}{a}$ (he struck him in the small of back). This is more commonly heard as $\overset{9}{b}\underset{\sim}{a}$. In each of these cases the vowels, $\underset{\sim}{a}$ and $\underset{\sim}{a}$, are sounded very roughly with considerable voiced friction in the throat; this is brought about by a contraction of the pharynx causing vibration of the epiglottis.

(a)

(b)

Kymograph Tracing of (a) $\underset{\sim}{a}$, (b) $\underset{\sim}{a}$.

Apart from the case of one interjection, $\overset{8}{f}\overset{3}{w}\underset{\sim}{a}$: (used when rousing a sleeper), this roughening of the vowels is only found in Zulu onomatopœia, imitations of sounds, etc. Examples:—

$\overset{8\ 8-9}{g}\underset{\sim}{a}\overset{8\ 8-9}{k}\overset{8\ 8-9}{o}$ $\overset{8\ 8-9}{g}\underset{\sim}{a}\overset{8\ 8-9}{k}\overset{8\ 8-9}{o}$ $\overset{8\ 8-9}{g}\underset{\sim}{a}\overset{8\ 8-9}{k}\overset{8\ 8-9}{o}$, descriptive of a wagon passing over a rough stony road.

$\overset{8\ 8-9}{b}\overset{8\ 8-9}{a}\overset{8\ 8-9}{k}\overset{8\ 8-9}{o}$,³ descriptive of smashing through a tin or piece of wood with a blow.

$\overset{9}{m}:\overset{9}{m}:\overset{9}{m}:\overset{9}{m}:$ $\overset{9}{n}:\overset{9}{n}:\overset{9}{n}:\overset{9}{n}:$ $\overset{9}{\eta}:\overset{9}{\eta}:\overset{9}{\eta}:\overset{9}{\eta}:$ $\overset{9}{\underset{\sim}{a}}\overset{9}{\underset{\sim}{a}}\overset{9}{\underset{\sim}{a}}\overset{9}{\underset{\sim}{a}}$	}	Zulu imitation of the grunting of a pig (syllabic nasals with epiglottal friction).
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$\overset{9}{\underset{\sim}{a}}\overset{9}{\underset{\sim}{a}}\overset{9}{\underset{\sim}{a}}\overset{9}{\underset{\sim}{a}}$, the sound made by the pig when tired.

§ 9. Diphthongs

Diphthongs have been unnoticed by grammarians in Zulu, but, while their range is very limited, they are a feature of the phonetics which cannot be overlooked. In a broad transcription there seems

¹ First brought to my notice by Mr. Carl Faye.

² It may be objected that such sounds as these should not be treated as part of the phonetics of Zulu speech, but the "radical" in Bantu is such a regular grammatical part of speech that it is difficult to exclude these from a study of the phonetics. I have tried, however, to indicate in each case that the use of these sounds is restricted.

³ Also heard as $\overset{8\ 8-9}{b}\overset{8\ 8-9}{a}\overset{8\ 8-9}{k}\overset{8\ 8-9}{o}$.

to be little need for distinguishing them. Nevertheless Zulu employs two rising diphthongs, *ɔa* and *æ*, one level diphthong, *ɪi*, and one falling diphthong, *ou*. In rising diphthongs the second element is the more prominent, whilst in falling diphthongs the first element is the more prominent. In level diphthongs neither element is especially prominent.

(i) *Rising Diphthongs*

ɔa. This diphthong starts from approximately the tongue-position of Zulu *ɔ*, and glides to the tongue-position of Zulu *a*. As this is a rising diphthong, the tongue reaches the full position of *a*, though in the commencement of the enunciation, the tongue position may not always be fully so high or so far back as Zulu *ɔ* (see Vowel Chart). Apart from its being found in one or two isolated words, the occurrence of this diphthong is almost entirely confined to certain noun diminutives, i.e. to the diminutives of those nouns which end in *ɔ*, but do not involve pre-palatalization.

- Examples : ^{2 3 4 4 3-8 9} *ùmfêloaká:zi* (widow).
^{4 4 2 2-8 9} *ùmkhólá:ne* (hornbill).
^{3 3-5 7 3-6 4} *ùngólá:ne* (a word of insult).
^{3-5 5 3 2 2 3 9} *í:ntʔɔ* > *íntʔá:na* (a little thing).
^{3 3-5 4 3 3-5 3 9} *isi:fo* > *isifoá:na* (slight disease).
^{5 3-5 4 3 3-5 3 9} *um:fo* > *umfoá:na* (little brother).
^{3 2 9 3 2 2-8 9} *isi:lo* > *isiloá:na*¹ (small leopard).
^{4 4 2 2-8 8 9 4 4 4 2 2 8-9 9} *ùmɪabá:nygo* > *ùmɪabanygoá:na* (small thought).
^{2 9 9 4 8-3 9 9} *u:fió:fió*² > *ù:fiófió:na* (small hall).

In current Zulu orthography *ɔa* is indicated by *wa*, no distinction being made from words really containing that sound, e.g. ^{3 2 2 9} *umá:ntʔu*
^{3 2 2 2-8 9} > *ùmntʔwá:na* (child). It must be noted that all verb passives end in *-wa*; and such monosyllabic verbs as *lwa*, *zwa*, *ɬwa* are correctly

^{3 2 2-8 9}
¹ This must not be confused with *isilwá:ne* and similar words meaning "animal", which are obviously derived from another root.

^{2-3 8-3 9}
² Or *u:fió:fió*.

written with **w**. Further, coalescence, resulting in the formation of a diphthong does not take place in such a case as ^{3 2 6 6 3-8 9} **àmazó:ló á:khe** (his dew), where the word-groups are kept separate, if the final vowel of the first word is not entirely elided. Notice also such words as ^{3 2 2-8 9} **ùmowá:né** (trap), ^{3 3-8 9} **owá:fó** (theirs), ^{3 3-4 4 3-8 9} **òwafiká:jó** (who arrived), where **ó** is followed by the semi-vowel **w**.

From the examples given it will be seen that **œ** may be either long or short according to the position of main stress.

œ. This diphthong starts from a tongue-position similar to that of the previous one (**æ**), and glides to the tongue-position of Zulu **e**. The reason for this is that all the instances of this diphthong, which I have hitherto found, have been of locatives, where necessarily the next syllable contains the vowel **ɪ**. As with the previous diphthong the commencement may be somewhat more forward than the tongue-position of Zulu **ɔ**, as this is a rising diphthong.

Examples : ^{3-5 3 2 2 3 9} **í:ntʔó** > **entʔœ:ni** (in the thing).
^{3 3-5 4 2 2-4 3 9} **isí:fó** > **èsifœ:ni** (in the disease).
^{3 2 9 3 2 2-8 9} **isí:ló** > **èsilœ:ni** (in the leopard).
^{3 3-8 9 3 2 8-9 9} **u:khé:zó** > **ò:khhezœ:ni** (in the spoon).
^{2 9 9 5 8-3 9 9} **i:vó:vó** > **èvovœ:ni** (in the knot).
^{2 9 9 5 8-3 9 9} **u:fió:fió** > **ò:fiófióœ:ni** (in the large hut).
^{2 2-8 9 4 2 2-8 9} **i:phú:phó** > **èphuphœ:ni**¹ (in the dream).
^{2 2-4 3 2 2-4 3 9} **isí:mó** > **èsimœ:ni**¹ (in the form).

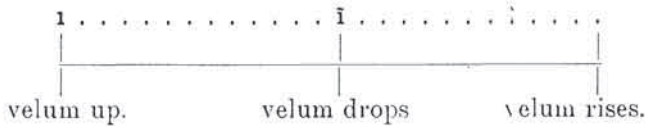
In all the examples I have gathered hitherto **œ** is long, as, being part of the locative suffix, it is in penultimate position. In pronunciation these forms must be carefully distinguished from **we**, as it appears in the words ^{3-8 9} **wé:thu** (our), ^{3-8 9} **kʔwé:nu** (your home).

(ii) *Level Diphthong*

ii. This diphthong, which is peculiar because of its nasalization, occurs in the plurals of certain words of Class 6. The first element of the diphthong is the pure vowel **ɪ**, and the second element is the

¹ In Zulu **phw-** is never found, for the semi-vowel **w** cannot follow a bi-labial consonant, but a few instances, as above, of **phœ-** are found. Similarly **mœ-** is found, but never **mw-**.

nasalized form of the same vowel. There is no alteration in the quality of the vowel, and neither element is more prominent than the other. Schematically the form of this diphthong may be represented as follows :—



Students of Zulu must be careful not to pronounce this diphthong as a complete nasalized vowel (i) or as ij . It is found only before noun stems commencing in j , h , fi , w , and x ; and in such cases ij is easily mistaken for ij , iĥ and iifi for ifi , iĥw for ijw , and iix for ijx . Careful hearing, however, will show that there is not a complete stoppage of the mouth-passage, as in the enunciation of the nasal consonant ŋ , but air is passing through both mouth and nose at the same time.

Examples :—

ij -	^{2-4 4-8 9} u:ǰá:ǰa (swarm).	^{2 6 3-8 9} izijá:ǰa
	^{3-2 2-8 9} u:ǰá:lu (mixture of pumpkins and mealies).	^{6 6 3-8 9} izijá:lu
	^{3-2 2-8 9} u:ǰá:ǰa (species of loin-girdle).	^{6 6 3-8 9} izijá:ǰa
	^{3-2 2-8 8-3 9} ù:jivá:za ¹ (one who wanders about).	^{2 6 2 8-3 9} izijivá:za
iĥ -	^{2-4 4 3-8 8 9} ù:héǰé:ŋgu ² (loafer).	^{2 6 4 3-8 8 9} izihéǰé:ŋgu
	^{2-4 3 6-3 9} ù:hazá:ne (quick walker).	^{2 6 3 6-3 9} izihazá:ne
	^{3 3 2 2-8 9} ù:halaká:ǰa (tall person).	^{6 6 3 2 2-8 9} izihalaká:ǰa
	^{2-4 2 9} u:há:i (kind of loin-cloth).	^{2 6 3 9} izihá:i
	^{2-4 2 9} u:hú:mé (chain of people).	^{2 6 3 9} izihú:mé
	^{3 2 2-8 9} ù:hǰǰó:lo (long thin thing).	^{6 6 3 3-8 9} izihǰǰó:lo
iifi -	^{3-2 9 9} u:fiǰó:fi ³ (large hall).	^{6 6-3 9 9} izifiǰó:fi
	^{3-2 6 3 9} ù:fiemá:ne (one who raves).	^{6 6-3 6 3 9} izifiemá:ne

¹ Or ù:jivá:za .

² In these words x is interchangeable with h , though the latter is the more usual.

³ Or u:fiǰó:fi .

	^{2-4 6-3 9} u:fú:mé (shaft dug in hill).	^{2 6 6-3 9} iziifú:mé
	^{2-4 6-3 9} u:fá:ǂé (one who flies into a temper).	^{2 6 6-3 9} iziifá:ǂé
iīw-	^{2-4 2 2 6-3 9} ù:wámmbá:zi (big blanket).	^{2 6 3 3 6-3 9} iziīwámmbá:zi
	^{3-2 2-8 9} u:wá:ǂa (crowd lying down).	^{6 6 3-8 9} iziīwá:ǂa
iix-	^{2-4 2 6-2 9} ù:xwézá:ne ¹ (collection of grains).	^{2 6 3 6-3 9} iziixwézá:ne
	^{2-4 2 6 3 9} ù:xubulú:zi (liquid food).	^{2 6 3 6 3 9} iziixùbulú:zi
	^{2-4 2 9} u:xí:di (long thing).	^{2 6 3 9} iziixí:di

(iii) *Falling Diphthong*

ou. This diphthong starts from the tongue-position of Zulu o, and glides in the direction of Zulu u. As this is a falling diphthong it is not always the case that the tongue at the end of the diphthong assumes the full position of u; a mere indication of the direction of the glide is often all that is necessary to pronounce it. In Zulu, ou is but rarely found. Of the two examples given below, the tongue assumes a position much closer to Zulu u in the first case than in the second; the reason for this being the length to which the first is drawn out, giving the tongue ample time to reach the position of u.

Examples : ³⁻⁵ h:óu: (wheu !)
⁸⁻⁹ xóu: (exclamation of irritation).

§ 10. Vowels in Juxtaposition

Apart from the examples given above, diphthongs are not used in Zulu. Grout³ treats ai and au as diphthongs, but they invariably form two syllables in Zulu. Bryant goes to the opposite extreme, and places a semi-vowel between them, so that he writes ^{6-3 3-6 3} ai:kʔé (well !) as ayíke and ^{2 4 2-8 9} ùmhá:u⁴ (jealousy) as umhawu. Though there is at times a perceptible glide between a and i, and a and u, that glide never assumes the force of the almost fricative semi-vowels j or w.

¹ With these words h may be substituted for x, though the latter is the more usual.

² Cf. examples of the use of this interjection in Chapter VII, § 7.

³ *The Isizulu* (ed. 1859), p. 9.

⁴ Or ùmxá:u.
^{2 4 2-8 9}

Examples : ^{6-3 9}fiá:ɪ (no !).
^{5 2 9}pʔeú:la (push over).
^{8-3 9}fié:ɪ (I say !).
^{3 9}ʔá:u (ach !).
^{1 9}á:u (wheu !).
^{9 9}á:u (dear me !).
^{3 7 4}ugwá:ɪ (tobacco).
^{6 3 9}gaú:la (chop down).

§ 11. The Semi-Consonants

In Zulu there are three syllabic nasals, m, n, and ŋ, which to a certain extent do the work of vowels. m may be used alone or in close conjunction with mb or pʔ; n is only found in conjunction with nd or tʔ; ŋ only in conjunction with ŋg or kʔ.¹ m, when used apart from mb or pʔ, more nearly approaches a pure vowel in its use; it may be long (m:); it may take main or secondary stress; while m (in conjunction with mb or pʔ), n and ŋ take neither length nor stress; and their work in the word-forms does not appear to be fully that of a vowel.²

The whole question of these semi-consonants will be discussed when dealing with the Nasals in Chapter VI; and it will suffice to record here that, when these nasals exert vowel influence, m has the resonance of u (mu), n the resonance of ɪ (ni), and ŋ the resonance of ɑ (ŋɑ). In Chapter VIII, § 6, the syllabic laterals of Zulu ɺ and ɻ are discussed and their very close approximation to the true vowels is noticed. Each of these is syllabic and they have respectively the resonances of the vowels ɪ and u. So similar are they, in fact, to true vowels, that I cannot refrain from terming them "Lateral Vowels".

In Zulu we also find in but two words instances of syllabic r (ɽ). In these two cases, dealt with in Chapter VII, the r is both stressed and long. How far this may be regarded as a true semi-consonant it is difficult to know; for there is no possibility of testing its vowel resonance, if it has any, owing to its final position in onomatopœic words. All semi-consonants must be voiced continuants. The whole question of the division of Vowels and Consonants is discussed in Appendix III.

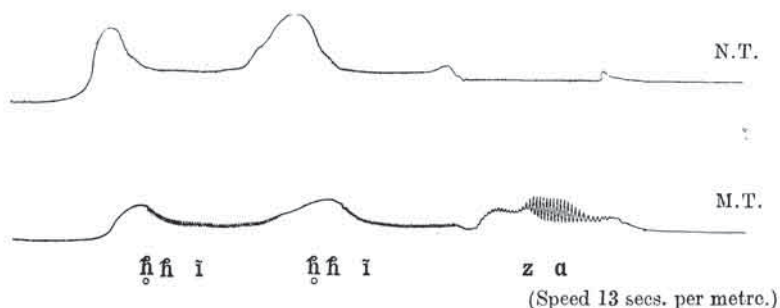
¹ Except in one rare case which we note in Chapter VI, § 6.

² These I have been tempted to term semi-syllabic nasals.

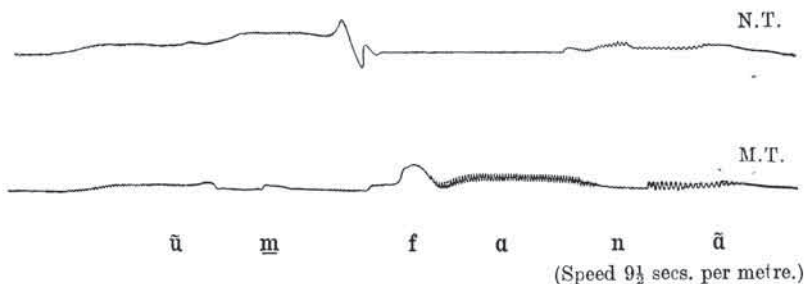
§ 12. Nasalization of Vowels

Nasalization of vowels is by no means a feature of Zulu speech, but careful analysis shows that vowels may become distinctly nasalized when in close proximity to certain nasal consonants. This is especially noticeable with the glottal nasal ŋ , e.g. ʔi:fi (exclamation of surprise used by women), $\overset{3}{\text{ŋ}}\overset{2}{\text{ŋ}}\overset{9}{\text{fi}}\text{zi}$ (show contempt).

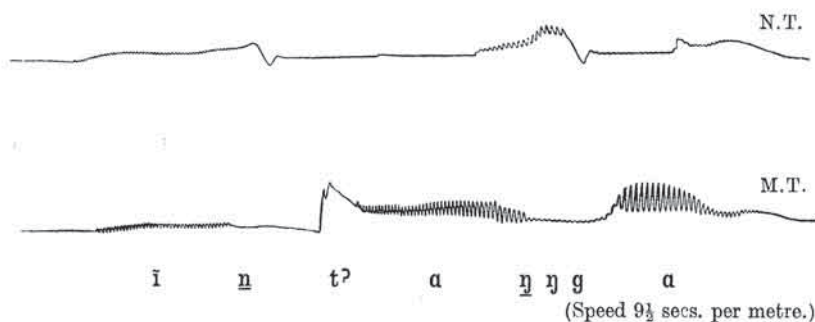
Kymograph tracings also clearly reveal the nasalization of the vowels, when used before syllabic nasals, thus ũm , in , in ; but we do not propose to mark such nasalization in writing, as it is a necessary concomitant feature with the syllabic nasals.



Above is a simultaneous nose-tracing (N.T.) and mouth-tracing (M.T.) from the Kymograph of $\overset{3}{\text{ŋ}}\overset{2}{\text{ŋ}}\overset{9}{\text{fi}}\text{zi}$, which shows clearly the vibration through the nose during the enunciation of the two i -vowels. ŋ (devocalized ŋ) is clearly indicated by non-vibrant humps in the nose-tracing. The pure oral vowel, a , appears much more clearly on the mouth-tracing, as its full force is through the mouth.



Simultaneous nose-tracing (N.T.) and mouth-tracing (M.T.) of $\overset{33-54}{\text{ũ}}\overset{9}{\text{mfá:na}}$ (boy), showing nasalization of u and final a , the middle vowel a , taking main stress, being a pure oral vowel.



Simultaneous nose-tracing (N.T.) and mouth-tracing (M.T.) of
 33 3-66 6-3
 int'á:ngga, showing nasalization of *i* and slight nasalization of the
 final *a*. Notice that the stop of the *t* is free from nasalization.

CHAPTER III
THE PLAIN CONSONANTS

§ 1. Chart of Zulu Plain Consonants

	Bi-Labial.	Denti-Labial.	Alveolar.	Pre-Palatal.	Velar.	Glottal.
Explosive { Unvoiced . . . Ejective . . . Aspirated . . . Voiced . . .	p ^ʔ (p) ph b (b)	[p ^ʔ] [b]	t ^ʔ th d	[t ^ʔ] [d]	k k ^ʔ kh g	[ʔ]
Implosive	ɓ					
Nasal	m m̄	[m]	n n̄	ɲ	ŋ ŋ̄	ɱ
Fricative { Unvoiced . . . Voiced . . .	(v)	f v	s z	ʃ (ʒ)	x	h ɦ
Rolled	{(p)} {(b)}		(r) (r̄)			
Lateral { Voiced . . . Unvoiced Fric. Voiced Fric. .			l ɬ ɮ		[ɬ]	
Affricate { Ejective . . . Aspirated . . . Voiced . . .		ɸf ^ʔ ɸv	ts ^ʔ dz	tʃ ^ʔ tʃh dʒ	kx ^ʔ	
Lateral- Affricate { Ejective . . . Voiced . . .			tɬ ^ʔ dɮ		kɬ ^ʔ	
Semi-vowel	{w}			j	w	

Note.—Symbols enclosed in square brackets [] indicate sounds not found except in affricate or other combination. Symbols enclosed in round brackets () indicate sounds which are rarely found and are not characteristic of Zulu. { } brackets indicate alternative positions.

§ 2. Explanation of Chart and terms used

Since only unvoiced consonants may be ejective or aspirated, the terms “Aspirated” and “Ejective” imply in each case that the consonant is unvoiced. Where the term “Unvoiced” is used it means that the consonant is in its simplest form, having neither voicing, nor ejection, nor aspiration.

The vertical columns indicate the **place** of formation of the consonants, descriptive of the organs of speech which are used in forming the sounds. The term “**Bi-labial**” indicates that the two lips are used in the production of the sound; “**Denti-labial**” that the upper teeth are against the lower lip; “**Alveolar**” that the tongue-tip is against the teeth-ridge or alveolus (that part of the palate which presents a convex surface to the tongue); “**Pre-palatal**” that the front of the tongue is against that part of the palate which is between the teeth-ridge and the true hard palate; “**Velar**” that the back of the tongue is against the soft palate or velum; and “**Glottal**” indicates sounds made in the throat.

In Zulu there are no inter-dental, no retroflex, no true palatal, and no uvular consonants.

The horizontal columns indicate the **manner** of production of the consonants. **Explosives** are formed by momentary complete closure of the air-passage; the air is compressed and, on release, issues suddenly with explosion. **Implosives** are also formed by a closure of the air passage, but instead of the air being compressed it is rarified by a lowering of the larynx, and, on release, a momentary inrush of air or implosion takes place.¹ **Nasals** are formed by a complete closure in the mouth, the velum being lowered so that the air passes out through the nose only. **Fricatives** are formed by narrowing the air-passage between the articulating organs, so that the air issues with audible friction or hissing. **Rolled** consonants are formed by a rapid succession of taps by the tongue-tip on the teeth-ridge, or by a rapid vibration of the lips. **Laterals** are formed by placing the tongue-tip against the teeth-ridge (or the back of the tongue against the soft

¹ This is described more fully in Chapter V.

palate) and allowing the air to escape over the side of the tongue. **Affricates** are "formed as plosive consonants, but with slower separation of the articulatory organs, so that the corresponding fricative is audible as the separation takes place".¹ The **Lateral-Affricates**, while forming the explosive indicated, do not separate the articulating organs, but allow the air to escape laterally, separation taking place only after the lateral has been sounded. The **Semi-Vowels** are formed with the tongue and lips in the position for vowels, but the articulating organs are held so tensely that consonantalization foreign to the vowels takes place.

Unvoiced or breathed consonants are pronounced without accompanying vibration of the vocal chords. **Ejective** consonants are unvoiced consonants pronounced with simultaneous glottal stop; that is to say, there is an appreciable break, caused by the closing of the glottis, between the enunciation of the consonant and that of the vowel following.² **Aspirated** consonants are unvoiced consonants followed by an audible rush of air through the open glottis. **Voiced** consonants are consonants pronounced with accompanying vibration of the vocal chords.

§ 3. General Observations on the Zulu Consonants

It has been noticed that the Zulu vowel system is the regular Bantu system. In its system of consonants, however, Zulu differs widely from most of the other Bantu languages. The clicks, which are treated separately from the plain consonants, are essentially a non-Bantu feature. The wide range of ejective sounds, especially of the affricative ejectives, is a noticeable feature, though it is shared with other Bantu languages, such as Suto, Ganda, etc.; nevertheless the velar ejective affricates are typically non-Bantu, and are, in all probability, due to Hottentot-Bushman influence. The lateral fricatives of Zulu are peculiar to the south-eastern Bantu languages, Zulu-Xosa, Suto-Chwana, Thonga, etc. The bi-labial implosive, while shared with Swahili, and other eastern Bantu languages, is used in Zulu in place of the more common Bantu bi-labial fricative; this latter being found in Zulu only as a rare variant in onomatopœia. The voiced glottal fricative is not usually found in Bantu. Zulu, like most other Bantu languages, possesses a full range of nasals, and these are augmented by the addition of nasal clicks. The use of

¹ Cf. *The Pronunciation of Russian* (Trofimov and Jones, 1923), p. 45.

² The ejectives are described more fully in Chapters IV and IX.

z, wanting in the phonology of many Bantu languages, is a marked feature of Zulu, where it takes the place of the Suto **gd**, Lamba **ʃ**, Chopi **ɸ**, etc. There is in Zulu a remarkable parallel in phonetic use between the explosive consonants and the clicks, where very similar rules of nasalization and aspiration are found.

The consonants are certainly the most difficult part of the phonetics of a Bantu language for the foreigner to master, and those of Zulu (and Xosa) are certainly more difficult than those of any other Bantu language.

CHAPTER IV
THE EXPLOSIVES

§ 1. Aspiration, Ejection, and Voicing

It is generally believed that in English there are only two types of explosives, the unvoiced and the voiced. The unvoiced is usually described as slightly aspirated. As a general rule this is true, but on careful investigation it is found that English has three types for each of the explosive positions, viz., an unvoiced unaspirated, an unvoiced slightly aspirated, and a voiced type. The following examples will make this clear :—

slōṽpṽ:‡ (slope all), slōṽp^hp:‡ (slow Paul), slōṽbṽ:‡ (slow ball).
blæktāi (blackened eye), blækt^hāi (black tie), blækdāi (black dye).
mēikṽ:‡ (make all), mēik^hp:‡ (may call), mēigṽ:‡ (may gall).

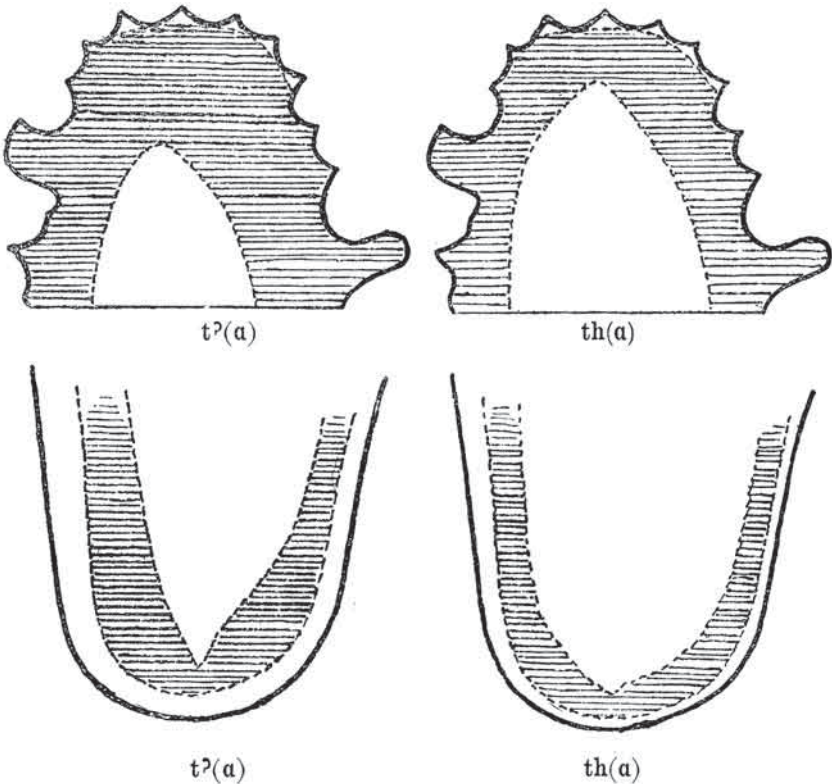
Instances of this in English are rare and very seldom noticed, but in Zulu there is a much more concise system of aspiration, voicing and, in addition, of ejection. This may be seen at a glance from the chart of plain consonants. The bi-labial, alveolar, and velar columns are each seen to possess an ejective, an aspirated and a voiced explosive, while the velar column has the additional unvoiced unaspirated form.

Perhaps the most difficult of the Zulu explosive sounds for the English speaker to acquire is the unaspirated unvoiced velar, **k**. Since this differs only in breath-force from the corresponding voiced form devocalized, it appears to the untrained English ear as the voiced form, i.e. to the English ear, **k** (which differs from **g̃**, unvoiced **g**, in breath-force only) seems more like **g** than **kh**. In fact **k** has been accepted as **g** by workers among the Matabele, where the regular Zulu infinitive **uku** is written **ugu**. To this can be traced the evolution of such Kitchen Kafir (or Pidgin Zulu) words as **gɑ:flɪ** (carefully), which in pure Zulu is ⁵ **ká:** ⁴ **ɛ**.

The Unvoiced Unaspirated Explosive.—In learning to speak Zulu, or any foreign language, it is necessary to acquire control of all the organs of speech. The exertion of this control is very noticed when learning the Zulu unvoiced unaspirated explosive. Normally, English speakers slightly aspirate every explosive, and to prevent that emission of air with the plosion is very difficult to most. A little practice along the lines of the exceptional unaspirated explosives,

given above for English, is very useful. Afrikaans speakers do not find quite such difficulty; with them more attention has to be paid to the proper aspiration of the aspirated forms. This Zulu explosive (k) is the simplest explosive one can make; there must be no trace of vibration of the vocal chords, no trace of air-friction following it, and no closure of the glottis. All these are additional elements to the ground-form of the explosive.

Palatograph examples contrasting the tenseness of the tongue for tʔ with the laxity of the tongue for th.



The Ejective Explosives.—The bi-labial, alveolar, and velar explosives each have an ejective form; that is, a form in which they are pronounced with simultaneous glottal stop. To designate such glottal-stop explosives, I have selected the term “ejective” as being descriptive of the action and the type of sound resulting. The vowel following the ejective consonant is necessarily started with the glottal stop (glottal explosive ʔ). Ejection is accompanied by an increased

tenseness of the tongue (or other articulating organ), as shown in the palatograph below by an increase in the palate-space covered by the tongue, and by an increased surface of the tongue coming into contact with the palate. This additional tenseness is brought about by an increase in the pressure of the tongue (or other organs, as in the case of $p^?$), exemplified in greater flattening of that part of the tongue, which is in contact with the palate.

Since the glottis is closed in enunciating the ejectives, there can be no voiced ejectives. It is noticeable that when emphasis is required the ejection becomes very pronounced. In ordinary speech, however, to the untrained ear the ejection of the explosives is scarcely perceptible. As with the unvoiced explosive, so with the ejective explosives, confusion has often been made with the corresponding voiced form. For instance we find entered in Bryant's Zulu-English Dictionary *gela* (cut down) instead of $k^?é:la$.

The ejectives will be discussed further in Chapter IX.

The Aspirated Explosives.—Zulu aspirated explosives have more aspiration than do those of English, so that there is a very clear distinction between them and the unaspirated or the ejective explosives. This aspiration or rush of air after the plosion is marked by the symbol h , the symbol of the unvoiced glottal fricative. In Zulu, $p^?$, $t^?$, and $k^?$ must be carefully differentiated from ph , th , and kh , and also from b , d , and g , for each of these sounds constitutes a separate phoneme, and may be used to distinguish one word from another, as, for instance :
 $t^?ó:fa$ (get softened), $thó:fa$ (bow down), and $dó:fa$ (catch fish);
 $uk^?ó:k^?ó$ (ancestor), $u:khó:khó$ (scab), and $u:gó:gó$ (shrivelled man),
and also $ugó:gó$ (grandmother).

The Voiced Explosives.—The Zulu voiced explosives closely resemble those of English, but there is a decided difference in the amount of voicing. In English the voicing starts considerably before the plosion; in Zulu the stop of the explosive is totally unvoiced, the voicing starting simultaneously with the plosion.¹ Voiced explosives, of course, are never aspirated.

In current Zulu orthography, b , d , and g are written as such (except in certain cases where b is written bh);² ph , th , and kh are written

¹ See the Kymograph tracings compared later when dealing with b .

² See my remarks on b , later.

p, *t*, and *k*, and the ejectives **pʔ**, **tʔ**, and **kʔ** (together with the unvoiced **k**) are written either *p*, *t*, and *k*, or *b*, *d*, and *g*, according as the writer thinks he hears. In many cases this has the result of causing considerable confusion.

It will be noticed that, in the ordinary way, the aspirated unvoiced explosives are more used than the unaspirated; but whenever the aspirated explosive at the beginning of a stem is preceded by the homorganic nasal, it is a rule without exception that the aspiration drops and the ejective form takes the place of the aspirated. By the term "homorganic nasal" I mean a bi-labial nasal¹ before a bi-labial explosive, an alveolar nasal before an alveolar explosive, or a velar nasal before a velar explosive. The following examples illustrate this:

3-2 2-5 4	u:phá:phɛ (feather).	6 6 6 3-5 4	izimpʔá:phɛ (pl.).
2-4 3	ú:thi (stick).	2 6 6 3	izintʔi (pl.).
3 3-5 3-8 9	ùfukhó:si (chieftainship).	3 3 3-8 9	inkʔó:si (chief).

Further examples of this will be noticed when dealing with the individual types of the explosives, and with the nasals in Chapter VI. A similar phenomenon of deaspiration, when preceded by the homorganic nasal, takes place with the aspirated click consonants, and will be noted thereunder.

§ 2. The Bi-labial Explosives

pʔ. Ejective-*p*, apart from **m**, is not of common occurrence in Zulu. The majority of words written in current Zulu orthography with *p* may be taken as having that *p* aspirated. It must be remembered that, unless the words are emphasized, the ejection of the explosive is very slight.

5 4 9	Examples: pʔeú:la (push over).
5 4 9	pʔeú:ka (fall over).
5 4 9	pʔotʔó:za (spit).
5 4 9	pʔitʔí:za (squeeze).
3 3 2 9	pʔèketʔú:la (throw in disorder).
3 2 3 2 9 9	isipʔikizá:na (stump of tail).

¹ This does not apply to the **m**, which may be used apart from **mb** or **pʔ**, and which more closely resembles a pure vowel.

^{5 4 9}
p²anú:za (play tricks in water).

^{5 4 9}
p²íkí:za (wriggle).

^{5 4 9}
p²ot²é:la (eat soft fruit).

^{5 4 9}
p²upú:za (dislocate).

In the combination **mp²**, the explosive is always ejective, except when the **m** is fully syllabic, when the combination **mph** is also found, as will be noticed later.

Examples : ^{3-5 5 4} ná:mp²a (here they are).

^{3 3 3-8 9}
imp²é:pho (medicine for twins).

^{3 3 3-6 9}
imp²á:ka (witch's cat).

^{3 3 3-6 9}
imp²i:si (hyaena).

mp² is the resultant form when a stem commencing in **ph** (aspirated-p) is preceded by the homorganic nasal.¹

^{3-2 2-8 8 9} u:phó:nndó (horn) > ^{6 6 6 3-8 8 9} izimp²ó:nndó (pl.).

^{2 2-4 3-8 9} isiphé:pho (gale) and ^{3 3 3-8 9} imp²é:pho (medicine for twins).

^{3 3 2 9} phákamí:sa (elevate) and ^{3 3 4 4-8 4} imp²aká:ma (high thing).

ph. Aspirated **p** closely resembles normal English **p**, which is slightly aspirated. In Zulu the aspirated form, when uninfluenced by any nasal, is more commonly met with than **p²**. The aspiration of **ph** in Zulu is decidedly pronounced, so that there is no possibility of confusion between it and the ejective form.



(a) Zulu pha



(b) English pha

The above kymograph mouth records (at a speed of 9½ secs. per

¹ A similar phenomenon occurs, working the reverse way, in Swahili; where words in dialects of the interior, which contain an explosive preceded by a nasal, when introduced into Swahili, drop their nasal and aspirate the explosive, e.g. **impaka** (wild cat) in Central Bantu becomes **phaka** in Swahili.

metre) illustrate the difference in the amount of aspiration. Nxele's Zulu tracing shows considerable bowing (or humping) of the line immediately after the upward sweep of the stylo caused by the plosion. This bowing is indicative of an unvoiced fricative, in this case *h*. My own English tracing shows much less bowing.

Though individual writers of Zulu mark the aspiration, in current Zulu orthography this sound is symbolized by *p*. The cases of ejective-*p* should be memorized, and then all other cases of *p*, if not preceded by the nasal, may be read as aspirated.

Examples : $\overset{3}{\text{ph}}\overset{9}{\text{ú}}:\overset{9}{\text{m}}\overset{9}{\text{a}}$ (go out).
 $\overset{5}{\text{ph}}\overset{4}{\text{í}}:\overset{4}{\text{l}}\overset{4}{\text{a}}$ (be in health).
 $\overset{3}{\text{ph}}\overset{3}{\text{à}}\overset{2}{\text{ph}}\overset{9}{\text{ath}}\overset{9}{\text{é}}:\overset{9}{\text{k}}\overset{9}{\text{a}}$ (act excitedly).
 $\overset{3}{\text{ph}}\overset{2}{\text{um}}\overset{9}{\text{ú}}:\overset{9}{\text{l}}\overset{9}{\text{a}}$ (rest).
 $\overset{3}{\text{b}}\overset{9}{\text{s}}:\overset{9}{\text{p}}\overset{9}{\text{h}}$ (tie).

It has already been noticed that *m* before *ph* causes the aspiration to be dropped and ejection to take place ; but if that *m* be contracted from the full noun prefix *umu-* or if it be the objectival verb concord (a contraction of *mu*), no change is made in the form of the explosive.

Examples : $\overset{3}{\text{um}}\overset{3}{\text{p}}\overset{3-8}{\text{é}}:\overset{9}{\text{th}}\overset{9}{\text{ø}}$ (end) but $\overset{3}{\text{um}}\overset{2}{\text{ph}}\overset{2-8}{\text{é}}:\overset{9}{\text{th}}\overset{9}{\text{ø}}$ (border).
 $\overset{3}{\text{um}}\overset{2}{\text{ph}}\overset{2-8}{\text{é}}:\overset{9}{\text{k}}\overset{9}{\text{i}}$ (cook).
 $\overset{3}{\text{um}}\overset{3-4}{\text{ph}}\overset{4}{\text{e}}\overset{4-7}{\text{f}}\overset{4}{\text{é}}:\overset{9}{\text{j}}\overset{9}{\text{a}}$ (reddish hair).
 $\overset{3}{\text{um}}\overset{3}{\text{ph}}\overset{3}{\text{h}}\overset{2-8}{\text{ù}}\overset{9}{\text{th}}\overset{9}{\text{l}}\overset{9}{\text{ú}}:\overset{9}{\text{z}}\overset{9}{\text{ø}}$ (close shave, graze).

Bi-labials are never, in Zulu, followed by the semi-vowel *w*, and, for this reason, pre-palatalization often takes place.¹ However, as was seen when dealing with the diphthong *æ*, a few instances of *phæ* in Zulu are found.

Examples : $\overset{3}{\text{è}}\overset{3}{\text{mp}}\overset{2}{\text{é}}\overset{2-8}{\text{ph}}\overset{9}{\text{ø}}:\overset{9}{\text{m}}\overset{9}{\text{i}}$ (in the medicinal plant).
 $\overset{3}{\text{è}}\overset{3-4}{\text{ph}}\overset{3}{\text{om}}\overset{3}{\text{p}}\overset{2}{\text{é}}:\overset{9}{\text{m}}\overset{9}{\text{i}}$ ² (to the shameless person).
 $\overset{3}{\text{è}}\overset{3}{\text{ph}}\overset{2}{\text{h}}\overset{2-8}{\text{ph}}\overset{9}{\text{ø}}:\overset{9}{\text{m}}\overset{9}{\text{i}}$ (in the dream).

b. Zulu *b* is somewhat similar to English *b*, only the latter has a partially voiced stop, while the former has a totally unvoiced stop.

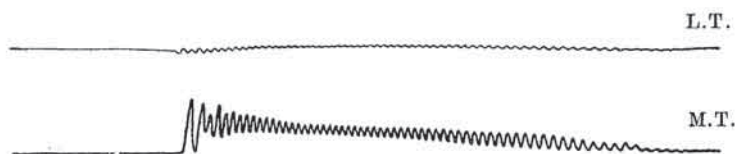
¹ Cf. Chapter XII.

² Where the explosive is despirated owing to homorganic nasal influence.

The following kymograph tracings, comparing the English with the Zulu **b**, show the difference in the starting points of the voicing.



(a) English **b**₁. (Speed 6 secs. per metre.)



(b) Zulu **b**₁. (Speed 6 secs. per metre.)

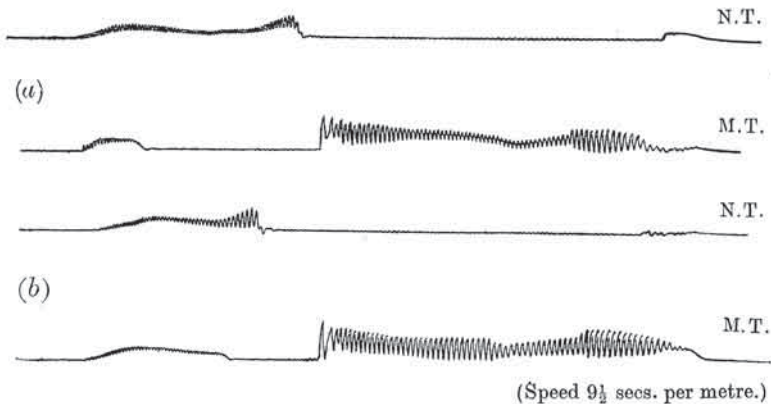
Simultaneous larynx tracings and mouth tracings of English **b**₁ and Zulu **b**₁, showing that in the first case voicing starts considerably before the up-glide of the stylo indicating the explosion, whilst in the second case the start of the voicing is simultaneous with the explosion.

There is no such thing as an aspirated **b** (**bh**) in Zulu, but Zulu grammarians and lexicographers have not recognized that the softer **b** sound in Zulu is implosive (**ɓ**), and so they have treated Zulu **ɓ** as though it were the usual English **b**, or a more softly exploded variety thereof, and have considered Zulu **b** to be aspirated, mistaking the more sudden advent of the voicing simultaneously with the explosion for aspiration. Of the two sounds, when isolated from any nasal influence, **ɓ** is more commonly met with than **b**. However, with the homorganic nasal (not **m** contracted from **mu**) explosive **b** is the form always used.

- Examples :
- ^{7 4} **bé:ka** (look).
 - ^{8-3 9} **bí:na** (use obscene language).
 - ^{6 3 9} **bǎǎ:za** (bore a hole).
 - ^{7 8-3 9} **bubí:sa** (destroy).
 - ^{4-6 6 3-8 9} **ì:buǎé:sí** (lion).
 - ^{8-3 9} **bá:la** (write).
 - ^{3 3 8-3-8 9} **ǎmbú:zi** (goat).

^{3 2 9 9}
isibá:m¹ (gun).
^{6 6 6-3}
śá:mmba (catch).
^{6 6 6-3}
lá:mmba (be hungry).
^{3 3 8-3-88 9}
mmbá:ndε (flute).

In the last of the above examples the combination **mmb** is seen. The **b** of **mb** has nasalized stop, marked by **m**, and when this is the case is always preceded by syllabic **m** (**m̥**) unless in initial position as in certain vocatives. Syllabic **m** (**m̥**) cannot stand immediately before **b** as it does before **p**?, unless it is the contracted form of **mu**. This same rule applies to the forms **nnd** and **ngg**. If, however, **m̥** is the contracted form of **mu**, it has the full value of a vowel and may stand immediately before **b**. A comparison of the kymograph tracings of ³³⁻⁴⁶⁻³⁹ **ùmbá:li** (writer) and ^{33 9 9} **mmbá:li** (heat-spot) is instructive :



(a) Simultaneous Nose-tracing (N.T.) and Mouth-tracing (M.T.) of ³³⁻⁴⁶⁻³⁹ **ùmbá:li**, showing that nasalization ceases considerably before the plosion of the **b**.

(b) Simultaneous nose-tracing (N.T.) and mouth-tracing (M.T.) of ^{33 9 9} **mmbá:li**, showing that nasalization is continued right up to the point of plosion of the **b**, and that the "stop" of **b** is nasalized.

p and **b**. A peculiarity of Zulu speech occasionally observed is the strong vibration of the lips made while pronouncing the ejective and the voiced bi-labial explosives. This form of explosive I term

^{3 2 9 9}
¹ Or **isibá:mu**.

“vibro-plosive” or “rolled bi-labial explosive”, being similar in production and in kymograph effect to the rolled r. For the unvoiced form I employ the symbol **p**, and for the voiced form the symbol **b**. The sound of the unvoiced form resembles closely that made by a horse when champing at the bit. Examples of these are few, but the following have been identified:—

^{3 2 9}**pεpε:za** (pass liquid stools).

⁴**b**:¹ (syllabic, used as an interjection when giving a calf to its mother).²

§ 3. The Alveolar Explosives

The position of Zulu t is alveolar, and it is pronounced with tongue-tip articulation as in English. In Zulu, t is found in both aspirated and ejective forms, the former always becoming ejective after **n**.

t[?]. Care must be taken to distinguish ejective-t from aspirated-t, for there are numerous instances of pairs of words thus distinguished; for instance:—

^{5 4}t[?]ú:ba (soften) and ^{5 4}thú:ba (become darkened).

^{6 6 6-3}t[?]é:ngga³ (wave about) and ^{3 3 9}thé:ngga⁴ (barter).

Examples of t[?]: ^{3-2 2-4 2 7 4}i:t[?]it[?]ifó:jε (pee-wit).

^{4 3 9}t[?]amá:sa (enjoy life).

^{2 3 3 9}ut[?]é:nnde (tent).

^{3 2 2-4 6-3}ukú:thi t[?]wá: (to sink down).

^{2-4 3-8 9}i:t[?]wá:m (the lower stomach).

^{4 3 9}t[?]wapá:za (feel over).

^{3 2 2-7 4}ùmt[?]á:t[?]a (a bay).

^{2-4 3 9}i:t[?]wé:t[?]wε (nervousness).

⁴¹ Dhlomo pronounces this **br**:, with the tongue rolling as well as the lips vibrating.

² For this example I am indebted to Mr. Carl Faye.

³ Some natives say ^{6 6 6-3}**nt[?]é:ngga**.

⁴ These words differ in tone also.

³⁻⁵ ⁴
 ú:tʔwa (deep bog).
⁵ ⁵ ⁶⁻³ ⁹
 tʔwɛŋŋú:la (tear up rags).

Examples with n :

²⁻⁴ ²⁻⁸ ⁸ ⁹ ² ⁶ ⁶ ³⁻⁸ ⁸ ⁹
 u:thá:ŋŋo (fence) > izintʔá:ŋŋo (pl.).
³⁻² ⁹ ⁹ ⁶ ⁶ ⁶ ³⁻⁸ ⁹
 u:thó:tho (closely-packed row) > izintʔó:tho (pl.).
³⁻⁵ ⁵ ⁴
 ná:ntʔi (here it is).
³ ³ ⁶⁻³ ⁹
 ntʔammbá:ma¹ (in the afternoon).
³ ³ ³⁻⁸ ⁹
 intʔá:ša (hill).
³ ² ² ²⁻⁸ ⁹
 ùmntʔwá:na (child).
³ ² ² ²⁻⁶ ³ ⁹
 ùmntʔaná:mi (my child).
⁷ ⁷ ⁴
 ntʔá:ntʔa³ (float).
³ ³ ³⁻⁴ ³ ⁹
 intʔóká:ndzi (what's its name).
³ ³ ³⁻⁶ ⁶ ³⁻³
 intʔó:mmbi (maiden).
³⁻⁵ ⁵ ⁴
 i:ntʔo (thing).
³ ² ² ²⁻⁸ ⁹
 èsintʔwí:ni (in the language of the people).

Again, it must be noticed that unless the word is emphasized the ejection of this explosive is very slight.

th. In Zulu aspirated-t has more aspiration than the normal t in Southern English.

Examples of th : ³ ⁹
 thwá:la (carry).
³ ³⁻⁵ ⁴
 um:thwa (Bushman).
³ ³ ⁹
 thá:nda (love).
³ ² ²⁻⁴ ⁸ ⁸⁻⁹
 ukú:thi thúfu (to appear suddenly).
³⁻⁴ ³ ³⁻⁸ ⁹
 àmathá:thu (three).

For help in reading Zulu in its current orthography, the following observations may prove useful : *t* usually indicates the aspirate (th), while in the combination *nt*, the *n* is syllabic (n), and the *t* always ejective (tʔ). All other cases of ejective-t should be learned

¹ n not n before tʔ in initial position.

individually. The verb $\overset{3}{\text{ukú}}:\overset{2}{\text{thi}}\overset{9}{}$, so commonly met with, in all its tenses and persons has aspirated-t.

d. In Zulu, d has voiceless stop, being otherwise similar to the English d. There are still traces in Zulu of the Bantu connexion between d and l. In many Bantu languages it is the rule that if a stem commencing in l is preceded by the alveolar nasal, l gives place to d. The occurrence of this in Zulu will be discussed when dealing with the question of nasal influence in Chapter VI.

Examples of d : $\overset{6-3}{\text{d}}\overset{9}{\text{é}}:\text{la}$ (be satisfied).
 $\overset{3}{\text{á}}\overset{2}{\text{m}}\overset{9}{\text{á}}\overset{9}{\text{d}}\overset{9}{\text{á}}:\text{da}$ (men).
 $\overset{22-46-33}{\text{isidí}}:\overset{9}{\text{ndi}}$ (clod of grass).
 $\overset{7}{\text{dí}}:\overset{7}{\text{ngga}}\overset{4}{}$ (need).
 $\overset{7}{\text{godú}}:\overset{7-4}{\text{ka}}$ (go home).
 $\overset{3-2}{\text{u}}:\overset{9}{\text{d}}\overset{9}{\text{á}}:\text{ka}$ (mud).

Examples of nd : $\overset{22}{\text{m}}\overset{9}{\text{nd}}\overset{9}{\text{á}}:\text{da}$ (man).
 $\overset{66-33}{\text{izimndá}}:\overset{9}{\text{á}}\overset{9}{\text{á}}$ (affairs).
 $\overset{55}{\text{lanndé}}:\overset{6-3}{\text{la}}$ (follow).
 $\overset{55}{\text{löndaló}}:\overset{5}{\text{za}}$ (protect).

§ 4. The Velar Explosives

In Zulu the velar explosives differ from the bi-labials and the alveolars in that they have three unvoiced varieties, viz. : k (unvoiced unaspirated), k^ʔ (ejective), and kh (aspirated). As far as can be ascertained, the point of articulation of the back of the tongue against the soft palate is approximately the same as for English kh, when followed by the vowel u. English k^h is not so strongly aspirated as Zulu kh, and its effect acoustically is between that and Zulu k.

k. This is the absolute velar-explosive ground-form. k, in Zulu, has no trace of voicing, none of aspiration, and none of ejection. It differs from $\overset{9}{\text{g}}$ (unvoiced g) only in breath-force, and for that reason is often mistaken for g. For instance, the correct Zulu for the river commonly called Tugela is $\overset{4}{\text{ù}}:\overset{3}{\text{thuké}}:\overset{3-8}{\text{la}}$.

- Examples of **k** :
- ^{2 2-4 3 9}
 ùkufù:na (to want).
- ^{4 4 4 2 2-8 9}
 ùku⁴àkani:pha (to be wise).
- ^{3 2 9}
 ukú:wa (to become dusk).
- ^{3 3-5 6-3}
 ukú:ga (eating).
- ^{8-9 9}
 kú:de (afar).
- ^{5 4}
 ká:we (carefully).
- ^{4 2-8 9}
 kakhú:lu (exceedingly).
- ^{3 2 9}
 ukó:sa (to roast).
- ^{2 2-8 9}
 ukó:na (to sin).
- ^{3 3-6 6-3}
 ukwí:ndga (autumn).
- ^{2 2 2-4 3 9}
 ìnk²ukwá:na (small fowl).
- ^{2 2-4 4 2 2-8 9}
 isikhùkuká:zi (hen).
- ^{3 3 3-8 9}
 ìnk²á:ku¹ (fowl).
- ^{3 3 3-4 3 3-8 9}
 ìnk²osiká:zi (principal wife).
- ^{3 3 3-5 3 9}
 ìnt²áká:pdzi (what's its name).
- ^{5 4 9}
 ts²eké:za (creak).
- ^{3-2 2-4 4 3}
 i:aká:ni (cunning).
- ^{4 4 3 9}
 βónaká:la (appear).
- ^{2 9}
 kí:mi (to me).
- ^{3 3 3 2 2-8 9}
 isimè:kemé:ke (wonderful story).
- ^{5 5 6-3 9}
 thandé:ka (be loveable).
- ^{3 2 9}
 kaqá:ne (in a small way).

It is useful to know that all forms with the verb infinitive uku have plain **-k**, as also the adverbs in **ku** and **ka**, the feminine and augmentative suffixes **-kazi**, and the suffixes of the neuter verb derivatives, **-akala** and **-eka**.

k². Ejective **k** is not often met with apart from **ŋ**, but the following instances might be noted :—

^{3 3 3-8 9}
¹ Sometimes heard as ìnk²á:khu.

⁴ ³
kʔá:kʔa (surround).
³ ³⁻⁴ ³ ⁹
isikʔé:bɛ (boat).
²⁻⁴ ³ ⁹
ɪ:kʔé:u (duck).
²⁻⁴ ³ ⁹
ɪ:kʔá:tʔɪ (cat).
³ ² ²⁻⁸ ⁹
ùkʔolwé:ni (wheat).
²⁻⁴ ³ ⁹
ɪ:kʔwí:lɪ (short-horned cattle).
³⁻⁸ ⁹
kʔwé:thu¹ (at our home).

Whenever the homorganic nasal (i.e. the velar nasal) comes before aspirated-**k**, aspiration is dropped and ejection takes place.

Examples : ³⁻² ²⁻⁸ ⁸ ⁹ **u:khá:m̩mba** (clay pot) > ⁶ ⁶ ⁶ ³⁻⁸ ⁸ ⁹ **izɪŋkʔá:m̩mba** (pl.).
²⁻⁴ ²⁻⁸ ⁹ **u:kó:zɪ** (species of eagle) > ² ⁶ ⁶ ³⁻⁸ ⁹ **izɪŋkʔó:zɪ** (pl.).
²⁻⁴ ²⁻⁸ ⁹ **u:khú:m̩** (firewood) > ² ⁶ ⁶ ³⁻⁸ ⁹ **izɪŋkʔú:m̩** (pl.).
³ ³⁻⁸ ⁹ **ɪŋkʔú:n̩dzɪ** (bull).
³ ³⁻⁵ ⁴ **ɪŋkʔó:m̩** (head of cattle)
³ ³⁻⁸ ⁹ **ɪŋkʔá:fɪ** (ox).
³⁻⁵ ⁵ ⁴ **ná:ŋkʔu** (here it is).
³ ³⁻⁵ ⁴ **ɪŋkʔwá:khwa** (species of snake).

kh. The aspiration of this explosive is distinctly heard, and is much stronger than that in normal English **k^h**.

Examples : ⁴ ³ **khá:pa** (shine).
³ ² ⁹ **khathá:la** (become fatigued).
³ ² ²⁻⁴ ³ **isikhá:thɪ** (time).
³⁻² ²⁻⁴ ³ **ɪ:khé:ɬa** (man with head-ring).
⁴ ³ **khí:pha** (take out).
³⁻² ²⁻⁴ ³ **ɪ:khó:ɬə** (left).
²⁻⁴ ³⁻⁵ ⁴ **ɪ:khó:lwa** (believer).
⁵ ⁵ ⁶⁻³ ⁹ **khom̩bí:sa** (point).

³⁻⁸ ⁹
¹ Or **kwé:thu**.

^{3 3 2 2-8 9}
ùmkhuḽá:ne (disease).
^{2 2-4 3-8 9}
àbakhú:lu (great ones).
^{3 2 9}
khwíḽi:sa (drive off fowls).

Careful distinction must be made between these three types of unvoiced velar explosive. Notice the following words distinguished by the ejection or aspiration of the explosive :

^{5 4} kʔá:kʔa (encircle)	^{3 9} khá:kha (be acrid).
^{5 4} kʔé:la (wear down)	^{5 4} khé:la (place slantwise).
^{5 4} kʔó:kʔa (surround)	^{3 9} khó:kha (be prepared to strike).

g. As with Zulu **b** and **d**, Zulu **g** is not so fully voiced as its English equivalent. When the homorganic nasal, **ŋ**, precedes the voiced velar explosive, the form assumed is **ŋg**,¹ the first **ŋ** being syllabic, the second indicating the nasalized stop of the **g**. More regarding this will be noted when dealing with the nasals in Chapter VI.

Examples of **g** : ^{7 4}
gú:la (be ill).
^{3-2 9 9}
ɾ:gé:ḽa (hoe).
^{3 2 9 9}
ùkugé:za (to wash).
^{3 2 9 9}
ìsigó:ḽo (chief's enclosure).
^{7 4}
gú:ḽa (kneel).
^{3 3 9 9}
ùnɔgwá:ḽa (hare).
^{3-2 8 3 9}
ì:gwaḽá:ḽa (raven).

Examples of **ŋg** : ^{6 6 6 2 9}
àŋgɾíḽi:m (I do not want to).
^{3 3 9 9}
ŋgɾó:zi (danger).
^{6 6 6-3}
lú:ŋga (be straight).
^{6 6 6-3 9}
lŋgá:na (be equal to).
^{6-3 3 6 3-8 8-3}
ŋgáŋgɾá:ŋga (as big as the moon).

The interchangeability of **ŋg** with the velar nasal **ŋ** in Zulu will be discussed in Chapter VI.

¹ Except when initial, in which case **ŋg** only is found.

§ 5. Explosives not found apart from Affricate or other Combination

(i) Denti-labial

It will be found that whenever in Zulu, the homorganic nasal (η) comes before the denti-labial fricatives **f** or **v**, affricates are formed. Of these affricates the first part is an explosive sound made with the vocal organs in the same position as for the fricatives, i.e. with the upper teeth against the lower lip. Whether these denti-labial explosives exist in any language, Bantu or other, apart from this affricate combination, I do not know. To indicate them, I have devised the following symbols: unvoiced φ , voiced ϕ , which bring them somewhat into line with the symbols used for the bi-labial explosives.¹ Instances of these affricate combinations will be given in Chapter IX.

(ii) Pre-palatal

The first element of the pre-palatal affricates is explosive. This element is usually indicated by the alveolar explosives, **t** for the unvoiced and **d** for the voiced. I had hitherto employed the palatal explosives, **c** and **j**, in this connexion; but as the sound and the tongue-position are intermediate between these two sets, and as the palatographs² showed conclusively that neither the tongue-tip (**t** and **d**) nor the tongue-back or middle (**c** and **j**) came into play, but the blade of the tongue, I have thought it best to use distinctive symbols, unvoiced **ʈ**, voiced **ɖ**, which sufficiently indicate their relation to the alveolar explosives.² In Zulu these explosives are never found apart from the affricate combinations, **tʃʔ**, **tʃh**, and **ɖʒ**. Instances of these affricates will be given in Chapter IX.

(iii) Glottal

The glottal explosive or glottal stop is found in Zulu with unvoiced explosives and unvoiced affricates, and accompanies ejection in every case. The symbol **ʔ** is used to indicate this. To form the glottal explosive, the glottis is closed at the larynx, there is increased tension and pressure until the closure is released and the sound ejected with some degree of force. Illustrations of ejectives (i.e. glottal stop explosives and affricates) are given when dealing with **pʔ**, **tʔ**, **kʔ**, **ɸʔ**, **tsʔ**, **tʃʔ**, **kʃʔ**, and **kxʔ**.

Further, the glottal explosive is found, but rarely, before vowels in certain exclamations, e.g. ³ ⁹ **ʔá:u** (ach!).

¹ The unvoiced explosives in these cases are evidently ejective in their isolated forms, viz., **ɸʔ** and **tʔ**; **t** is also found plain in the affricate **tʃh**.

² See Chapter IX for illustrations.

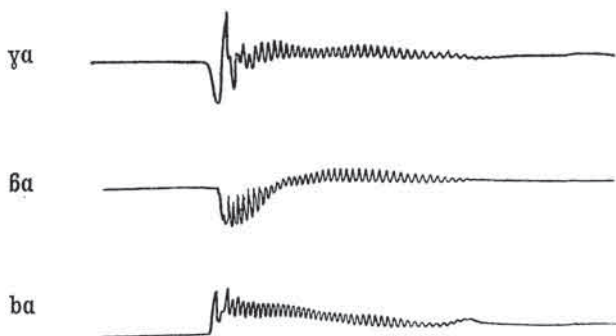
CHAPTER V

THE BI-LABIAL IMPLOSIVE

§ 1. The Nature of the Bi-labial Implosive

It is absolutely necessary to distinguish definitely this **b**-sound from the explosives, and furthermore to invent for it a new nomenclature and a new symbol. I have chosen the symbol **ɓ**. In pronouncing this sound the glottis is not entirely closed during the articulation, and **ɓ** is, in reality, a species of click sound. It differs, however, from the true clicks, in that the tongue does not form a rarefaction between the forward and velar points of articulation, as will be seen later with the clicks; but a rarefaction is formed by the enlargement of the air-passage above the larynx, by moving the larynx down; so that on releasing the lips to pronounce a voiced bi-labial, the air momentarily rushes in to fill the rarefied space, a kind of inverted-**b** being the result, followed immediately by the out-breathed vowel. To designate this sound I use the term **Implosive**.

A comparison of the kymograph tracings of a voiced click and of **ɓ** shows very clearly the close relationship between these two types of sound. A further comparison of **ɓ** with Zulu **b** shows how great is the divergence between the explosive and the implosive. It must be borne in mind that the Zulu **hears** no similarity in sound between **b** and **ɓ**, and the substitution of the explosive for the implosive sound is a serious mistake, and one which jars upon his ears.



The above are mouth-tracings at a speed of $9\frac{1}{2}$ seconds per metre. The first two examples show implosion or "injection" by the immediate dropping of the stylo below the medial line. The third

example shows explosion by the sudden rising of the stylo above the medial line.

The nature of this sound has hitherto been unrecognized by most Zulu scholars, and this failure has led them into a serious error, which has already been noticed when dealing with **b**, viz., that of treating this sound, on account of its softer effect, as almost identical with English **b**, and attributing aspiration to Zulu **b**, which is not so fully voiced as the English.

Regarding Xosa, McLaren writes: "The letter **b** has two sounds in Kaffir, each of which is quite different from its sound in English. In producing the first sound the breath is drawn in, as *bala*, count: *ubawo*, my father. In producing the second sound the breath is expelled much more forcibly than in producing the English sound of **b**. The second sound is marked by writing the sign, ' , called the 'aspirate' over the following vowel, as *bála*, write; *bála*, thrash."¹ McLaren recognizes part of the phenomenon, the inrush of air, but evidently attributes it to the action of the lungs; and further, he attributes aspiration to **b**, which differs from English **b** only in the amount of voicing. From his Table of Consonants it is evident that he does not properly understand the meaning of aspiration. Kropf, in his Xosa Dictionary,² also remarks that one variety of **b** is "inspired".

§ 2. How to acquire the Pronunciation

In order to acquire the pronunciation of any implosive sound, control over the larynx must be obtained, so that it may be raised or lowered at will. Practice in front of a looking-glass is helpful in this connexion, for with practice it is possible to make a difference of an inch between the high and low positions of the larynx. The vocal organs are got into position first for the particular implosive sound, and then the larynx is lowered. On the release of the organs implosion takes place.

A useful practice for learning to lower the larynx, voicing at the same time, is first of all to pronounce **bmbmbmbm** : : without moving the lips (the **bm** being as in the normal pronunciation of the English word **submit**). Having got accustomed to doing this, cut out the nasal part, and pronounce **bbbb** . . . keeping the lips together. By drawing out the individual sounds **b . . . b . . . b . . .** the main

¹ J. McLaren, M.A., *A Grammar of the Kaffir Language*, 2nd ed., 1917, p. 4.

² A. Kropf, D.D., *A Kaffir-English Dictionary*, 2nd ed., 1915, p. 14.

portion of **β** will be enunciated.¹ It remains to draw the **b . . .** out slightly and then release the lips and pronounce the vowel, to give the Zulu **βa**.²

§ 3. Examples of the Bi-labial Implosive in Zulu

^{3 3-5 4} u β á:βa (my father).	^{2-4 2-8 9} u:βí:sí (milk).
^{5 5 6-3} βá:mmba (catch).	^{4 4 9} βú:mmba (mould).
^{4 9} βó:na (see).	^{3 3-5 4} uβú:βí (evil).
^{6 3 9} bəβó:za (drill a hole).	^{3 3 3-5 4} əβáβí:li (two).

Pairs of words are distinguished in Zulu by the type of voiced bi-labial used; hence it is very necessary to distinguish them carefully:—

^{6 3} bÉ:ka (look).	^{3 9} βÉ:ka (put).
^{8 8-3} bá:ba (entrap).	^{3 9} βá:βa (be acrid).
^{6 3} bí:za (have concern).	^{3 9} βí:za (call).
^{6 6 3} bó:γγga (roar).	^{6 6 3} βó:γγga (praise).
^{6 3} bú:za (buzz).	^{3 9} βú:za (ask).

It might be noticed that in many cases the Zulu **β** corresponds to the Central Bantu **v**³ (bi-labial voiced fricative), cf. Lamba: **vika** (put), **vava** (be acrid), **vona** (see), **vumba** (mould), **uvuvu** (evil), **vavili** (two), etc.

β, when preceded by the homorganic bi-labial nasal **m**, becomes **mb**, as for example:—

^{3-2 2-8 8 9} u:βá:mmbə (rib) >	^{6 6-3 3 3-8 8 9} izimmbá:mmbə (pl.).
^{3-2 2-8 8 9} u:βú:nnda (emaciated person) >	^{6 6-3 3 3-8 8 9} izimmbá:nnda (pl.).
^{3 2 2-8 9} ù:βókÉ:la (long thing) >	^{6 6 6 3 3-8 9} izimmbókÉ:la (pl.).
^{6 6 6 3 9} βámmbelÉ:la (hold firmly),	^{3 3 6 6 6 3 9} immbámmbelÉ:la (a holding on to).

¹ This is the sound which the ostrich makes when "booming". Close observation shows that the mouth of the ostrich is kept shut, while the upper part of the neck is distended tremendously and then allowed to recede, this process going on repeatedly.

² This method was suggested to me by reading exercises in connexion with Russian voiced explosives, given on p. 92 of *The Pronunciation of Russian*, by Trofimov and Jones.

³ The extremely rare instance of **v** being used in Zulu is considered in Chapter VII, § 2.

It is well to know that all the prefixes and concords of the plural of Class I of Nouns and of Class VII contain the bi-labial implosive, as **aḡa-**, **ḡa-**, **uḡu-**, **ḡu-**, **oḡu-**. The auxiliary verb **ḡa** (**ḡε**) in all the verb tenses also has the bi-labial implosive. In fact **ḡ** is met with in Zulu far more frequently than **b**, except when the latter is in the combination **mmb**. In many Zulu texts no distinction is made in writing between **b** and **ḡ**, but in others the former is written **bh** and the latter **b**.

CHAPTER VI

THE NASALS

§ 1. The Range of Nasals in Zulu

Apart from the nasalization found occasionally with vowels, Zulu has a large range of nasal consonants, comprising nine sounds, for which the following symbols are used :

m, ɱ, n, p, ŋ, ɸ, ɳ, ɹ, and ʀ.

Of these the last three are click nasals, and cannot be dealt with in detail in this chapter. Of the first six, as will be seen later, **ɱ** belongs to the same phoneme as **m**, and the use of the symbol would not be necessary in broad transcriptions ; but, as I am using a close transcription throughout this work, I retain the symbol.

It will be seen that, of these nine nasals, three, viz., **m, n, and ŋ**, have syllabic forms in which they resemble vowels in many respects. It will also be seen that there are certain limitations to their influence as vowels. These will be discussed in full. The bi-labial nasal, **m**, and a rare instance of the velar nasal, **ŋ**, in contractions, are used in a way in which it is almost impossible to distinguish them from vowels. This is a very important point to realize, for the dividing-line between the consonant and the vowel is not so easy to determine as may at first be thought.¹

As in all Bantu languages, the nasal plays an important part in Zulu morphology, causing various consonantal changes, and in itself goes through varying permutations. All these changes, so bewildering to the beginner in a Bantu language, are perfectly regular according to the differing phonetic laws of the individual languages.

§ 2. The Bi-labial Nasal

In formation, the bi-labial nasal in Zulu is the same as in English, a complete closure of the mouth being made by the two lips. In Zulu, however, there are three forms of this nasal, **m**, **m** (when used in close connexion with the bi-labial explosives), and **m** (which is a contraction of **mu**). We now deal with these in turn.

(i) **m**. Used as an ordinary consonant, **m** is found in conjunction

¹ See Appendix III.

with each of the vowels, and the diphthongs, but is never found followed by the semi-vowel **w**. This is a rule which applies equally to all Zulu bi-labials.

Examples of **m** : ^{3 3-5 4} ukú:ma (to stand).
^{3 7 4} umá:me (my mother).
^{4 4 3 9} màmathé:ka (smile).
^{4 3 3-5 4} isimí:pa (truth).
^{3 2 2 9} umú:nt'u (person).
^{3 2 2-8 8 8-3} imi4á:mmbi (flocks).
^{3 2 2-8 9} ùkumí:ndza (to swallow).
^{3 3-5 4} isi:mó (shape).
^{3 2 2-4 8 8-9} ukú:thi méke (to gash).
^{3 2 2-4 8 8-9} ukú:thi mópu (to pull out).
^{5 5 6-3 9} manngá:la (wonder).
^{3 3-8 9} amá:ndzi (water).

In immediate connexion with **b**, and between it and **m**, non-syllabic **m** is always found.¹ Many examples of this are given in section (ii). When **mp** appears in initial position, **m** loses its syllabic nature, and becomes merely the nasalized stop of the explosive **p**.

Example of **mp** : ^{7 7 4} mpá:mp'a (flutter).

Nasal influence before stems beginning in **m** causes no syllabification or change in that **m**, e.g. :

^{3-2 2-5 4} u:mó:pa (python) > ^{6 6 3-5 4} izimó:pa (pl.).
^{3 4 9} imí:ni (mid-day) and ^{3 4 9} emí:ni (at mid-day).

(ii) **m**. Whenever, in Zulu, nasal influence is brought to bear upon the explosives **ph**, **p**, or **b**, or upon the implosive **ɓ**, the nasal appears as syllabic-**m** (**m**); **ph** becomes **p**; **p** remains unchanged; **b** and **ɓ** each become **mb**; so that the forms assumed appear as **mp** and **mmb**. It must be noticed, however, that there is no syllabic-**m** when these forms come in initial position in any sense-group; in such positions

¹ In this case it is really the nasalized stop of the **b**.

they appear as $mp^?$ and mb ; in other words merely the stops of the explosives are nasalized.

Examples of m :

^{3 3 3 2 2-8 9} ùḥup[?]ḍ[?]t[?]εp[?]ḍ[?]t[?]ε and ^{3 3 3 2 2 2-8 9} imp[?]ḍ[?]t[?]εmp[?]ḍ[?]t[?]ε (mashy food).
^{3-2 2-5 4} u:phá:phε (feather) > ^{6 6 6 3-5 4} izimp[?]ḍ[?]:phε (pl.)
^{2-4 6 3-5 4} ù:béké:pa (quarrelsome person) > ^{2 6 6 6 3-5 4} izimmbéké:pa (pl.)
^{3 3 3-5 4} áḥaḥí:li and ^{3 6-3 3 7 4} èzimmbí:li (two).

^{3-5 5 4} í:mp[?]i (army).
^{3-5 5 4} ná:mp[?]a (here they are).
^{6 6 6 3-8 9} izimp[?]ḍ[?]:ḥa (goods).
^{8 8 8-3} ḥá:mmba (catch).
^{3 3 3-3-8 8 9} mmbá:mnde (flute).
^{3 3 3-3-8 9} mmbú:zi (goat).
^{3 3 9} há:mmba (travel).

This species of syllabic bi-labial nasal never takes stress or length in any word, and while it has a separate tone of its own, it is interesting to note that that tone is always the same as that of the prior syllable or that on which the prior syllable ends, and that it must be a level tone. If the vowel immediately before this m is long or half-long (whether in position of stress or not), the syllabic nasal exerts no vowel influence of its own, the quality of the prior vowel being determined by the vowel following the nasal, e.g. :

^{8 8 8-3} thó:mmba (menstruate for the first time).
^{3 3 3-8 8 8-3} int[?]ḍ[?]:mmbi (maiden of age).

Nevertheless, when the prior vowel is short (whether stressed or not) m exercises the influence of either of the vowels i or u ; for example :

^{5 5 3-8 9} nemp[?]ḍ[?]:ka, not ^{5 5 3-8 9} nemp[?]ḍ[?]:ka (and the witch's cat).
^{3 3 6 6 6-3 9} èmmba:mndé:ni, not ^{3 3 6 6 6-3 9} èmmba:mndé:ni (in the flute).
^{3 2 2-4 5-7 7 8 8 9} ukú:thi thènt[?]élé:zi (to buy cheaply).

(iii) m. Bantu **mu** is generally represented in Zulu by syllabic-m. There are a few cases where **mu** is retained in Zulu, notably in Class I of nouns in the case of the one word ^{3 2 2 9} **umú:nt⁹u** (person), this being the only word of monosyllabic stem in this class which retains the full form; and in the case of most words of Class V, which have monosyllabic stems, e.g. ^{3 3-5 4} **umú:thi** (tree), ^{3 2 9} **umú:zi** (village), etc.; also in the case of the objectival verbal concord of Class I singular, when used with verbs of monosyllabic stem, e.g. ^{2 3 9} **wamú:pha** (he gave him).

Unlike the syllabic-m described in the previous section, when m is equivalent to Bantu **mu**, it may take stress, whether main or secondary; it may have a tone of its own distinct from surrounding tones, and this tone need not always be a level tone. When in position of main stress it becomes long, and its vowel resonance, which is that of u, is always felt. Further than this, we shall see that m may close a word-group. Despite all this, however, it cannot fully take the place of a vowel, for it must always be preceded by a vowel, unless itself in initial position; it is never used immediately following a consonant.

- Examples of m : ^{3 3-5 3-8 9} **ùmmí:ni** (owner).
^{3 2 2-8 8 9} **ùmpá:nygo** (doorway).
^{3 2 2 9 9} **ùmnygá:ne** (friend).
^{3 3-5 3 3 9} **ùmnyó:nygo** (species of wild fig).
^{3 3-5 5 3 9} **ùmpam:lo** (boundary).
^{3 2 2-8 9} **ùmnyú:ma** (baby's bottle).
^{3 3-5 4 9} **ùmfá:na**¹ (boy).
^{3 2 2-8 9} **ùmlé:ndze** (leg).
^{3 3 2 2-8 9} **ùmthaká:thi** (wizard).
^{3 3-5 5 5 6-3 9} **ùmsinndí:sí** (saviour).
^{3 3-5 3-8 9} **ùmxá:u** (emotion).
^{3 3-5 3-8 9} **òmkhú:lu** (great).
^{3 3-5 3 3-8 9} **òmfu fá:ne** (short).

¹ Certain Zulu speakers use **nyof⁹** instead of **f** after m, thus ^{3 3-5 4} **um:nyof⁹o**,
^{3 3-5 4 9} **ùmnyof⁹á:na**; see § 3.

6-33 3-8 9
ngà:m66:na (I saw him).

3 3-5 5 5 6-3 9
ùku^hhammbí:sa (to make him travel).

3 3 3-8 8-3
wà:m^mí:ndza (he swallowed him).

Example of m : 3-5 5 5 5 5 3 3 3 3-5 4
sà:fumani:su^mnt^om:fi (we came upon an evil
man).

Examples of m : 3 3-5 4
u^m:fò (brother).

3 3-5 4
u^m:khwe (father-in-law).

3 3-5 4
o^m:4ε (niece).

There is even an example of m coming immediately before mb, e.g. :

3 3-5 5 6-3
u^m:m^bba (beast given to bride's mother).

3 3-5 5 6-3 9
è^mmbé:ni (to the beast).

This m may, of course, come immediately before ph or β without causing any change in them, e.g. :

3 2 9 9
ùmphé:thò (hem).

3-5 3 3-6 6 7 8-3-8 9
wà:m^βàm^bbezé:la (he detained him).

In Zulu m may close a word-group :

3 3 8-3 9
ùno^hfé:m (crested crane).

3 2 2-4 8 8-9
ukú:thi bá^m (to burst).

3 2 2-4 8 8-9
ukú:thi chá^m (to arrive suddenly).

3 2 9 9
isibá:m (gun).

m may become mε (or me) before all verbs which may take ε (or e) before their stems, e.g. :

5 3-8 9 5 3-8 9
m^sú:le or me^sú:le (strike off his name).

6 6 6 3 9 6 6 6 3 9
ngijampá:pa or ngijame^há:pa (I am disgusted with him).

5 3 3-8 9 5 3 3-8 9
m^suké:le or me^suké:le (attack him).

3 3-6 6-3 5 5 4 4 9 3 3-6 6 6-3 5 5 4 4 9
ijam^gú:la umú:nt^u or ijame^gú:la umú:nt^u (it surpasses a man).

§ 3. The Denti-labial Nasal

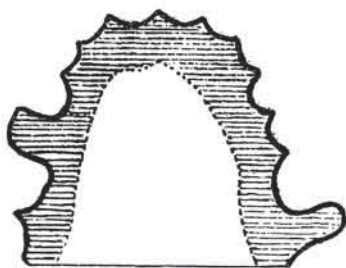
This nasal is formed with the organs of speech in the position for f or v, i.e. with the upper teeth against the lower lip. The lips

do not meet completely. This nasal, for which the symbol η is used, is the homorganic nasal to f and v . It cannot come immediately before these fricatives but forms the affricate combinations $\eta\varphi f^?$ and $\eta\theta v$. η is never syllabic. In a broad transcription $mf^?$ and mv would be sufficient to record these sounds, since η and m belong to the same phoneme.

- Examples :
- $u:f\acute{u}:du$ (tortoise) > $\overset{2-4}{i}z\overset{2}{i}\overset{6}{m}\overset{3-8}{\eta}f^?u:du$ (pl.).
- $u:f\acute{u}:sa$ (a consumptive) > $\overset{2-4}{i}z\overset{2}{i}\overset{6}{m}\overset{3-8}{\eta}f^?u:sa$ (pl.).
- $\grave{u}:v\epsilon\eta\theta v\acute{a}:ne$ (butterfly) > $\overset{2-4}{i}z\overset{2}{i}\overset{6}{m}\overset{3-8}{\eta}\overset{6-3}{\theta}v\overset{6-3}{\eta}\overset{6-3}{\eta}\overset{6-3}{\eta}\overset{9}{\acute{a}}:ne$ (pl.).
- $\overset{2}{i}\overset{9}{\eta}f^?e$ (sugar-reed).
- $\overset{3}{\epsilon}\overset{3-8}{\eta}f^?\overset{9}{\acute{e}}:ni$ (in the sugar reed).
- $\overset{3-8}{i}\overset{8-3}{\eta}\theta vu$ (sheep).
- $\overset{3-2}{i}\overset{2-4}{\eta}f^?\overset{3}{\epsilon}\overset{3-8}{\eta}f^?\overset{9}{\acute{e}}\theta\acute{a}:na$ (little scandal-monger).
- $\overset{3}{\grave{u}}\overset{2}{k}\overset{2-8}{\eta}f^?\overset{9}{\acute{e}}:ma$ (to begin to sprout).
- $\overset{3}{u}k\overset{2}{\acute{u}}:\overset{2-4}{\theta}i\overset{5}{\eta}\overset{5}{\theta}v\overset{3}{\acute{e}}\overset{3}{\acute{e}}::$ (to tingle).
- $\overset{3}{u}k\overset{2}{\acute{u}}:\overset{2-4}{\theta}i\overset{3}{\eta}f^?\overset{3}{\acute{e}}:$ (to pipe, of a flute).

§ 4. The Alveolar Nasal

This nasal has much the same tongue-position as normal southern English n , but if anything it is slightly nearer to the dental position, the edges of the tongue touching the base of the teeth, though it will be noticed from a comparison of the palatographs of na and $nt\acute{t}^?a$, that when combined with an ejective affricate, the tongue does not come quite so near to the teeth.¹



$n(a)$



¹ Cf. palatograph of $nt\acute{t}^?a$ in Chapter IX, § 4.

In Zulu *n* is found both syllabic and non-syllabic, syllabic-*n* being found only in conjunction with alveolar explosives, non-syllabic-*n* being used alone, between *n* and the voiced alveolar explosive, and in conjunction with alveolar affricates.

(i) *n*. Used as an ordinary consonant, *n* is found in conjunction with each of the vowels and the semi-vowel *w*.

Examples : ^{3 3-8 9} *uní:na* (his mother).
^{5 4} *ná:ka* (concern oneself).
^{3 3 8-3-8 9} *nemmbá:la* (truly).
^{3 9} *nó:ma* (even if).
^{3 3-5 6 6 6-3 9} *ùkuthangndá:na* (to love one another).
^{3 2 9} *noní:sa* (fatten).
^{5 4} *nú:ku* (smell).
^{2-4 2-8 9} *u:nwá:fa* (chamelion).
^{2 6 3 9} *izinwé:le* (hair).

In immediate connexion with *d*, and between it and *n*, non-syllabic-*n* is always found.¹ Non-syllabic-*n* occurs before *tʔ* and *d* in initial position in a sense-group; it is also found when the nasal influences an alveolar fricative causing it to become an affricate; thus nasal + *s* > *ntsʔ*, nasal + *z* > *ndz*, nasal + *ʃ* > *ntʃʔ*, and nasal + *ǰ* > *ndǰ*.

Examples : ^{3-2 9} *ú:su* (stomach) > ^{6 6-3 9} *izi:ntsʔu* (pl.).
^{2-4 2-8 9} *u:sú:ku* (day) > ^{2 6 3-8 9} *izintsʔú:ku* (pl.).
^{3-2 2-8 9} *u:sí:zi* (sorrow) > ^{6 6 3-8 9} *izintsʔí:zi* (pl.).
^{2-4 6-3 9} *u:zí:mé* (walking staff) > ^{2 6 6-3 9} *izindzi:mé* (pl.).
^{3-2 9 9} *u:zí:pho* (claw) > ^{6 6-3 9 9} *izindzi:pho* (pl.).
^{3-2 2-8 9} *u:ʃó:fo* (species) > ^{6 6 3-8 9} *izintʃó:fo* (pl.).
^{3-2 6 3} *u:ǰú:fu* (ground-nut) > ^{6 6-3 6 3} *izindǰú:fu* (pl.).
^{2-4 8-3 8-3 9} *ù:gondǰwá:né* (headstrong person) > ^{2 6 8-3 8-3 9} *izindǰondǰwá:né* (pl.).

¹ Examples of this are given in section (ii).

² ²⁻⁶⁶⁻³⁹
 int¹ɪzi:jo (heart).
³⁻⁵ ⁴
 phá:ntsɿ¹ (down).
³ ⁹ ⁹
 indk̥é:la (path).
³ ³⁻⁸ ⁹
 amá:ndzi (water).

(ii) n. Whenever, in Zulu, nasal influence is brought to bear upon the alveolar explosives, **th**, **tʔ**, or **d**, the nasal appears as syllabic-n (n); **th** becomes **tʔ**; **tʔ** remains unchanged; **d** becomes **nd**; so that the forms assumed appear as ntʔ and nd, except when in initial position in a sense-group.

Examples : ²⁻⁴ ²⁻⁸⁸ ⁹ u:thá:nggɔ (fence) > ² ⁶⁶ ³⁻⁸⁸ ⁹ izintʔá:nggɔ (pl.).
²⁻⁴ ³ ² ⁶⁶ ³
 ú:thi (stick) > izi:ntʔ¹ (pl.).
²⁻⁴ ⁴ ²⁻⁸ ⁹ ù:tʔunú:nu (person with large buttocks) > ² ⁶⁶ ⁶ ³⁻⁸ ⁹ izintʔunú:nu
 (pl.).
³⁻² ⁶ ³ u:dí:fi (baggage-boy) > ⁶⁶⁻³³ ⁶ ³ izinndí:fi (pl.).
³⁻² ⁹ ⁹ ⁶⁶⁻³³ ⁹ ⁹
 u:dá:ka (mud) > izinndá:ka (pl.).
³⁻² ⁸ ⁸ ⁸⁻³ ⁶⁶⁻³³ ⁸ ⁸ ⁸⁻³
 u:dó:ngga (ravine) > izinnadó:ngga (pl.).
³³ ³⁻⁸ ⁹
 intʔá:mɔ (neck).
³⁻⁵⁵ ⁴
 í:ntʔɔ (thing).
³⁻²²⁻⁸⁸ ⁸⁻³
 i:çá:nda (egg).
³³ ⁹ ⁹
 mndá:fa (affair).

As with the first species of m, n never takes stress or length in any word, and while it has a tone of its own, that tone is always level and of the same pitch as that on which the prior syllable ends. If the vowel immediately before this n is long or half-long, the syllabic nasal exerts no influence of its own, the quality of the prior vowel being determined by the vowel following the nasal, e.g. :

³ ²²⁻⁸⁸ ⁹
 ùkuló:nda (to keep safely).
⁵ ³ ³ ³ ⁹
 ásiló:ndi (we do not keep safely).

³ ⁷ ⁷ ⁴
¹ Or izi:ntʔ¹.

Nevertheless, under other circumstances, n exercises the influence of either of the vowels i or u, for example :

^{4 4} ^{3 3-8 9} ènt?apé:m, not ènt?apé:m (in the neck).
^{4 4} ^{3 3-8 9} ènt?afé:m, not ènt?afé:m (on the hill).

This is of special philological interest, because it points directly to an older and fuller form of the Class III prefixes, as far as those which have the alveolar nasal, at any rate, are concerned. The present Zulu prefixes in- and izin- must have been originally ini- and izini- (or possibly inu- and izinu-, which, however, is not probable). This would bring the Zulu prefixes into line with Meinhof's Class 9 and Class 10 prefixes for "Ur-Bantu".

(iii) Nasal influence before stems beginning in n causes no syllabification or change in that n, e.g. :

^{3-2 2-4 3 9} ùnaká:nɛ (tsetse disease) > ^{6 6 3-4 3 9} izinaká:nɛ (pl.).
^{2-4 2-8 9} u:nwá:ɓu (chamelion) > ^{2 6 3-8 9} izinwá:ɓu (pl.).
^{3 3-4 3 9} inants?i:k?ɛ (what's its name).

Normally, in modern Zulu, nasal influence before stems beginning in l, not only leaves the lateral unaltered, but the nasal itself does not appear. For example :

^{2-4 2-8 9} u:lí:mɪ (language) > ^{2 6 3-8 9} izilí:mɪ (pl.).
^{3-2 2-8 8 9} u:lé:mɓbu (spider) > ^{6 6 3-8 8 9} izilé:mɓbu (pl.).
^{2-4 2-8 9} u:lwá:ndɓɛ (sea) > ^{2 6 3-8 9} izilwá:ndɓɛ (pl.).

Nevertheless there appear in Zulu traces of the Bantu phonetic law that nasal + l > nd. Hitherto I have been able to identify only the following words illustrating this law :

^{2 6 6 8-3-8 9} izíndí:mɪ (an alternative plural of u:lí:mɪ, tongue).
^{2 2 6 3} indí:ma (patch of cultivated ground, evidently derived from the
^{3 2 2-8 9} Zulu verb ùkulí:ma, to cultivate).
^{3 3 9 9} undá:la (given by Bryant for "fruit of the i:lá:la palm"—but
^{3-2 2-8 9} I have been unable hitherto to confirm this).

§ 5. The Pre-palatal Nasal

There must be a sharp distinction made between the Zulu pre-palatal nasal (ɲ) and, on the one hand, the French palatal nasal (ɲ), and, on the other hand, the English alveolar nasal followed by the palatal glide (nj). In acoustic effect and in physiological production ɲ appears to lie mid-way between the French and the English sounds. An examination of the palatograph will show that the sound is produced by the blade (not the back or the tip) of the tongue, coming into contact with almost the whole of the hard palate right up to the alveolus. Furthermore the tongue-tip is not kept down against the back of the lower teeth, as is usual with the true palatals. This remark holds good for all the Zulu pre-palatal sounds. I have chosen the symbol ɲ (a slight modification of ɲ) to represent this sound. In Zulu orthography it is written *ny*.

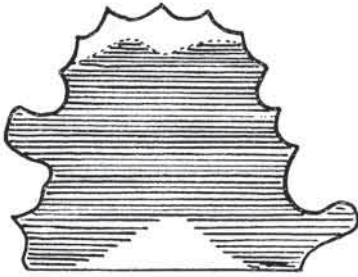


Approximate tongue-position for Zulu ɲ .

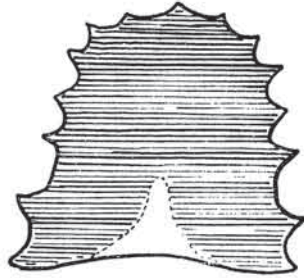
A comparison of the palatographs of Zulu ɲ and Suto ɲ show a wide divergence between these two Bantu languages in the tongue-position for this nasal. In the production of the Suto sound, approximately the same portion of the tongue is used, but not quite so much of it; but the blade of the tongue is brought right forward to touch the basis of the teeth. In the Zulu example the tongue is a considerable distance from the front teeth.¹

In addition to its use as a nasal consonant on its own merits, ɲ is the homorganic nasal to the pre-palatal fricative and affricates, the former always becoming affricative under this nasal influence. ɲ is never syllabic in Zulu.

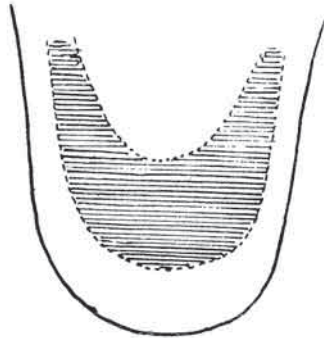
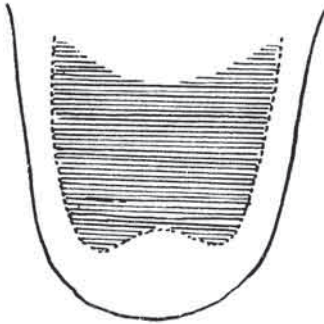
¹ The Zulu example is taken from the artificial palate of F. Nxele, and the Suto example from that of H. Moshoeshe, great-grandson of Moshesh.



Zulu p



Suto p



Examples : ^{3 2 9} **pa:ká:za** (wave to and fro).

^{5 3} **pi:pa** (squeeze together).

^{3 3-8 9} **umú:pu** (depression).

^{2-4 3} **í:ptʃʔε** (ostrich).

^{3-6 6-3} **í:pdza** (dog).

^{5 3 8-9 9} **pdzà'lpdzá:lə** (continually).

^{3-2 2-8 9} **u:pá:wə** (foot) > ^{6 6 3-8 9} **izipá:wə** (pl.).

^{3-2 2-8 9} **u:pá:zi** (lightning) > ^{6 6 3-8 9} **izipá:zi** (pl.).

^{2-4 4 3-8 9} **ù:ʃíkí:ʃí** (quarrelsome person) > ^{2 6 6 3-8 9} **iziptʃʔíkí:ʃí** (pl.).

^{2-4 3 3 6 3 3 9} **u:ʃá'ngguʃá'nggu** (roving person) > ^{2 6 3 3 6 3 3 9} **iziptʃʔá'ngguptʃʔá'nggu** (pl.).

^{3-2 9 9} **u:dzó:dzə** (long pointed thing) > ^{6 6-3 9 9} **izipdzó:dzə** (pl.).

Care must be taken to distinguish **ɪp** from **ɪj**, examples of which were given in Chapter II. In the latter case the blade of the tongue does not **touch** the palate.

§ 6. The Velar Nasal

In Zulu, the velar nasal is formed in the same way as in English; as, for example, in the Southern English pronunciation of the word **singing** (sɪŋɪŋ). In Zulu, however, there are three forms of this nasal, ŋ, ŋ̣ (when used in close connexion with the velar explosives and the clicks) and ŋ̣̣ (sometimes occurring when extensive contraction involving consonants has taken place).

(i) ŋ. This is the homorganic nasal to use before the ejective velar affricate (kxʔ) and the ejective velar lateral affricate (kɬʔ). In these cases ŋ is never syllabic.

Examples : ukú:thi ŋkxʔi: (to grasp tightly).
 3 2 2-4 3
 3 3 2 2-8 9
 ùkujkʔʔŋkʔʔi:za (to make a choking noise).
 2-4 3 3 6 3-8 8 9 2 6 3 3 6 3-8 8 9
 u:kʔʔá:ŋŋgakʔʔá:ŋŋga (watery food) > iziŋkʔʔá:ŋŋgakʔʔá:ŋŋga (pl.).

In immediate connexion with g, γ, ʒ, and œ, and between them and ŋ, non-syllabic-ŋ is always found.¹ It must be noted that ŋ does not combine with the velar fricative x and form an affricate; in cases of nasal influence, x is always preceded by the nasalized diphthong iĩ.²

Trans-Tugela Zulus pronounce either ŋg or merely ŋ after syllabic-ŋ (ŋ̣). When ŋg is used there is only a slight enunciation of the g; it is seldom pronounced as clearly and forcibly as in the Southern English pronunciation of such words as *longer* (lɔŋgə), *finger* (fɪŋgə).

Examples : i:lá:ŋŋga or i:lá:ŋŋa³ (sun).
 3-2 2-8 8 9 3-2 2-8 8 9
 6 8-6 3 3 9 9 6 8-6 3 3 9 9
 èzɪŋaŋŋgé:m̄ or èzɪŋaŋŋgé:m̄ (to the doctors).
 5 3 3 9 5 3 3 9
 amá:ŋŋga⁴ or amá:ŋŋa (lies).
 3 3 6 3-6 6-3 3 3 6 3-6 6-3
 iŋŋgukú:ɣa or iŋŋukú:ɣa (it is food).
 3 3 6-3 9 3 3 6-3 9
 iŋŋgá:n̄e or iŋŋá:n̄e (baby).
 3 2 2 9 9 3 2 2 9 9
 ùmŋŋgá:n̄e or ùmŋŋá:n̄e (friend).

¹ See examples of this in section (ii).

² See Chapter II, § 9.

³ Apart from other evidence this is an important proof that in *ng*, as it is written in current Zulu, in addition to ŋ there is ŋg; in other words *ng* is not phonetically ŋg but ŋŋg.

⁴ Or amá:ŋŋga.
 3 2 2 9

^{6 6 3 9} ^{6 6 3 9}
 ηgijabó:na or ηijabó:na (I see).
^{6-3 3 3-8 9} ^{6-3 3 3-8 9}
 ηgà:mḡbó:na or ηà:mḡbó:na (I saw him).
^{6-3-6 6 6 3 3 9} ^{6-3-6 6 6 3 3 9}
 ηgà:ηηgihá:mmba or ηà:ηηgihá:mmba (I went).

The last three examples show that when ηηg or ηη comes in initial position in any sense-group the syllabic-η is dropped, and the forms ηga, ηgi, etc., or ηa, ηi, etc., result.

(ii) η. In Zulu, whenever nasal influence is brought to bear upon the velar explosives, kh, k^ʔ, and g, or upon the clicks ɿ, ʄ, ɕ, ɔ, ɟ, and ʝ, the nasal appears as syllabic-η (η); kh becomes k^ʔ; k^ʔ remains unchanged; g becomes ηg or η; ɿ remains unchanged; ʄ becomes ηʄ; ɕ remains unchanged; ɔ becomes ηɔ; ɟ remains unchanged; and ʝ becomes ηʝ, so that the forms taken up appear as : ηk^ʔ, ηηg (or ηη), ηɿ, ηηʄ, ηɕ, ηηɔ, ηɟ and ηηʝ. No instances have come to light of k (plain -k) coming under nasal influence. Examples of η :

^{5 3 9} ^{2 2 2-4 3 9}
 khathá:za (trouble). iḡk^ʔathá:zə (trouble)
^{3 3-5 3-8 9} ^{2 2 2-8 9}
 àmakhó:sɿ (chiefs). iḡk^ʔó:sɿ (chief)
^{3-2 2-8 9} ^{6 6 6 3-8 9}
 u:khé:zə (spoon) > iziḡk^ʔé:zə (pl.).
^{2-4 3 9} ^{2 6 6 3 9}
 u:k^ʔó:bə (wristlet wire) > iziḡk^ʔó:bə (pl.).
^{3-2 9} ^{6 6-3 3 9}
 ú:gu (bank of river) > izí:ηηgu (pl.).
^{2-4 6-3 6-3 9} ^{2 6 6 6-3 6-3 9}
 ù:gagá:nε (thorn-tree) > iziηηgagá:nε (pl.).
^{3 3-5 6 6 2-8 9}
 bǎjizizηηgǎ:lε (they hunted it).
^{5 3 6-8 6 6}
 àβelú:ηηgu (white people).
^{3 3 7 4 5 4 9}
 ðηηgɿβònlé:jə (who saw me).
^{3 3 7 4 5 4 9}
 èηηgɿβònlé:jə (who saw me).
^{3-5 5 4}
 ná:ḡk^ʔu (here it is).
^{3 2 2-4 4 8-3}
 uká:thi ηηyí: (to complete).
^{3 3 9 9}
 ηηyǎ:ḡ (richness).
^{6 6 3 9}
 ɔaηǎ:la (jump about).
^{3 3 7 4}
 ηηyǎ:la (thing seen for first time).
^{5-3 3 6 3-8 9}
 nēηyǎkí:thi (with the subject-matter).

^{55 3 9}
shapá:tha (pound up).

^{22 6 3 9}
ihyasaá:nó (quarrel).

^{44 4 22 8-99}
ihyá:fi hihyá:fi (something that moves heavily, as elephant).

From the above examples it is seen that this species of velar nasal never takes stress or length in any word, and while it has a tone of its own, that tone is always level, and of the same pitch as that on which the prior syllable ends. If the vowel immediately before this η is long or half-long, the syllabic nasal exerts no influence of its own, the quality of the prior vowel being determined by the vowel following the nasal, e.g. :

^{2 2-4 3 3 9}
ùkuthé:nyga (to barter)

^{66 6 3 3 9}
ànygithé:nygi (I do not barter).

Nevertheless, under other circumstances, η exercises a vowel influence other than that of i or u . In all probability its vowel influence is that of a .

^{2 2-66 6-3 9}
sáthénygi:le (they bought).

^{55 3-5 4}
neyk'á:mé (and the centipede).

(iii) η . In the case of certain contractions, syllabic- η is found apart from velar explosives, and under these circumstances may sometimes have length and main stress. Examples :

^{3 3-6 66 6 3 9}
eká'denygikwé:ndza (which I have been doing) becomes

^{3 3-6 66 3 9}
eká'denykwé:ndza.¹

^{66 66-33 6 6 6-3 6 6 6 3-66 6-3}
ànyginá:nyge nygi:ze nygihá:mmbé (I never travelled) becomes

^{66 66-33 6 6 6 6-3 6-3 66 6-3 66 6-33 6 6 6 3-66 6-3}
ànyginá:ze nygihá:mmbé, or even ànyvá:ze nygihá:mmbé.

§ 7. The Glottal Nasal

This is commonly called "Nasalized- fi ". To indicate it I use the symbol fi . The glottal nasal is found in Zulu in very few instances. This sound is produced by narrowing the pharynx and passing the air through mouth and nose at the same time ; the sound is voiced,

¹ Notice that the k after η is not ejective : η here has full syllabic force.

and, in addition, there is considerable vibration in the nose. The only instances of this sound, which I have hitherto found in Zulu, are the following :

^{5 6-3}
ʔifi (an exclamation of surprise used by women).

^{6 6 3 4 4-7}
fi: fi: fi:fi:fi¹ (the cry of the ground-hornbill).

Most instances of fi are preceded by its fricative form devoiced (fi̥) a sniff through the nose :

²
fi̥fi (what ! an exclamation of surprise).

^{3 3 3 2}
fi̥fi̥fi̥fi̥fi̥fi̥fi̥ (laughing through the nose).

^{3 2 9}
fi̥fi̥fi̥fi̥:za (make a laughing sound through the nose).

In Zulu orthography fi is written nh. The distinct nasalization of the vowel i, used in conjunction with fi is a noticeable feature. This sound must not be confused with ifi.²

§ 8. The Nasal Clicks

Details regarding the click nasals, their formation and their nature, will be given in Chapter XI, but it is necessary here to note that the homorganic nasal to the clicks is the velar nasal. Though, as will be seen later, each of the three different types of clicks has two points of articulation, a forward (or lateral) and a velar, it is obvious that with the back of the tongue touching the velum, the nasal homorganic to the clicks is not influenced in any way by the position of the rest of the tongue, the passage to the mouth being closed at the velar point. Hence the nasal homorganic to the clicks must be the pure velar nasal, ŋ.

Corresponding to each positional type of click, however, there is the full nasal click. The following few examples of these will suffice at this stage :

(i) *The Dental Click Nasal* : ŋ.

^{3 3-6 6-3}
ŋʒ:ŋmbo (small termite).

^{3 3-6 6-3}
ŋwá:di (book).

^{3 4 9}
ŋé:ku (officer of chief).

¹ In addition to this form, Mr. Carl Faye also gave me the following variants of this bird's cry : ^{6 6 3 4 4-7} ŋ: ŋ: ^{6 6 3 4 4-7} ŋ:mm and ^{6 6 3 4 4-7} ŋ: ŋ: ^{6 6 3 4 4-7} ŋm:mm.

Nxele gave this as : ^{6 6 3 4 4-7} gú: gú: gú:gugu.

² See Chapter II, § 9.

(ii) *The Alveolar Click Nasal* : ɱ

^{3 4 9}
ɱó:la (wagon).

^{3 3-8 9}
ɱwá:fa (heap).

(iii) *The Lateral Click Nasal* : ɲ

^{3 3-8}
ɲá: (when, if).

^{3 3 2 2-8 9}
ɲá fuɲá:fu (pasty matter).

§ 9. Devocalized Nasals

In the imitation of certain sounds, Zulu occasionally employs devocalized nasals. For instance, in describing the sound of alarm made by a buffalo,¹ the following forms are used :

ɱ::, ɲ::, ɲ̥::,

or the same forms preceded by the glottal stop :

ʔɱ::, ʔɲ::, ʔɲ̥::

It must be pointed out, however, that these devocalized nasals, "sniffs," are all fricative. True devocalized nasals, as devocalized *l* or *w*, are practically silences. Thus the fricative forms used in speech should have distinct symbols, e.g. ɱ is distinct from ɬ, ɰ is distinct from ɱ. I still employ the symbols ɱ, ɲ, ɲ̥, ɱ̥, however, with the convention that they are fricative, rather than multiply symbols at this stage for so limited a use. If, however, voiced fricative forms are found as speech sounds, as was ɰ in addition to ɬ, new symbols will be necessary.

§ 10. The Syllabic Nasals and their Influence on Stress and Vowel-quality

This section contains a summary of the conclusions which have been arrived at concerning the syllabic nasals and their influence on stress and vowel-quality.

Regarding ɱ, when it is the contracted form of *mu*, we found that it exerts the influence of the vowel *u* in all circumstances, that it may be long or short, may have main stress or not, and may even be final in a word.

Regarding ɲ, when it is the result of contraction involving consonants, we found that it too could take length and stress, but we have no instances which would enable us to test its vowel-resonance. In all probability it has the same quality as ɲ used as homorganic nasal.

¹ First brought to my notice by Mr. Carl Faye. See also the example of ɱɱ given in the footnote on § 7 of this Chapter.

However, apart from those two instances, it might be well to examine each occurrence of syllabic nasal, and formulate and test rules for determining (i) whether the nasal is syllabic, and (ii) what its vowel-resonance is when syllabic. These tests I intend to apply quite apart from dependence on the ear.

Rule 1. If the nasal is syllabic, it will exert some vowel influence on the vowel of the preceding syllable, if that vowel is of mid-forward or mid-back variety, provided that the vowel is neither long nor half-long. (That is to say, that despite whatever vowel may follow the syllabic nasal, the mid-forward or mid-back vowel followed by a syllabic nasal, under conditions stated above, will remain constant in quality, either consistently high or consistently low).

Rule 2. Under the conditions laid down in Rule 1, if the mid-forward or mid-back vowel before the syllabic nasal is consistently high in quality, then the nasal exercises the influence of either of the vowels *i* or *u*; if it is consistently low in quality, then the nasal exercises the influence of some other vowel, in all probability of that of *a*.

Rule 3. If the nasal is syllabic it will have a tone of its own. (In the case of these homorganic syllabic nasals the tone is level and of the same pitch as that on which the prior syllable ends).

In examining each case in the light of the above rules, it has been found most useful to notice the effect on the vowel when a noun is preceded by *na* (and, with), or changed into a locative adverb.

$\overset{3-55}{\text{mp}} \overset{4}{\text{i:mp}} \overset{4}{\text{?i}}$ (army), $\overset{5-3-55}{\text{né:mp}} \overset{4}{\text{?i}}$ (with the army).
 $\overset{33}{\text{imp}} \overset{3-8}{\text{?i:lo}}$ (health), $\overset{55}{\text{nemp}} \overset{3-8}{\text{?i:lo}}$ (with health).
 $\overset{33}{\text{imp}} \overset{3-8}{\text{?á:ka}}$ (witch's cat), $\overset{55}{\text{nemp}} \overset{3-8}{\text{?á:ka}}$ (and a witch's cat).

From the first instance, since *e:* is long, there is no proof. Tone proves *m* to be syllabic, and the persistent high quality of the mid-forward vowel, in the last two instances, proves that *m* has the vowel quality of *i* or *u*.

$\overset{33}{\text{mb}} \overset{8-3-88}{\text{immbá:ndé}}$ (flute), $\overset{33}{\text{emmba}} \overset{88}{\text{ndé:ni}}$ (in the flute).

Again *m* is syllabic before *mb*, and has the resonance of *i* or *u*.

m (+ vowel) $\overset{3}{\text{ima}} \overset{7}{\text{pú:le}}$ (baldness), $\overset{5-3}{\text{nèma}} \overset{7}{\text{pú:le}}$ (with baldness).
 $\overset{3-2}{\text{u:mó:pa}}$ (python), $\overset{66}{\text{izimó:pa}}$ (pl.).
 $\overset{3}{\text{imí:ni}}$ (mid-day), $\overset{4}{\text{emí:ni}}$ (by day).

When *m* is part of the word-stem, nasal influence does not cause it to become syllabic. Notice the inconstant type of vowel before *m*, and notice that it has no tone of its own.

$\eta\phi f^?$ $\overset{2}{\eta}\overset{2-8}{\phi}\overset{9}{f}^? \overset{5}{\acute{e}}:\overset{3-8}{n\acute{e}}$ (baboon), $\overset{5}{n\acute{e}}\overset{3-8}{\eta}\overset{9}{\phi}\overset{5}{f}^? \overset{3-8}{\acute{e}}:\overset{9}{n\acute{e}}$ (and the baboon).
 $\overset{2}{\eta}\overset{2-4}{\phi}\overset{3}{\acute{e}}:\overset{9}{z\acute{i}}$ (firefly), $\overset{5}{n\acute{e}}\overset{3-5}{\eta}\overset{4}{\phi}\overset{9}{f}^? \overset{3-5}{\acute{e}}:\overset{4}{z\acute{i}}$ (and the firefly).

Here η is non-syllabic.

$\eta\theta v$ $\overset{2}{\eta}\overset{8-3-8}{\theta}\overset{9}{v}:\overset{5-3}{\acute{u}}:\overset{8-3-8}{l\acute{a}}$ (rain), $\overset{5-3}{n\acute{e}}\overset{8-3-8}{\eta}\overset{9}{\theta}\overset{5}{v}:\overset{8-3}{\acute{u}}:\overset{9}{l\acute{a}}$ (and rain).
 $\overset{2}{\eta}\overset{8-3}{\theta}\overset{9}{v}:\overset{5-3}{\acute{u}}:\overset{8-3}{n\acute{a}}$ (lamb), $\overset{5-3}{n\acute{e}}\overset{8-3}{\eta}\overset{9}{\theta}\overset{5}{v}:\overset{8-3}{\acute{u}}:\overset{9}{n\acute{a}}$ (and the lamb).

Here η is non-syllabic.

$\underline{n}t^?$ $\overset{3-22}{\acute{u}}:\overset{9}{n\acute{t}}^?u$ (diaphragm), $\overset{3}{o}:\overset{3}{n\acute{t}}^? \overset{3-8}{w\acute{i}}:\overset{9}{n\acute{i}}$ (in the diaphragm).
 $\overset{44}{\acute{i}}\overset{44}{n\acute{t}}^? \overset{2}{\acute{i}}\overset{2-8}{n\acute{t}}^? \overset{9}{\acute{i}}\overset{55}{s}\overset{55}{w}\overset{3}{\acute{a}}:\overset{3-8}{n\acute{o}}$ (something passed round), $\overset{55}{n\acute{e}}\overset{55}{n\acute{t}}^? \overset{3}{\acute{i}}\overset{3-8}{n\acute{t}}^? \overset{9}{\acute{i}}\overset{55}{s}\overset{55}{w}\overset{3}{\acute{a}}:\overset{3-8}{n\acute{o}}$
 (and something passed round).
 $\overset{22}{\acute{i}}\overset{2-8}{n\acute{t}}^? \overset{9}{\acute{a}}:\overset{33}{m\acute{o}}$ (neck), $\overset{33}{\acute{e}}\overset{2-2-8}{n\acute{t}}^? \overset{9}{\acute{a}}:\overset{33}{m\acute{e}}:\overset{9}{n\acute{i}}$ (on the neck).
 $\overset{22}{\acute{i}}\overset{3}{n\acute{t}}^? \overset{3}{\acute{u}}:\overset{9}{\eta}\overset{55}{\eta}\overset{3}{\eta}\overset{3}{\eta}\overset{9}{\acute{g}\acute{a}}$ (species of grass), $\overset{55}{n\acute{e}}\overset{3}{n\acute{t}}^? \overset{3}{\acute{u}}:\overset{3}{\eta}\overset{3}{\eta}\overset{9}{\acute{g}\acute{a}}$ (and the grass).

The first example, $\overset{3}{o}:\overset{3}{n\acute{t}}^? \overset{3-8}{w\acute{i}}:\overset{9}{n\acute{i}}$, is inconclusive, as *o* is long and not in position of main stress, therefore must be high in quality. But from the consistency of the other examples, it is clear that \underline{n} is here exercising the influence of the vowel *i* or *u*.

$\underline{n}nd$ $\overset{22}{\acute{i}}\overset{9}{n\acute{d}}:\overset{9}{\acute{a}}:\overset{44}{\acute{b}\acute{a}}$ (affair), $\overset{44}{\acute{e}}\overset{5}{n\acute{d}}:\overset{3-8}{\acute{a}}\overset{9}{\acute{b}\acute{e}}:\overset{9}{n\acute{i}}$ (in the affair).
 $\overset{22}{\acute{i}}\overset{9}{n\acute{d}}:\overset{9}{\acute{u}}:\overset{44}{\acute{k}\acute{u}}$ (stick), $\overset{44}{\acute{e}}\overset{5}{n\acute{d}}:\overset{3-8}{\acute{u}}\overset{9}{\acute{k}\acute{w}\acute{i}}:\overset{9}{n\acute{i}}$ (on the stick).
 $\overset{33}{\acute{i}}\overset{6-3}{n\acute{d}}:\overset{9}{\acute{u}}:\overset{33}{n\acute{a}}$ (captain), $\overset{33}{\acute{e}}\overset{66-3-89}{n\acute{d}}:\overset{9}{\acute{u}}\overset{33}{n\acute{e}}:\overset{9}{n\acute{i}}$ (to the captain).

\underline{n} is here syllabic and exercises the influence of *i* or *u*.

n (+ vowel) $\overset{33-88}{\acute{i}}\overset{8-3}{n\acute{m}}\overset{5}{\acute{e}}:\overset{3-88}{m}\overset{8-3}{b\acute{e}}$ (medicine), $\overset{5}{n\acute{e}}\overset{3-88}{\acute{i}}\overset{8-3}{n\acute{m}}\overset{5}{\acute{e}}:\overset{8-3}{m}\overset{8-3}{b\acute{e}}$ (with medicine).
 $\overset{33-88}{\acute{i}}\overset{8-3}{n\acute{v}}\overset{5}{\acute{a}}:\overset{3-88}{\eta}\overset{8-3}{g}\overset{8-3}{w\acute{e}}$ (veld herb), $\overset{5}{n\acute{e}}\overset{3-88}{\acute{i}}\overset{8-3}{n\acute{v}}\overset{5}{\acute{a}}:\overset{8-3}{\eta}\overset{8-3}{g}\overset{8-3}{w\acute{e}}$ (and the herb).

When *n* is part of the word-stem, nasal influence does not cause it to become syllabic.

$\underline{n}ts^?$ $\overset{3}{n\acute{t}}\overset{3-8}{s}^? \overset{9}{\acute{i}}:\overset{5}{m\acute{u}}$ (garden), $\overset{5}{n\acute{e}}\overset{3-8}{n\acute{t}}\overset{9}{s}^? \overset{5}{\acute{i}}:\overset{3-8}{m\acute{u}}$ (and a garden).
 $\overset{3}{n\acute{t}}\overset{3-5}{s}^? \overset{4}{\acute{e}}:\overset{5}{p}\overset{3-5}{h\acute{e}}$ (spring-bok), $\overset{5}{n\acute{e}}\overset{3-5}{n\acute{t}}\overset{4}{s}^? \overset{4}{\acute{e}}:\overset{5}{p}\overset{3-5}{h\acute{e}}$ (with a spring-bok).

Here *n* is non-syllabic.

⁴ 8-3 9 9 ⁵ 8-3 9 9
 ndz indzavú:la (tusk), nēndzavú:la (with a tusk).
² 9 9 ⁵⁻³ 9 9
 indzí:ka (sediment), nendzí:ka (and sediment).

Here n is non-syllabic.

³ 3-5-6-3 9 ⁵ 3-6-3 9
 ntɬ? intɬ?izí:jə (heart), nēntɬ?izí:jə (with the heart).
³ 3-8 9 ⁵ 3-8 9
 intɬ?á:ɬa (good fortune), nēntɬ?á:ɬa (with good-fortune).

Here n is non-syllabic.

² 9 9 ⁵⁻³ 9 9
 ndǰ indǰá:la (hunger), nēndǰá:la (with hunger).
² 6 3 3-5 4 ⁵⁻³ 6 3 3-5 4
 indǰù:lamí:thi (giraffe), nēndǰù:lamí:thi (and a giraffe).

Here n is non-syllabic.

³ 3-8 9 ⁵ 3-8 9
 p (+ vowel) ɪpó:nɪ (bird), nēɪpó:nɪ (and a bird).
³ 3-8-8 9 ⁵ 3-8-8 9
 ɪpú:m̄mba (barren person), nēɪpú:m̄mba (and a barren
 person).

When p is part of the word-stem, nasal influence does not cause it to become syllabic.

² 3 9 ⁵ 3 9
 pɬʃ? ɪpɬʃ?é:la (burnt porridge), nēpɬʃ?é:la (and burnt porridge).
² 3 9 ⁵ 3 9
 ɪpɬʃ?í:pɬʃ?ə (male duiker), nēpɬʃ?í:pɬʃ?ə (and a male duiker).

Here p is non-syllabic.

² 8-3 9 ⁵⁻³ 8-3 9
 pǰ ɪpǰá:lə (edible tuber), nēpǰá:lə (with the tuber).
² 9 9 ⁵⁻³ 9 9
 ɪpǰí:ɾa (sediment), nēpǰí:ɾa (and sediment).

Here p is non-syllabic.

³ 3 3-5 4 ⁵ 5 3-5 4
 ɲk? ɪɲk?ú:mɛ (centipede), nēɪɲk?ú:mɛ (and a centipede).
³ 3 3-8 9 ⁵ 5 3-8 9
 ɪɲk?á:βɪ (ox), nēɪɲk?á:βɪ (with the ox).

ɲ is here syllabic, and exercises a vowel influence other than that of i or u.

² 2 8-3 9 ⁵⁻³ 3 8-3 9
 ɲɲ ɪɲɲgá:nɛ (baby), nēɪɲɲgá:nɛ (and a baby).
⁶ 6 6 3-8 9 ⁶ 6 6 3-8 9
 ɪɲɲgulú:βɛ (pig), nēɪɲɲgulú:βɛ (and a pig).

ɲ is here syllabic, and exercises a vowel influence other than that of i or u.

³ 3 3-5-8-3 9 ⁵ 3 8-3 9
 ɲkx?, ɲkɬ? ɪɲkɬ?ázá:thə (share), nēɪɲkɬ?ázá:thə (and a share).

⁵ ^{5 3} ^{3-8 9}
 ɪkʰʔ̀ùṃṃkʰʔ̀ú:mu (gristly substance),
⁵ ^{5 3} ^{3-8 9}
 neɪkʰʔ̀ùṃṃkʰʔ̀ú:mu (and the gristle).

Here ɪ is non-syllabic.

^{22 9 9} ^{5-33 9 9}
 ɪɪɪ ɪɪɪɪé:ṃṃ (richness), neɪɪɪɪɪé:ṃṃ (with richness).
^{22 9 9} ^{5-33 9 9}
 ɪɪɪɪí:nṃ (gum), neɪɪɪɪɪí:nṃ (with gum).

Here ɪ is syllabic, exercising a vowel influence other than that of i or u.

^{55 3 9}
 ɪɪ ʔ̀ ʔ̀aɪɪú:la (jump about).

As examples of this are so rare, it is not possible to prove the vowel-quality of ɪ in this instance, though the separate tone shows it to be syllabic.

^{33 7 4} ^{5-33 7 4}
 ɪɪʔ̀ ɪɪʔ̀á:la (thing seen for the first time), neɪɪʔ̀á:la (and the thing).
^{33 6 3-8 9} ^{5-33 6 3-8 9}
 ɪɪʔ̀ɪkí:thi (subject matter), neɪɪʔ̀ɪkí:thi (and the subject matter).

Here ɪ is syllabic, and exercises a vowel influence other than that of i or u.

^{55 3 9}
 ɪɪʔ̀ ʂaɪɪú:tha (pound up).

As with ɪɪ, though the separate tone shows ɪ to be syllabic, insufficient examples prevent its vowel-resonance being established.

^{22 6 3 9} ^{5-33 6 3 9}
 ɪɪɪʂ ɪɪɪʂaṃá:nṃ (quarrel), neɪɪɪʂaṃá:nṃ (with a quarrel).
^{66 6 33 8-9 9} ^{66 6 33 8-9 9}
 ɪɪɪʂi fɪɪɪʂi:fɪ (heavily moving object), neɪɪɪʂi fɪɪɪʂi:fɪ
 (and a heavily moving object).

Here ɪ is syllabic, and exercises a vowel-influence other than that of i or u.

^{33-8 9} ^{5 3-8 9}
 ɪ (+ vowel)¹ ɪí:ɪɪɪʔ̀ʔ̀i (person who says ɪɪ), neɪí:ɪɪɪʔ̀ʔ̀i (and the person).
^{3 3-6 6-3} ^{5 3-6 6-3}
 ɪɪwá:dɪ (book), neɪwá:dɪ (and the book).

Here ɪ is non-syllabic, when it belongs to the stem of the word.

^{3 4 9} ^{5 4 9}
 ɪ (+ vowel) ɪpó:la (wagon), neɪpó:la (and the wagon).

¹ Or semi-vowel.

^{3 3-8 9} ɪí:na (hunting-party), ^{5 3-8 9} neɪ:na (with the hunting party).

Here ɪ is non-syllabic, when it belongs to the stem of the word.

ɪ (+ vowel) ^{5 5 3 3-8 9} ɪŋá:fuɪá:fu (bog), ^{5 5 3 3-8 9} neɪŋá:fuɪá:fu (and the bog)
^{5 4} ɪí:ŋa (pester for money), ^{3 2 9} eɪí:ŋa (he pestering).

Here ɪ is non-syllabic, when it belongs to the stem of the word.

From the above it is seen that, as homorganic nasals, m and n exercise the vowel influence of i or u, while ɪ exercises a vowel influence other than that of i or u, in all probability that of a, since a, i and u are the basic Bantu vowels. Further, these homorganic nasals are syllabic before ejective explosives and unvoiced clicks; are syllabic, followed by a non-syllabic nasal of the same type, before voiced explosives and voiced clicks; disappear before nasals, and are non-syllabic before affricates, or when the normally syllabic form is in initial position in a sense-group.

Regarding stress and length, the homorganic nasals, when syllabic, take neither main nor secondary stress, neither full nor half-length; neither do they affect the counting of stress syllables in any word-group.

These Zulu homorganic nasals offer a strong contrast to the syllabic nasals of Suto. In Suto the syllabic nasals, m, n, p, and ɪ are fully syllabic, taking distinctive tone, and full length and stress when necessary.

Examples : ɪí:mɛ (my mother).

muɪ:na (man).

ɪé:u (so and so).

ɪ:kʔa (take).

§ 11. Summary of the Morphological Influence of the Nasal

The following is a table showing the morphological influence of the nasal in Zulu :

(i) *With Plain Consonants*

nasal + pʔ = <u>mp</u> ʔ	nasal + tsʔ = ntsʔ
„ ph = <u>mp</u> ʔ	„ p = p
„ b = <u>mmb</u>	„ f = ptʃʔ
„ ɓ = <u>mmb</u>	„ tʃʔ = ptʃʔ
„ m = m	„ dʒ = pdʒ

nasal + f = ɲɸfʔ	nasal + kʔ = ɲkʔ
„ v = ɲɸv	„ kh = ɲkʔ
„ tʔ = ɲtʔ	„ g = ɲɲg (or ɲɲ)
„ th = ɲtʔ	„ ɲ = ɲ
„ d = ɲnd	„ kxʔ = ɲkxʔ
„ n = n	„ kʔʔ = ɲkʔʔ
„ s = ntsʔ	„ x = iix
„ z = ndz	„ j = iij
„ l = l (or ɲnd)	„ w = iiw
„ ɸ = ntɸʔ	„ h = iih
„ ɟ = ndɟ	„ fi = ifi

(ii) *With Click Consonants*¹

nasal + ɲ = ɲ	nasal + ʄh = ɲ
„ ɸ = ɲɲɸ	„ ʂ = ɲɲʂ
„ ɸh = ɲ	„ ɲ = ɲ
„ ɸ = ɲɲɸ	„ ɸ = ɲɲɸ
„ ɸ = ɸ	„ ɸh = ɲ
„ ɸ = ɲɲʂ	„ ɸ = ɲɲɸ

If, however, the nasal (except the fully syllabic m) is initial in any sense-group or in any isolated word or word-group, it is never syllabic; thus ntʔ > ntʔ, mmb > mb, etc.

Examples: ^{6 3 9}ɲgífú:na (I want).

^{3-8 9}ɲkʔó:sí (O chief).

^{8 8-3}ndí:za (fly!) but ^{3 22 8-9 9}ʔkʔndí:za (to fly).

^{5 5 4}ntʔá:ntʔa (float).

From an examination of the above table, the following laws may be deduced:

Under nasal influence,

(i) Aspirated explosives become ejective, preceded by a syllabic nasal.

(ii) Aspirated clicks become nasal clicks.

(iii) Voiced explosives and voiced clicks take a non-syllabic form of the nasal as well as the syllabic.

(iv) Unvoiced unaspirated clicks become voiced, preceded by a syllabic as well as a non-syllabic velar nasal.

¹ For examples of these, see Chapter XI.

(v) Nasals are unaltered.

(vi) Fricatives become affricates, preceded by a non-syllabic nasal; unvoiced fricatives becoming ejective affricates, and voiced fricatives becoming voiced affricates.

(vii) The voiced (non-fricative) lateral is unaltered, the nasal not appearing; except in rare cases of the persistence of the Bantu rule by which *l* becomes *nd*.

(viii) The bi-labial implosive becomes voiced bi-labial explosive, preceded by a syllabic as well as a non-syllabic form of the nasal.

(ix) Semi-vowels, the velar fricative and the glottal fricatives take the nasal diphthong, *iĩ*, before them.

§ 12. The Result of the Presence or Absence of Nasals in the Zulu Noun Prefixes

Several of the noun prefixes in Zulu contain nasals, e.g. Class 1 s. *umu-*, Class 2 p. *ama-*, Class 3 s. *in-*, etc., Classes 3 p. and 6 p. *izim-*, etc., Class 5 s. *umu-*, and Class 5 p. *imi-*. It is worthy of notice that in concordial agreement, all the prefixes which contain nasals act in a different way from those which do not contain nasals. In the adjectival concord the nasals are retained, as are the consonants which make up the prefixes of the other classes, e.g. ^{3 2 2 2-4 3 3-5 4} *umú:nt^u omí:ǃε* (a nice person) and ^{3 2 2 2-4 3 3-5 4} *abá:nt^u abá:ǃε* (pl.). In the relative concord, however, while other consonants are retained, all nasals are dropped, e.g. ^{3 2 2 2-4} *umú:nt^u* ^{3-8 8-3} *ó:zε* (a naked person) and ^{3 2 2 2-4 3 3-8 8-3} *abá:nt^u abá:zε* (pl.).

The same phenomenon of dropping the nasal is found with the possessive concord, and the subjectival verb concord, e.g. ^{3 2 2 2-4} *umú:nt^u* ^{3 9} *wá:mi* (my man) and ^{3 2 2 2-4 3 9} *abá:nt^u bá:mi* (pl.); ^{3 2 2 2-4 3 3-5 3 3 9} *umú:nt^u ùjahá:mmba* (the person travels) and ^{3 2 2 2-4 3 3-5 3 3 9} *abá:nt^u ájahá:mmba* (pl.). This dropping of the nasal in the subjectival verb concords has the effect of leaving many of these concords mere vowels, without any consonant; and for this reason many other phonetic changes take place. Some of these are discussed in Chapter XIII.

CHAPTER VII
THE FRICATIVES

§ 1. The Zulu Fricatives

Apart from the Lateral Fricatives, which will be dealt with in the next chapter, Zulu employs six fricatives, four of which have both voiced and unvoiced forms, and one of which has a lengthened almost-syllabic form. They are represented by the following symbols :

v, f, v, s, z, ʃ, ʒ, x, h, fi, and h:

In addition to these, I have included in this chapter for consideration the rarely-used syllabic rolled lingual—r, which is not a fricative.

§ 2. The Bi-labial Fricative

The voiced bi-labial fricative, v, though common in some other Bantu languages, is found in rare circumstances in Zulu. The onomatopœic radical $ts^{\text{3 9}}w\overset{\text{3 2}}{i}b\overset{\text{2-4}}{i}$, indicative of the sound of a wagon-whip, is often heard as $w\overset{\text{3 2}}{u}m\overset{\text{2-4}}{:}th\overset{\text{3 9}}{i} ts^{\text{3 9}}w\overset{\text{3 9}}{i}v\overset{\text{1}}{i}$ (he whipped him). In the same connexion the form $uk\overset{\text{3 2}}{u}:\overset{\text{2-4}}{th\overset{\text{3 9}}{i}} ts^{\text{3 9}}w\overset{\text{3 9}}{i}v\overset{\text{1}}{i}$ is also found. In Zulu this fricative seems to be practically the same as that used so commonly in the Central Bantu languages. The lips are close enough together to cause vibration as the voiced sound passes through. The teeth play no part in the production of the sound, and the position of the tongue is immaterial. This sound, however, cannot in any way be regarded as typical of Zulu speech, in which the bi-labial implosive takes the place of the fricative found in other Bantu languages.

§ 3. The Denti-labial Fricatives

In Zulu f and v are pronounced as in English, with the upper teeth touching the lower lip.

Examples : $\overset{\text{33-5 4 9}}{u}m\overset{\text{2}}{f}\overset{\text{a}}{:}n\overset{\text{a}}{\text{2}}$ (boy).
 $\overset{\text{5 5 3 9}}{s}i\overset{\text{3}}{j}\overset{\text{a}}{f}\overset{\text{u}}{:}n\overset{\text{a}}{\text{9}}$ (we want).
 $\overset{\text{33-5 3 3-8 9}}{u}m\overset{\text{2}}{f}\overset{\text{a}}{:}k\overset{\text{a}}{\text{2}}z\overset{\text{1}}{\text{9}}$ (stranger).

¹ For this example I am indebted to Mr. Carl Faye.

² Certain Zulus pronounce f after syllabic-m as the ejective affricate describe! below, thus : $\overset{\text{33-5}}{u}m\overset{\text{4 9 33-5}}{m}\overset{\text{3 3-8 9}}{j}\overset{\text{2}}{f}\overset{\text{a}}{:}n\overset{\text{a}}{\text{9}}$, $\overset{\text{33-5}}{u}m\overset{\text{4 9 33-5}}{m}\overset{\text{3 3-8 9}}{j}\overset{\text{2}}{f}\overset{\text{a}}{:}k\overset{\text{a}}{\text{2}}z\overset{\text{1}}{\text{9}}$.

^{3 2 9 9}
 ùkuvá:la (to shut).

³³⁻⁵⁶⁻³⁻⁵³
 ùmvú:pa (maggots).

^{5 5 5 3 9}
 vùmbulú:ka (emerge).

^{4 3 9}
 amé:va (thorns).

The homorganic nasal to the denti-labial fricatives is *ŋ*, the denti-labial nasal; and, under the influence of this nasal, both *f* and *v* become affricates, the former ejective, the latter voiced. The explosive elements in these affricates are the denti-labial explosives, *ɸ* and *ɸ̣*, not used apart from this combination in Zulu.

Examples : ^{5 5 3 3-8 9} *ɪŋɸfʔð kəŋɸfʔó:kə* (spongy substance).
^{3 6 3-8 9} *izɪŋɸfʔú:du* (tortoises).
^{3 8-9 9} *ɪŋɸfʔé:ne* (baboon).
^{6 8-6 3 8-9 9} *ɪŋɸvù:ʂuŋɸvú:ʂu* (big fat woman).
^{3 7 4} *ɪŋɸvú:ma* (marriage ox).
^{3 6 6 6 6-3} *ɪŋɸvù:mamá:zwɪ* (garrulous person).

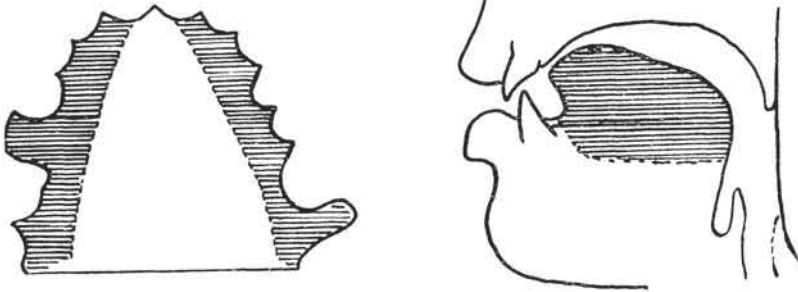
The ejection of *ɪŋɸfʔ* must be clearly sounded. The sound approaches that of *pf* in such a word-group as **top-flight**; only of course the lips do not come entirely together, and true ejection takes place. It is extremely difficult to describe this sound, as I know of no equivalent in any European language.¹

§ 4. Alveolar Fricatives

In Zulu *s* and *z* are pronounced as in English. I have noticed no difference either in tongue-position or in acoustic effect.

Examples : ^{3 2 2-8 9} *ùkusú:ka* (to go away).
^{33-555 6-3 9} *ùmsɪŋndí:sɪ* (saviour).
^{3 3-5 8-3 9} *ùkuzá:la* (to beget).
^{3-6 8-3 9} *ezí:pe* (others).
^{8 3-8 8-6 6 6-3 9} *ùsuzɪŋgɛ:la* (you are now hunting).

¹ See Chapter IX for further examples of these affricates.



sa.

Palatograph and approximate tongue-position diagram for Zulu *s*.

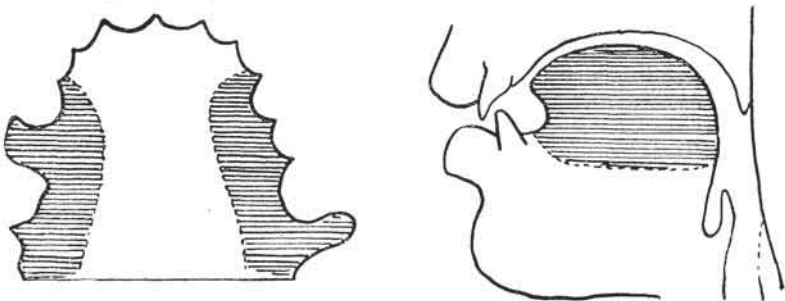
The homorganic nasal to the alveolar fricatives is *n*; and, under the influence of this nasal, both *s* and *z* become affricates, the former ejective, and latter voiced. The explosive elements in these affricates are the alveolar explosives, *t* and *d*.

Examples : ^{6 6 3-8 9} izints^ʔá:fa (dry twigs).
^{2 6 3-8 9} izints^ʔá:ku (days).
^{3 3-8 9} amá:ndzi (water).
^{3 2 9} ukwé:ndza (to make).

tsʔ is also used apart from the nasal, see Chapter IX.

§ 5. Pre-palatal Fricatives

The unvoiced form, *f*, is pronounced with the blade of the tongue, and the point of main friction is rather further forward than for normal *f* in English. This Zulu fricative is not a true palatal; the tongue-tip is not kept down behind the lower teeth, nor is the back of the tongue brought forward to cause friction with the hard palate.



fa.

Palatograph and approximate tongue-position diagram for Zulu *f*.

Examples : $\overset{2-4}{\underset{2-4}{\dot{u}}}$: $\overset{4}{\text{f}}\overset{3-8}{\text{k}}\overset{3-8}{\text{i}}\overset{9}{\text{f}}\overset{1}{\text{i}}$ (quarrelsome person) > $\overset{2}{\text{i}}\overset{6}{\text{z}}\overset{6}{\text{i}}\overset{6}{\text{p}}\overset{6}{\text{t}}\overset{6}{\text{f}}\overset{6}{\text{z}}\overset{6}{\text{i}}\overset{6}{\text{k}}\overset{6}{\text{i}}\overset{6}{\text{f}}\overset{6}{\text{i}}$ (pl.).
 $\overset{2-4}{\underset{2-4}{\dot{u}}}$: $\overset{3-8}{\text{f}}\overset{3-8}{\text{w}}\overset{3-8}{\text{i}}\overset{9}{\text{z}}\overset{1}{\text{a}}\overset{1}{\text{n}}\overset{1}{\text{e}}$ (swift walker) > $\overset{2}{\text{i}}\overset{6}{\text{z}}\overset{6}{\text{i}}\overset{6}{\text{p}}\overset{6}{\text{t}}\overset{6}{\text{f}}\overset{6}{\text{z}}\overset{6}{\text{i}}\overset{6}{\text{w}}\overset{6}{\text{i}}\overset{6}{\text{k}}\overset{6}{\text{i}}\overset{6}{\text{f}}\overset{6}{\text{i}}$ (pl.).
 $\overset{3-5}{\underset{3-5}{\dot{u}}}$: $\overset{4}{\text{p}}\overset{4}{\text{t}}\overset{4}{\text{f}}\overset{4}{\text{z}}\overset{4}{\text{e}}$ (ostrich).

t^{f} is also used apart from the nasal, see Chapter IX.

§ 6. The Velar Fricative

In Zulu **x** has a sound similar to the Scottish sound of *ch* in *loch*, though in the southern districts of Natal, where there is the *ukuteta* influence of Mpondo and Xosa, it has much more "scrape", more nearly resembling the Cape Dutch *g* in *gaan*. In fact, in *ukukuluma* Zulu, **x** tends to approximate to **h**. Though in numerous words **h** and **x** are interchangeable many Zulu scholars¹ make no differentiation between these two sounds; nevertheless they seem to be phonemically distinct,² distinguishing words of different meanings otherwise alike, e.g. $\overset{5}{\text{x}}\overset{4}{\text{o}}\overset{4}{\text{l}}\overset{4}{\text{a}}$ (draw) and $\overset{5}{\text{h}}\overset{4}{\text{o}}\overset{4}{\text{l}}\overset{4}{\text{a}}$ (lead).

In current Zulu orthography, the symbol *r* is used to indicate **x**. Under nasal influence, **x** is treated in the same way as the glottal fricatives and the semi-vowels, **ix** being the resultant.

Examples of **x** : $\overset{3-3-5-3-8-9}{\underset{3-3-5-3-8-9}{\dot{u}}}\overset{3}{\text{m}}\overset{3}{\text{x}}\overset{3}{\text{a}}\overset{3}{\text{u}}$ ³ (emotion).
 $\overset{2-4}{\underset{2-4}{\text{i}}}$: $\overset{3}{\text{x}}\overset{3}{\text{o}}\overset{9}{\text{x}}\overset{9}{\text{o}}$ (small of the back).
 $\overset{3}{\text{e}}\overset{2}{\text{x}}\overset{9}{\text{w}}\overset{9}{\text{i}}\overset{9}{\text{t}}\overset{9}{\text{h}}\overset{9}{\text{a}}$ (he snatching).
 $\overset{3}{\text{u}}\overset{2}{\text{k}}\overset{2-8-9}{\text{x}}\overset{2-8-9}{\text{w}}\overset{2-8-9}{\text{e}}\overset{2-8-9}{\text{f}}\overset{2-8-9}{\text{a}}$ ⁴ (to buy).
 $\overset{2-6}{\text{i}}\overset{2-6}{\text{z}}\overset{3-6-3-9}{\text{i}}\overset{3-6-3-9}{\text{x}}\overset{3-6-3-9}{\text{u}}\overset{3-6-3-9}{\text{b}}\overset{3-6-3-9}{\text{u}}\overset{3-6-3-9}{\text{l}}\overset{3-6-3-9}{\text{u}}\overset{3-6-3-9}{\text{z}}\overset{3-6-3-9}{\text{i}}$ (liquid food).

Nevertheless in many cases **x** is the emphatic form of **h**; thus a more emphatic imperative of

$\overset{3}{\text{h}}\overset{3}{\text{a}}\overset{9}{\text{m}}\overset{9}{\text{b}}\overset{9}{\text{a}}$ (go !) is $\overset{2}{\text{x}}\overset{2}{\text{a}}\overset{9}{\text{m}}\overset{9}{\text{b}}\overset{9}{\text{a}}$,⁵
 $\overset{5}{\text{h}}\overset{5}{\text{i}}\overset{5-3-9}{\text{b}}\overset{5-3-9}{\text{i}}\overset{5-3-9}{\text{l}}\overset{5-3-9}{\text{i}}\overset{5-3-9}{\text{z}}\overset{5-3-9}{\text{a}}$ (drink the porridge) is $\overset{4}{\text{x}}\overset{4}{\text{i}}\overset{4-2-9}{\text{b}}\overset{4-2-9}{\text{i}}\overset{4-2-9}{\text{l}}\overset{4-2-9}{\text{i}}\overset{4-2-9}{\text{z}}\overset{4-2-9}{\text{a}}$,
 $\overset{4}{\text{h}}\overset{4}{\text{a}}\overset{3-9}{\text{f}}\overset{3-9}{\text{a}}\overset{3-9}{\text{z}}\overset{3-9}{\text{a}}$ (rinse the dish !) is $\overset{3}{\text{x}}\overset{3}{\text{a}}\overset{2-9}{\text{f}}\overset{2-9}{\text{a}}\overset{2-9}{\text{z}}\overset{2-9}{\text{a}}$.

Emphatic Forms are further noticed in § 9.

¹ Including A. C. Bryant: see under "h" in his Dictionary.

² Though possibly not so with all speakers.

³ Less commonly $\overset{3-3-5-3-8-9}{\underset{3-3-5-3-8-9}{\dot{u}}}\overset{3}{\text{m}}\overset{3}{\text{h}}\overset{3}{\text{a}}\overset{3}{\text{u}}$.

⁴ Less commonly $\overset{3-2-2-8-9}{\underset{3-2-2-8-9}{\dot{u}}}\overset{3-2-2-8-9}{\text{k}}\overset{3-2-2-8-9}{\text{u}}\overset{3-2-2-8-9}{\text{h}}\overset{3-2-2-8-9}{\text{w}}\overset{3-2-2-8-9}{\text{e}}\overset{3-2-2-8-9}{\text{f}}\overset{3-2-2-8-9}{\text{a}}$.

⁵ Notice the rise of pitch in the emphatic forms.

§ 7. Glottal Fricatives

Zulu employs both voiced and unvoiced glottal fricatives. The unvoiced form (**h**) is the same as **h** in the English word *hand*. The voiced form (**ɦ**) is seldom found in European languages, but is used in the English expression **ɦɦ**, an alternative to **ɦɦ**, commonly written as *humph!* In addition to these two forms of glottal fricative, there is an instance of the unvoiced form being prolonged so as to become almost syllabic. To express this, I use the symbol **h:**. There is also one instance of the voiced form being used syllabically (**ɦ**). The glottal nasal (**ɦ̃**) was dealt with in the last chapter.

(i) *Unvoiced Glottal Fricative.*

^{3 3 9}
há:m̃ba (travel).
^{6 6-3}
há:za¹ (shower down).
^{3 2 2-8 9}
ùkuhá:ha (be greedy).
^{2 6 2 9}
izihá: (kind of loin cloth).
^{2-4 2 9}
u:hú:m̃e (chain of people).
^{3 2 2-4}
ukú:thi há: há: há: ² (to sizzle).

(ii) *Long Unvoiced Glottal Fricative.*

Found only in the exclamation **h:**³⁻⁵
^{6-3 4 6-3-5 3-5}
fié:a wó: h:óu (Look out! Oh! Ah!)³
^{3-5 8 8 3 3 8 3-8 8 9}
h:óu: - ùjòhá:m̃busi:ñda (Wheu! you escaped by the skin
of your teeth!)
^{3-5 6-3 3 3-4 3 3-4 3 6 6 6 3 3-8 9}
h:óu: - ɦgesì:ɦsikhá:thi - ɦgiophùmélé:la (Wheu! next time
I'll manage to get through!)

(iii) *Voiced Glottal Fricative.*

This sound is pronounced as **h** with accompanying vibration of the vocal chords. The voicing of **h** has the effect of making the following vowel appear to be very roughly pronounced, and gives

^{6 6-3}
¹ Or **xá:za**.

^{5 5 8-3 9}
² The verb formed from this is **xáxazi:sa** (to sizzle), which form again shows the close connexion between **x** and **h**.

³ From "Old-time Chants of the Mpumuza Chiefs", by P. R. Kirby in *Bantu Studies*, vol. ii, No. 1, p. 30.

the impression that the **h** has been dropped.¹ In current Zulu orthography this fricative is not distinguished from the unvoiced form. Bryant and Samuelson use *hh* to signify it, and the latter amusingly calls it "Barytone-H".²

Examples : $\overset{3-6-3-9}{\text{ɪ:fú:ɸ}} \text{ (horse).}$
 $\overset{3-4-8-3-9}{\text{ùnəhíé:m}} \text{ (crested-crane).}$
 $\overset{6-6-3-9-9}{\text{iziihó:fió}} \text{ (large huts).}$
 $\overset{3-3-8-8-3-8-8-3}{\text{ùmfiá:fiá}} \text{ (with expedition).}$
 $\left. \begin{array}{l} \overset{6-3-6-6-3-4}{\text{wó: fié:a}} \\ \overset{6-3-6-6-3-4}{\text{fió: fié:a}} \end{array} \right\}^3 \text{ (bah !)}$

Care must be taken in distinguishing **fi** from **h** because they are phonemically different, e.g. :

$\overset{3-2-9}{\text{hɛβé:za}} \text{ (whisper) and } \overset{8-3-9}{\text{fiɛβé:za}} \text{ (split open the head).}$
 $\overset{5-3}{\text{hé:ha}}^4 \text{ (entice) and } \overset{8-8-3}{\text{fié:fiá}} \text{ (split open the head).}$

(iv) *Syllabic Voiced Glottal Fricative*

This is found, as far as I know, only in the expression $\overset{8-3}{\text{fiwá:}}$, an exclamation used when waking someone up. **fi** is extremely short, and it is only its separate tone which indicates that it is syllabic. Notice that the vowel is pronounced with epiglottal friction.

§ 8. Voiced Rolled Lingual

In Zulu the symbol *r* is used to indicate the unvoiced velar fricative (**x**). The choice of this symbol is unfortunate, because of

¹ In the Bushman texts published by Dr. L. C. Lloyd in 1911, a number of the vowels is marked with the diacritic $\underline{=}$ beneath, and in explanation on p. viii of the preface, this is said to indicate "a rough, deep pronunciation of the vowel". Further research into Bushman phonetics may reveal that this is none other than **fi** (a sound which I found to occur in the $\text{çh}\bar{\text{u}}$: Bushman language), and if so, that Zulu owes more than the clicks and the velar lateral affricate to the Bushmen. It is possible also that this roughening of the Bushman vowels may be due to epiglottal friction as with Zulu $\underline{\text{a}}$, etc.

² In *The King Cetywayo Zulu Dictionary* (Intro., p. xlii), R. C. A. Samuelson writes, with more humour than accuracy: "It should be pronounced with a heavy, humming, barytone intonation something like the utterance of H by a person who, while uttering it, gets a thump in the pit of the stomach; or something like the sound uttered by a growling dog."

³ Usually written *wo eya*.

⁴ Or $\overset{5-3}{\text{xé:xa}}$.

the prevalence of the rolled-*r* across the Drakensberg among the Basuto. It is additionally unfortunate, when it is known that in Zulu itself there are two compound sounds containing the rolled lingual. In these compounds, *ndr* and *phr*, the *r* is strongly rolled and carried on for considerable length. The only instances of which we know are of onomatopœic words indicative of the flight of birds.¹

3 3-5 5 3-3 3-5 5 6
ipó:ni jú:thi ndr̄:: (the bird flew off).
 6 6 3-5 5 8-3 3-5
izipó:ni zú:thi phr̄:: (the birds flew off).

In the second example given the *r* is unvoiced owing to the unvoiced explosive immediately before it.

§ 9. Phonetic Morphology to Express Emphasis

It will be seen later that in Zulu there is no emphatic stress, or as it is sometimes called "sentence stress"; an alteration in word order takes the place of emphatic stress. In order to emphasize any particular word, that word usually takes precedence in order in the sentence. Further, in order to give a more forcible expression to certain words the tone is usually raised, and in two cases the form of the first consonant of the stem may be altered. This has been found to be the case with two consonants in Zulu, and both of these are unvoiced fricatives, viz., *f* (pre-palatal fricative) and *h* (glottal fricative). The pre-palatal fricative gives place to the aspirated pre-palatal affricate (*tfh*), which must be carefully distinguished from the commonly-met-with ejective affricate (*ʈfʔ*). The glottal fricative gives place to the unvoiced velar fricative (*x*), which is, in many cases, simply interchangeable with *h*.

f > *tfh*. ^{5 4} *fé:fa* (hasten) > ^{4 3} *tfhé:tfhá* (be quick !)
 (Other examples are given in Chapter IX).

^{3 3 9} *há:mmba* (travel) > ^{2 2 9} *xá:mmba* (get along !)
 (Other examples are given in § 6 of this Chapter.)

¹ This sound has been noticed by Mr. Carl Faye, in his recent book, *Zulu References*. See the note to p. 2.

CHAPTER VIII

THE LATERALS

§ 1. The Laterals in Zulu

Zulu has four lateral sounds, one of which is not found apart from ejective affricate combination. Of the other three, two are lateral fricatives, the voiced variety of which, I believe, has no representative in any European language. For the production of all three of these sounds, the tongue-tip has approximately the alveolar point of articulation considerably further forward than in the articulation of English *l*. As is the case with the English lateral, the back and the blade of the tongue are adjusted according to the resonance of the adjacent vowels : so also is the position of the tongue-tip, which is considerably further forward for *li* than for *li*; nevertheless Zulu does not show this shifting to anything like the degree noticed with a Suto speaker who was examined. In the case of the fricatives, the side of the tongue, where friction is made, is raised higher than in the case of *l*, so that friction takes place between it and the palate.

The symbols used for these three laterals are : *l* (voiced alveolar lateral), *ɭ* (unvoiced fricative alveolar lateral), and *ɮ* (voiced fricative alveolar lateral). A comparison of the following kymograph mouth-tracings shows that, since *l* is not a fricative, the line is scarcely forced up at all, but the vibration shows the voicing of the sound, which merges into the following vowel with only the slightest indica-

(a)



(b)



(c)



(a) Mouth-tracing of *la*. (b) Mouth-tracing of *ɭa*. (c) Mouth-tracing of *ɮa*.

(Each by F. Nxele, speed $9\frac{1}{2}$ secs. per metre.)

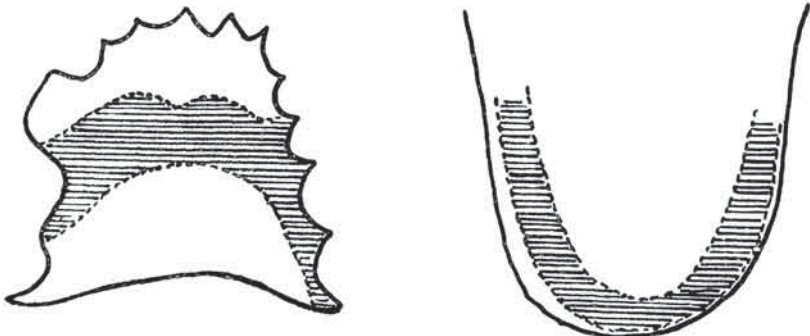
tion of a break when the tongue-tip is released. With the unvoiced fricative ɬ , the line is considerably bowed, indicating friction; it is clear of voice vibrations until the tongue is released and the vowel follows. With the voiced fricative ɮ , the line is bowed, but not so much as for ɬ , the voicing which appears throughout lessening the bowing by compensation. That means that there is less actual friction when voicing takes place.

All three of these lateral sounds are phonemically different, e.g. :

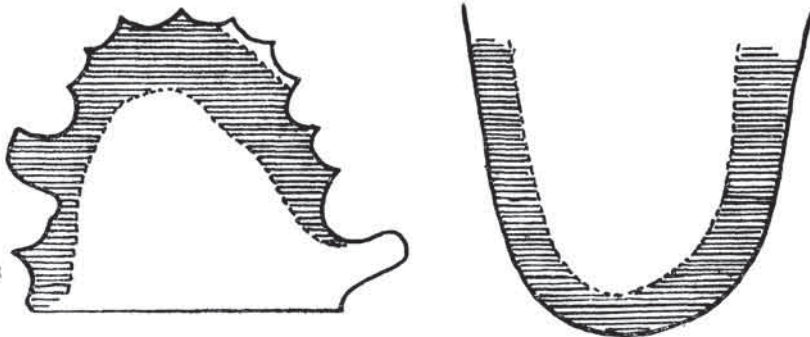
$\overset{8-3}{\text{l}}\overset{9}{\text{á}}\text{la}$ (sleep), $\overset{3}{\text{ɬ}}\overset{9}{\text{á}}\text{la}$ (sit), $\overset{8-3}{\text{ɮ}}\overset{9}{\text{á}}\text{la}$ (play).

§ 2. The Unvoiced Alveolar Lateral

This is made with tongue-tip articulation, considerably further forward than in English. The palatograph reveals the fact that



English la.



Zulu la.

Palatographs comparing English ¹ l with Zulu l. (The shaded portion of the tongue touches the shaded portion of the palate)

¹ From my own palatograph impression.

Zulu l is made with the tongue-tip rather to the one side of the centre of the alveolus. In the case of the subject with whom the palatography experiments were carried out, the sound issued unilaterally on the side furthest from the tongue-tip.

In Zulu l is always of the clear forward variety, the velarized "dark-l" found in final positions in English words never occurring in Zulu.

As has already been observed, when dealing with the nasals, the general rule in modern Zulu is for the nasal to drop before l, leaving this lateral unaltered. Instances of its change to nd, as in many other Bantu languages, are found, but they are rare, and this is not the regular rule for nasal influence in Zulu.

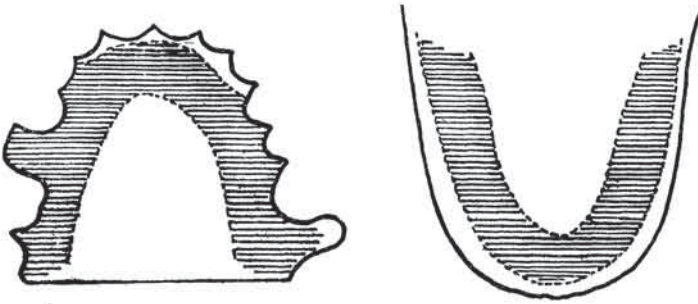
Examples : $\overset{6}{l}\overset{6}{a}:\overset{6-3}{mmba}$ (be hungry).
 $\overset{5}{l}\overset{4}{i}:\overset{9}{la}$ (cry)
 $\overset{5}{l}\overset{4}{\beta}\overset{9}{\beta}:\overset{9}{la}$ (pay marriage compensation)
 $\overset{2-2-4}{\dot{u}}\overset{3-3}{l}\overset{9}{h}\overset{9}{u}:\overset{9}{ni}$ (fire-wood)
 $\overset{2-4}{w}\overset{3-3-8-8-3-8-9}{a}:\overset{9}{mla}:\overset{9}{nd}\overset{9}{\epsilon}:\overset{9}{la}$ (he followed him).
 $\overset{2-4}{u}:\overset{3-8-9}{l}\overset{9}{a}:\overset{9}{za}$ (cream).

In Bantu languages generally l has a less abiding nature than most consonants. This is perhaps most noticeable when comparing Swahili words, especially verbal derivative suffixes, with the fuller, older forms in the languages of the interior from which Swahili has obviously been built up. In Zulu, too, there are certain traces of the lack of persistence of the l; for instance, the full-form prefixes of the singulars of Classes 2 and 6 are *li-* and *ulu-* respectively, while the usual modern forms of everyday use are respectively *l-* and *u-*. Then, again, the suffix to form the perfect stem of verbs is generally *-ile*, and this is often contracted, as will be seen later, by an elision of the l. For syllabic laterals see § 6.

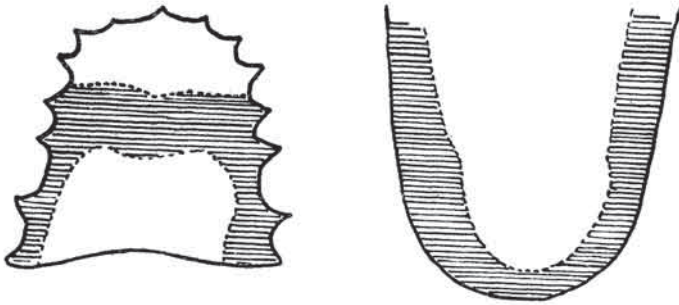
§ 3. The Unvoiced Fricative Alveolar Lateral

This is not the unvoiced form of l (l̥), which would be a quiet frictionless passing of the air, almost a silence. It cannot, therefore, be written with the symbol l̥. It is very similar to the Welsh ll,¹ as in Llanelly (ɬanɛɬɪ).

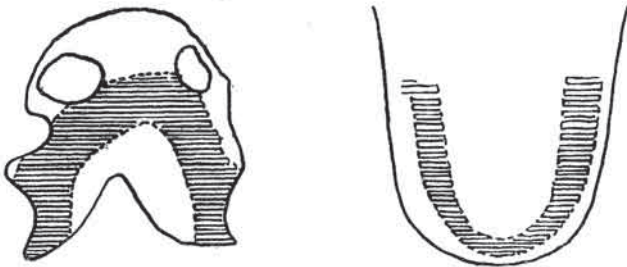
¹ Both Welsh and French sounds, as in *pœpl*, are commonly called "unvoiced-l" and written phonetically with l̥, but this is obviously incorrect in the former case. Even the French sound does not seem to be devoid of friction.



Zulu ɛa.



Suto ɛa.



Welsh ɛa.

Palatographs: Zulu of F. Nxele; Suto of H. Moshoeshoe; Welsh, by kind favour of Mr. G. T. R. Evans, B.Sc., of the Witwatersrand University, a native of Mid-Wales.

From the three palatographs above it is evident that there is no **radical** difference between Welsh, Zulu, and Suto ɛ. In the case of the Zulu sound, the tongue has a rather more forward position than for the others, though the Welsh graph is not quite conclusive as the holes in the palate indicate the protrusion of teeth on the old teeth ridge; the new set being fixed much further forward. The Zulu

and Welsh portions of the tongue affected seem to correspond most closely, not being so close to the edge as is the case with the Suto.

Many European speakers, to whom this sound is foreign, find great difficulty in acquiring it. Some pronounce a compound of velar fricative, viz., **xl**; others a compound of inter-dental fricative, viz. **θl**; and others, amongst whom I have noticed especially Dutch speakers, a compound of pre-palatal fricative, viz., **ʃl**.¹ The best rule to insist on is that the tongue be kept rigidly in the position for **l** all the time; as soon as the sound is approximately reached, the tongue will adjust itself to the position somewhat variant from that of **l**. The same applies to the learning of **ʒ**.

Examples : $\overset{5}{\text{ɬ}}\overset{4}{\text{u}}\text{:pha}$ (trouble).
 $\overset{5}{\text{ɬ}}\overset{5}{\text{u}}\overset{3}{\text{ɛ}}\overset{9}{\text{l}}\text{:la}$ (sing).
 $\overset{2}{\text{u}}\overset{2}{\text{l}}\overset{4}{\text{a}}\overset{3}{\text{ɬ}}\overset{6}{\text{ɬ}}\overset{6}{\text{ɬ}}\overset{6}{\text{ɬ}}\overset{3}{\text{ɬ}}\overset{9}{\text{l}}\text{:thi}$ (flank).
 $\overset{2}{\text{n}}\overset{2}{\text{a}}\overset{4}{\text{ɬ}}\overset{4}{\text{a}}\text{:ndzɛ}$ (to-day).
 $\overset{2}{\text{u}}\overset{2}{\text{k}}\overset{4}{\text{ɬ}}\overset{3}{\text{ɛ}}\text{:fa}$ (to slander).
 $\overset{3}{\text{ɬ}}\overset{9}{\text{i}}\text{:ndza}$ (flay).

When preceded by the homorganic nasal, the alveolar nasal, **ɬ** becomes the ejective affricate **tɬʔ**, e.g. :

$\overset{3}{\text{u}}\text{:}\overset{4}{\text{ɬ}}\overset{2}{\text{ɬ}}\overset{2}{\text{ɬ}}\overset{8}{\text{ɬ}}\overset{9}{\text{ɬ}}$ (species) > $\overset{6}{\text{i}}\overset{6}{\text{z}}\overset{3}{\text{i}}\overset{8}{\text{n}}\overset{9}{\text{t}}\overset{4}{\text{ɬ}}\overset{2}{\text{ɬ}}\overset{6}{\text{ɬ}}\overset{9}{\text{ɬ}}$ (pl.).
 $\overset{3}{\text{u}}\text{:}\overset{4}{\text{ɬ}}\overset{2}{\text{ɬ}}\overset{2}{\text{ɬ}}\overset{8}{\text{ɬ}}\overset{9}{\text{ɬ}}$ (dry stalk) > $\overset{6}{\text{i}}\overset{6}{\text{z}}\overset{3}{\text{i}}\overset{8}{\text{n}}\overset{9}{\text{t}}\overset{4}{\text{ɬ}}\overset{2}{\text{ɬ}}\overset{6}{\text{ɬ}}\overset{9}{\text{ɬ}}$ (pl.).
 $\overset{3}{\text{i}}\overset{3}{\text{n}}\overset{6}{\text{t}}\overset{6}{\text{z}}\overset{8}{\text{i}}\overset{3}{\text{l}}\overset{3}{\text{i}}\overset{9}{\text{j}}\text{:jɔ}$ (heart).

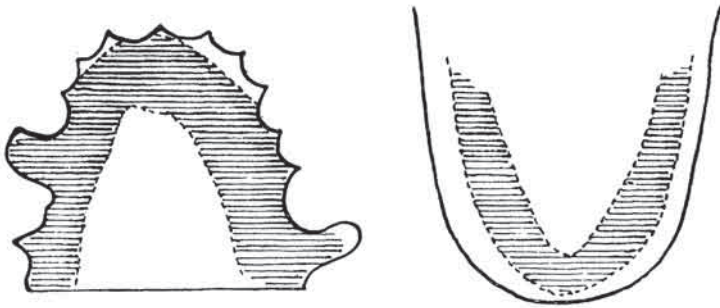
The presence of this affricate is not generally ² recognized, the last-mentioned word above being written in current Zulu as *inhliziyo*, *hl* being the regular group symbol by which **ɬ** is represented in Zulu orthography.

§ 4. The Voiced Fricative Alveolar Lateral

This may be described as the fully-voiced form of **ɬ**, or the fricative form of **l**. The tongue is somewhat more tense for this voiced form than for the unvoiced, as may be seen from a comparison of the palatographs.

¹ Notice the common "kitchen Kafir" pronunciation of $\overset{5}{\text{k}}\overset{4}{\text{a}}\text{:}\overset{4}{\text{ɬ}}\text{:ɛ}$, as **ga:ʃl**.

² Bryant and one or two others do recognize it.



Zulu ɣa.

As has been noticed already, ɣ differs from l in that the side of the tongue is raised sufficiently to produce friction with the palate. The air escapes unilaterally, but somewhat further back in the mouth than for l. This sound is extremely difficult for European speakers to acquire. Again, control of the organs of speech is essential. If learners acquire the pronunciation of ɣ, they must be able to voice the sound without altering in any appreciable way the position of the tongue.

- Examples : ^{3 3-6 6-3} ukú:ɣa (to eat).
^{8-3 9} ɣú:la (pass).
^{3 2 9 9} àmaɣó:zi (spirits).
^{3 2 9 9} isiɣó:ɣa (chief's enclosure).
^{3-6 8-3 9} u:ɣwé:ɣwe (long staff).
^{3-6 8-3 9} i:ɣé:lo (pasture-ground).
^{3 2 2-4 8 8-9} ukú:thi báɣu (to patch with a different colour).

When preceded by the homorganic nasal, ɣ becomes the voiced affricate dɣ. In current Zulu orthography ɣ is represented by dhl, and so it is impossible in such orthography to distinguish the fricative from the affricate. The affricate is not generally recognized as such, but many Europeans erroneously think that they hear a d in the fricative ɣ.

- Examples of ndɣ : ^{6 6 6-3 8-9 9} indɣù:ɣundɣú:ɣu (poor quality cloth).
^{3 2 9} isa:ndɣa (hand).
^{3 2 9} ama:ndɣa (strength).

² ⁹ ⁹
 indǃǃé:la (path).
² ⁹ ⁹
 endǃǃí:ni (in the house).

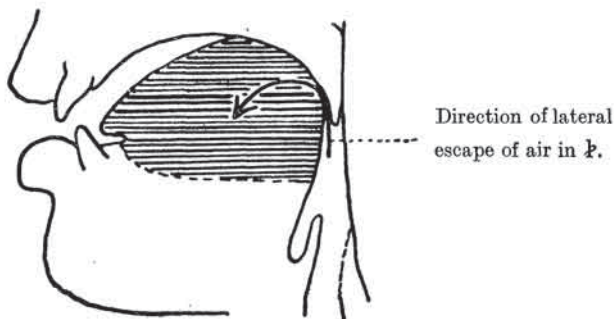
²⁻⁴ ⁸⁻³ ⁸⁻³ ⁹ ² ⁶ ⁸⁻³ ⁸⁻³ ⁹
 ù:ǃǃondǃǃwá:ne (headstrong person) > izindǃǃondǃǃwá:ne (pl.).

In the formation of the diminutives of Zulu nouns, of which the last syllable commences in l, an alternative form is made by changing that l to ǃ, and suffixing -ana.

Examples : ³ ³⁻⁵ ⁴ ⁹ ³ ³⁻⁵ ⁴ ⁹ ⁹
 àmaǃǃé:le (breasts) > àmaǃǃéǃá:na.
³ ² ²⁻⁸ ⁹ ³ ³ ² ⁹ ⁹ ⁹
 ùmmǃǃǃǃǃǃá:la (river) > ùmmǃǃǃǃǃǃá:na
³⁻² ²⁻⁸ ⁹ ³ ² ⁹ ⁹
 i:thó:le (heifer) > i:thǃǃá:na.

§ 5. Unvoiced Fricative Velar Lateral

This sound is not found in Zulu apart from the affricate combination, kǃ?, which will be discussed in the next chapter. To examine the lateral part alone, however, we find that the position of the tongue-tip is immaterial. It may be a position of rest; it may be down; and



Approximate tongue-position diagram for Zulu ǃ.

I have seen the sound clearly enunciated with the tongue-tip well out between the teeth. The back of the tongue, however, is raised to touch the velum in the middle, as for k,¹ while a narrow space is left at the one side for the air to rush out unilaterally, causing considerable friction as it does so. ǃ is unvoiced, and is the velar counter-type of the alveolar ǃ already described.

¹ This may be for a slightly more forward k than is normal in Zulu, though I do not think, from a comparison of the nasal, ŋ, used before both k? and kǃ?, that there is any material forward alteration in the position.

§ 6. Syllabic Laterals or Lateral Vowels

The syllabic lateral, **l̥**, has long been recognized as an integral part of Suto speech, but the existence of such a thing in Zulu has hitherto been unsuspected. Appendix III to this work indicates that I am by no means satisfied with the present accepted division of speech sounds into Vowels and Consonants. The discovery of the syllabic laterals in Zulu have made this dissatisfaction only more accentuated. Anyone hearing these sounds cannot fail to recognize their distinct vowel quality and syllabic nature. For this reason I have found it impossible to include them in any of the tables of vowels or consonants. Though I have noted them when dealing with semi-consonants, I cannot refrain from terming them "Lateral Vowels".

In Zulu these are two in number, the first being the vowel **l̥** with the tongue in the position of **l**, and the second being the vowel **u** with the tongue in the position of **l**. There are no lateral vowels in Zulu with the qualities of vowels other than **l̥** or **u**.

(i) *Forward Lateral Vowel*: **l̥**.

Description: Tongue-tip against alveolus as for **l**, lips spread as for vowel **l̥**; fully syllabic and exercising the vowel-quality of **l̥**. This sound takes the place of Zulu **l** under certain circumstances. These will be considered later. In order to pronounce **l̥**, place the tongue as for **l**, and then try to pronounce the vowel **l̥** without removing the tip of the tongue.

Examples: ^{33-56-33-4 3 9} **àḥazá:l̥ ḥá:khə** (thy parents).

³³⁻⁸⁸⁻³⁹ but **àḥazá:l̥** when final in a sense-group.

^{6-3-533-4 4 4 3 3 9} **ḡgàḥḥá:na ḥá:mmba** (I saw it travelling).

^{2-66-33-4 33-43-89} **l̥:fiá:f̥l̥ èḥkhú:lu** (a big horse).

Further examples will be seen in the phonetic transcriptions in Chapter XXI.

(ii) *Back Lateral Vowel*: **u̥**.

Description: Tongue-tip against alveolus as for **l**, tongue-back raised and lips fully rounded as for vowel **u**; fully syllabic and exercising the vowel-quality of **u**. This sound takes the place of Zulu **lu** under certain circumstances. In order to pronounce **u̥**, place the tongue as for **l**, and then try to pronounce the vowel **u** without removing the tip of the tongue.

Examples : $\overset{33-4}{k\grave{a}}\overset{33-4}{t}h\overset{3}{l}u\overset{3}{m}$ (of Lutoluni).
 $\overset{22-4}{k\grave{u}}\overset{3}{\grave{u}}\overset{3}{k}h\overset{9}{u}\overset{3}{m}$ (it is hard).
 $\overset{2-4}{u:k}h\overset{4}{u}\overset{4}{m}$ $\overset{33-4}{\grave{o}}\overset{3-8}{\grave{u}}\overset{9}{k}h\overset{3-8}{u}$ (big piece of firewood).

\grave{u} and \grave{u} are usually found in Zulu instead of **h** and **lu**, except in the following circumstances :

- (a) When the final syllable in any sense-group.
 (b) When **la**, **le**, etc., have become **h** or **lu** through elision in the formation of a new word-group.
 (c) When emphatic.
 (d) When long.
 (e) When having main stress.
 (f) With nouns having the class prefixes **ulu-** and **ilu-** in their full forms, e.g. $\overset{22-4}{\grave{u}}\overset{2-8}{l}u\overset{9}{k}h\overset{3}{u}\overset{3-56-39}{m}$ (firewood), $\overset{33-56-39}{\grave{u}}\overset{3}{l}i\overset{3}{f}\overset{3}{a}:\overset{3}{f}$ (horse).
 (g) With the first syllable of reduplications, which read **lu \grave{u}** and **h \grave{u}** ; e.g., $\overset{22-4}{\grave{u}}\overset{4}{l}u\overset{4}{k}h\overset{33-55}{\grave{u}}\overset{58-3}{\grave{a}}\overset{9}{z}\overset{5}{a}:\overset{5}{z}\overset{58-3}{\grave{e}}\overset{9}{l}\overset{a}$ (greenish firewood), $\overset{5}{l}\overset{5}{u}:\overset{5}{z}\overset{5}{e}:\overset{9}{l}\overset{a}$ (go blindly), $\overset{44}{\grave{u}}\overset{3}{s}:\overset{9}{e}:\overset{9}{l}\overset{a}$ (wail).

Further, whenever the next syllable commences in a semi-vowel, **w** or **j**, **h** and **lu** are always found, e.g. $\overset{33-54}{l}\overset{4}{i}:\overset{4}{j}\overset{9}{a}h\overset{4}{a}:\overset{9}{m}b\overset{4}{a}$ (it is travelling), $\overset{2}{l}\overset{2-42-89}{w}\overset{2}{a}f\overset{2}{u}:\overset{2}{n}\overset{a}$ (it wants them). When the next syllable commences in an alveolar fricative, **s** or **z**, if that syllable is stressed, \grave{u} and \grave{u} are used ; if unstressed **h** and **lu** are found.

Examples : $\overset{43-89}{\grave{u}}\overset{4}{s}i:\overset{4}{z}\overset{48-39}{a}:\overset{4}{s}\overset{a}$ (it helping), but $\overset{4}{l}\overset{48-39}{i}:\overset{4}{s}i:\overset{4}{z}\overset{48-39}{a}:\overset{4}{s}\overset{a}$ (it causing to help).
 $\overset{48-39}{\grave{u}}\overset{4}{z}\overset{4}{a}:\overset{4}{m}\overset{4}{a}:\overset{53-89}{s}\overset{4}{a}:\overset{53-89}{z}\overset{4}{a}:\overset{53-89}{m}\overset{4}{a}$ (it trying), but $\overset{48-39}{l}\overset{4}{z}\overset{4}{a}:\overset{4}{m}\overset{4}{a}:\overset{53-89}{s}\overset{4}{a}:\overset{53-89}{z}\overset{4}{a}:\overset{53-89}{m}\overset{4}{a}$ (it causing to try).

CHAPTER IX
THE AFFRICATES

§ 1. The Scheme of Affricate Formation in Zulu

An affricate sound is a combination of an explosive immediately followed by a fricative of corresponding organic position. In Zulu there are eleven affricate combinations, and the similarity of their formation is striking. There are seven unvoiced affricates, six of which are ejective and one aspirated, and four voiced affricates. Thus we see, for Zulu, two main types of affricate sounds, the ejective and the voiced, with one instance of an aspirated form. Suto regularly shows the three types, the ejective, the aspirated, and the voiced. From the following table it will be seen that some of the affricates in Zulu are not used apart from the homorganic nasals, while others are found at times with and at times without the nasal.

Table of Zulu Affricates.

	Explosive.	Fricative.	Nasal.	Affricate.		
Denti-Labial { Ejective . . . Voiced . . .	[ɸʔ] [ɸ]	f v	[ŋ]	ŋɸfʔ ŋɸv		
Alveolar { Forward { Ejective Voiced Lateral { Ejective Voiced	tʔ d	s z		n	(n)tsʔ ndz	
	tʔ d	ɬ ʒ	ntɬʔ ndʒ			
	Pre-Palatal { Ejective . . . Aspirated . . . Voiced . . .	[tʔ] [th] [d]	ʃ		p	(p)tʃʔ tʃh
		Velar { Forward, Ejective . . . Lateral, Ejective . . .				kʔ	ɣ	(ɣ)dkʒ (ɣ)kxʔ

Note.—Symbols in square brackets indicate sounds not used apart from affricate combination. (For the rare instances of ʒ used in ordinary Zulu speech alone see Chapter VII.) Round brackets enclosing nasals indicate that the affricates are found both with and without the nasal.

It must be remembered that in Zulu whenever a fricative, other than the glottal and velar fricatives, is preceded by the homorganic nasal, that fricative becomes affricate. In addition to such affricates, Zulu possesses six affricates which are found apart from any nasal

influence. These are $tsʔ$, $tʃʔ$, $tʃh$, $dʒ$, $kxʔ$, and $kɰʔ$. It is evident that it is the ejective explosive which is the explosive element in six of the unvoiced affricates. The fact that, in Zulu, only explosives and affricates are ejective, fricatives never being found so, may be due to the fact that the tension necessary in the production of the ejection necessitates the presence of the explosive also. In no case in Zulu is the nasal found to be syllabic before affricates: homorganic syllabic nasals only occur before the explosives.

§ 2. The Denti-labial Affricates

(i) Ejective: $\eta\varphiʔ$

$\eta\varphiʔ$ is never found in Zulu apart from the denti-labial nasal. It is the resultant of nasal influence upon the denti-labial unvoiced fricative, f .¹

Examples: $\overset{3}{\eta}\overset{3-8}{\varphi}\overset{9}{ʔ}\acute{\epsilon}:\acute{n}\acute{\epsilon}$ (baboon).
 $\overset{3}{\acute{i}}:\overset{9}{\eta}\overset{9}{\varphi}\overset{9}{ʔ}\acute{\epsilon}$ (sweet reed).
 $\overset{3}{\acute{i}}\overset{3-5}{\varphi}\overset{4}{\varphi}\overset{9}{ʔ}\acute{i}\acute{\acute{e}}:\acute{z}\acute{i}$ (fire-flies).
 $\overset{3}{\eta}\overset{3}{\varphi}\overset{2}{ʔ}\overset{9}{\acute{a}}\overset{9}{\eta}\overset{9}{\varphi}\overset{9}{ʔ}\acute{a}:\acute{t}\acute{h}\acute{a}$ (gnaw).
 $\overset{3}{\acute{u}}\overset{3-5}{\varphi}\overset{4}{\varphi}\overset{4}{ʔ}\acute{a}:\overset{9}{\eta}\overset{9}{\varphi}\overset{9}{ʔ}\acute{u}$ (October).
 $\overset{3}{\acute{u}}\overset{2}{\acute{k}}:\overset{2-4}{\acute{t}}\overset{8}{\acute{h}}\overset{8-9}{\eta}\overset{9}{\varphi}\overset{9}{ʔ}\acute{u}$ (to appear suddenly).

η never becomes syllabic, and is never found in Zulu apart from these affricates. Care must be taken to contrast² the pronunciation of \underline{m} (bi-labial syllabic nasal), as found in such words as:

$\overset{3-3-5}{\acute{u}}\overset{4}{\underline{m}}\overset{3-5}{\acute{f}}\overset{4}{\acute{u}}:\overset{4}{\acute{l}}\overset{4}{\acute{u}}$ (large bundle).
 $\overset{3-3-5}{\acute{u}}\overset{4}{\underline{m}}:\overset{4}{\acute{f}}\overset{4}{\acute{o}}$ (brother).
 $\overset{3-3-5}{\acute{u}}\overset{4}{\underline{m}}\overset{4}{\acute{f}}\overset{9}{\acute{a}}:\overset{9}{\acute{n}}\overset{9}{\acute{a}}$ (boy).

The stem of nouns, such as $\overset{3}{\eta}\overset{3-8}{\varphi}\overset{9}{ʔ}\acute{\epsilon}:\acute{n}\acute{\epsilon}$, will always begin in f , as $-f\acute{\epsilon}n\acute{\epsilon}$. Notice the correct spelling of the Zulu word for "river": $\overset{3-2}{\acute{u}}\overset{2-8}{\eta}\overset{9}{\varphi}\overset{9}{ʔ}\acute{u}:\acute{l}\acute{a}$, plural $\overset{3-2}{\acute{i}}\overset{2-8}{\eta}\overset{9}{\varphi}\overset{9}{ʔ}\acute{u}:\acute{l}\acute{a}$.

¹ In all probability this sound occurs in the Central Bantu languages, e.g. in Lamba, as in the word *mfi* (these are they), which is probably phonetic $\eta\varphiʔi$, though I have had no opportunity of testing this conclusively.

² Dhlomo and many other Zulus also pronounce f after \underline{m} in this way, e.g. $\overset{3-3-5}{\acute{u}}\overset{4}{\underline{m}}:\overset{4}{\acute{f}}\overset{3-3-5}{\acute{a}}:\overset{4}{\acute{f}}\overset{9}{\acute{o}}$, $\overset{4}{\underline{m}}\overset{4}{\acute{f}}\overset{9}{\acute{a}}:\overset{9}{\acute{n}}\overset{9}{\acute{a}}$; but notice the plurals $\overset{3-3-5}{\acute{a}}\overset{4}{\acute{f}}\overset{9}{\acute{o}}$, $\overset{4}{\acute{f}}\overset{3-3-5}{\acute{a}}\overset{4}{\acute{f}}\overset{9}{\acute{a}}:\overset{9}{\acute{n}}\overset{9}{\acute{a}}$, never have the ejective affricate.

(ii) Voiced : $\eta\theta v$.

θv , as $\theta f^?$, is never found in Zulu apart from the denti-labial nasal. It is always the resultant of nasal influence upon the denti-labial voiced fricative, v .

Examples : $\overset{2}{i}\overset{8-3-8-9}{\eta\theta v\acute{u}:la}$ (rain).

$\overset{3-6}{\acute{i}}\overset{8-3}{\eta\theta v\acute{u}}$ ¹ (sheep).

$\overset{3}{u}\overset{2}{k\acute{u}}:\overset{2-4}{thi} \overset{6-3}{\eta\theta v\acute{u}}$: (to scoop up a spoonful).

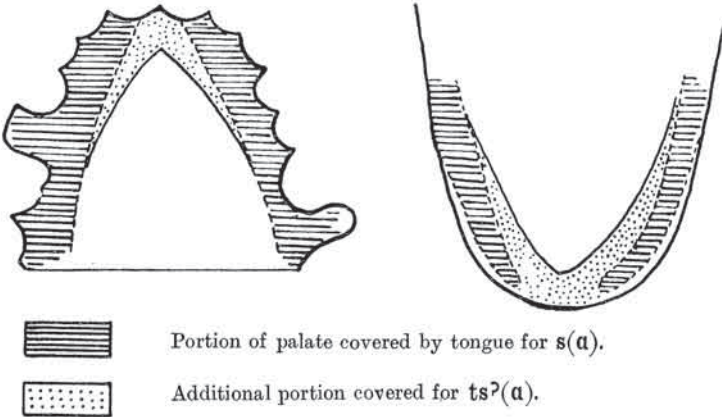
$\overset{3}{u}\overset{2}{k\acute{u}}:\overset{2-4}{thi} \overset{6}{\eta\theta v}\overset{6}{\acute{e}}\overset{3}{n\acute{e}}\overset{6}{\acute{e}}\overset{3}{\acute{e}}$:: (to tingle).

Contrast $\overset{3}{\acute{u}}\overset{2}{m}\overset{9}{v\acute{i}}:\overset{9}{mmb\acute{o}}$ (weal), $\overset{3-3-8-8-3}{e\acute{m}:va}$ (behind), etc., with syllabic- m .

§ 3. Alveolar Affricates (forward)

(i) Ejective : $ts^?$ and $nts^?$.

This unvoiced affricate is always ejective, though at times, if there is no emphasis, and if the affricate is part of an unstressed syllable, the ejection is scarcely perceptible to the untrained ear. The elements of this affricate are practically the same as in the English word *its*, though the ejection of the Zulu sound makes a marked distinction.



Palatograph comparing Zulu $s(a)$ with Zulu $ts^?(a)$.

Examples of $ts^?$: $\overset{3}{u}\overset{2}{k\acute{u}}:\overset{2-4}{thi} \overset{8-8-9}{ts^?á\acute{b}u}$ (to flick).

$\overset{4}{ts^?á}\overset{3}{\acute{b}\acute{u}}:\overset{9}{za}$ (excise).

¹ Dhlomo says $\overset{3-6}{\acute{i}}\overset{5}{\eta\theta v\acute{u}}$.

^{5 4}
 ts²á:ka (squirt through teeth).
^{3 2 2-4 8 8-9}
 ukú:thi ts²ébu (to be bright red).
^{4 3 9}
 ts²εkÉ:za (creak).
^{3-2 2-8 9}
 ɪ:ts²á:kə (space between teeth).
^{4 3 9}
 ts²εmÉ:za (cut).
^{3 2 2-4 8 8-9}
 ukú:thi ts²óbo (to break).
^{4 3 9}
 ts²umú:za (strike the head open).

Whenever *s* is immediately preceded by its homorganic nasal, *n*, it becomes the affricate *ts*².

Examples : ^{3-2 9} ú:su (stomach) > ^{6 6-3 9} ɪzɪ:nts²u (pl.).

^{3 9 9}
 mts²á:fa (scout).
^{2 2-8 8 8-3}
 mts²á:ŋgu (hemp).
^{3 2 2-8 9}
 ùmmts²á:lə (bow for arrow).
^{3 2 2-8 9}
 ùkunts²á:la (to pull).
^{2 2-4 3}
 mts²É:phe (springbok).
^{2 2-4 3 9}
 mts²ents²á:nε (insect).
^{2 2-8 8 9}
 mts²í:mmbɪ (metal).
^{3 3 3-4 3 3-4 9}
 mts²ù:mants²umá:nε (folk-tale).
^{3-5 4}
 phá:nts²ɪ (down).
^{3 4 9}
 mts²í:zwa (youth).

Though phonemically distinct from *s* and *tʃ*², *ts*² is sometimes found interchangeable with them, e.g. :

^{8 8-9} s²óbo and ^{8 8-9} ts²óbo (smash !)
^{3-2 2-8 9} ɪ:ts²á:kə and ^{3-2 2-8 9} ɪ:tʃ²á:kə (space between teeth).
^{5 4} ts²á:ka and ^{5 4} tʃ²á:ka (squirt through teeth).
^{2-4 3 9} ɪ:ts²wÉ:fa and ^{2-4 3 9} ɪ:tʃ²wÉ:fa (fleshy part of thigh).
^{3 2 2-4 2 2 2} ukú:thi ts²wí: ts²wí: ts²wí: }
^{3 2 2-4 2 2 2} ukú:thi tʃ²wí: tʃ²wí: tʃ²wí: } (to squeak, of mice).

Examples of phonemic difference :

^{4 3 9} sɛkɛ:za (enclose), ^{4 3 9} tsʔɛkɛ:za (creak).
^{6 6 3-8 9} izintsʔú:mə (wonderful happenings), ^{6 6 3-8 9} izintʃʔú:mə (reed for squirting hemp spittle).

(ii) Voiced : ndz.

Pronounced as ndz in the English lændzmən (landsman). In Zulu dz is not found apart from n ; it is the resultant of nasal influence on stems commencing in z, and in current Zulu orthography this is represented merely by nz, the presence of the d not being recognized.

Examples : ^{3-8 8-3} ú:zwa (abyss) > ^{3 8 8-3} izí:ndzwa (pl.).
^{3-8 8-3 9} u:zí:mɛ (walking-staff) > ^{3 8 8-3 9} izindzí:mɛ (pl.).
^{3-2 8-9 9} u:zí:pho (claw) > ^{6 6-3 8-9 9} izindzí:pho (pl.).
^{3 3-8 9} amá:ndzi (water).
^{8 8-3} jé:ndza (make !).
^{4 3 9} sɛβɛ:ndza (work).

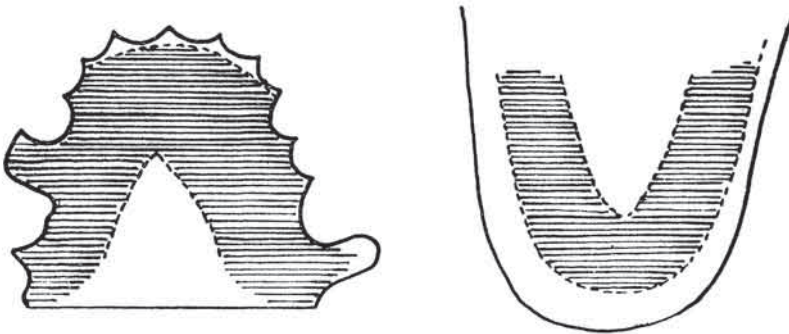
§ 4. Alveolar Affricates (lateral)

(i) Ejective : ntʔʔ.

This represents the sound of tʔ exploded laterally, the lateral part as well as the explosive being unvoiced, so that tl does not adequately represent it. tʔʔ is found whenever the unvoiced lateral fricative, ʔ, is immediately preceded by the homorganic (alveolar) nasal, n, and is never found apart from the nasal. For ntʔʔ Bryant writes ntl, but in current Zulu orthography the presence of the t is not recognized, and nhl is written. nhl would be preferable to ntl, because the lateral is of the unvoiced fricative type, tl giving the sound heard in *Watling Street*, *night-light*, etc. No words in the Zulu Dictionary should be classified under tl, as Bryant classifies them ; for, where the stem does not commence in ntl, it will always be hl, the t appearing only on account of the nasal in the prefix ; for instance : *intliziyo* (of Bryant) should be classified under *-hliziyo*, not *-tliziyo*, as he has it. The same remark applies to many words commencing in *ints-* ; the stem of the word *intsimu* is *-simu* not *-tsimu*, as the plural, *amasimu* clearly shows.

Examples of ntʦ² ^{2-8 9} intʦ²ʔé:ʃo (secret).
^{3 6 6 6 3-8 9} èzintʦ²ʔizijóé:ni (in the hearts).
^{3 2 2-8 9} intʦ²ʔantʦ²ʔá:na (good luck).
^{3 2 9} ntʦ²ʔantʦ²ʔá:tha (crunch up).
^{3 4 9} intʦ²ʔó:ko (head).

Compare this sound with its velar counterpart, ŋkʦ², in § 6.



Palatograph of Zulu ntʦ²(a).

It is interesting to compare this with the palatograph of the unvoiced lateral click, ɬ, given in Chapter XI, § 5. It will be seen that the forward tongue-positions of the two are practically the same. tʦ² is the **ejective**, while ɬ is the corresponding **injective** or click.

(ii) Voiced : ndʒ.

ʒ preceded by the homorganic nasal, n, always becomes the affricate dʒ. dʒ is never found in Zulu apart from the homorganic nasal.

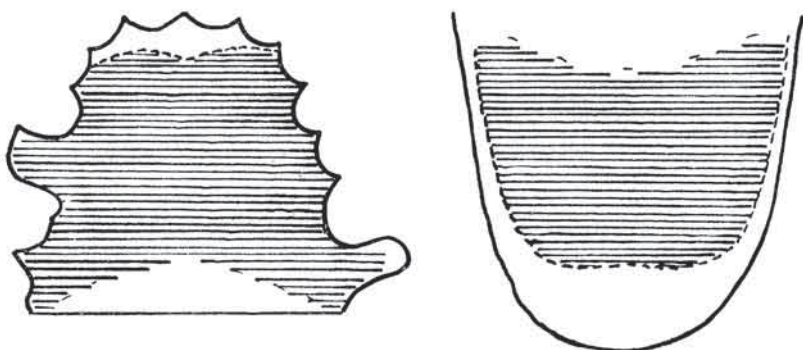
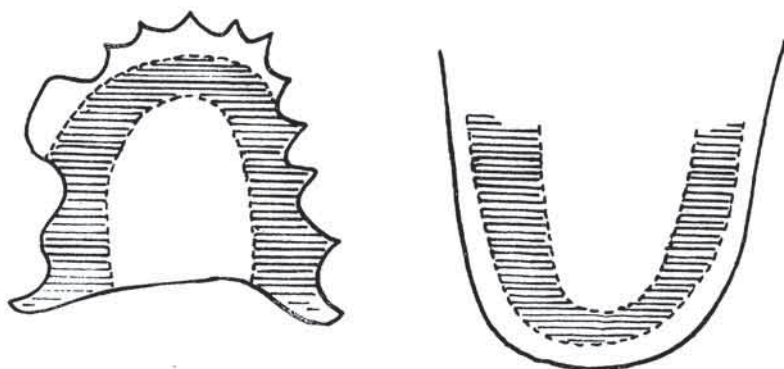
Examples : ^{3-2 8 3} u:ʒú:ʃu (ground-nut) > ^{6 6-3 8 3} izindʒú:ʃu (pl.).
^{2-4 8-3 8-3 9} ù:ʒondʒwá:ne (headstrong person) > ^{2 6 8-3 8-3 9} izindʒondʒwá:ne
 (pl.).
^{3 2 9} amá:ndʒa (strength).
^{2 9} í:ndʒu (hut).
^{3 5 4 9} èndʒéle:ni (in the path).

§ 5. Pre-palatal Affricates

(i) Ejective : tʃ² and ntʃ².

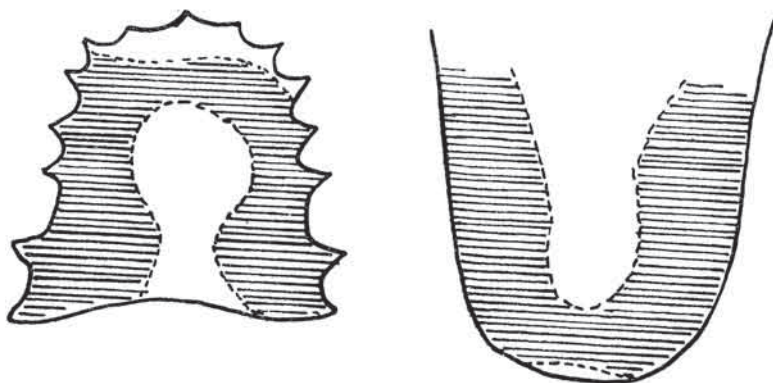
The unvoiced form of the pre-palatal affricate in Zulu is usually ejective. As will be seen from the palatograph, the front portion of

the blade of the tongue comes into contact with the forward part of the hard-palate. The difference between the Zulu $\text{tʃ}^?$ on the one hand, and the English tʃ^1 and Suto $\text{tʃ}^?$ on the other, is clearly shown by comparing the palatographs ² below. The latter sounds are almost tongue-rim affricates, the blade of the tongue not coming into complete contact with the palate. Care must be taken not to go to the other extreme by making the Zulu sound a palatal affricate, cç , with the tongue-tip kept down, and the back of the tongue operating. Zulu $\text{tʃ}^?$ resembles closely, in its physiological aspects, the Swahili tʃ found in tʃó:ka (be tired).

Zulu tʃa(a) .English tʃ .

¹ It is doubtful whether this English sound should be written tʃ , as the tongue-tip is not in operation as it is for t . In all probability tʃ would be more correct, though t indicates blade against palate-alveolus division.

² Zulu, palate of F. Nxele; English, my own palate; Suto, palate of H. Moshoeshoe.



Suto tʃʰ(a).

As has already been noticed, the explosive element tʃ is not used alone in Zulu, but only in this affricate combination. In current Zulu orthography *tsh* or *ty* is used to indicate tʃʰ.

- Examples of tʃʰ : tʃʰ³é:la⁹ (tell).
 utʃʰ³á:ni^{3-8 9} (grass).
 utʃʰ³wá:la^{3-6 6-3} (beer).
 í:tʃʰ^{3-2 9}ε (stone).
 tʃʰ^{4 3 9}é:ka (lend).
 isí:tʃʰ^{3 2 9}a (plate).
 tʃʰ^{5 4}á:ka (squirt).
 tʃʰ^{3 9}á:la (plant).
 tʃʰ^{4 3 9}átʃʰ^{3 9}á:za (squirt).
 tʃʰ^{4 3 9}óká:za (spurt out).
 tʃʰ^{5 4}á:ma (discharge spittle).

As with tsʰ, so with tʃʰ, the ejection is more noticeable in cases of emphasis.

Whenever the homorganic nasal, n, precedes the pre-palatal fricative, ʃ, the latter becomes the affricate tʃʰ.

- Examples : u:ʃ^{3-2 2-8 9}é:kó (watery dung) > izi^{6 6 3-8 9}ntʃʰ^{3 9}é:kó (pl.).
 u:ʃ^{2-4 3 3 8 3 3 9}â^{3 3 9}nggu^{3 3 9}ʃ^{3 3 9}â^{3 3 9}nggu (a gad-about) >
 izi^{2 6 3 3 8 3 3 9}ntʃʰ^{3 3 9}â^{3 3 9}nggu^{3 3 9}ntʃʰ^{3 3 9}á:nggu (pl.).

² ²⁻⁸ ⁹
 ɪptʃʔɔ:ɔ (crowding together on one spot).

³ ³ ⁹
 ptʃʔi:ŋga (throw away).

² ²⁻⁸ ⁹
 ɪptʃʔɛ:βɛ (bearded man).

³ ⁴ ⁹
 ɪptʃʔɔ:βa (projection).

²⁻⁴ ³
 ɪptʃʔɛ (ostrich).

⁶ ⁶ ⁶ ³ ³ ⁹ ⁹
 ɪzɪptʃʔɪβaŋndɔ:lɔ (tall men).

It must be noticed that ʃ and tʃʔ are phonemically different, e.g.

⁵ ⁴ ⁵ ⁴
 ʃɛ:ʃa (hasten) and tʃʔɛ:tʃʔa (cut meat into strips).

⁵ ⁴ ⁵ ⁴
 ʃú:ma (slip under) and tʃʔú:ma (discharge spittle).

(ii) Aspirated : tʃh.

This affricate is only found as the emphasized form of the fricative ʃ; for instance, tʃhá:ja is more emphatic than ʃá:ja for "strike!" and would be used when the speaker is speaking with emotion.

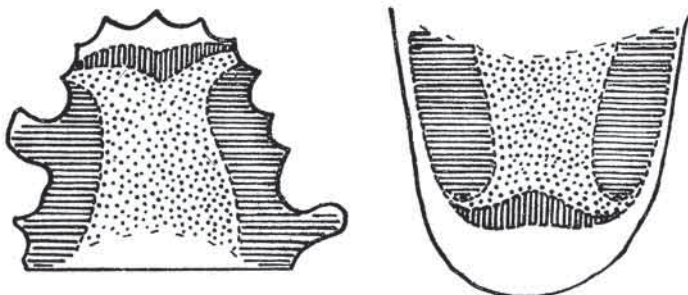
Examples : ⁵ ⁴ ⁴ ³
 ʃɛ:ʃa (hasten) > tʃhɛ:tʃha.

³ ⁹ ² ⁹
 ʃí:ja (leave behind) > tʃhí:ja.

³ ⁹ ² ⁹
 ʃó:na (go down) > tʃhó:na.

(iii) Voiced : dʒ and ɲdʒ.

This is the voiced form of tʃ. Zulu dʒ corresponds to English dʒ to the same limited extent as does tʃ to tʃ. Neither element of this



Space of contact between tongue and palate for ʃ(a).



Additional space of contact for dʒ(a).



Further addition of space of contact for tʃʔ(a).

Palatograph illustrating ʃ, dʒ, and tʃʔ.

affricate (ɖʒ) is normally found apart in Zulu, though we have noticed that ʒ is sometimes found in song. ɖʒ is found either without or in combination with the homorganic pre-palatal nasal, ɲ.

Though the tongue-positions are practically the same for tʃʔ and ɖʒ, the increased tenseness of the ejective brings the tongue further forward to cover a greater palate space.

Examples of ɖʒ: ^{4 3 9}ɖʒaβú:la (rejoice).
^{3 2 8 8-3}ùɖʒá:du (dancing competition).
^{3 2 8-9 9}ùkudʒi:ɖʒa (elongate).
^{2 6-3 9}uɖʒó:ɖʒo (Kafir fink).

Examples of ɲɖʒ: ^{3-8 8-3}í:ɲɖʒa (dog).
^{6 3 8-9 9}ɲɖʒà:ləɲɖʒá:lə (continually).
^{6-3 3 6 3 3 9}ɲɖʒɛŋŋgomú:ntʔu (just like a man).

§ 6. The Ejective Velar Lateral Affricate

This is perhaps the most difficult Zulu sound for a foreigner to acquire, and one of the most difficult to describe without practical demonstration. In fact Elliott, in his *Tebele Dictionary*,¹ writes of it as "wholly indescribable, almost unattainable", with the added encouraging remark that it is "very seldom used". Döhne, too, describes it as "a kind of choking, very difficult to describe and more so to utter". But it cannot be passed by in that convenient manner.

kʔ is an affricate sound, and the fact that its homorganic nasal is ɲ, pronounces it to be velar. The fricative element in this affricate, which is unvoiced, is a lateral. It is a velar lateral, corresponding to the forward alveolar lateral ɬ. To indicate this velar lateral fricative, I employ the symbol ɰ. All ordinary Zulu unvoiced affricates are ejective, and this is no exception; so the whole combination is made up of the unvoiced velar explosive (k), the unvoiced velar lateral fricative (ɰ), and the glottal stop (ʔ).

I have already described the lateral ɰ;² and for any who are unable to get actual demonstration from a Zulu, I would suggest the following method of arriving at this sound. Try to pronounce the alveolar lateral affricate sound tʃʔ far back in the mouth with the

¹ *Dictionary of the Tebele and Shuna Languages*, by W. A. Elliott, 1897, p. xii.

² In the last chapter.

back of the tongue against the velum. It is thought by some that it is not physically possible to make a velar lateral sound ; but practice, after having heard a native make it, disproves this.

This sound has been thought by many to be a click, and Colenso and others wrote it with an italic *x*, Romic **x** signifying the lateral click. Others wrote it **xx**. Bryant describes it as "a certain strong guttural sound, quite unknown in European languages, and produced by a constricted formation of the lower throat". He therefore uses **rr** to denote it, "as befitting a guttural sound," and notes that in Xosa **r̄** is used to indicate the same sound. Grout comes nearer to a description of this sound, when he writes,¹ "a peculiar, hard, rough guttural, which seems to be made by contracting the throat and giving the breath a forcible expulsion, at the same time modifying the sound with a tremulous motion of the epiglottis." Here he seems to recognize the ejection, but quite misses the lateral and velar characteristics. He may, however, have heard more frequently the variant pronunciation **kxʔ**, and have been describing that. Grout uses the sign **!** to indicate this sound. **hx** is the usual representation of this sound employed by Zulus of to-day. Elliott, for Tebele, uses **tl**, which is wide of the mark ; but Samuelson, in his recent Dictionary of Zulu, uses, perhaps, the nearest equivalent in Romic, viz., **kl**. In this he recognizes both the velar and the lateral characteristics.

- Examples : $\overset{6}{k}\overset{8}{\text{ʔ}}\overset{3}{\text{é}}:\overset{3}{z}\overset{3}{a}$ (milk into the mouth).
 $\overset{3}{k}\overset{9}{\text{ʔ}}\overset{3}{w}\overset{9}{\text{é}}:\overset{3}{b}\overset{9}{a}$ (scratch).
 $\overset{6}{k}\overset{6-3}{\text{ʔ}}\overset{9}{\text{é}}\overset{9}{\text{ú}}:\overset{9}{l}\overset{9}{a}$ (tear)
 $\overset{6}{k}\overset{6-3}{\text{ʔ}}\overset{9}{\text{a}}\overset{9}{\text{ú}}:\overset{9}{z}\overset{9}{a}$ (wade).
 $\overset{2-4}{\text{í}}:\overset{3}{k}\overset{3}{\text{ʔ}}\overset{3}{w}\overset{3}{a}$ (spear).
 $\overset{3-2}{\text{í}}:\overset{2-4}{k}\overset{3}{\text{ʔ}}\overset{3}{\text{ú}}:\overset{3}{m}\overset{3}{\text{é}}$ (sapling).
 $\overset{3}{\text{ù}}\overset{2}{m}\overset{2-8}{k}\overset{9}{\text{ʔ}}\overset{9}{\text{é}}:\overset{9}{z}\overset{9}{o}$ (light rain).
 $\overset{4}{k}\overset{5}{\text{ʔ}}\overset{3}{\text{é}}\overset{9}{\text{ú}}:\overset{9}{l}\overset{9}{a}$ (rip along).
 $\overset{5}{\eta}\overset{4}{k}\overset{9}{\text{ʔ}}\overset{9}{\text{í}}:\overset{9}{z}\overset{9}{a}$ (breathe with difficulty).
 $\overset{3-3-5}{\text{ù}}\overset{6-3-6}{\text{m}}\overset{3}{\text{á}}:\overset{3}{\eta}\overset{3}{k}\overset{3}{\text{ʔ}}\overset{3}{\text{á}}$ ² (koodoo).

¹ In the revised edition of *Isizulu*, 1893, p. 13.

² Döhne writes this word *umgaxa*, and says of it : "the last root, *xa* contains a peculiar click, a palato-guttural, a most difficult articulation. Other dialects have instead of this a harsh guttural *ganra*." I find no difference in the pronunciation of this word from that of $\eta k \text{ʔ}$ elsewhere. "Other dialects" use $\eta k x \text{ʔ}$.

§ 7. Ejective Velar Affricate

This is an interesting variant to the above lateral affricate; it is used by certain Zulu speakers who always substitute it for $k\text{p}^?$, though its use by Zulus is not nearly so widespread as the latter.

In this sound the explosive element is k , while the fricative element is the ordinary velar unvoiced fricative x . The sound is produced over the centre of the back of the tongue and is ejective. For some time I have employed the symbol ɣ to indicate this whole affricate combination, but, in this work, in order to bring this into line with all the other affricates, I have decided to indicate all the component parts and write $kx^?$.

Examples: $kx^{\text{6 8-3}}\text{é:za}$ or $k\text{p}^{\text{6 8-3}}\text{é:za}$ (milk into the mouth).

$kx^{\text{3 9}}\text{wé:ba}$ or $k\text{p}^{\text{3 9}}\text{wé:ba}$ (scratch).

$kx^?$ and $k\text{p}^?$ are interchangeable and not phonemically different.

CHAPTER X
THE SEMI-VOWELS

§ 1. The Semi-vowels in Zulu

As in English so in Zulu, there are two semi-vowels, *j* and *w*. These semi-vowels are glide sounds; they indicate the approximate starting-point of a movement on the part of the organs of speech, the vowel following indicating the direction and destination of that movement. Since these semi-vowels indicate a vowel-position starting-point, each of them is voiced. Some writers use *w* and *j* rather freely between two adjacent vowels in Zulu, e.g. *umhawu* for ²²⁻⁴³⁻⁸⁹*umhá:u* (emotion); not only is this unnecessary, but in such cases there is no glide existent at all.

§ 2. The Pre-palatal Semi-vowel

This semi-vowel in Zulu has for its starting-point approximately the position of Zulu *i*, although when used between two vowels of low quality, such as in the word ^{5 4}*já:ja*, the tongue does not rise nearly as high as the position of the vowel *i*; a slight rise above that of *a* is sufficient to indicate the semi-vowel.

Examples: ^{5 4}*jé:na* (he, she).
^{6 3-5 4}*ujé:na* (it is he, she).
^{3-8 9}*jé:thu* (our).
^{3 2 9}*jalú:ka* (go out to graze).
^{3 2 9}*jolí:sa* (make tasty).
^{3 2 2-4 8 8-9 8 8-9}*ukú:thi jú:bu jú:bu* (to gobble up soft food).
^{5 4 4 2 3 3 4 4}*jé:na - ßónijá:ni mí:na* (he saw me).
^{3 3-6 6 3-8 9}*éntɬʰizijó:ni* (in the heart).

This semi-vowel is found followed by the semi-vowel *w*, especially in certain passive formations, e.g.:

^{5 4}*já:jwa* (be struck). ^{7 4}*gá:jwa* (be ground).

When under nasal influence, *j* is preceded by the diphthong *iĩ*, e.g. ^{3-2 2-8 9}*u:já:ɬa* (species of loin-girdle) > ^{6 6 3-8 9}*iziijá:ɬa* (pl.).

Other examples are given in Chapter II, § 9.

§ 3. The Velar Semi-vowel

This semi-vowel has for its starting-point approximately the position of the Zulu vowel *u*; although, as with *j*, when used between two vowels of low quality, such as in the word ^{4 3 9}*fulá:wa*, the tongue does not rise nearly as high as the position of the vowel *u*; a slight rise above the position of *a* in the direction of *u* being sufficient to indicate the semi-vowel. While I class this semi-vowel as velar, on account of its closeness to the back vowel *u*, it might also be regarded as a bi-labial semi-vowel, on account of the lip-rounding necessary for its production.

Care must be taken not to confuse this semi-vowel with the diphthongs *oa* and *œ*, examples of which were given in Chapter II. *w* never exercises the influence of a vowel to change the quality of a previous mid-forward or mid-back vowel.

- Examples : ^{5 4}*wé:na* (thou).
^{6 3-5 4}*uwé:na* (it is thou).
^{3-8 9}*wé:thu* (our).
^{3-2 2-8 9}*ɪ:wí:sa* (knob-kerrie).
^{5 4}*wó:la* (gather together).
^{5 4 9}*wulé:ka* (be a fool).
^{5 5 6-3 9}*wèʔezé:la* (rattle).
^{5 4 9}*wawá:sa* (eat with toothless gums).

When under nasal influence *w* is preceded by the diphthong *iɪ*,
^{3-2 2-8 9}e.g. *u:wá:ŋa* (crowd lying down) > ^{6 6 3-8 9}*iziwá:ŋa* (pl.). See Chapter II, § 9
 for further examples.

Apart from its use on its own merits, *w* may be used in conjunction with most other Zulu consonants. However, in Zulu, *w* never combines with any of the **bi-labials**, and this is one of the main causes of pre-palatalization in Zulu.¹ In the formation of possessives, where the forms *ɓwa*, *ɓwe*, *ɓwo* (of Class 7) would be expected, no pre-palatalization takes place, the semi-vowel is elided, and the forms appear as

¹ Cf. Chapter XII.

βa, βε, βo. In certain locatives we find *pwe-* and *mwe-* written, but this is a mistake for phonetic *phæ-* and *mæ-*, for instance :

^{4 4 2 2-8 9}
 èmp²ephæé:ni (in the medicine).
^{3 3-4 4 3 9}
 èphomp²æé:ni (to the garrulous person).
^{3 3-4 3 9}
 èsimæé:ni (in the form).

Further, when used in conjunction with other Zulu consonants, *w* is not followed by any of the vowels *a*, *o*, or *u*; thus what would synthetically become *kwo-* or *lwo-* becomes *ko-* or *lo-*; *kwu* and *lwu* are never found; examples :

^{3 3-6 6 3 3-4 4 3 3 9}
 em:va kòkujη^ε:ηηga (after coaxing it—not *kwoku-*)
^{2-4 4 3 3-4 3 3 9}
 u:khú:ni lomú:nt²u (the person's firewood—not *lwo-*).

In written Zulu the forms *kwo*, *lwo* are often found, and there is a growing tendency to favour the use of such forms in spoken Zulu by European speakers, and even by natives coming under the influence of a spelling pronunciation.

After **denti-labials** it is optional in all cases to employ or to leave out the *w*. In Zulu *fw* and *vw* are only used with the vowels *i* or *a*; with the vowel *e* the form assumed is *fæ* and *væ*. Examples :

Locatives : ^{3 3-8 9 3 3-8 9} efwí:ni or efí:ni (in the cloud).
^{3 6-3 9 3 6-3 9}
 em^θvwí:ni or em^θví:ni (to the sheep).
 Diminutives : ^{3-2 2-8 9 3-2 2-8 9} i:fwá:na or i:fá:na (little cloud).
^{3 6-3 9 3 6-3 9}
 m^θvwá:na or m^θvá:na (lamb).

After **alveolars**, *w* is found followed by any of the vowels *a*, *ε* (*e*), or *i*. In combinations of *w* with other consonants, one never finds the mid-back or the high-back vowels; in cases when one would normally expect this, the semi-vowel is elided, on account of its nearness in tongue-position to these vowels.

(i) Explosives : ^{2 2-4 3} thw um:thwa (Bushman).
^{4 3-8 9}
 sithwé:le (we carried).
^{5 4}
 thwí:ja (switch).
^{3 2 2 2-8 9}
 t²w àsant²wá:na (children).
^{2-4 3}
 ú:t²wa (bog).

- ^{5 5 6-3 9}
tʷɛŋŋú:la (tear up).
- ^{2-4 3 9}
ɪ:tʷɛ:tʷɛ (apprehension).
- ^{3 2 2 2-8 9}
èsɪntʷí:m (in the language of the people).
- ^{3 3-5 6-3}
dw **uɪ:dwa** (a scratch).
- ^{6-3 9}
dwɛ:ɸa (scratch).
- ^{3-5 6-3}
ɪ:dwɪ (black toad).
- ^{2 2 8 8 8-3}
ɪndwá:ŋŋu (rags).
- (ii) Nasal :
- ^{2-4 3-8 9}
nw **u:nwá:ɸu** (chamelion).
- ^{2 6 3 9}
izɪnwɛ:lɛ (hair).
- ^{3 2 2-4 3-8}
ukú:thɪ nwí:: (to tear, rip).
- (iii) Fricatives :
- ^{3 2 9}
sw **ɛswá:ja** (he turning round).
- ^{3 3-8 9}
uswɛ:lɛ (he is in need).
- ^{3 2 9}
eswí:ja (he flinging).
- ^{3-8 9}
zw **ɛ:zwa** (he hearing).
- ^{8-3 9}
zwɛ:la (feel for).
- ^{5 5 3 9}
ɛzwisi:sa (he fully understanding).
- (iv) Laterals :
- ^{3 2 9}
lw **ukú:lwa** (to fight).
- ^{3-2 2-8 8 9}
u:lwɛ:mmbu (spider).
- ^{2 2-8 9}
ulwí:lɛ (he fought).
- ^{5 4 9}
ɬw **ɬwantɬʷá:sa** (walk on side of path).
- ^{5 6-3}
ɬwɛ:za (be filled with tears, of eyes).
- ^{5 4}
ɬwí:thɪ (snatch).
- ^{5 5 5 6-3 9}
ɸw **ɸwàŋŋuzɛ:la** (walk as a mad person).
- ^{5 5 4 9}
ɸwɛŋŋú:ka (break through).

- (v) Affricates : $ts^{\text{p}}w$ $\overset{2}{i}nt\overset{2-8}{s}^{\text{p}}\overset{9}{w}á:m$ (weed).
 $\overset{3}{i}nt\overset{4}{s}^{\text{p}}\overset{4}{w}é:\overset{9}{mp}^{\text{p}}\text{ε}$ (quail).
 $\overset{5}{t}s^{\text{p}}\overset{4}{w}í:\overset{9}{l}a$ (switch).
 $ndzw$ $\overset{6-3}{i}z\overset{8-9}{i}ndzwá:m$ (toes).
 $\overset{5}{á}k\overset{5}{u}set\overset{3}{f}^{\text{p}}\overset{3-8}{é}:\overset{8-3}{ndz}w\text{ε}$ (it must be worked).
 $nt\text{t}^{\text{p}}w$ $\overset{5}{n}ent\overset{3-8}{t}^{\text{p}}\overset{9}{w}á:th$ (and a python).
 $\overset{3-2}{i}nt\overset{2-8}{t}^{\text{p}}\overset{9}{w}é:\overset{9}{\eta}nga$ (Tonga person).
 $ndkw$ $\overset{5-3}{n}end\overset{9}{k}wá:\overset{9}{n}a$ (and a small hut).
 $\overset{2}{i}z\overset{6}{i}nd\overset{6-3}{k}wé:\overset{9}{ndk}w\text{ε}$ (long staffs).

After **pre-palatals**, **w** is found as after alveolars.

- (i) Nasal : pw $\overset{3}{l}ú:\overset{9}{p}wa$ (be bitten).
(ii) Fricative : fw $\overset{4}{f}wá\overset{4}{b}ani:\overset{3}{s}a$ (crumple).
 $\overset{5}{f}wé:\overset{6-3}{z}a$ (glide along).
 $\overset{5}{f}wí:\overset{4}{l}a$ (twist).
(iii) Affricates : $t\text{f}^{\text{p}}w$ $\overset{3}{è}t\overset{3-5}{f}^{\text{p}}\overset{4}{w}alé:m$ (in the beer).
 $\overset{2-4}{i}:\overset{3-8}{t}^{\text{p}}\overset{9}{w}é:\overset{9}{l}e$ (young chicken).
 $\overset{4}{t}f^{\text{p}}\overset{3}{w}í:\overset{9}{l}a$ (switch).
 $t\text{f}hw$ $\overset{4}{t}fhwí:\overset{3}{l}a$ (twist !).
 dzw $\overset{2}{i}z\overset{6}{i}nd\overset{6-3}{z}wá:\overset{9}{\eta}ngu$ (edible vegetable).
 $\overset{5}{e}d\overset{6-3}{z}wi:\overset{9}{s}a$ (he hurling).
 $\overset{5}{d}z\overset{4}{w}ajé:\overset{9}{l}a$ (get accustomed to).
(iv) Semi-vowel : jw $\overset{6}{á}zi\overset{6}{f}á:\overset{3}{j}w\text{ε}$ (let them be struck).

After **velars**, **w** is used as with the alveolars.

- (i) Explosives : **kw** ^{3 3-6 6-3} ukwí:ndǵa (autumn).
^{3 3-8 9} ukwá:la (to refuse).
^{22 2-4 3 9} ĩkʔukwá:na (chicken).
kʔw ^{3-8 9} kʔwé:thu (our home).
^{33 3-5 4} ĩkʔwá:khwá (species of snake).
^{2-4 3 9} i:kʔwí:l (short-horned cattle).
khw ^{22-4 3} u^ĩ:khwé (father-in-law).
^{3-2 2-4 3} i:khwá:pha (arm-pit).
^{4 3 9} khwíβi:zá (drive off fowls).
gw ^{3-2 7 4} i:gwá:la (coward).
^{55 5 3 9} gwènggulú:la (glance off).
²²⁻⁵⁶⁻³⁻⁸⁹ isgwí:l (rich man).
- (ii) Fricative : **xw** ^{5 4} xwá:ja (search in grass).
^{5 4} xwé:βa (buy).
^{5 4} xwí:tha (snatch).
- (iii) Affricate : **kʔw** ^{3 9} kʔwé:ba (scratch).
^{2-4 3 3 9} i:kʔwí:ntʔ¹ (green pumpkin).
^{2-4 3} kxʔw í:kxʔwá (kind of spear).

After **glottals**, **w** is used as with the alveolars, only one instance, however, of **fw** being found.

- ^{2-4 3 9} i:hwá:pa (hairy man).
^{2-4 2-4 3} i:hú:hwa (craving).
^{8 3} fwá:¹ (exclamation to wake a person up).

After each of the **clicks**, **w** is also used as with the alveolars.

¹ Notice that in this one case **fi** is syllabic but very short, while the vowel is pronounced with epiglottal friction.

- (i) Dental Clicks :
- ɿw ɿwá:ja (sing while sitting).
 ɿhw ɿhwephé:ja (get things easily).
 ɿw ùɿwɿɿwɿ:ɿwɿ (clever person).
 ɿw ɿwá:di (book).
- (ii) Alveolar Clicks :
- ɿw ùɿwé:ɿu (wrinkles).
 ɿhw ɿhwí:ja (scrape ground backwards).
 ɿw ɿwá:ɿa (dig up potatoes).
 ɿw ɿwá:ɿa (pile).
- (iii) Lateral Clicks :
- ɿw ɿsɿwé:ɿwe (broad flat thing).
 ɿhw ɿhwá:la (be an invalid).
 ɿw ɿɿwɿwé:mmbɿ (porridge ladle).
 ɿw ùɿwazí:ɿɿ (species of edible root).

CHAPTER XI

THE CLICK CONSONANTS

§ 1. Chart of Zulu Click Consonants

	Dental.	Palato-Alveolar.	Lateral.
Unvoiced . . .	ǀ	ǃ	ǁ
Aspirated . . .	ǀh	ǃh	ǁh
Voiced	ǀ̤	ǃ̤	ǁ̤
Nasal	ǀ̤̃	ǃ̤̃	ǁ̤̃

From this chart it is seen that there are three positional types of click consonants in Zulu: the dental, the palato-alveolar and the lateral. In acoustic effect, to the native, these sounds differ one from the other as much as **p**, **t**, and **k** do to our ears. Hence it is absolutely necessary for the foreigner to acquire their exact pronunciation, as the misuse of a click would be as bad as to say *pat* for *cat*.

Further, each positional type of click has four forms, the unvoiced unaspirated form, which is the ground-form of click; the aspirated form, the voiced form, and the nasal form. In enunciating the aspirated form of the click, which must necessarily be unvoiced, there is a strong rush of air accompanying the articulation; this is indicated, as with aspirated explosives, by the symbol **h** following the click. The voiced click is produced with the same tongue-position as its corresponding unvoiced form, only with simultaneous vibration of the vocal chords. The nasal clicks are produced with the velum lowered so that air passes through the nose during articulation.

§ 2. The Physiological Mechanism of the Zulu Clicks

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. It will be seen that there are two aspects to every click, the forward or tongue-tip aspect, and the velar or tongue-back aspect.

Authorities ¹ on the language of the Nama Hottentots give instances of the clicks made in combination with the velar explosive, **k**, and other instances of "pure" clicks made without this explosive. This presents the possibility of there being two distinct varieties of click, in the first of which the boundaries of the rarefaction would be tongue-front and tongue-back, and in the second tongue-front and glottis. But of this question in both Hottentot and Bushman we shall have to say more presently.

In discussing this point, however, with a Zulu,² I found that he could make two distinct clicks, one with audible **k** and the other without any audible **k**. He maintained that, in normal Zulu clicks, the back of his tongue did not rise as it does for **k** and **g**. Owing to the absolute closure effected by the front of the tongue, the movements of the back of the tongue could not be optically observed. And, moreover, an artificial palate cannot be used for observations further back than the limits of the hard palate. In order to solve this question indisputably, it was necessary to have recourse to X-ray observations.³

In order to penetrate the thick material of the jaw a ray of such strength had to be used as would completely obscure the tongue. Hence a scheme had to be devised to indicate exactly the tongue-position and the movements of that organ. Small squares of thin lead were hammered on to a strong thread in the same manner as has been done in the Phonetic Laboratory of University College, London.⁴ A light flexible chain was thus made and inserted into the mouth and down the throat of the Zulu in such a way that it lay flat over the centre of the tongue. It was found that this did not impede him in articulating the clicks.

Observed on the X-ray screen, it was seen conclusively that for the articulation of each click the back of the tongue was raised to touch the velum. The following interesting points were observed :—

(1) In preparation for the sounding of the clicks, the front of the tongue was **first** raised into position, the back of the tongue rising immediately after.

(2) The front or side (in the case of the lateral clicks) was the first to be released from its position, the back of the tongue coming away from the velum perceptibly after it.

¹ See my article in *Bantu Studies*, vol. ii, No. 1, August, 1923.

² F. Nxele.

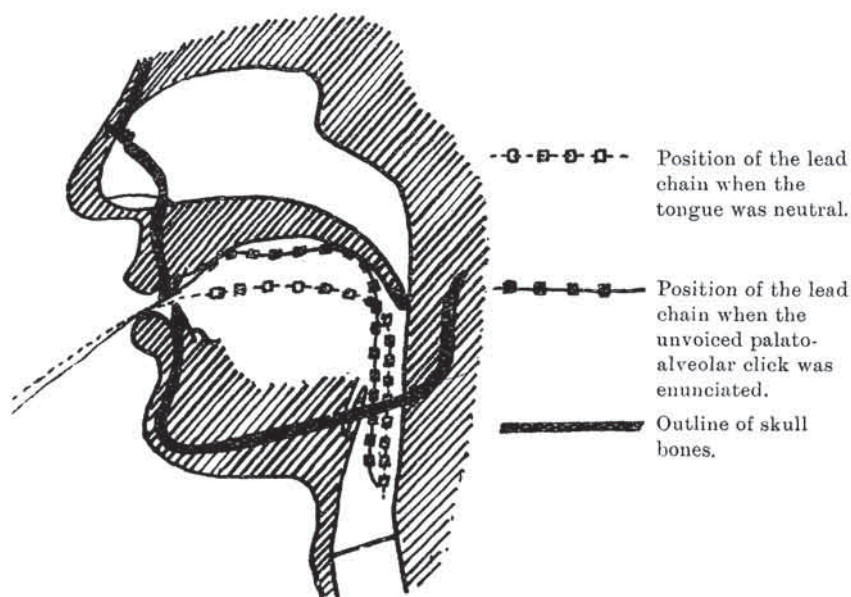
³ Kindly carried out by Dr. P. J. Olivier of Johannesburg.

⁴ By Mr. Stephen Jones. This method was invented by Dr. E. A. Meyer, of Stockholm, some fifteen or twenty years ago.

(3) In the case of the voiced and unvoiced clicks the back of the tongue was arched as high as for the velar explosives ; but the arching was not so high in the case of the nasal clicks, this being due to the lowering of the velum, necessitating less raising of the back of the tongue.

It was unfortunate that the position of the teeth, as well as the density of the jaw, made it impossible to take a photograph that would show the limits of the back of the tongue ; though these could be observed clearly when the movements took place.

The following diagram indicates, as accurately as I could ascertain it, the position of the lead chain when the tongue was in neutral position and when the unvoiced palato-alveolar click (*ɕ*) was being enunciated.



The Zulu himself informed me that when articulating the unvoiced clicks he could not feel the lead at all ; that when articulating the voiced clicks he could feel the lead against the **velum** ; and that when articulating the nasal clicks, he could feel it against the **root of the tongue**. It is evident from this that with the unvoiced clicks the back of the tongue must touch the velum but lightly ; but when voicing the clicks the tongue must become more tense. In the case of the nasal clicks, the lowering of the velum would push the leads against the root of the tongue.

Now having come thus far in our investigations into the nature of the Zulu clicks, it will be best, perhaps, to state, as concisely as possible, our definition of a click; for, upon this, will depend to a great extent the correct manner of writing the clicks. I therefore define a click as follows:—

A click is an injected consonant produced by a rarefaction between two points of closure of the tongue, one of these points of closure always being velar.

From this we deduce that, physiologically, the click is a compound, having double closure to be arranged, and double release effected before it can be complete. Such click-sounds as $\underset{x}{t}\underset{x}{t}\underset{x}{t}$ (English *tut-tut*) are **incomplete**, inasmuch as the velar closure, which must be arranged for the click, has not been released. Parallel examples of this are to be found with the complete and incomplete explosives, as in the English $\underset{x}{k}t$ (*act*), where **k** is incomplete. Except in interjections, incomplete clicks do not appear in speech-sounds in Zulu, each click being followed by some vowel, and being either plain, aspirated, voiced, or nasal. In each of these cases there appears some form of velar sound necessary to the completion of the click.

In Hottentot and Bushman,¹ however, there are clicks devoid in sound of this velar element, and this can only be effected by a slight pause between an incomplete click and the following vowel, this pause being the stop of the glottal explosive. During this pause of the glottal stop the velar position of the tongue would be silently released and the click inaudibly completed.² Thus Bushman *ta* would read phonetically $\underset{x}{t}^{\text{a}}$ (or more strictly $\underset{x}{t}^{\text{a}}$), whereas Bushman *lka* would be $\underset{x}{t}^{\text{a}}$.³

Our definition will exclude as a real click the Bushman bi-labial, written © by W. H. I. Bleek. This seems to be akin to the West African labio-velar implosives, **gb** and **kp**, and perhaps identical with the latter unvoiced example.

§ 3. The Dental Clicks

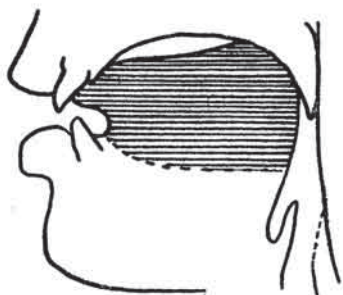
The back of the tongue is raised against the soft palate in the position for **k**, while the tongue-tip is placed lightly against the upper

¹ See Miss D. F. Bleek's note on the orthography of Bushman clicks in *Bantu Studies*, vol. ii, No. 2.

² This I have ascertained to be the case in $\underset{x}{t}^{\text{h}}$: Bushman. See my article in *Bantu Studies*, vol. ii, No. 3.

³ The question of orthography will be considered in § 7 of this Chapter and in Appendix V.

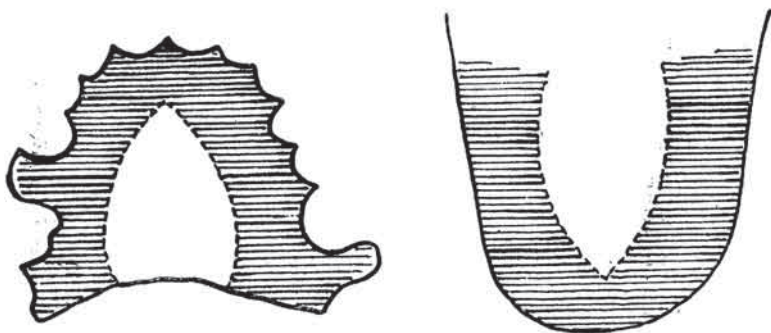
front teeth and gums, forming a rarefaction between the middle of the tongue and the palate. The tip of the tongue is released and the click ensues. Naturally the click is never unaccompanied by a vowel sound, and there must be no pause whatever between the click and the vowel, one straightforward syllabic being made. The unvoiced dental click may be at times slightly drawn out, there being considerable friction with the teeth, resembling the sound made when a person "sucks" the teeth to draw out something lodged between them.



Approximate tongue-position diagram for Zulu ɬ and ʄ.

The essence of the unvoiced form of this dental click (ɬ) is what is used in the English click of annoyance, written *tut-tut*, but really ɬɬɬɬ, a repeated enunciation of the click incomplete, i.e. without velar release and hence unaccompanied by any vowel.

The following palatograph shows clearly the tendency of the space of rarefaction to terminate at the back of the tongue; the impossibility of recording by palatography anything registered on the velum makes the completion of this space of rarefaction impossible. The same result is registered by the chalk left on the tongue.

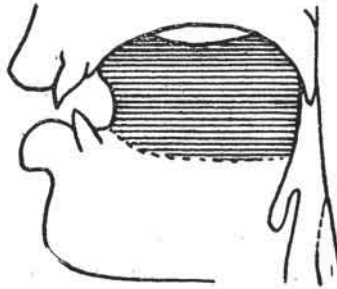


ɬ(a)

The voiced dental click I write γ , and the nasal η . In each case the tongue-position is the same, but for γ the vocal chords are made to vibrate simultaneously with the plosion of the click,¹ causing a g -sound to be heard, and for η the velum is down allowing the air to pass through the nose during the whole enunciation of the click.¹ In current Zulu orthography these clicks are written as follows: e is used to represent γ and ηh , gc to represent γ , and nc to represent η .

§ 4. The Palato-alveolar Clicks

Hitherto I have termed these clicks **retroflex**,² but wrongly so. They have also been described as **cerebral** or **palatal**, but the portion of tongue involved in their production differs so vastly from that used in the production of regular palatal sounds, and the forward point of articulation varies from palato-alveolar to alveolar, that I consider the best term for describing them to be **palato-alveolar**. Further, my investigations into chũ : Bushman phonetics have revealed the true alveolar and true retroflex clicks in addition to this positional type.³



Approximate tongue-position diagram for Zulu ç and ǀ .

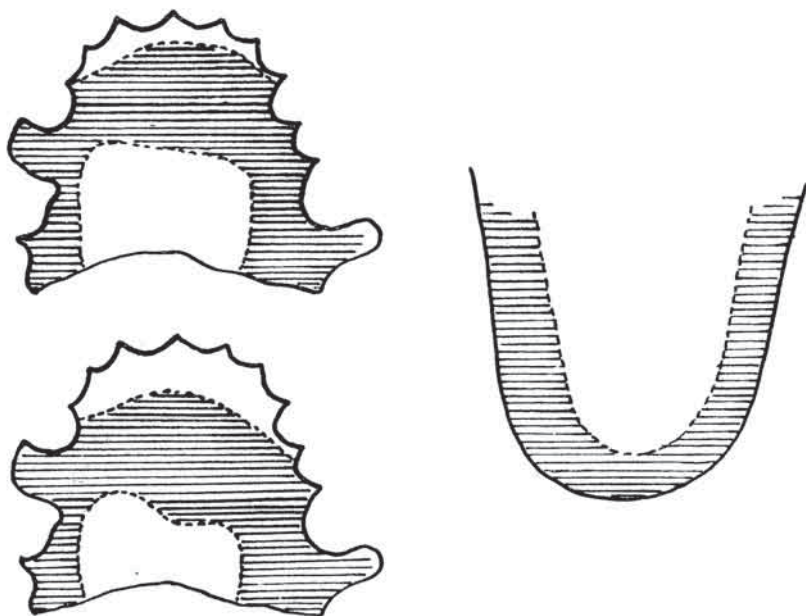
From this diagram it will be seen that the back of the tongue is in the same k -position as for the dental clicks. The upper part of the tongue-tip is pressed tightly against the alveolus and may be in a more forward or a more backward position than that shown above. The palatographs below show two different positions of the tongue of the same Zulu speaker within a few minutes of each other. The edges of the tongue come into contact all round the edges of the gums. All the

¹ See the simultaneous kymograph tracings in § 7.

² In "A dissertation on the phonetics of the Zulu language", published in the *Bulletin of the School of Oriental Studies*, vol. ii, pt. iv.

³ See my article entitled "An outline of the Phonetics of chũ :" in *Bantu Studies*, vol. ii, no. iii.

top of the tongue is depressed, so that no part of it touches the palate. Then, with the tongue kept very rigid, the tip of the tongue is released, being drawn downward and backward. The resultant click, when unvoiced, resembles the drawing of a cork from a bottle. This click is instantaneous, and cannot be enunciated with drawn-out friction as the dental click.



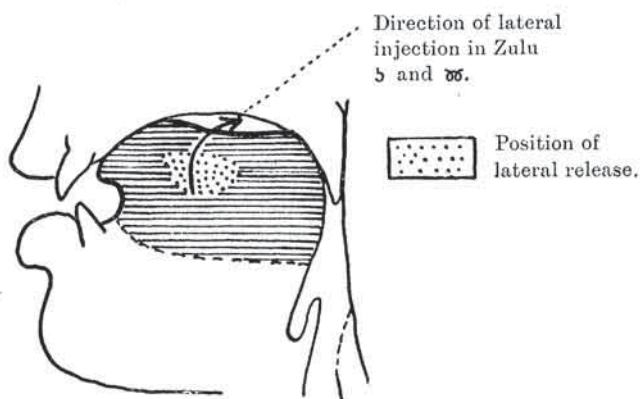
Two palate positions for Zulu $\text{t}(a)$, same portion of tongue affected.

There is no European exclamatory sound equivalent to this unvoiced palato-alveolar click (t); and it generally proves to be the most difficult for a European to acquire. The voiced form of this click I write with the symbol t , and the nasal p . In current Zulu orthography these clicks are written as follows: q is used to represent t and $\text{t}h$, gq to represent t , and nq to represent p .

§ 5. The Lateral Clicks

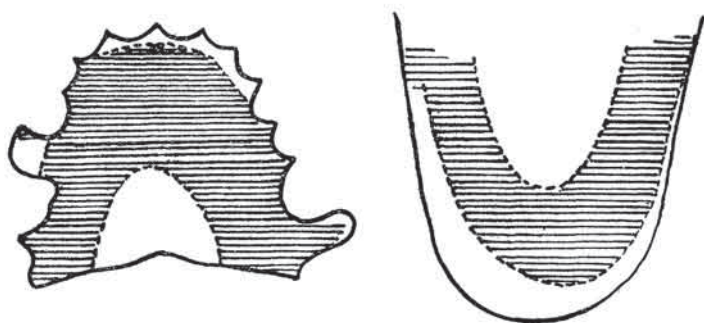
The upper part of the tongue-tip is pressed firmly in a post-alveolar position, i.e. against the ridge between the gums and the hard palate. The back of the tongue is held in the k -position, and the injection is made laterally, releasing one side of the tongue where it is pressed

against the side-teeth ridge, the tip being kept firmly in position until the completion of the injection.



Approximate tongue-position diagram for Zulu ɬ and ɬ̥, showing the position of lateral injection.

Owing to the release of these clicks being lateral, there is a strong l-element noticeable. Zulu lateral clicks are released unilaterally, i.e. on one side of the tongue at a time only, though either left or right side may be used. The unvoiced form of this lateral click (ɬ) is essentially the same as the incomplete click used by a cab-driver in urging on his horse. The lateral click, even more so than the dental, may be, and often is, drawn out to considerable length with friction against the side teeth.



Palatograph of Zulu ɬ̥(a).

The voiced form of the lateral click I write with the symbol ɬ̥, and the nasal ɬ̥̃. In current Zulu orthography these clicks are written as follows: *x* is used to represent ɬ and ɬ̥, *gx* to represent ɬ̥̃, and *nx* to represent ɬ̥̃̃.

§ 6. How to learn the clicks

The elements of the dental and lateral clicks can usually be acquired with ease by a reference to the English *tut-tut* and the cab-driver's click. When once these elements, without any vowel, are satisfactorily acquired, the student should place his tongue in the position indicated for the palato-alveolar click, and try to produce a sound as near as possible to that of a cork being drawn from a bottle. Having mastered ɿ and ʘ, the student should try to copy the same phenomenon for the tongue-position of ɸ, and should not find very great difficulty.

The greatest difficulty is experienced when trying to combine the vowel with the click. Usually the click is enunciated, and then a considerable space intervenes before the vowel. This is due to a silent release of the velar part considerably after the plosion of the incomplete click. It must be the aim of the student to eliminate this space altogether, in other words, to make the click complete instantaneously; and then the vowel will follow on normally. Perhaps the following exercise will prove helpful in this connexion. Enunciate repeatedly **ka ka ka ka**, and then quickly substitute **ɸa ɸa ɸa ɸa**, while still mentally concentrating on the **k**-element. Or try working from the forward end of the click, thus: **ta ta ta ta . . . ɸa ɸa ɸa ɸa**, where **t** is unaspirated dental-t, much as in French.

Similarly, in order to learn the palato-alveolar click, start either from the velar end: **ka ka ka ka . . . ɸa ɸa ɸa ɸa**, or from the forward end: **ta ta ta ta . . . ɸa ɸa ɸa ɸa**, where **t** is unaspirated alveolar-t.

For the voiced forms, practise similarly with **ga** in place of **ka**, and **da** for **ta**, thus:

ga ga ga ga . . . ya ya ya ya
da da da da . . . ya ya ya ya (dental-d)
ga ga ga ga . . . ʒa ʒa ʒa ʒa
da da da da . . . ʒa ʒa ʒa ʒa (alveolar-d)

And similarly for the lateral click, remembering to concentrate mentally on the velar part, **k** when unvoiced, and **g** when voiced.

Many students find it easier to learn the nasal forms first, as they find little difficulty in eliminating the space in nasal clicks; and, having once mastered the method of elimination with the nasals, they are able to apply the same principles to the other forms. It must be clearly remembered that the **k**, or the **g**, or the **ŋ** is an integral part of the click, and there must be no recognizable space between the release of the forward part and the release of the back of the tongue.

§ 7. The Representation of the Click Consonants

As has already been noticed, the clicks in Zulu have hitherto been represented by the three symbols, *c*, *q*, and *x*, since those letters have not been otherwise required in the language. The voiced forms are written *gc*, *gq*, and *gx*, the nasal forms *nc*, *nq*, and *nx*, and the voiced forms preceded by a nasal *ngc*, *ngq* and *ngx*; but this method makes no provision for the unvoiced forms preceded by a nasal, which are not now generally recognized as existent. In fact, the writing of *nc*, etc. in words where the unvoiced form preceded by a nasal really occurs, has caused Europeans to overlook the existence of such forms; and further, there is danger of the natives themselves beginning to pronounce them as the ordinary nasal form, if there is no special method of recording them in writing.

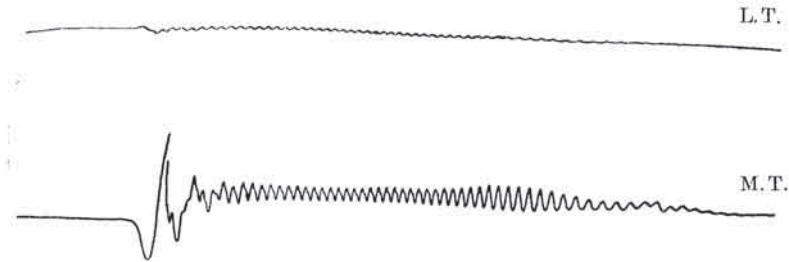
Sixty years ago Callaway employed a much more practical system of writing the clicks by using *kc*, *kq*, and *kx* for the unvoiced forms, so that he was able to distinguish *nkc*, *nkq*, and *nkx* from *nc*, *nq*, and *nx*; and it will be greatly regretted if his system is not reintroduced before "spelling pronunciations" destroy the purity of Zulu, and the forms he indicated by *nkc*, *nkq*, and *nkx* be lost to Zulu altogether. McLaren recognizes the same difficulty in Xosa, and says "they might with advantage have been written *kc*, *kq*, *kx*". In order to avoid any misunderstanding he distinguishes these forms from the nasal clicks by writing the former *n̄c*, *n̄q*, and *n̄x*.

Further, there are aspirated forms of the unvoiced clicks. Bryant, Samuelson, and some others recognize these, but they are not included in ordinary writing. *kch*, *kqh*, and *kxh* could be thus employed.

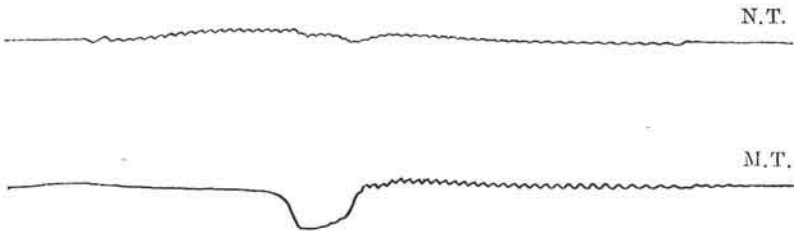
Now it may be argued from the above that I might have adopted some system such as Callaway's, working from my ground-forms of **ɔ**, **ɕ**, and **ɔ̣** (since **c**, **q** and **x** are used to represent other sounds by the International Phonetic Association), and using **kɔ**, **gɔ**, **ɔ̣ɔ**, **ɔ̣kɔ**, **ɔ̣gɔ**, etc. To this, in a phonetic study of the language, I have several objections.

Firstly, it is the whole click, and not merely the velar part thereof, which is found to be unvoiced, voiced, or nasal, as the case may be. The symbols **kɔ**, **gɔ**, and **ɔ̣ɔ** do not indicate this. The kymograph tracings on p. 133 are illustrative of this.

Secondly, both in preparation for the click and in release the velar is the second and not the first of these compound sounds, hence **ɔ̣k**, **ɔ̣g**, **ɔ̣ɔ̣**, according to the order used by orthographists of Hottentot and Bushman, would be the more logical order.



Simultaneous mouth and larynx tracing of ya at a speed of $4\frac{1}{2}$ secs. per metre, showing that the voicing goes right through the click, though the stop before it is unvoiced.



Simultaneous mouth and nose tracing of na at a speed of $4\frac{1}{2}$ secs. per metre, showing that not only is the click itself nasal, but the stop before it is also fully nasal.

Thirdly, this method gives undue prominence to the velar part, which is only one element of the click, ɕ , ɕ , and ɕ must represent the whole click and not the non-velar part only.

Lastly, the unvoiced, voiced, and nasal clicks are as acoustically different to the native as are the unvoiced, voiced, and nasal explosives to the European. In fact they show a striking parallel in their variations. And so it seems to me that it is unwise to multiply intricacies, which tend to slow and difficult reading and writing, by using :

$k\text{ɕ}$, $g\text{ɕ}$, $\eta\text{ɕ}$ instead of ɕ , ɕ , η ,
 $k\text{ɕ}$, $g\text{ɕ}$, $\eta\text{ɕ}$ „ „ ɕ , ɕ , ɕ ,
 and $k\text{ɕ}$, $g\text{ɕ}$, $\eta\text{ɕ}$ „ „ ɕ , ɕ , ɕ .

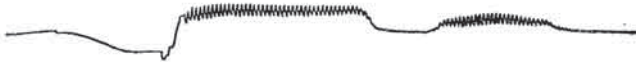
A little practice with these symbols will make reading and writing fluent and speedy. I discard Sir H. H. Johnston's symbols ɕ , ɕ , ɕ , and ɕ (one of them for a fourth click which does not exist in Zulu or Xosa), because of their great mutual similarity, which is apt to cause continual mistakes, and is baffling to quick reading.

§ 8. Aspiration, Voicing and Nasal Influence

(i) Each of the unvoiced clicks, ɕ , ɕh , and ɕh , has its aspirated form : ɕh , ɕh and ɕh . The following kymograph mouth-tracings will show both the nature of the click or suction-sound, which causes the stylo to fall sharply below the line, instead of jumping above as with the explosives, and also the effect of aspiration with the click.



(a) $\overset{3}{\text{ɕ}}\overset{9}{\text{ú:ɕa}}$ (crouch down).



(b) $\overset{5}{\text{ɕh}}\overset{4}{\text{ú:ɕa}}$ (drive).

The aspiration causes the stylo to rise much higher immediately after the click, the depth of the fall of the stylo below the medial line being less by compensation.

It is very essential to distinguish carefully between aspirated and unaspirated clicks, as words differing in meaning but otherwise alike are distinguished thereby, e.g. :

$\overset{5}{\text{ɕ}}\overset{4}{\text{á:ɕa}}$ (scrape a wound), $\overset{5}{\text{ɕh}}\overset{4}{\text{á:ɕh}}\overset{4}{\text{á}}$ (shell beans, etc.).

$\overset{5}{\text{ɕ}}\overset{4}{\text{á:tha}}$ (break up new ground), $\overset{5}{\text{ɕh}}\overset{4}{\text{á:tha}}$ (cause a fight).

$\overset{5}{\text{ɕ}}\overset{4}{\text{ó:ɕa}}$ (relate), $\overset{5}{\text{ɕh}}\overset{4}{\text{ó:ɕha}}$ (prod, poke).

(ii) As has already been noticed in Chapter VI, under nasal influence the aspirated click loses its aspiration, and the resultant form is that of the pure nasal click. Examples :—

$\text{ɕh} > \text{ɕ}$ $\overset{3}{\text{ú:ɕh}}\overset{2-8}{\text{ú}}\overset{9}{\text{ɕé:la}}$ (sharp instrument), $\overset{6}{\text{iz}}\overset{6}{\text{ɕh}}\overset{3}{\text{ɕh}}\overset{3-8}{\text{ú}}\overset{9}{\text{ɕé:la}}$ (pl.).

$\overset{2-4}{\text{ú:ɕh}}\overset{3}{\text{ɕh}}\overset{3-88}{\text{ɕh}}\overset{8-3-6}{\text{ɕh}}\overset{3}{\text{ɕé:ne}}$ (wild berry), $\overset{2}{\text{iz}}\overset{6}{\text{ɕh}}\overset{3}{\text{ɕh}}\overset{3-88}{\text{ú}}\overset{8-3-6}{\text{ɕh}}\overset{3}{\text{ɕé:ne}}$ ¹ (pl.).

$\overset{5}{\text{ɕh}}\overset{4}{\text{wep}}\overset{9}{\text{h}}\overset{ɕ}{\text{é:fa}}$ (do easily), $\overset{3}{\text{ɕh}}\overset{2}{\text{wep}}\overset{2-8}{\text{h}}\overset{9}{\text{ɕé:ɕ}}$ (a master of his craft).

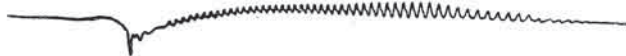
$\overset{5}{\text{ɕh}}\overset{4}{\text{wá:ɕa}}$ (perform hut-dance), $\overset{2}{\text{ɕh}}\overset{2-8}{\text{wá:ɕ}}$ (a hut-dancer).

¹ Note the double nasalization in the plural, a case of harmony.

- $\text{ɕh} > \text{ɸ}$ ^{3-2 2-4 3} i:ɕhú:ɸu (bulge), ^{2 2-4 3} iɸú:ɸu (bend in river).
^{2-4 3 6-3 9} ù:ɕhudú:du (tall careless person), ^{2 6 3 6-3 9} izɸudú:du (pl.).
^{3 3 2 2-8 9} u:ɕhàkamé:la (tall broad-chested person), ^{6 6 6 3 3-8 9} izɸàkamé:la (pl.).
- $\text{sh} > \text{ɸ}$ ^{5 5 4} shá:ntʔa (sprout), ^{2 2 2 2-8 9} iɸantʔé:la (shoot, branch).
^{3 2 2-8 9} ù:shufé:la (sharp instrument), ^{6 6 3 3-8 9} izɸufé:la (pl.).
^{3 3 3 2 2-8 9} ùlushà'fushá:fu (muddy place), ^{6 6 6 3 3-8 9} izɸù'fufá:fu (pl.).

Hence many of these nasal forms in Zulu point to derivation from the corresponding aspirated form.

(iii) Voiced, unvoiced, aspirated, and nasal clicks are, of course, strictly phonemic, differentiating one word from another. The following kymograph tracings present noticeable differences.



(a) ca.



(b) cha.



(c) 2a.



(d) ɸ.

(At 6 secs. per metre.)

Aspiration is shown in (b) by the sustained bowing immediately after the rise of the stylo. Voicing is shown by the strong vibration immediately the stylo rises in (c). The shallowness of (d) is due to nasalization which detracts from the click depth for compensation.

Examples of phonemic differences :

^{5 4} ɸá:ɸa (chop down), ^{8-3 9} ɸá:ɸa (tattoo).

^{5 4}ǀhá:ǀa (spread out), ^{5 4}ǀá:ǀa (cover breasts).

^{8-3 9}ǀá:ǀa (mark the face), ^{3 9}ǀá:ǀa (forbid).

^{5 4}ǀhú:ma (pop), ^{7 4}ǀú:ma (moan), ^{3 9}ǀú:ma (cut).

^{5 4}ǀhú:ma (join together), ^{5 4}ǀú:ma (jump).

The following examples show how the different positional types of clicks differentiate between words otherwise alike in sound :

^{3 9}ǀǃ:ǀa (pick up), ^{5 4}ǀhǃ:ǀa (be conceited), ^{3 9}ǀǃ:ǀa (drive away)
^{2-4 3 9}ǀǃ:ǀe (aside), ^{2-4 3 9}ǀǃ:ǀe (swarm), ^{2-4 3 9}ǀǃ:ǀe (left-handed person).

(iv) If the homorganic nasal is placed immediately before the unvoiced (unaspirated) click, the corresponding voiced form results. Examples :

ǀ > ǀǀǃ ^{3-2-2-6 8-3} u:ǃ:ǃ:zu (slice) > ^{66-33 6 8-3} ǀǀǀǃǃǃ:ǃ:zu (pl.).
^{3-2-2-6 6 8-3} u:ǃ:ǃǃǃǃǃǃ (wire) > ^{66-33 6 6 8-3} ǀǀǀǃǃǃǃǃǃǃǃǃ (pl.).
^{3-2 9} ú:ǃu (row of beads) > ^{66-33 9} ǀǀǃǃǃǃǃǃǃ (pl.).
ǀ > ǀǀǃ ^{3-2 2-4 3} u:ǃwé:ǃwé (scab) > ^{66-33 7 4} ǀǀǃǃǃǃǃwé:ǃwé (pl.).
^{3-2-2-8 8 9} u:ǃú:ǃǃǃǃǃǃǃ (grass stalk) > ^{66-33 3-8 8 9} ǀǀǃǃǃǃǃú:ǃǃǃǃǃǃǃǃǃ (pl.).
^{2-4 3 3 9} u:ǃǃ:ǃǃǃǃǃǃǃ (seam of head ring) > ^{2 6 6 6-3 3 9} ǀǀǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃ (pl.).
ǀ > ǀǀǃǃ ^{3 2 9} ǀǀǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃ (quarrel) > ^{2 2 5 3 9} ǀǀǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃ (a quarrel).
^{3 2 9} ǀǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃ (worry) > ^{2 2 5 3 9} ǀǀǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃ (trouble).
^{5 4} ǀǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃ (relate) > ^{3 3 9 9} ǀǀǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃ (account).

(v) Nasal influence on a nasal click causes no alteration therein. Before a voiced click the homorganic nasal is syllabic followed by a non-syllabic nasal of the same type, closely in contact with the voiced click. Examples :

^{2-4 4 3-8 9} ǀǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃ (tinkling thing), ^{2 6 6 3-8 9} ǀǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃ (pl.).
^{2 2-4 3-8 9} ǀǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃ (quality of a ram), ^{3 3-8 9} ǀǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃ (ram).
^{2 2-4 3} ǀǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃ (side), ^{2-4 3} ǀǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃ (side).
^{5 4} ǀǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃ (wax up hive), ^{3 3 9 9} ǀǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃǃ (wax).

^{3-2 9 9} u:2ó:kó (wooden tray), ^{66-33 9 9} izi:ŋŋ2ó:kó (pl.).
^{3-2 9} ú:sa (digging-stick), ^{66-33 9} izi:ŋŋsa (pl.).

(vi) Just as with the majority of plain consonants, so the clicks may be followed by the semi-vowel w. Examples of this have been given in Chapter X. Similarly m is used before the clicks, unvoiced, voiced, aspirated, or nasal, e.g. :

^{22-4 3-8 9} ùmshwé:lé (inner feelings).
^{3 2 7 4} ùmýú:la (one who stands instead of working).
^{3 2 2-8 9} ùmǰhá:ǰo (tassel).
^{3 3 22 2-8 9} ùmpantʔú:la (protruding tooth).

The remarkable parallel in form and phonetic operations between the Zulu explosives and the Zulu clicks is worthy of passing notice. There is great similarity in the influence of the homorganic nasals and in aspiration. The ejective explosive is the reverse of the injective click; while the kymograph tracings seem to suggest that the click is a negative or inverted explosive.

§ 9. Unvoiced Clicks preceded by Nasals

Scholars of modern Zulu do not realize the existence of combinations of unvoiced clicks with the nasal. However, they are very rare, and I have only identified the following as yet :

^{3 2 2-4 555-8} ŋǰ ukú:thi ǰhóŋǰo¹ (to be on top of anything).
^{3 2 9 9 9} ŋǰ ùku2ú:ŋǰa (to fade, become discoloured), with all its derivatives :
^{5 5 3 9} 2uŋǰí:sa (cause to fade).
^{5 5 5 4 9} 2ùŋǰisé:la (cause to fade for).
^{5 5 4 9} 2uŋǰé:la (fade on).
^{4 4 443-8 9} ùm2uŋǰí:só (that which causes to fade).
^{2 2-4 55 3 9} ùku2uŋǰú:la (to leap about).
^{3 2 2-4 77 4} ukú:thi 2áŋǰu (to leap about).
^{3 2 7 7 4} áma2á:ŋǰu (small leaps).

^{55 8-3}
¹ Or more commonly ǰhóŋǰo.

η³ ù²ku²⁻⁸shá:η⁸sa (mix sour milk).

ù²ku²⁻⁴saη⁴á:tha (to pound up green roots), with all its derivatives :

ù²shaη²⁻⁴á:the (he pounded).

shà⁴η⁴sathé:la (pound up for).

shà⁴η⁴sathisi:sa (pound quickly).

In Xosa, however, unvoiced clicks preceded by the homorganic nasal are fully recognized, at any rate by McLaren, for example :

incence (phon. η³η³é:η⁴ε, zinc).

inqayi (phon. η³á:η⁴, bald head).

ukuti-nivu (phon. ukú:thu η³su, to dip in).

Dr. Callaway recorded a number of words in his *Religious System of the Amazulu* and his *Nursery Tales of the Amazulu*, nearly sixty years ago, with the symbol **nk** followed by the click symbol. I am unable to get these words confirmed as Zulu with the pronunciation he records. Several of his examples tally with present-day Xosa words, and in all probability the other examples are strongly influenced from Xosa.

Examples :

- | | |
|--------------------------|--|
| Religious System—p. 170. | kwati nkqi ¹ (it was firm). |
| " " p. 229. | enkqineni ² (among the hunters). |
| Nursery Tales—p. 137. | i nkqwininize (it (bird) cried). |
| " " p. 187. | namankqe ³ (and the vultures). |
| " " p. 203. | a kqonkqwe (let it be melted down). |

¹ Cf. Xosa η³ci: (be firm).

² Cf. Zulu è³phiné:ni, and Xosa è³phiné:ni, both with the above meaning.

³ Cf. Xosa í:η³çə (vulture).

CHAPTER XII

PHONETICS IN RELATION TO MORPHOLOGY

(1) PRE-PALATALIZATION

§ 1. The Nature of Pre-palatalization in Zulu

It has already been seen that the presence of a nasal before the stem of a word in Zulu often causes extensive morphological changes in the phonetic structure of the word. In this chapter we have to consider the morphological changes which occur in words because the final syllable of their stems contains a bi-labial consonant. Similar changes are found to take place in Xosa, Suto, Chwana, and other Bantu languages; and such change is usually called **palatalization**, because the bi-labial or other consonants are said to give place to palatal sounds. In Zulu, however, there are no true palatals, the pre-palatal consonants taking their place, and so I have termed this process in Zulu **pre-palatalization**. Whilst pre-palatalization is caused primarily by the presence of bi-labials, it is not confined entirely to them in Zulu; for, in the formation of Noun Diminutives, there are cases of the pre-palatalization of alveolars.

In Zulu pre-palatalization takes place in the formation of (a) the Passives of Verbs, (b) Locative Adverbs from Nouns, and (c) the Diminutives of Nouns, Adjectives, Relatives, and Adverbs. The main rule, which will be deduced from an examination of each of these cases, is as follows:—

ph (aspirated bi-labial explosive) > ʃ (unvoiced pre-palatal fricative).

b (voiced bi-labial explosive) > dʒ (voiced pre-palatal affricate).

β (bi-labial implosive) > tʃʔ (ejective pre-palatal affricate).

m (bi-labial nasal) > ɲ (pre-palatal nasal).

§ 2. Pre-palatalization in the Formation of the Passive

The general rule in Zulu, as in Bantu as a whole, for the formation of the passive of verbs is to suffix **-wa** in place of the final **-a** of the verb stem. It has already been observed, when dealing with the semi-vowel **w**, that this semi-vowel never combines, in Zulu, with any of the bi-labials, hence there is this special rule for the formation of passives when bi-labials are involved.

Verbs, of which the final syllable begins with a bi-labial consonant, change that consonant to the corresponding pre-palatal before suffixing **-wa**. Examples :

ph > f	⁵ ⁴ ɬú:pha (tease) > ⁵ ⁴ ɬú:fwa
	³ ⁹ ɬó:pha (tie) > ³ ⁹ ɬó:fwa.
b > dz	⁶ ⁶⁻³ bú:ba (die) > ³⁻⁵ ⁶ ⁶⁻³ kwa:bú:dzwa. ¹
	⁶ ⁶⁻³ bá:ba (trap) > ⁶ ⁶⁻³ bá:dzwa.
β > tʃʔ	³ ⁹ ló:βa (write) > ³ ⁹ ló:tʃʔwa.
	⁵ ⁴ ɬá:βa (stab) > ⁵ ⁴ ɬá:tʃʔwa.
m > n	³ ⁹ thú:ma (send) > ³ ⁹ thú:nwa.
	³ ⁹ lú:ma (bite) > ³ ⁹ lú:nwa.
mpʔ > ntʃʔ	⁵ ⁵ ⁴ mpʔá:mpʔa (flutter) > ³⁻⁵ ⁵ ⁵ ⁴ kwa:mpʔá:ntʃʔwa. ¹
mmb > ndz	⁶ ⁶ ⁶⁻³ βá:mmba (catch) > ⁶ ⁶⁻³ βá:ndzwa
	³ ³ ⁹ há:mmba (travel) > ³ ⁴ ⁹ kwahá:ndzwa. ¹

It is interesting to see how far this pre-palatalization persists in passives, even when the bi-labial is no longer in the **final** syllable of the word, if that word is a derivative of a simple stem which contains the bi-labial.

Examples :	⁴ ³ ⁹ ɬophé:la (tie for) > ⁴ ³ ⁹ ɬofé:lwa.
	⁶ ⁶⁻³ ⁹ bubí:sa (kill) > ⁶ ⁶⁻³ ⁹ budzǐ:swa.
	⁴ ⁴ ³ ⁹ lùmsí:sa (bite hard) > ⁴ ⁴ ³ ⁹ lùmsí:swa.

From this one is able to recognize that many verbs, now used as simple stems, are really derived forms of simple stems maybe no longer extant in Zulu, formed by derivative suffixes, which are not recognized as such in Zulu.

Examples :	⁴ ³ ⁹ thaβá:tha (take) > ⁴ ³ ⁹ thatʃʔá:thwa.
	⁴ ⁴ ³ ⁹ ɬáβelé:la (sing) > ⁴ ⁴ ³ ⁹ ɬátʃʔelé:lwa.
	⁴ ⁴ ³ ⁹ fùmajé:la (preach) > ⁴ ⁴ ³ ⁹ fùnajé:lwa.

¹ Sense does not permit of these passive forms being used in the imperative.

$\overset{4}{\text{t}}\overset{4}{\text{a}}\overset{4}{\text{m}}\overset{3}{\text{b}}\overset{9}{\text{u}}\overset{9}{\text{l}}\overset{9}{\text{u}}\overset{9}{\text{l}}\overset{9}{\text{a}}$ (cleanse) > $\overset{4}{\text{t}}\overset{4}{\text{a}}\overset{3}{\text{n}}\overset{3}{\text{d}}\overset{3}{\text{z}}\overset{9}{\text{u}}\overset{9}{\text{l}}\overset{9}{\text{u}}\overset{9}{\text{l}}\overset{9}{\text{w}}\overset{9}{\text{a}}$.
 $\overset{4}{\text{k}}\overset{3}{\text{h}}\overset{9}{\text{u}}\overset{9}{\text{m}}\overset{9}{\text{u}}\overset{9}{\text{l}}\overset{9}{\text{a}}$ (take off) > $\overset{4}{\text{k}}\overset{3}{\text{h}}\overset{9}{\text{u}}\overset{9}{\text{p}}\overset{9}{\text{u}}\overset{9}{\text{l}}\overset{9}{\text{w}}\overset{9}{\text{a}}$.
 $\overset{4}{\text{b}}\overset{3}{\text{a}}\overset{9}{\text{b}}\overset{9}{\text{a}}\overset{9}{\text{z}}\overset{9}{\text{a}}$ (flatter) > $\overset{4}{\text{b}}\overset{3}{\text{a}}\overset{9}{\text{t}}\overset{9}{\text{s}}\overset{9}{\text{z}}\overset{9}{\text{a}}\overset{9}{\text{w}}\overset{9}{\text{a}}$.

From these examples we are able to deduce that the original simple stems of these verbs were: $\overset{4}{\text{t}}\overset{4}{\text{h}}\overset{4}{\text{a}}\overset{4}{\text{b}}\overset{4}{\text{a}}$, $\overset{4}{\text{t}}\overset{4}{\text{a}}\overset{4}{\text{b}}\overset{4}{\text{a}}$, $\overset{4}{\text{j}}\overset{4}{\text{u}}\overset{4}{\text{m}}\overset{4}{\text{a}}$, $\overset{4}{\text{t}}\overset{4}{\text{a}}\overset{4}{\text{m}}\overset{4}{\text{b}}\overset{4}{\text{a}}$, $\overset{4}{\text{k}}\overset{4}{\text{h}}\overset{4}{\text{u}}\overset{4}{\text{m}}\overset{4}{\text{a}}$, and $\overset{4}{\text{b}}\overset{4}{\text{a}}\overset{4}{\text{b}}\overset{4}{\text{a}}$, each with a bi-labial as the second or final consonant of the root. In present-day Zulu there seems to be no connexion between $\overset{5}{\text{t}}\overset{4}{\text{h}}\overset{4}{\text{a}}\overset{4}{\text{b}}\overset{4}{\text{a}}$ (be delighted) and the "Contactive" form $\overset{4}{\text{t}}\overset{4}{\text{h}}\overset{4}{\text{a}}\overset{3}{\text{b}}\overset{9}{\text{a}}\overset{9}{\text{t}}\overset{9}{\text{h}}\overset{9}{\text{a}}$ (take), the simple form of which may have had different tones. $\overset{5}{\text{t}}\overset{4}{\text{a}}\overset{4}{\text{b}}\overset{4}{\text{a}}$ (strike up a tune) is certainly connected with the "Perfective" form $\overset{4}{\text{t}}\overset{4}{\text{a}}\overset{4}{\text{b}}\overset{4}{\text{a}}\overset{4}{\text{t}}\overset{4}{\text{h}}\overset{4}{\text{a}}\overset{4}{\text{b}}\overset{4}{\text{a}}\overset{4}{\text{t}}\overset{4}{\text{h}}\overset{4}{\text{a}}$ (sing). There seems to be no connexion between the Zulu $\overset{5}{\text{j}}\overset{4}{\text{u}}\overset{4}{\text{m}}\overset{4}{\text{a}}$ (creep in under) and the form $\overset{4}{\text{j}}\overset{4}{\text{u}}\overset{4}{\text{m}}\overset{4}{\text{a}}\overset{4}{\text{j}}\overset{4}{\text{e}}\overset{4}{\text{l}}\overset{4}{\text{a}}$ (preach): here again the tones may indicate a separate stem. $\overset{4}{\text{t}}\overset{4}{\text{a}}\overset{3}{\text{m}}\overset{6}{\text{b}}\overset{6}{\text{a}}\overset{3}{\text{j}}\overset{3}{\text{e}}\overset{3}{\text{l}}\overset{3}{\text{a}}$ (wash) is certainly connected with the "Repetitive" form $\overset{4}{\text{t}}\overset{4}{\text{a}}\overset{4}{\text{m}}\overset{4}{\text{b}}\overset{4}{\text{a}}\overset{4}{\text{t}}\overset{4}{\text{h}}\overset{4}{\text{a}}\overset{4}{\text{b}}\overset{4}{\text{a}}$ (cleanse), and indicates to "go over the washing again". $\overset{5}{\text{k}}\overset{4}{\text{h}}\overset{4}{\text{u}}\overset{4}{\text{m}}\overset{4}{\text{a}}$ (eat something brittle) seems scarcely connected with the "Reversible" form $\overset{4}{\text{k}}\overset{4}{\text{h}}\overset{3}{\text{u}}\overset{3}{\text{m}}\overset{9}{\text{u}}\overset{9}{\text{l}}\overset{9}{\text{a}}$ (take off). It is also difficult to see the connexion between $\overset{3}{\text{b}}\overset{3}{\text{a}}\overset{9}{\text{b}}\overset{9}{\text{a}}$ (be acrid) and $\overset{4}{\text{b}}\overset{4}{\text{a}}\overset{3}{\text{b}}\overset{9}{\text{a}}\overset{9}{\text{z}}\overset{9}{\text{a}}$ (flatter). The consistent series of tones, 4, 3, 9, also proclaims that these words are derivatives.

Changes in the formation of the passive, other than those due to pre-palatalization, will be noticed in the next chapter.

§ 3. Pre-palatalization in the formation of Locative Adverbs

The general rule for the formation of the Locative¹ in Zulu is that the initial vowel of the noun is changed to ϵ (e) and the final vowel gives place to a suffix $-\text{eni}$, if that vowel be a , ϵ , or o , and $-\text{ini}$, if it be i or u .² When, however, the final syllable of the noun is composed of a bi-labial consonant followed by o or u , pre-palatalization of that consonant takes place, and o gives place to the suffix $-\text{eni}$, and u to $-\text{ini}$.

¹ I.e. the formation of Locative Adverbs from Nouns.

² When the final vowel is o the suffix becomes $-\text{oeni}$, and when it is u , $-\text{wini}$.

Examples :

ph > f	^{33-53-8 9} isi ḽ ó:pho (grass rope) > ^{33-55 3 9} èsi ḽ ófjé:ni.
	^{3-2 2-8 9} i:ḽhó:pho (corner) > ^{4 33-8 9} èḽho fj é:ni.
b > dʒ	³⁻²⁻²⁻⁶⁻⁶⁻³ u:ḽú:bu (mealie-meal water) > ^{4-3 3-6 6-3 9} ò:ḽud ʒ í:ni. ¹
	^{22-4-6-3 9} isi ḽ ú:bu (calabash) > ^{33-5-6-3 9 9} èsi ḽ ud ʒ í:ni.
ḽ > tʃʔ	^{6-6-33 8-9 8} izi ḽ uḽḽú:ḽo (blankets) > ^{6 6 6 6 3-8 9} èzi ḽ uḽḽgutʃʔé:ni.
	^{3 2 2-8 9} isi ḽ ó:ḽo (friend) > ^{3 3 2 2-8 9} èsi ḽ ó tʃ ʔé:ni.
m > ɱ	^{3 2 2-8 9} ù ḽ l ḽ ó:mó (mouth) > ^{3 3 2 2-8 9} è ḽ l ḽ o ɱ é:ni.
	^{2 2 2-8 9} ù ḽ tʔá:mó (neck) > ^{3 3 2 2-8 9} è ḽ tʔa ɱ é:ni.
mpʔ > pʃʔ	^{2 2-4 3-8 8 9} ù ḽ bup ḽ ó:mpʔó (shamelessness) > ^{2 2-4 5 3 9} è ḽ bup ḽ o pʃ ʔé:ni. ²
mmb > p ḽ ʒ	^{22-4 3-8-8 9} ù ḽ thó:m ḽ mbó (well) > ^{33-5 5 6-3 9} è ḽ tho pḽ ʒé:ni.
	^{3 2 2-8-8 9} isi ḽ á:m ḽ mbó (handle) > ^{3 3 2 9 9} èsi ḽ a pḽ ʒé:ni.

When, however, the bi-labial is followed by any other vowel, the general rule holds good, and no pre-palatalization takes place : e.g. :

^{3 2 2-8 9} isikhé:ḽe (game-pit) > ^{3 3 2 2-8 9} èsikhéḽé:ni.
^{22-4 3 9} isikʔé:bé (boat) > ^{22-4 3 9 9} èsikʔéḽé:ni.
^{2 2 2-8 9} ù ḽ kʔá:ḽi (ox) > ^{2 2 2-4 3 9} è ḽ kʔaḽi:ni.
^{3 3-5 4} uḽú:ḽi (evil) > ^{3 3-5 4 9} èḽuḽi:ni.
^{3-2 2-4 3} i:khwá:pha (arm-pit) > ^{2 2-4 3 9} èkhwaphé:ni.
^{3 3-8 9} ù ḽ á:ma (meat) > ^{3 2 2-8 9} è ḽ amaé:ni.

The above rule for pre-palatalization is not so rigidly adhered to with the Locatives as with the Verb Passives, and, amongst others, the following are the principal exceptions :

(i) Bi-labial followed by ɔ or u not pre-palatalized :

^{3 3-8 9} intsʔí:mu (garden) > ^{3 3-5 4 9} èntsʔimí:ni.
^{6 6 6 3-5 4} izi ḽ kʔó:mó (cattle) > ^{6 6 6 3 4 9} èzi ḽ kʔomé:ni.

¹ Or rarely ò:ḽubí:ni. The initial ɔ: is found, in place of ɛ, with words having the contracted prefix of Class 6.

² More commonly èḽbup**ḽ**o**ɱ**ʔé:ni.

^{3 3-5 4} isi:ma (form) > ^{3 3-5 4 9} esimaé:ni or ^{3 3-5 4 9} esimé:ni.¹
^{3 3 8-9 9} imp²é:pho (medicinal plant) > ^{3 3 2 2-8 9} èmp²εphoé:ni.²
^{3-2 2-8 9} i:phú:pho (dream) > ^{3 2 2-8 9} èphufé:ni or ^{3 2 2-8 9} èphuphoé:ni.³
^{3-2 2-4 4 3} i:fwé:mp²u (poor person) > ^{3 3-4 4 3 9} èfwemp²í:ni.
^{3 2 8 8 8-3} isidú:mmbu (dead body) > ^{3 2 8 8-3 9} èsidupdzí:ni or ^{3 2 8 8 8-3 9} èsidummbí:ni.⁴

(ii) Bi-labial followed by a or i, yet pre-palatalized :⁵

^{2 2-4 3-8 8 9} ùmkhú:mmbi (ship) > [^{2 2-4 5 5 8-3 9} èmkhummbí:ni or ^{2 2-4 5 8-3 9} èmkhupdzí:ni].
^{2-4 6-3-6 9} i:gá:ma (name) > ^{3 6 3 9} ègamé:ni [or ^{3 6 3 9} ègapé:ni].
^{2 2-8 8-3-8 8 9} ùmzí:mmba (body) > ^{3 3-8 8 8 8-3 9} èmzimmbé:ni [or ^{3 3-8 8 8-3 9} èmziɸdzé:ni].
^{2 2-8 8-3 3 9} isidú:mmbi (species of garden) > ^{3 3-8 8-3 3 9 9} èsidummbí:ni or ^{3 3-8 8-3 9 9} èsidupdzí:ni.
^{2-4 3 9} i:çó:ma (basket) > ^{2 3 3-8 9} èçomé:ni [or ^{2 3 3-8 9} èçapé:ni].

§ 4. Pre-palatalization in the formation of Diminutives

In the formation of Diminutives, whether of nouns, adjectives, relatives or adverbs, the general rule for Zulu is to suffix *-ana* in place of the final vowel of the stem. Pre-palatalization takes place prior to suffixing when the consonant of the final syllable is a bi-labial, and in certain cases when that consonant is an alveolar; irrespective of the quality of the final vowel.

(i) When the consonant of the final syllable is bi-labial :

Examples :

ph > **f** ^{3-2 2-4 3} u:phá:phε (feather) > ^{3-2 2-4 3 9} ù:phafá:na.
 ^{2 2 2-8 9} imp²ú:phu (meal) > ^{3 3 2 8-9 9} èmp²u:phá:na.
b > **dz** ^{3-2 2-8 8-3} u:çú:bu (meal-water) > ^{3-2 2-6 6-3 9} ù:çudzázá:na.
 ^{2 2-4 6-3 9} isigú:bu (calabash) > ^{3 3-5 6-3 9 9} èsigudzázá:na.

¹ Possibly so as not to be confused with ^{3 3-5 4 9} esipé:ni, the locative of ^{3 3-5 4} isi:ɸe (bladder).

² See Chapter IV, § 2.

³ Notice the working of the Rule of Compensation: the *o* is dropped when pre-palatalization takes place, and retained when the bi-labial is unchanged.

⁴ Differing only in tone from the locatives of ^{2 2-8 8-3 3 9} isidú:mmbi below.

⁵ The less commonly used form is placed in square brackets.

ǃ > tʃ ²	^{2 2 2-8 9} ĩḱʔá:ǃi (ox) > ^{2 2 2-4 3 9} ĩḱʔatʃʔá:na ¹
	^{3 3 8-9 9} ĩntʔá:ǃa (hill) > ^{3 3 2 8-9 9} ĩntʔatʃʔá:na .
m > p	^{3 3 3-5 4} ĩḱʔó:mǃ ("beast") > ^{3 3 3-5 4 9} ĩḱʔǃpá:na . ²
	^{2 2 2-8 9} ĩntʔá:mǃ (neck) > ^{3 3 2 2-8 9} ĩntʔǃpá:na .
mpʔ > ptʃ ²	^{3 4 4 9} ĩntsʔwɛ:mpʔɛ (quail) > ^{3 4 3-8 9} ĩntsʔwɛptʃʔá:na .
	^{3 4 4 9} ĩntsʔú:mpʔa (wart) > ^{3 4 3-8 9} ĩntsʔuptʃʔá:na .
mmb > pdz	^{3 3 3-8 8 9} ĩntʔá:mmbǃ (string) > ^{3 3 2 8-9 9} ĩntʔǃpdzǃa:na .
	^{3 2 9 9 9} ĩsivǃ:mmbǃ (stopper) > ^{6 6 6-3 9 9} ĩsivǃpdzǃa:na .

Exceptions are found to this rule, for instance :

^{3-5 5 4} ĩ:mpʔi (army) > ^{3 3 4 9} ĩmpʔá:na . ³
^{3 2 2 9} ĩsǃ:mmbǃ (digging-stick) > ^{3 2 2 9 9} ĩsǃmmbǃa:na or
^{3 2 2 9 9} ĩsǃmmbǃǃa:na .

(ii) If the final syllable of the noun contain an alveolar explosive, aspirated, or voiced, two forms of the diminutive are possible, either the explosive remaining unchanged or pre-palatalization taking place before suffixing *-ana*.

th remains **th** or becomes **ʃ** :

^{3 2 2-4 3} ĩsikhá:thi (time) > [^{3 2 2-4 3 9} ĩsikhathá:na or] ⁴ [^{3 2 2-4 3 9} ĩsikhafá:na].
^{2-4 3} ú:thi (stick) > ^{2-4 3 9} u:thá:na [or ^{2-4 3 9} u:ʃá:na].
^{3-5 4} ú:thǃ (thing) > ^{3-5 4 9} u:thǃá:na [or ^{3-5 4 9} u:ʃǃá:na].

¹ ^{2 2 2-4 3 9} **ĩḱʔáǃá:na** is also sometimes heard ; both forms also being the diminutives of ^{2 2 2-8 9} **ĩḱʔá:ǃa** (navel).

² This diminutive means "a small beast" even if old, and has different tones from ^{3 3 3-5 3-8 9} **ĩḱʔǃpá:na** or ^{3 3 3-5 3-8 9} **ĩḱʔǃpá:ne**, a calf. Notice also that ^{3 3 3-5 4 9} **ĩḱʔǃpá:na** (small "beast") has the plural ^{6 6 6 3 3-8 9} **ĩzĩḱʔǃpá:na**, whilst **ĩḱʔǃpá:na** (calf) has the plural ^{3 3 3-5 5 3-8 9} **ǃmǃzĩḱʔǃpá:na**. **ĩḱʔǃpá:na** means also "muscle", but has for its plural ^{3 6 6 6 3-8 9} **ĩzĩḱʔǃpá:na**.

³ Possibly because the stem is monosyllabic ; but contrast the word ^{2-4 3} **ú:thi**, lower down.

⁴ The less commonly used form is placed in square brackets.

d remains **d** or becomes **ɖg** :

^{3 3-8 8-3} **ɪwá:dí** (book) > [^{3 3-88-3 9} **ɪŋwádá:na** or ^{3 3-8 8-3 9} **ɪŋwáɖgá:na**.
^{3 2 7 7-4} **ùmgó:dí** (mine) > [^{3 2 6 6-3 9} **ùmgódá:na** or ^{3 2 6 6-3 9} **ùmgóɖgá:na**.

nnd remains **nnd** or becomes **ɲɖg** :

^{3-22-88 8-3} **ɪ:ɖá:nnda** (egg) > [^{3-22-66 6-3 9} **ɪ:ɖáɲnda:na** or ^{3-22-6 6-3 9} **ɪ:ɖáɲɖgá:na**.
^{2-43-88 9} **ɪ:só:nndə** (footprint) > [^{2-4 44 8-3 9} **ɪ:sónndá:na** or ^{2-4 4 8-3 9} **ɪ:səɲɖgá:na**.
^{2 2 2-88 9} **ɪmpʔá:nndɛ** (root) > [^{2 2 2-88. 8-3 9} **ɪmpʔáɲnda:na** or ^{2 2 2-8 8-3 9} **ɪmpʔáɲɖgá:na**.

It is noteworthy that in these forms **-ána** or **-wana**¹ is retained, even if the alveolar gives place to the pre-palatal, the Law of Compensation not operating in this case.

The word ^{2 2 9 9} **ɪnndó:da** (man) has two diminutives :—

- (a) ^{5 5 6-3 9 9} **ɪnndódá:na**² (son).
 (b) ^{5 6 6 6 3-8 9} **ɪnndóɖgɛjá:na** (childish man).

(iii) If the final syllable of the word contain **tʔ**, ejective alveolar explosive, not preceded by the homorganic nasal, then **tʔ** gives place to the pre-palatal **ɲʔ**, e.g. :

^{2-4 3 9} **ɪ:kʔá:tʔ**₁ (cat) > [^{2-4 3 3-8 9} **ɪ:kʔáɲʔá:na**.
^{2-4 3 9} **ɪ:tʔwɛ:tʔwɛ** (apprehension) > [^{2-4 3 3-8 9} **ɪ:tʔwɛɲʔá:na**.
^{3-2 8-9 9} **u:pʔɛ:tʔɛ** (knock-kneed person) > [^{3 2 8-9 9} **u:pʔɛɲʔá:na**.

When, however, **ɲtʔ** comprises the consonantal part of the final syllable, no pre-palatalization takes place, e.g. :

^{3 2 2 9} **umu:ɲtʔu** (person) > [^{3 2 2 2-8 9} **ùmɲtʔwá:na**.³
^{3-5 5 4} **í:ɲtʔə** (thing) > [^{3 3 4 9} **ɲtʔá:na**.

The following word is an exception to this rule :

^{2 2-4 3 3 9} **ùmkhó:ɲtʔə** (spear) > [^{2 2-4 3 3-8 9} **ùmkhəɲtʔá:na**.

^{2 2-4 4 4 3-8 9} ^{2 2-4 4 4 3-8 9} ^{2 2-4 4 3-8 9}
¹ Cf. also **isɪsùkuthwá:na** or **isɪsùkufwá:na**, diminutive of **isɪsukú:thu** (a crowd).

² This is not the real diminutive, as it has acquired a specialized meaning now.

³ Note that the tones are the same whether this is the diminutive of **umù:ɲtʔu**, meaning "a small person", or the noun meaning "a child".

(iv) If the final syllable of the noun contain the alveolar nasal, *n*, pre-palatalization takes place before suffixing *-ana*, i.e. *n* becomes *ɲ*.

Examples :

^{2 2 6-3 9} **ĩndú:na** (captain) > ^{2 2 6 3-8 9} **ĩnduɲá:na**.
^{2 2-8 9} **ĩɲɔfʔé:ne** (baboon) > ^{3 2 2-8 9} **ĩɲɔfʔeɲá:na**.
^{2 2-8 9} **ĩpó:ni** (bird) > ^{3 2 2-8 9} **ĩpɔɲá:na**.
^{2 2-4 3-8 9} **ĩmĩɲɔfʔí:ni** (vegetables) > ^{2 2-4 4 3-8 9} **ĩmĩɲɔfʔiɲá:na**.
^{3 2 2-4 3} **isixú:nu** (anything cut short) > ^{3 2 2-4 3 9} **isixuɲwá:na**.

This rule governs the working of the further diminution of diminutives. It is generally stated that greater diminution is indicated by suffixing *-ana* instead of *-ana*; but this form is arrived at merely by applying the ordinary rule of diminutive formation, for nouns ending in *-na*, to the already-diminutive suffix *-ana*. This process may be repeated several times, e.g. : ^{3-8 8-3} **ĩ:ɲɔza** (dog) > ^{3 8-3 9} **ĩɲɔzá:na** (little dog) > ^{3 8 3-8 9} **ĩɲɔzaɲá:na** (very little dog) > ^{3 8 3 3-8 9} **ĩɲɔzaɲá:na** (exceedingly tiny dog).

(v) The above rules apply also to the diminutives of adjectives, relatives, and adverbs, e.g. :

^{2 2-4 3 9} **kũmɛ́:ɔphe** (it is white), ^{2 2-4 4 3 9} **kũmɛ́:ɔfá:na** (it is whitish).
^{3 4 9} **kufú:phi** (near), ^{3 4 3 9} **kũfufá:na** (very near).
^{3 9} **kú:de** (far off), ^{3 9 9} **kudá:na** or ^{3 9 9} **kudzá:na** (a little distance off).

The monosyllabic stem, *-bi* is however unaltered :

^{3 3-5 4} **om̃:bi** (bad one) > ^{2 2-4 3 9} **om̃bá:na** (rather bad one).

CHAPTER XIII
PHONETICS IN RELATION TO MORPHOLOGY

(2) OTHER PHONETIC LAWS

§ 1. Other Phonetic Laws appearing in the formation of the Passive

Quite apart from pre-palatalization, which has just been dealt with, other phonetic laws are apparent in the formation of the passive in Zulu.

Rule 1.—Monosyllabic verb stems and duosyllabic verb stems beginning in a vowel or syllabic nasal suffix *-iwa* (not *-wa*) for the final vowel of the simple stem.¹

^{2 2-4 3} ^{2 2-4 3 9}
 ukú:pha (give), ùkuphí:wa.
^{2 2-8 8-3} ^{2 2-8-8-3 9}
 ukú:ǰa (eat), ùkuǰí:wa.
^{3 2 9} ^{3 2 9}
 ukú:thi (say), kuthí:wa.
^{3 2 9} ^{3 2 9 9}
 ukwé:ndza (make), ùkwendzí:wa.
^{2 2-8 9} ^{2 2-4 3 9}
 ukwá:kha (build), ùkwakhí:wa.
^{2 2-8 9} ^{2 2-4 8-3 9}
 ukwá:zi (know), ùkwazí:wa.
^{3 2 2 9} ^{3 2 2 9 9}
 ukú:mmba (dig), ùkummbí:wa.

Rule 2.—It is apparent from one remaining example that Zulu used to have a derivative suffix in *-ala*, which formed its passive by change to *-awa*, the *l* dropping out entirely :

^{3 2 9} ^{3 2 9}
 bulá:la (kill), bulá:wa.

§ 2. Other Phonetic Laws appearing in the formation of the Locative

Rule 1 (General Rule).—Substitute ϵ (or *e*) for the initial vowel of the noun, and suffix as follows :—

^{3 2} ^{2-8 9} ^{3 3} ^{2 2-8 9}
 -eni for final -a, ùmmǰf²ú:la (river), èmmǰf²ulé:ni.
^{2 9} ^{3 9 9}
 -eni for final -ε, í:zwε (country), εzwé:ni.
^{2 2-8 9} ^{3 2 2-8 9}
 -ini for final -i, ipó:ni (bird), èpóní:ni.

¹ The verb ukú:ǰo (to say) is phonetically an exception to many of the rules governing monosyllabic verbs. This verb will be discussed in Chapter XV, § 1.

-œni for final -o, 1:sá:nygo (gateway), èsanygoé:ni.
 -wini for final -u, 1:zú:lu (sky), èzulwí:ni.

This rule, however, has its exceptions,¹ besides those which have already been dealt with as causing pre-palatalization. For instance í:ndǵu (house) becomes endǵí:ni.²

Rule 2.—Nouns ending in a denti-labial consonant, followed by o or u, suffix either -eni, -ini or -œni, -wini.

í:nyǵvu (sheep), enyǵví:ni or enyǵvwí:ni.
 ísí:fo (disease), èsífé:ni or èsífœ:ni.
 í:fu (cloud), efí:ni or efwí:ni.

Rule 3.—Nouns of Class 6 form their Locatives in three ways :
 (i) If the contracted prefix (u:) is used, that prefix is changed to o:, and the usual suffix appended.

(ii) If the full form of the prefix (ulu) is used, that prefix become either elu or (iii) olu.

ú:thi (stick), o:thí:ni, èluthí:ni, òluthi:ni.
 u:khé:zo (spoon), ò:khezoé:ni, èlukhezoé:ni, òlukhezoé:ni.

Rule 4.—Nouns of Class 7 form their Locatives in three ways :
 (i) If the contracted prefix (u) is used, that prefix is changed either to o, or (ii) to e. (iii) If the full form of the prefix (uŋu) is used, that prefix becomes eŋu.

utʃʔá:ni (grass), ðtʃʔaní:ni, ètʃʔaní:ni, èbʊtʃʔaní:ni.
 uŋó:mi (happiness), ðŋomí:ni, èŋomí:ni, èbʊŋomí:ni.

§ 3. Other Phonetic Laws appearing in the formation of the Diminutive

Rule 1 (General Rule).—If the final vowel of the Noun Adjective or Relative be a, i, or e, substitute the suffix -ana; if the final vowel be o or u, add -ana, making -oana and -wana.

ukú:ǵa food > ùkuǵá:na.
 immbú:zi (goat) > immbuzá:na.

¹ It must also be remembered that all nouns of Class 1 are treated as the pronouns, ku being prefixed, and no suffix taken.

² Sometimes recorded as endhwiní.

^{3-2 9} í:tfʔε (stone) > ^{3-2 8-9 9} i:tfʔá:na.
^{3-5 5 4} í:ntʔo (thing) > ^{3 3 4 9} ɪntʔá:na.
^{3 2 2 9} umá:ntʔu (person) > ^{3 2 2 2-8 9} ʊmɪntʔwá:na.

Rule 2.—If the final syllable of the word have l as its consonant, three forms for the diminutive are found :

- (i) the general rule applies,
- (ii) l becomes **ɓ** before suffixing -ana,
- (iii) l becomes **j** before suffixing -ana. This last form is always found amongst the *Amaqwabe*, but has spread into use to a great extent among the Zulus proper.

^{3 2 2-8 9} ʊmɪɪɔfʔá:la (river) > ^{3 3 22-8 9 3 3} ʊmɪɪɔfʔulá:na, ^{2 9 9 3 3} ʊmɪɪɔfʔuká:na,¹ ^{2 2-8 9} ʊmɪɪɔfujá:na.
^{3-2 2-8 9} i:thó:le (calf) > ^{3 22-8 9 3 2 9 9 3 22-8 9} i:tholá:na, ^{3 3 22-8 9 3 3 2 9 9 3 3 22-8 9} i:thobá:na, ^{3 3 22-8 9 3 3 2 9 9 3 3 22-8 9} i:thojá:na.
^{3 2 2-8 9} isiá:lu (calabash) > ^{3 3 22-8 9 3 3 2 9 9 3 3 22-8 9} isiáalá:na, ^{3 3 22-8 9 3 3 2 9 9 3 3 22-8 9} isiáaká:na, ^{3 3 22-8 9 3 3 2 9 9 3 3 22-8 9} isiáajá:na.
^{3 2 2-8 9} isiá:lo (chair) > ^{3 3 22-8 9 3 3 2 9 9 3 3 22-8 9} isiáalólá:na, ^{3 3 22-8 9 3 3 2 9 9 3 3 22-8 9} isiáakólá:na, ^{3 3 22-8 9 3 3 2 9 9 3 3 22-8 9} isiáajólá:na.
^{2 2-4 3-8 9} ʊɓuá:lu (beads) > ^{2 2-4 4 3 9 2 2-4 4-5 8-3 9 2 2-4 4 3 9} ʊɓuáalwá:na, ^{2 2-4 4 3 9 2 2-4 4-5 8-3 9 2 2-4 4 3 9} ʊɓuáakwá:na,¹ ^{2 2-4 4 3 9 2 2-4 4-5 8-3 9 2 2-4 4 3 9} ʊɓuáajwá:na.²

Rule 3.—Nouns ending in a denti-labial consonant, followed by -o or -u, form their diminutive by substituting either -ana or -ana (-wana) for the final vowel :

^{3-6 6-3} í:ɪɔvu (sheep) > ^{3 6-3 9 3 6-3 9} ɪɪɔvńá:na or ɪɪɔvńwá:na.
^{3 3-5 4} isi:fɔ (disease) > ^{3 3-5 4 9 3 3-5 4 9} isiáfá:na or isiáfá:na.
^{3-2 9} í:fu (cloud) > ^{3 3-8 9 3 3-8 9} i:fńá:na or i:fwńá:na.

§ 4. Some phonetic rules for the formation of Imperatives

Rule 1.—Regular duo-syllabic verbs and polysyllabic verbs use the simple stem, ending in -a, as the imperative singular :

^{3 3 9} thá:nda (love !)
^{4 4 3 9} ɔákani:pha (be wise !)
^{4 4 4 3 9} hámmbisi:sa (travel quickly !)

¹ Notice **ɓ** taking a lower tone than l or j.

This last form is usually heard as ^{2 2-4 4 3 9} ʊɓuáaíwńá:na, where j ceases to be consonantal.

Rule 2.—All mono-syllabic verbs form the imperative by prefixing *i* or *ji* or by suffixing *-na*.

^{3 3-8 8-3} ukú:ǵa (eat), ^{6 8-3 6 8-3 8-3 9} í:ǵa, jí:ǵa, ǵá:na.
^{3 2 9} ukú:za (come), ^{6 8-3 6 8-3 8-3 9} í:za, jí:za,¹ zá:na.
^{3 2 2 9} ukú:mmba (dig), ^{6 6 8-3 6 6 8-3 8-3 9} í:mmba, jí:mmba, mbá:na.
^{3 3-5 4} ukú:ma (stand), ^{7 4 7 4 8-3 9} í:ma, jí:ma, má:na.
^{3 2 9} ukú:fo (speak), ^{7 4 7 4 3 9} í:fo, jí:fo, fó:no.²

Rule 3.—All verbs beginning in vowels form the imperative singular by prefixing *j*.

^{3 2 9} ukwé:ndza (make), ^{6 8-3} jé:ndza.
^{3 3-8 9} ukwá:kha (build), ^{7 4} já:kha.
^{3 2 2-8 9} ùkosé:la (roast for), ^{5 4 9} josé:la.

§ 5. Some phonetic rules for the formation of Verb Perfect Stems

From the rules set out hereunder, it will be seen that, in Zulu, the vowel *ε* is predominant in the formation of verb perfects. This may be noted also as a general characteristic of most Bantu languages.

Rule 1 (General Rule).—Substitute *-iε* for the final *α* of the simple stem :

^{3 3 9} há:mmba (travel), ^{4 4 4 6-3 9} síhammbí:lé.³
^{4 4 3 9} ßóní:sá (see clearly), ^{4 4 4 3 3-8 9} síßóní:sí:lé.
^{5 5 6-3 9} thanndé:ka (be loveable), ^{4 4 4 6 3-8 9} síthanndekí:lé.

Rule 2.—All Applied Forms, Reversive Forms, and Perfective Forms of the verb (ending in *-εla*, *-ula*, *-ulula*, and *-εlela* respectively) change final *α* to *ε*.

^{4 3 9} ßophé:la (tie for), ^{4 4 3 9} síßophé:lé.
^{4 4 3 9} ðáβelé:la (sing), ^{4 4 4 3 9} síðáβelé:lé.
^{4 3 9} khumú:la (take off), ^{4 4 3 9} síkhumú:lé.

^{6-3 9}

¹ Or *wó:za*, very commonly used.

² For this irregularity see Chapter XV, § 1.

³ In all examples of the perfect I have used the 1st person plural subjectival concord, as the perfect stem cannot stand alone.

Notice the three forms of the perfect which may be used under varying circumstances :

5 5 5 6-3 9	}	(we travelled for . . .)
sih ⁵ am ⁵ b ⁵ é:lé		
5 5 5 53-8 9		
5 5 5 53-8		
sih ⁵ am ⁵ b ⁵ é:lé		

§ 6. Phonetic Laws appearing in the formation of Verb Diminutives

This form in essence is a reduplication of the Simple Stem, and signifies that the action indicated by the verb is performed "a little".

Rule 1.—The Simple Stem of regular duo-syllabic verbs is repeated :

3 3 9	5 5 5 3 3 9
há:m ³ ba (travel),	há:m ⁵ ba há:m ⁵ ba.
4 9	4 4 3 9
bó:na (see),	bó:na bó:na.

Rule 2.—The first two syllables of polysyllabic¹ verbs are placed before the stem :

6 6-3 9	6 6 6 6-3 9
gíd ⁶ z ⁶ i:ma (run),	gíd ⁶ z ⁶ i:ma gíd ⁶ z ⁶ i:ma.
4 4 3 9	4 4 4 4 3 9
ǃàkani:pha (be wise),	ǃàkani:pha ǃàkani:pha.
4 3 9	4 4 4 3 9
bálé:ka (run),	bálé:ka bálé:ka.

Rule 3.—Monosyllabic verb stems are repeated with *i* or *ji* between them :

3 2 9	5 5 53-8 9	5 5 53-8 9
ukú:za (to come),	ukú:za i:za or	ukú:za ji:za.
2 2-4 3	2 2-4 3 3-8 9	2 2-4 3 3-8 9
ukú:fa (to die),	ukú:fa i:fa or	ukú:fa ji:fa.
3 2 2 9	5 5 5 53-8 8 9	5 5 5 53-8 8 9
ukú:m ³ ba (to dig),	ukú:m ⁵ ba i:m ⁵ ba or	ukú:m ⁵ ba ji:m ⁵ ba.

Rule 4.—Duo-syllabic verbs beginning in a vowel are repeated with *j* between them :²

3 2 9	5 5 53-8 9
ukwé:ndza (to make),	ukwé:ndza jé:ndza.
2 2-8 9	2 2-4 3 3-8 9
ukwá:la (to refuse),	ukwá:la já:la.
3 2 9	4 4 3 3-8 9
ukó:sa (to roast),	ukó:sa jós:sa.

¹ I here use the term polysyllabic to mean more syllables than two.

² With the exception of ukwá:zi (know), which becomes ukwá:zajá:zi.

§ 7. Phonetic Laws appearing in the formation of Vocative Interjections from Nouns

Rule 1 (General Rule).—The Vocative is formed by eliding the initial vowel of the Noun :

^{3 2 2 9} umú:nt⁹u (person), ^{8-9 9} mú:nt⁹u.
^{3 3 3-8 9} ñk⁹ó:sí (chief), ^{3-8 9} ñk⁹ó:sí.
^{3 3-5 4 9} àbafá:na (boys), ^{5 4 9} bafá:na.
^{3 3-5 4} u⁹bá:ba (my father), ^{5 4} bá:ba.

Rule 2.—In the plural of Class 1a,¹ the vowel is not elided,² but the plural prefix *o:* is replaced by *bo:* :

^{3-5 5 4} o:bá:ba (our fathers), ^{3 5 4} bo**bá:ba**.
^{3-5 6-3 9} o:dá:dé (sisters), ^{3 6-3 9} bo**dá:dé**.

Rule 3.—Monosyllabic Noun roots used with the contracted prefix *i:* (Class 2) or *u:* (Class 6) invariably form the Vocative from the uncontracted form, by elision of the initial vowel :

^{3-8 8-3} í:zwi (word), ^{8 8-3} lí:zwi.
^{3-2 9} í:tf⁹ε (stone), ^{8-9 9} lí:tf⁹ε.
^{2-4 3} ú:thi (stick), ^{4 3} lú:thi.
^{3-2 9} ú:su (stomach), ^{8-9 9} lú:su.

Rule 4.—Polysyllabic Noun roots used with contracted prefix *i:* (Class 2) or *u:* (Class 6) or *u:* (Class 7) may form their vocatives either from the contracted or from the uncontracted form, by the elision of the initial vowel :

^{2-4 8-3-8 9} i:zí:mu (ogre), ^{8-3-8 9} zí:mu or ^{8 8-3-8 9} lízí:mu.
^{2-4 4 3 3-8 9} i:sè⁹lesé:le (frog), ^{4 3 3-8 9} sè⁹lesé:le or ^{4 4 3 3-8 9} lí⁹sè⁹lesé:le.
^{2-4 3-8 9} u:nwá:ba (chamelion), ^{3-8 9} nwá:ba or ^{3 3-8 9} lúnwá:ba.
^{2-4 3-8 9} u:lí:mi (tongue), ^{3-8 9} lí:mi or ^{3 3-8 9} lúlí:mi.
^{2 2-8 9} utf⁹á:ni (grass), ^{2-8 9} tf⁹á:ni or ^{2 2-8 9} butf⁹á:ni.
^{3 3-5 4} u**bó:ja** (wool), ^{5 4} bó:ja or ^{5 5 4} bu**bó:ja**.

¹ I.e. the sub-class to Class 1, which, while having concords as Class 1, has as noun prefixes, in the singular *u:*, and the plural *o:*.

² Else there would be no distinction between it and the Vocative of the singular of this class, cf. *u**bá:ba*** under Rule 1. The length of the vowel further accounts for its retention.

§ 8. Rules due to the presence or absence of Consonants in Subjectival Verb Concords

(i) *Objectival Verb Concords*.—If the subjectival concord contain a consonant, the objectival concord of the same person, class and number is precisely the same; but if the subjectival concord is a vowel only, the objectival concord corresponding will differ in that the vowel must be preceded by a consonant. Examples:

	(Subjectival.)	(Objectival.)
1st pers. sing.	ngi	ngi
2nd pers. sing.	u	ku
3rd pers. Class 1 sing.	u	m
„ „ 1 plur.	ba	ba
„ „ 2 plur.	a	wa
„ „ 5 sing.	u	wu
„ „ 5 plur.	i	ji

(ii) *Possessives with Nouns of Class 1a, sing.*—With Nouns of Class 1a, sing., the possessive formative used is **ka**, preceded by the subjectival verb concord of the possessed, except when that concord contains no consonant, in which case the concord is omitted altogether.

³ ² ² ²⁻⁴ ³ ³⁻⁵ ⁴	umú:nt'u ka bá:ba (my father's servant).
³ ² ² ²⁻⁴ ⁴ ³ ³⁻⁵ ⁴	abá:nt'u ba kabá:ba (my father's servants).
³⁻⁸⁻⁸⁻³ ⁴ ⁴ ³ ³⁻⁵ ⁴	i:fá:ji li kabá:ba (my father's horse).
³ ³⁻⁸⁻⁸⁻³⁻⁴ ³ ³⁻⁵ ⁴	amafá:ji ka bá:ba (my father's horses).
³ ³⁻⁵ ⁴ ⁴ ⁷ ⁴	umú:thi ka má:mé (my mother's tree).
²⁻⁴ ⁴ ³ ³⁻⁵ ⁴ ⁷ ⁴	u:khú:ni lí kamá:mé (my mother's firewood).

(iii) *Contracted Past-Continuous and Exclusive Tenses*.—In contracting the Past-continuous and the Exclusive tenses, if the Subjectival Verb Concord contain a consonant, the whole concord is omitted; but if this concord is merely a vowel, it is retained, while the **e** of **be** (or **se**) is elided:

⁶ ⁶ ⁶ ³⁻⁸⁻⁸ ⁹	ngi se nggithá: nda (I was loving) >	⁶ ⁶ ⁶ ³⁻⁸⁻⁸ ⁹	se nggithá:nda .
⁶ ³ ⁶⁻⁸⁻⁹ ⁹	ngi se nggífú: na (I now want) >	³ ³ ⁶⁻⁸⁻⁹ ⁹	se nggífú:na .
⁸ ⁸ ³⁻⁸⁻⁸ ⁹	but ub eutha:nda (thou wast loving) >	⁸ ⁸ ³⁻⁸⁻⁸ ⁹	ub uthá:nda .
³⁻²⁻⁴ ³⁻³⁻⁸⁻⁹	ù sefú:na (he now wants) >	³⁻²⁻³⁻³⁻⁸⁻⁹	ù sefú:na .

(iv) *Relative and Adjectival Concords*.—It will be noticed that in the subjectival verb concords of the 3rd person there are no nasal consonants. Nasal consonants appear in the noun prefixes and in the adjectival concords, these latter being formed by prefixing the formative *-a* to the noun prefix, e.g. *um-* > *om-*; *izim-* > *ezim-*; etc.¹

The Relative Concords correspond to the Adjectival Concords except that, wherever a nasal occurs, the nasal together with any vowel following is elided, e.g. *aŋa-* > *aŋa-*; *om-* > *o-*; *ezim-* > *ezi-*. In this way no nasal appears in the Relative Concords, and these correspond closely to the subjectival Verb Concords, except for the initial influence of the formative *a*.

§ 9. Phonetic Rules in the Formation of the Predicative ²

Rule 1.—The predicative of all nouns with prefixes beginning in *i* (e.g. *in-*, *izim-*, *isi-*, *izi-*, *i-*, *imi-*) is formed by altering the tone and sometimes preplacing *j*:

²²⁻⁴³⁻⁸⁹ *isi:la* (tail) > ^{6 33-89} *jisi:la* (it is a tail) or ^{6 33-89} *isi:la*.
^{3 3 8-3-89} *imbú:zi* (goat) > ^{8-33 8-3-89} *jimbú:zi* (it is a goat)
^{3-22-4 3} *i:ŋé:lé* (corn) > ^{8-3 4 4} *ji:ŋé:lé* (it is corn)

Rule 2.—With nouns commencing in *a*, *o*, or *u* (except nouns of Class 6), the predicative is either the same as the substantive (in form, not in tone) or it preplaces *ŋg* with alteration of tone:

²²⁻⁴³⁻⁸⁹ *umfá:zi* (woman) > ^{8 33-8 9} *umfá:zi* or ^{8 33-8 9} *ŋgumfá:zi*.
^{3 2 9} *amá:ndŋa* (strength) > ^{8 3 9} *amá:ndŋa* or ^{8 3 9} *ŋgamá:ndŋa*.
^{3-55 3-88 9} *om̄pʔá:nd̄e* (the Mpandes) > ^{8-3-55 3-88 9} *om̄pʔá:nd̄e* or ^{8-3-55 3-88 9} *ŋgom̄pʔá:nd̄e*.
^{3 3-9 9} *utʔá:ni* (grass) > ^{6 3-8 9} *utʔá:ni*, ^{6 3-8 9} *ŋgutʔá:ni*, ^{6 3 3-8 9} *ùbutʔá:ni* or ^{6 3 3-8 9} *ŋgùbutʔá:ni*.

Rule 3.—With nouns of Class 2 sing., the short form of the prefix may be used preceded either by *j* or by *l* in addition to the full form preceded by *j*.

^{3-2 9} *itʔɛ* (stone) > ^{8-3 9 8-3 9} *jitʔɛ*, ^{8 3 9} *litʔɛ* or ^{8 3 9} *jilitʔɛ*.

Rule 4.—With nouns of Class 6 sing. the short form of the prefix

¹ See "Coalescence" in Chapter XIV.

² I.e. forming a Copulative Predicative from Nouns or Pronouns.

may be used alone or preceded by *l*, or the full form may be used alone :

^{2-4 3-8 9} u:khú:ni (firewood) > ^{8-3-5 3-8 9 8-3-5 3-8 9} u:khú:ni, ^{8 3 3-8 9} lu:khú:ni or ùlukhú:ni.

Rule 5.—The predicative of absolute pronouns ¹ and demonstrative pronouns is formed by preplacing *ji* :

^{3 9} ló:kə (that) > ^{6 3 9} jiló:kə.
^{5 4} mí:na (I) > ^{6 3-5 4} jumí:na.
^{4 4 3 9} lò:wajána (that yonder) > ^{6 3-4 4 3 9} jilò:wajána.

Rule 6.—The predicative of adjectives is formed by eliding the initial vowel :

^{3 2 2 2-4 2 2-4 3-8 9} umú:ntʔu òm̀khú:lu (a big man) > ^{3 2 2 2-4 6 3 9} umú:ntʔu mkhú:lu (the man is big)
^{3-5 6 3 3-5 4} í:zwi elí:ɛ (a nice voice) > ^{3-5 6 3-5 4} í:zwi lí:ɛ (the voice is nice).

Rule 7.—The predicative of relatives is formed by using the subjunctival verb concord instead of the relative concord :

^{3 2 2 2-4 2 2-8 9} umú:ntʔu ɔ́:thò (an honest man) > ^{3 2 2 2-4 2 3 9} umú:ntʔu ɔ́:thò (the man is honest)
^{3 3-5 5 3 3-5 5 3 9} ubú:sò òb̀umpá:ma (a black face) > ^{3 3-5 5 3 3-5 3 9} ubú:sò b̀umpá:ma (the face is black).

Rule 8.—The Predicative of Pronouns formed from Possessives is formed from the absolute form according to Rule 2 :

^{2 3 9} aḃá:mi (mine) > ^{8 3 9} aḃá:mi or ^{8 3 9} ŋgaḃá:mi.
^{2 8-3-8 9} ezé:thu (ours) > ^{8-3-8-3-8 9} ezé:thu or ^{8-3-8-3-8 9} ŋgezé:thu.
^{2 3 9} olwá:khò (thine) > ^{8 3 9} olwá:khò or ^{8 3 9} ŋgolwá:khò.

^{5 4} ^{5 4}
^{6 3-5 4} ^{6 3-5 4} ^{6 3-5 4} ^{6 3-5 4}
¹ Excepting that of **wé:na** (2nd person sing.) and **jé:na** (3rd person 1st Class sing.), which become **uwé:na** or **ŋguwé:na** and **ujé:na** or **ŋgujé:na**.

§ 10. General Conclusions

In summing up the results of these investigations it is evident that special phonetic laws come into play whenever the stem of the noun or verb is monosyllabic, and this takes place so that the continuity of the laws of stress, which will be discussed later,¹ is not unduly upset. It is worthy of notice that the Class 5 singular prefix is found in its original full form, *umu*, before monosyllabic stems only, and in one case it is found in Class 1 singular, and then before the mono-syllabic stem *-ntʰu*. Special forms of the vocative have been noticed, when the stem is monosyllabic and the prefix a contracted one of Class 2 or 6.

With the verbs, the monosyllabic stems form a special variety having special forms in the passive, the imperative and the diminutive. These peculiarities are shared to a great extent by the "vowel" verbs, as they are sometimes called.

In Zulu the phonetic laws are not so pronounced in the formation of verbal derivatives as they are in some other Bantu languages, notably in Kongo² and Central Bantu languages such as Lamba.³ For instance, Zulu has the one form *-ela* as suffix to form the applied derivative of verbs, whereas Lamba has four forms, *-ila*, *-ela*, *-ina*, and *-ena*, according to the quality of the stem-vowel⁴ and the presence or absence of a pure nasal after that vowel. We shall see in Chapter XV that the law of vowel harmony or vowel assimilation, though hinted at in Zulu, is exemplified by no means so fully as it is in many of the Congo languages.

¹ In Chapter XVI.

² Cf. Bentley, *Dictionary and Grammar of the Kongo Language*, pp. 623 and 627.

³ Cf. Doke, *Grammar of the Lamba Language*, pp. 104, 108, 110, etc.

⁴ I.e., the penultimate vowel.

CHAPTER XIV
PHONETICS IN RELATION TO MORPHOLOGY

(3) CONTRACTION

§ 1. Contraction

In Zulu there are three types of morphological contraction, the elision of vowels, the coalescence of vowels, and contractions involving consonants. On investigation it will be seen that the elision of vowels, while customary, is really optional, but that the coalescence of vowels, as set out below, is always compulsory. It will also be seen that when two separate words come into juxtaposition, in such a way that either elision or coalescence takes place, the resultant is one word-group, the length and stress of vowels having been so modified that only one vowel is left with main stress upon it. In the case of contractions involving consonants, contraction is not always compulsory, though customary, in ordinary speech. Here again, on contraction, single word-groups are formed.¹

Coalescence and elision of vowels are very common phenomena in the Bantu languages, and are due to the fact that, generally speaking, all syllables and hence all words end in vowels, and that in many Bantu languages, Zulu included, practically every noun commences in a vowel, owing to the noun prefix system, which in many cases employs an initial vowel. So it is that repeatedly two vowels come into juxtaposition, and then one of three things takes place: either (i) both vowels remain and are enunciated separately, e.g. ²²⁻⁴³ ⁴ ³ ⁴ ⁹ *ũmfá:na ufi:le* (the boy is dead), or (ii) one of the vowels is elided, the other remaining, or (iii) the vowels coalesce either to form a vowel of the same quality, if they are like vowels, or to form a vowel of a new quality, if they are unlike vowels. In the first case, when both vowels remain, the word-groups also remain separate. In the last two cases the word-groups fuse to form one fresh word-group.

· § 2. Elision of Vowels

There are two types of elision in Zulu, the elision of initial vowels, and the elision of final vowels. When two words or word-groups come together and elision takes place, either the initial vowel of the

¹ For a discussion of word-groups see Chapter XVI.

second word or word-group is elided, or the final vowel of the first word or word-group. In Zulu orthography an apostrophe is inserted to indicate where elision has taken place,¹ e.g. *laba'bantu* (these people), *b'eza* (they come). In some cases this apostrophe is even used after *m* (*m'*) to indicate syllabic-*m* (*m*) when it is the objectival verb concord, under the impression that *u* has been elided, e.g. *wam'bona* (he saw him), and in vocatives to indicate the elision of the initial vowel, e.g. *'madoda* (men!). In phonetic script, as the sound only and not the analysis of the form has to be recorded, no symbol is used to indicate that elision (or coalescence) has taken place.

§ 3. Elision of Initial Vowel

The initial vowel is elided in the following instances :

(i) *After Absolute pronouns :*

⁴ ³³⁻⁸⁸ ⁹ *thi'na:nt'u* (we people) < ⁵ ⁴ ³ ²² ⁹ *thi:na + a:nt'u*.
⁴ ³⁸⁻³⁹ ⁴ ³³⁻⁸⁸⁻³⁹ *wè'na:nt'u* or *wè'na:nt'u* (thou horse) < ⁵ ⁴ ³⁻⁸⁸⁻³⁹ *wé:na + i:nt'u*.
⁴ ³³⁻⁵ ⁴ *wè'na:nt'u* (thou stick) < ⁵ ⁴ ³⁻⁵ ⁴ *wé:na + u:nt'u*.²
⁴ ³³ ³⁻⁸ ⁹ *jò'na:nt'u* (he the chief) < ⁵ ⁴ ³³ ³⁻⁸ ⁹ *jó:na + nt'u*.
⁴ ³³⁻⁵ ⁴ *βò'na:nt'u* (it the face) < ⁵ ⁴ ³³⁻⁵ ⁴ *βó:na + u:nt'u*.
⁶ ³⁻⁴ ³³⁻⁵ ⁵⁵ ⁵³⁻⁸ ⁹ *jikhò'nakuhàmbisi:sa* (it is the real fast travelling).
⁵ ⁴ ³³⁻⁵⁵ ⁵³⁻⁸⁹ < *khó:na + ùkùhàmbisi:sa*.

The pronouns, *mí:na*, *thí:na*, *wé:na*, and *ní:na*, of the 1st and 2nd persons are always used with initial elision of the vowel of the noun following, but the pronouns of the 3rd person (for all classes) may only be so used in two instances :

(a) *After the contracted perfect of the verb ukú:thi*, e.g. :
² ²⁻⁸ ⁴ ³ ³⁻⁸⁸ ⁹ *uthé: jè'namú:nt'u* - ⁵ ³³⁻⁴ ³³ ⁶ ³ ⁹ *àkakhá:nt'u* *ló:khu* (he the man said that he does not like that).
⁶ ³⁻⁸ ⁶ ³⁶ ³⁹ ⁶⁻³⁶ ³³ ⁵ ⁵ ⁵³⁻⁵ ⁴ *zithé: zè'nazàluká:zi* - *zizàhá:mmba* *ngomú:sò* (they the old women said that they would go to-morrow).

¹ According to the rules of the Zulu Orthography Conference of May, 1907, "the apostrophe shall be used to indicate the elision of a final vowel only."

² If the stem is monosyllabic, the full form of contracted prefixes (Classes 2 and 6) must be reverted to.

(vi) *After a verb Negative :*

^{6 6 6-3 3-8 8-9 9}
 ãŋginamá:ndža (I have no strength).

Affirmative: ^{6 6 3 9}
 ŋginamá:ndža.

^{6 3 3-5 5 4}
 àsinaβó:ja (it has no hair).

Affirmative: ^{3 5 3-5 4}
 sinóβó:ja.

^{6 3 3-5 8-9 9}
 akù:kosí:ŋk?wa (there is no bread).

Affirmative: ^{2 2-4 4 3 2 2 9}
 kukhó:na isí:ŋk?wa.

§ 4. Elision of the Final Vowel

The final vowel is elided in the following instances :

(i) *Of the auxiliaries, ja and sa, before "vowel" verbs :*

^{8 8-9 9}
 ŋgiŋé:ndza (I am making).

^{3 2 9}
 usé:za (he is still coming).

^{3 2 9}
 sisó:na (we are still sinning).

(ii) *Of the subjunctival verb concords before "vowel" verbs :¹*

^{3-8 9}
 sá:la (we refusing) < s₁ + ala.²

^{6 6-3 9}
 zendzé:la (they making for) < z₁ + endzela.²

^{6 3 9}
 ŋgoní:le (I have sinned) < ŋgi + onile.²

(iii) *Of objectival verb concords before "vowel" verbs :³*

^{3 4 3 9 3 3-8 9}
 ßàjajó:sa (they roast it—ipá:ma, meat)

^{3-8 8 8-3 5 5 6-3 9}
 sijazá:kha izí:ndža (we build houses).

^{2 2-4 3 9 9}
 ùkuβendzé:la (to make for them).

(iv) *Of noun prefixes before stem beginning in a vowel :*

^{3 2 9 3 2 9}
 umé:ndzi (maker), pl. aβé:ndzi. Class I

^{3 3-8 9 3 3-8 9}
 umó:ni (sinner), pl. aβó:ni. „ I

^{3 3-8 9 3 3-8 9}
 umá:khi (builder), pl. aβá:khi. „ I

¹ Except when these concords are *l* and *u*, in which cases they become the semi-vowels, *j* and *w*; and *lu* and *ku*, which become *lw* and *kw*.

² These being incomplete alone, tones and stress cannot be assigned.

³ Except when the concords are *lu* and *ku*, in which cases they become *lw* and *kw*.

²²⁻⁴⁴ 3 9	^{3 6 6 3 9}	
isaluká:zi (old woman), pl. izaluká:zi.	Class 4	
^{3 2 9}	^{6 6-3 9}	
isé:ndzə (deed), pl. izé:ndzə.	,, 4	
^{3 3-8 9}	^{3 6-3-6 9}	
isó:ni (sinner), pl. izó:ni.	,, 4	
^{3 2 9}		
ufé:ndzi (making)	,, 7	
^{3 3-8 9}		
ufá:khi (building).	,, 7	
^{3 2 9}		
ukó:sa ¹ (roasting).	,, 8	

(v) *Of nouns when followed by adjectives and relatives :*

^{3 2 2 2-4 3 9}	afá:nt?á:á:ne (other people).
^{2 2 2-4 3 3 3-8 9}	inkò:se:ink?ú:lu (a big chief).
^{3 2 2 2 2-8 8-3}	um?nt?o:á:nyovu (a red man).
^{6 6 6 3-5 3 6 6 3-8 9}	izink?á:me:zint?á:thu (three cattle)

Adjectives and relatives may also follow the nouns as separate words, no elision taking place. Notice that the initial vowel of the second word becomes long in the compound word-group, though it is short when no elision of the preceding vowel takes place.

(vi) *Of adjectives, relatives, and possessives, when these, for rhetorical purposes, may precede the noun :²*

^{2-4 3 3-5 4 4 9}	afá:naá:nt?u (other people)	} <i>Adjectival root -ne (other).</i>
^{2-4 3 3-5 4 9}	esi:ni:it?á (another plate)	
^{2-4 3 3 3-5 3-8 9}	ofá:puvuá:lu (other beads)	
^{6 3 3 3 3-5 3 3 9}	ngidá:nabaá:laá:nt?u (I see two people). Adj. root, -á:li (two).	
^{2 6 6 6 6 6 3-5 4}	ezint?á:thizink?á:mo (three cattle). Adj. root, -thathu (three).	
^{2 2-4 4 3 3 9}	afá:á:á:nt?u (nice people). Adj. root, -á:ε (nice).	
^{3 6 6 6 3 8 8-3}	ezink?á:lizi:pdza (big dogs). Adj. root, -khulu (big).	
^{3-8 8 3 3 9}	ozumú:nt?u (a naked man). <i>Relative root, -ze (naked).</i>	
^{3 3 3-6 6 3 3 9}	á:baá:nyovuá:nt?u (red people). <i>Rel. root, -á:nyovu (red).</i>	
^{2 3 3-4 3 3 9}	afá:maá:nt?u (my people). <i>Possessive root, -mi (my).</i>	

¹ In Class 8 u does not elide before vowels other than ə (o); before a and ε (e) it becomes w.

² Having become qualificative pronouns.

^{2 6-3 3 8 8-3}
εzà·khwizí:pdza¹ (thy dogs). Poss. root, **-kha** (thy).

^{2 3 33-8 9}
εjà·khwipá:ma¹ (thy meat). Poss. root, **-kha** (thy).

^{2 2-4 3 3-5 4}
ofá·luβú:sə (its face). Poss. root, **-lo** (its).

(vii) *Of absolute pronouns of the 3rd person, when followed by their nouns :*

^{5 5 3 3 9} **jè·numú:nt²u** (he the person) < ^{5 4 3 2 2 9} **jé:na** + **umú:nt²u**.

^{5 3 3 3-8 9} **jò·nyk²ó:sí** (he the chief) < ^{5 4 3 3 3-8 9} **jó:na** + **nyk²ó:sí**.

^{6 6 6 3-5 4} **zò·nyk²ó:mə** (they the cattle) < ^{6 3 6 6 3-5 4} **zó:na** + **iznyk²ó:mə**.

(viii) *Of enumerative pronouns when followed by their nouns :*

^{3 3 3-5 4 4 9}
βə·nyk²aβá:nt²u (all people).

^{6-3 3 3-8 8 3-5 4}
zə·nyk²iznyk²ó:mə (all cattle).

^{6-3 6-3 6 6 8-3-8 9}
zò·dwizimmbú:zi (only goats).

^{2 6 3 6-3 9}
ò·dwamafá:fí² (only horses).

^{2 6-3-6 3-8 9}
lò·du:khú:ni³ (only firewood).

(ix) *Of verbs when followed immediately by a noun :*

^{6 3 3 3-5 4} **ngifù numá:li** (I want money). Vb. **fú:na**.

^{4 2 2-4 3 3 9} **síβə numú:nt²u** (we see the man). Vb. ^{4 9} **βó:na**.

^{6-3 3-6 6-3 9} **lè·thi:fá:fí** (bring the horse). Vb. ^{6-3 9} **lé:tha**.

^{6-3 3-6 6-3} **jì:sí:pdza** (send the dog). Vb. ^{6-3 9} **jí:sa**.

^{5 5 6-3 3-4 3 3-8 9} **hammbi·sumnt²wá:na** (make the child go). Vb. ^{5 5 6-3 9} **hammbi:sa**.

^{3 3 3 2 2 2-4 3} **sijilethi·nyk²ó:mə** (we brought the beast). Vb. ^{3 3 2 9} **silethí:le**.

^{2 2-4 3 3-5 4 4 9} **βám·fajì lumú:nt²u** (they struck the person). Vb. ^{3 2 2-8 9} **βáfajì:le**.

^{5 5 2 2-3 3 2 9 9} **nijí·afí·lipàmazá:ne** (you wounded the buck). Vb. ^{7 7 8-9 9} **ní·afí:le**.

^{2 6-3 3 8 8-3}
¹ Notice : there is no diphthong **ɔi** in Zulu, hence **ɔ** + **i** becomes **wi**. Further, **w** may be omitted in either case, e.g. **εzà·khwizí:pdza**.

² Notice that, as there is no consonant before the first vowel, this becomes long ; and, as it is not in the position of main stress, it must be of high quality.

^{2 6-3-6 3-8 9}
³ Note the lapse of **w** before **u**. **lò·dwu:khú:ni** would have been expected.

^{5 5 2 2 2-3 3 3-8 8-3}
 àsfù·nukuḡò·nì:fá:fǀ (we do not want to see the horse).

^{3 9 4 9}
 Vbs. fú·na and ḡḡ·na.

^{2-4 4 4 4 4 3 3 3-4 3 2-4 4 4 4 4 3 3 3-4 3-4 3}
 sà:fumani·sù·ntʔo·m̄:fǀ (analysed = sà:fumani:sá umú:ntʔu o·m̄:fǀ,
 we came upon an evil man).

^{3 2 2 2-4 3 3-5 5 6-3 3 3-8 9}
 aḡá:ntʔu ḡāhammbi·le:khá:ja (the people went away from home).

^{3 3-5 5 6-3 9}
 Vb. ḡāhammbí·le.

^{2 2-4 4 3 3 9 3 3-5 4}
 kukhò·nu·ntʔu (a man is present); in this case kukhò·na is
 a copulative predicative.

(x) *Of Adverbs, when followed by the second adverb* ^{3 3 4 9} **impʔé:la**
(exceedingly):—

^{4 2 2 3 9}
 kǎ·ḡimpʔé:la (very well).

^{4 4 2 2 3 9}
 kakhù·l̄impʔé:la (very much).

^{2 3 3 3 4 9}
 kaṇà·n̄impʔé:la (very slightly).

(xi) *Of na, nga, etc., when followed by e or o, if these are the initial vowels of qualificative pronouns or of the plural of Class 1a.*

^{5 4 9 3 4 9}
 nejá:mǀ (with mine, na + e·já:mǀ).

^{3 3 6 3 3 3-8 9}
 pǎzèṅṅowewḡkʔó:sǀ (just like the chief's (child)).

^{3-8 5-3 8-3 8 9}
 kùnezé:thu (than ours (cattle)).

^{5-3 8 8-9 9 3-8 8-9 9}
 no:ní:na¹ (with their mothers, na + o:ní:na).

§ 5. Initial or Final Elision

Either initial or final elision may take place when the 3rd Demonstrative precedes a noun :

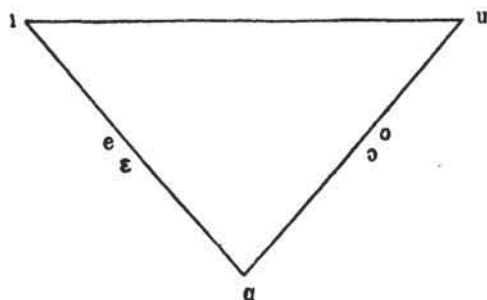
^{5 5 5 3 9 5 5 5 3 9}
 lè·sǀjasi:tʔa or lè·sǀjasi:tʔa (yonder plate).

^{5 5 3 3-5 4 5 5 3 3-5 4}
 lō·ḡujatʔá:nǀ or lō·ḡujatʔá:nǀ (yonder grass).

^{5 3-8 9 3 3-8 9}
¹ Contrast noní:na (with his mother, na + u:ní:na).

§ 6. Coalescence of Vowels

In order to understand coalescence of vowels in Bantu, the following diagram is useful :



It has already been noticed, in Chapter II, that the vowels **i**, **a**, and **u** are the basic Bantu vowels. Of these, **a** is the lowest vowel in Zulu, while **i** and **u** are the highest in tongue-position, the former being the forward vowel and the latter the back vowel. Coalescence of vowels in Zulu, as in Bantu generally, takes place when the vowel **a** is followed by either **i** or **u** in certain morphological constructions. When coalescence takes place, **a + i** becomes **ε** or **e** (the quality of this mid-forward vowel being dependent upon the usual rules of stress, length, and surrounding vowel influence); **a + u** becomes **ɔ** or **o** (the quality of this mid-back vowel being dependent upon the same conditions as for the mid-forward vowel); and **a + a** becomes **a**.

The morphological conditions for coalescence in Zulu are much more restricted than in many other Bantu languages; for instance, we have already noticed that in Zulu elision of the final vowel of verbs takes place when they are immediately followed by a noun; but in Central Bantu, in such cases, coalescence takes place.¹ The principal cases of coalescence in Zulu are the following :

(i) *With possessives :*

^{4 3 3 9} **womú:nt**⁹**u** (of the person), **wa + umú:nt**^{3 2 2 9}⁹**u**.
^{3 3-5 3-8 9} **wómfá:zi** (of the woman), **wa + úmfá:zi**.^{2 2-4 3-8 9}
^{3-5 4} **wó:thi** (of the stick), **wa + ú:thi**.^{2-4 3}
^{3 3-8 9} **wotfʔá:ni** (of grass), **wa + utfʔá:ni**.^{2 2-8 9}

¹ In Lamba, for instance: **naphè**·**lomú:ntu** (I gave to the man) for **naphé:la umú:ntu**; **twavò**·**neḡkalá:mu** (we saw a lion) for **twavó:na iḡkalá:mu**.

^{3-8-8-3 9} we:fiá:fí (of the horse), wa + i:fiá:fí.	^{2-8 8-3 9}
^{3 3-5 4} wemí:thi (of trees), wa + imí:thi.	^{2 2-4 3}
^{3 3 3-5 4} weŋkʔó:mó (of the beast), wa + ŋkʔó:mó.	^{2 2 2-4 3}
^{3 3 3-8 9} weŋkʔú:khu (of the fowl), wa + ŋkʔú:khu.	^{2 2 2-8 9}
^{4 3 3 9} waḡá:ntʔu (of people), wa + aḡá:ntʔu.	^{3 2 2 9}
^{3 3-8 8-3} wamá:zwi (of words), wa + amá:zwi.	^{2 2-8 8-3}
^{2 6 3-8-8-3-8 9} í.ndkú je:zi:mu (the house of a cannibal).	
^{2 2-4 4 3 3 3-5-8-3-8-8 9} ùbukhú:lu ðòmzi:mmba (the size of the body).	
^{3 2 2-4 4 3 3-8-8 9} ùkukhá:pa kwe:lá:ŋga (the light of the sun).	
^{2-4 3 3 3 6-3 9} í:sò leŋgá:mé (the baby's eye).	
^{2 2-4 3 3 3-8 9} uḡú:ḡe ḡotʔá:ni (the beauty of the grass).	

Coalescence is found in the possessive stems of the 1st and 2nd persons plural, where *ethu* and *enu* are really *a* + *-ithu* and *a* + *-inu*.

Coalescence does not take place with the possessive *ka*, which is used with the singular of Class 1*a*; we have already noticed that elision of the initial vowel takes place.

(ii) *With na*, meaning "and", "with", except when following a negative, in which case elision of the initial vowel of the noun following takes place.¹

^{5 3 3 9} naḡá:ntʔu (and the people), na + aḡá:ntʔu.	^{3 2 2 9}
^{5 3-8 9} namá:ndzi (with water), na + amá:ndzi.	^{3 3-8 9}
^{5-3 3-8 9} no:khé:zò (and a spoon), na + u:khé:zò.	^{3-2 2-8 9}
^{5 3-5 4} nojí:ḡò (and thy father), na + ují:ḡò,	^{2 2-4 3}
^{5 3 3-8 9} nòḡuḡá:lu (and beads), na + ùḡuḡá:lu.	^{2 2-4 3-8 9}
^{5 3 4 4 9} nòkukhá:mmba (and travelling), na + ùkukhá:mmba.	^{2 2-4 3 3 9}
^{5 7 4} nəmá:mé (and my mother), na + umá:mé.	^{2 7 4}
^{5 4 9} nəkḡé:ndza (and doing), na + ukḡé:ndza.	^{4 3 9}
^{5-3-5 4} nÉ:sò (and an eye), na + í:sò.	^{3-5 4}

¹ See § 3 (vi).

^{5 5 3-8 9} nenkʔó:si (and the chief), na + ^{3 3 3-8 9} inkʔó:si.
^{5 5 5 3-8 9} nēγγgǝǝmá:ma (and the lion), na + ^{5 5 5 3-8 9} iγγgǝǝmá:ma.
^{5 3 9} nesí:tfʔa (and a plate), na + ^{3 2 9} isí:tfʔa.
^{5-3 8 8-3} nezí:pdza (with dogs), na + ^{3 8 8-3} izí:pdza.
^{5-3 3 8-3-8 9} nemmbá:la (indeed), na + ^{3 3 8-3-8 9} immbá:la.
^{5 3-5 4} nemí:thi (and trees), na + ^{2 2-4 3} imí:thi.

(iii) *With ɣga, pdzɛɣɣga and ɣgaɣɣga.*

^{6 3 4 9} ɣǝǝǝfá:na¹ (by means of the boys).
^{3 3 6 3 3 3-8 9} pdzɛ̀ɣɣgǝǝǝntʔwá:na (just as children).
^{3 3 6 3 3-8 9} ɣǝǝɣɣgǝǝǝfá:zi (as big as the women).
^{6-3 6 3 9} ɣǝǝzɛɛnwé:le (by means of the hair).
^{6-3 3 6-3-5 3-8 8 9} pdzɛ̀ɣɣgǝ:khá:mnda (like the head).
^{6-3 3 6-3 3 9 9} ɣǝǝɣɣgǝǝndú:ku (as big as a walking-stick).
^{6-3 9 9} ɣǝǝndzɛ:la (by means of the path).
^{6-3-5 4} ɣǝǝé:fa (by means of the inheritance).
^{6-3 3-8 8 9} ɣǝǝǝfá:mmbǝ (by means of a rib).
^{6-3 3 6-3-5 3-8 9} pdzɛ̀ɣɣgǝ:khú:ni (just like a piece of firewood).
^{6-3 3 6 3 4 9} ɣǝǝɣɣgǝǝǝfá:nɛ (the size of the smallness).
^{6-3 6 6 3-5 4} ɣǝǝǝǝdǝ:dɛwé:thu (about our sister).
^{6-3 3 6 3-8 9} pdzɛ̀ɣɣgǝǝǝtfʔá:ni (like grass).
^{6-3 3 6 3 4 4 9} ɣǝǝɣɣgǝǝǝkúhá:mmba (as much as travelling).

§ 7. Contractions involving Consonants

Apart from vowel contractions involving either elision or coalescence, Zulu affords many instances of contractions which involve the loss of consonants. Only a few of the most outstanding

¹ Notice that in this plural there is no distinction from the predicative, meaning "they are the boys" or "by the boys". In the singular the distinction is:

^{6 3 4 9} ɣǝǝǝfá:na (by the boy) and ^{6 3 4 9} ɣǝǝǝfá:na (by means of the boy).

can be noticed here. Contraction is such a common occurrence in every type of human speech, that the following brief survey of Zulu contractions must not be looked upon as in any way exhaustive.

§ 8. Contracted Forms of Noun Prefixes

(i) *Class 2, singular* : **i** for **ih**.—Every word in this class may be used with either full or contracted prefix, the latter being the more usual, the former being restricted to poetical and rhetorical expression.

^{3-8 8-3} **í:zwí** (word), ^{3-8 8-3} **ihí:zwí**.
^{3-8 8-3 9} **ihí:á:fí** (horse), ^{3-8 8-3 9} **ihí:á:fí**.

(ii) *Class 6, singular* : **u** for **ulu**.—Either form may be used with all words, the full form now being restricted almost entirely to poetical and rhetorical expression. ^{3-5 4} **ulú:thó** (thing) is perhaps more commonly used than ^{3-5 4} **ú:thó**, owing to its monosyllabic form.

^{2-4 3-8 9} **u:khú:ni** (firewood), ^{2 2-4 3-8 9} **ùlukhú:ni**.
^{3-2 2-8 8 9} **u:á:mmbó** (rib), ^{3 2 2-8 8 9} **ùluá:mmbó**.

(iii) *A few Nouns of Class 7* : **u** for **uŭu**.—The majority of nouns in Class 7 have only the prefix **uŭu**, but there are a few which normally have **u**, and may take **uŭu** in poetical expression.

^{2 2-8 9} **utŭf'á:ni** (grass), ^{2 2-4 2-8 9} **ùŭutŭf'á:ni**.
^{2 2-4 3} **uŭó:ja** (wool), ^{3 2 2-4 3} **ùŭuŭó:ja**.

(iv) *Plural prefixes of Classes 3, 4, and 6*, in **izi**, **izini**, etc., are frequently contracted to **i**, **ini**, etc. ; though the presence of the **z** is shown in the concords and tone.

^{6 3-6 6 8-3 3 9} **ikhá:thi zó:ŭk'ɛ** (all times) < ^{6 6 3-6 6 8-3 3 9} **izikhá:thi zó:ŭk'ɛ**.
^{6-3 6 6 3-6 6 3 8-3 9} **ŭgà:thà:thi:khá:lí zá:mi** (I took my weapons)
 < ^{6-3 6 6 3 6 6 3 8-3 9} **ŭgà:thà:thi:zikhá:lí zá:mi**.¹
^{6 6 3-5 5 5-3 6 6 3-8 9} **ihk'ó:mó nê:ihk'ó:ŭfi** (cattle and oxen)
 < ^{6 6 6 3-5 5 5-3 6 6 3-8 9} **izihk'ó:mó nê:zihk'ó:ŭfi**.
^{6 6 3-5 5 6-3 6-3 9} **ihk'ó:mó zik'i:lɛ** (the cattle have eaten) < ^{6 6 6 3-5 5 6-3 6-3 9} **izihk'ó:mó zik'i:lɛ**.

¹ Even the objectival verb concord **zi** is here contracted to **i**.

Also in the formation of certain personal names, as :

^{2 2-6 6 3-6 6-3} ^{2 2-6 6 3-6 6-3}
 ùno:ǰá:ǰa for ùnoziǰá:ǰa.

(v) *The plurals of Class 1a nouns* are formed with the prefix **o:**, which is contracted from the older Zulu form **ao**. Though there is no consonant involved here, as far as an examination of present-day Zulu shows, we include this noun-prefix contraction here for completeness.

^{3-5 5 4} ^{5 3-5 5 4}
o:ǰá:ǰa (our fathers), **ǰǰá:ǰa**.
^{3-6 8-9 9} ^{5 3-6 8-9 9}
o:ní:na (their mothers), **ǰóní:na**.

Regarding the contracted forms of Classes 2, 6, and 7, the fact that the consonant **always** reappears in every concord, apart from the evidence in other Bantu languages, proves conclusively that the prefix with the consonant is the older form, the present form being a contraction therefrom.

§ 9. Contracted Forms of Future Tenses

There are several stages of contraction in all Zulu future tenses, and all the forms, contracted and uncontracted, are used according to the choice of the speaker. The more remote future tenses in **ja** contract one stage further than do the more immediate futures in **za**. These contractions take place in all future tenses, whether they are indefinite, continuous or perfect in manner, or simple, progressive, or exclusive, in mode. The following are examples of the progressive contraction of future simple tenses from the uncontracted forms, both positive and negative :

Immediate Future Simple : (I shall begin)—Positive.

^{6 6 6 6 3-8 9}
ǰǰizaùkuǰá:la.
^{6 6 6 3-8 9}
ǰǰizokuǰá:la.
^{6 6 6 3-8 9}
ǰǰizaǰá:la
^{6 6 3-8 9}
ǰǰizǰá:la.

Remote Future Simple : (I shall begin)—Positive.

^{6 6 6 6 3-8 9}
ǰǰijaùkuǰá:la.
^{6 6 6 3-8 9}
ǰǰijokuǰá:la.

^{6 6 6 3-8 9}
ngijauca:la.

^{6 6 3-8 9}
ngijoca:la.

^{6 3-8 9}
ngoca:la.

Immediate Future Simple : (I shall not begin)—Negative.

^{6 6 6-3 6 3 3-5 3-8 9}
angigizihuka:la.

^{6 6 6-3 6 3 3-8 9}
angigizuka:la.

^{6 6 6-3 6-3-5 3-8 9}
angigizu:ca:la.

Remote Future Simple : (I shall not begin)—Negative.

^{6 6 6-3 4 3 3-5 3-8 9}
angigizihuka:la.

^{6 6 6-3 3 3-5 3-8 9}
angigizuka:la.

^{6 6 6-3 3 3-8 9}
angigizu:ca:la.

^{6 6 6-3-5 3-8 9}
angigù:ca:la.

§ 10. Contracted Imperatives

In the third person, Class 1 sing. and Class 2 plur., the usual form of the Dependent used as Imperative contains *ka*; this form undergoes contraction, losing the *k* :

^{5 5 3 3 9} mākahá:m̄mbe¹ (let him go) > ^{5 3 3 9} ma:há:m̄mbe.

§ 11. Contraction of Continuous Past and Exclusive Tenses

Particulars of this type of contraction are to be found in Chapter XIII, § 8, (iii).

§ 12. Elision of *wa* in Passive forms now used actively

Examples :

^{3 6 3 8-9 9}
udi:nuzú:lu (Dinuzulu, the one who disliked the Zulus)² from
^{7 4 3 8-9 9}
dí:nwa + uzú:lu.

^{5 3 3-8 8 8-3} ^{5-3 3-8 8 8-3}
¹ Or mākahá:m̄mbe and ma:há:m̄mbe.

² Named after Cetywayo's brother, with whom Cetywayo quarrelled and whom Cetywayo nicknamed "the one who does not desire the Zulus to become great".

Mr. C. Faye, however, does not agree with this derivation and says it is from ^{7 4} dí:na + ^{3 8-9 9} uzú:lu, "the one who worried the Zulus." If this latter derivation is the true one, we should have here a case of final elision not involving any consonant.

⁴ wé:na ³ fá:ku ³⁻⁵ ukò·⁴ ⁸ ⁸ ⁸ ³ ³⁻⁸ ⁹ um·⁴·⁶ (You, Faku, you are a friend-
 forgetter) from ⁵ kó:wa + ⁴ ³ ² ²⁻⁸ ⁹ um·⁴·⁶.

⁴ wé:na ³ ⁶⁻³ ⁶ ⁸ ³ ⁶⁻³⁻⁵ ³⁻⁸ ⁹ ³ ⁹ ²⁻⁴ ³⁻⁸ ⁹ ukò·lu:·⁶·⁴·⁶ (You Jojo, you are a believer-in-
 nothing) from ³ ⁹ ²⁻⁴ ³⁻⁸ ⁹ kó:lwa + u:·⁶·⁴·⁶.

§ 13. Miscellaneous Contractions

Two examples of a more complicated process of contraction are given in Chapter VI, § 6, (iii).

CHAPTER XV

PHONETICS IN RELATION TO MORPHOLOGY AND SYNTAX

§ 1. Morphological Harmony

Many languages of the Congo show interesting types of morphological harmony in their verb conjugations. For instance, Bangi, Ngala, Poto, Ngombe, and Kele each have three conjugations of verbs, the final vowels of the simple stems of which are *a*, *e*, and *o* respectively. These verbs prefer,¹ whenever possible, that the vowel in any suffix which is attached to them should harmonize with the final vowel. In Ngala, for instance, *jata*, *bete*, *kolo*, to walk to beat, to speak, are representative of the three conjugations, *a*, *e*, and *o*. Their emphatic imperatives are *jata-ka*, *bete-ke*, *kolo-ko*, the vowels of the suffixes harmonizing with the final vowels of the simple stem.

Now, in Zulu, there is one instance of this type of morphological vowel harmony, and this is in the verb $\overset{3}{\text{ukú}}:\overset{2}{\text{fó}}^9$ (to say), which has to be studied apart from the conjugation of the regular verbs in Zulu. Notice the following:—

- Infinitive : $\overset{3}{\text{ukú}}:\overset{2}{\text{fó}}^9$ (to say).
 Perfect : $\overset{88-99}{\text{ngí}}:\overset{4}{\text{fí}}:\overset{10}{\text{ló}}$ (I said).
 Present Continuous : $\overset{88-99}{\text{ngí}}:\overset{8}{\text{fá}}:\overset{9}{\text{fó}}$ (I am saying).
 Situative : $\overset{8}{\text{ngí}}:\overset{9}{\text{fó}}$ (I saying).
 Negative Present : $\overset{66}{\text{angí}}:\overset{63-63}{\text{fó}}^3$ (I do not say).
 Negative Past : $\overset{66}{\text{angí}}:\overset{63}{\text{fó}}:\overset{33}{\text{ngó}}^9$ (I did not say).
 Negative Future : $\overset{66}{\text{angí}}:\overset{63-63}{\text{fó}}:\overset{63}{\text{ngókú}}^4^9$ (I shall not say).
 Future : $\overset{88-99}{\text{ngí}}:\overset{8}{\text{fá}}:\overset{9}{\text{fó}}$ (I shall say).
 Applied form : $\overset{3}{\text{úku}}:\overset{22-89}{\text{fó}}:\overset{10}{\text{ló}}$ (to say for).
 Neuter form : $\overset{3}{\text{kú}}:\overset{22-89}{\text{fó}}:\overset{10}{\text{kó}}$ (it is said).
 ditto. (negative) : $\overset{6}{\text{úku}}:\overset{34}{\text{fó}}:\overset{9}{\text{kó}}$ (it is not said).
 Causative form : $\overset{4}{\text{fwísí}}:\overset{39}{\text{sa}}^2$ (to cause to say).
 Passive : $\overset{32}{\text{kufí}}:\overset{9}{\text{wó}}$ (it is said).

¹ So states W. H. Stapleton in his *Comparative Handbook of Congo Languages*, p. 134.

² From $\text{fó} + \text{ísísa}$, there being no diphthong *óí* in Zulu.

Throughout these forms, the persistence of the vowel *o* is very noticeable, especially in such cases as that of the suffixes *nga*, *la*, and *ka* becoming *ngɔ*, *lɔ*, and *kɔ*.

Morphological vowel harmony is noticeable in many of the derivative suffixes of Zulu verbs, e.g. *-ama*, *-atha*, *-ala*, *-ana*, with their perfects in *-eme*, *-ethe*, *-ele*, *-ene*, e.g. *phaká:ma* (get up),
^{2 2-4 3 9} *iphaké:mé*; ^{4 3 9} *thabá:tha* (take), ^{2 4 3 9} *ithabé:the*; ^{4 3 9} *bulá:la* (kill), ^{2 4 3 9} *ibulé:le*;
^{6 6 6-3 9} *ɬanygá:na* (meet), ^{4 3 3 8-9 9} *ɬanygé:ne*; also *-ulula*, *-elela*, *-isisa*, as in
^{6 6 6 3 9} *vummbulú:la* (uncover), ^{4 4 3 9} *ɬáβelé:la* (sing), ^{4 4 3 9} *βónisi:sa* (see clearly).

§ 2. Structural Harmony

Zulu, like most other Bantu languages, shows a strong tendency to consonantal harmony. This is due probably to the fact that most simple stems are duosyllabic in form, and are thus made up of a very limited number of consonants. The longer verbs and nouns are built up by derivative suffixes conforming to definite rules, or by a reduplication or repetition of the stem. In this case one notices the structural harmony of the consonants very forcibly.

Examples : ^{3-2 9 9} *u:fió:fió* (large room).
^{2 2-4 4 3-8 9} *ùβukɬ?wɬkɬ?wɬ:kɬ?wɬ* (sound of writing).
^{4 3 9} *ɬzaká:ɬza* (scold).
^{3 2 9 9} *ùmǰú:ǰu* (one of Mpande's regiments).
^{3 2 2-8 9} *isiɬá:ɬa* (bush).

It is seldom that one finds in any one word more than one positional type of click sound; in fact I have not found one hitherto; e.g.:

^{3 2 2-8 9} *ùçhoçhó:çho* (wind-pipe).
^{5 4} *shó:ŋa* (stab about).
^{8 8-9 9 9} *šáthušó:ló* (be equal in size).
^{4 3 3 9} *çhəçhá:mmba* (burst with a crackle).
^{7 7 4} *šú:ŋça* (fade).

Notice the harmony in consonantal type evinced by the following examples: ejective explosive with ejective affricate, aspirated explosive with fricative, voiced explosive with voiced affricate.

⁵ p ⁷ ətʃ ⁴ ʔ ⁹ á:za (spit).	⁸ p ⁸⁻⁹ ʔátʃ ⁹ a (bursting with a splash !).
⁵ ph ⁴ ʃ ⁹ á:za (tell lies).	⁸ ph ⁸⁻⁹ áfa (emerging of the sun).
⁵ b ⁴ ɔ́ʒ ⁹ á:za (tell lies).	

From the above examples the tendency towards vowel harmony is also very evident. Throughout Bantu one sees examples of vowel harmony in the forms of the noun prefixes, *umu*, *aŋa*, *ama*, *ili*, *uŋu*, etc., as they appear in Zulu. By some philologists this is believed to be due to a reduplication in more primitive Bantu.

§ 3. Syntactical Harmony : The Alliterative Concord

The division of nouns into classes according to the forms of their prefixes, and the fact that other parts of speech in agreement with the nouns have these respective prefixes repeated in one form or another before them, are two of the outstanding characteristics of the Bantu family of languages. This method of indicating agreement is commonly called that of the alliterative concord. It is not always possible to find alliteration in every concordial agreement, but all the concords are recognizable as being phonetically derived from the noun prefix.

It is not the place, in a study of the phonetics of Zulu, to tabulate all the noun prefixes and different concordial forms, but the following examples will show clearly how important this principle of concordial harmony is in Zulu syntax :

³³⁻⁵⁸⁻³³⁻⁵ ábázá:la	⁵ fá:khe	³³⁻⁵ ábakhú:lu	⁵ -	³³⁻⁵⁵ báhammbí:le	⁶⁻³⁴ -	⁴ bábáfi:li.
cousins	they-his	they-big		they-have-gone		they-both

=Both his big cousins have gone.

This is an example of syntactical harmony with a noun in the plural of Class 1. The noun ³³⁻⁵⁸⁻³³⁻⁵ ábázá:la is made up of stem *-zala* and prefix *aŋa-*, which gives colouring to every word in the sentence which is in agreement with the noun. ³⁻⁸ fá:khe is made up of the possessive root *-khe*, meaning "his", and the possessive concord of Class 1 plural, *fa-*. ³³⁻⁵ ábakhú:lu is composed of the adjectival root *-khulu*, meaning "big", and the adjectival concord of Class 1 plural, *aŋa-*. ³³⁻⁵⁵ báhammbí:le is the verb perfect stem *-hammbile*, meaning "went", "have gone", coupled with the subjectival verb concord of Class 1 plural, *fa-*. ⁴ bábáfi:li is the enumerative pronoun,

meaning "both"; the adjectival stem -*ɓili* meaning "two" is coupled with *ɓɓa-* to form an enumerative pronoun of Class 1 plural.

Another example taken from the plural of Class 3, when compared with the above, will show the extent of the harmony more clearly.

^{3 6} ⁶⁻³	⁶ ⁶	^{3 6 6} ^{6 6}	^{6 3 3} ^{6-3 4}	^{6 6-3 3} ^{6 3}
<i>izí:pdza</i>	<i>zá:khe</i>	<i>èziŋkʔú:lu</i>	— <i>zihammbi:le</i>	<i>zòzɔmmbi:lɪ</i>
dogs	they-his	they-big	they-have-gone	they-both

=Both his big dogs have gone.

Compare also the syntactical harmony in the following further examples :

^{2 2-4} ^{4 2}	²⁻⁴ ⁴	^{2 2-4} ^{3 4}	^{2 2-4} ^{3 3-4 4}	^{3 3} ⁹
<i>ùɓuɔ́:lu</i>	<i>ɓé:thu</i>	<i>òɓuɔ́:nɛ</i>	— <i>ɓùlaɔ́:eki:le</i>	<i>ɓó:ŋkʔɛ</i>
beads	they-our	they-small	they-are-lost	they-all
— — ³ ⁹	² ²⁻⁴ ^{4 2}	³ ³⁻⁸	— ^{2 2-4} ^{4 2 4}	
<i>kó:dwa</i>	<i>ò:ɓukhú:lu</i>	<i>ló:ɓu</i>	— <i>ìɓutholí:le</i>	
but	them-big	them-these	she-them-picked-up	
^{2 2 2-6 6} ⁶	^{3 4}	^{3 4} ⁹	— —	
<i>ɪntʔó:mmbɪ</i>	<i>lé:jɔ</i>	<i>ɛŋá:nɛ</i>	— —	
maiden,	she-that	she-small		

= All our small beads are lost, but that small maiden picked up these big ones.

In this example, the concord of the Class 7 noun, ^{2 2-4 3-8 9} *ùɓuɔ́:lu* is seen to recur seven times, the last time it being the objectival verb concord with the perfect stem -*tholɪ* (picked up). The subject of the second part is the noun ^{3 3} ^{3-6 6} ⁶⁻³ *ɪntʔó:mmbɪ* of Class 3 singular, and the concordial agreement with this noun, indicated in the translation by "she", is seen to occur with three words, the forms being *ɪ*, *jɔ*, and *ɛŋ*.¹ We cannot here explain fully how these are in harmony with the prefix *m-*, except to point out the vowel *ɪ*, its recurrence in the semi-vowel *j*, its appearance as *ɛ* (after coalescence with the formative *ɔ*) in conjunction with a nasal click, *ŋ*, which has taken the place of the nasal of the prefix.

This principle of syntactical harmony is applied also to all pronouns, whether absolute or demonstrative. For Class 1 plural, in agreement with a noun such as ^{3 3-5 8-3 9} *àɓazá:la*, the absolute pronoun is ^{5 4} *ɓó:na* (they), the demonstrative pronouns, ^{3 9} *lá:ɓa* (these), ^{3 9} *lá:ɓɔ* (those), and ^{5 5 4} *là:ɓajá* (yonder); for Class 3 plural, in agreement with ^{3 8} ⁸⁻³ *izí:pdza*, we have

¹ Where the velar nasal, *ŋ*, has been absorbed in the nasal click, *ɛŋ*.

^{7 4 3 9 3 9} zó:na, ^{7 7 4} lé:zi, ^{2 2-4 3-8 9} lé:zə and ^{7 7 4} lè:zijá; for Class 7 in agreement with ^{2 2-4 3-8 9} ùbuǀá:lu
 we have ^{5 4 3 9 3 9} ßó:na, ^{5 4 3 9 3 9} ló:ɓu, ^{5 5 4} ló:ɓə and ^{5 5 4} lò:ɓujá; and for Class 3 singular, in
 agreement with ^{3 3 3-6 6-3} intǀó:mmbi, we have ^{5 4 3 3 9} jó:na, ^{5 4} lé, ^{5 4} lé:jə and ^{5 4} le::já.

No adjective, relative, possessive, or verb, can be used in a sentence without being brought into syntactical harmony with the noun or pronoun expressed or understood, with which it has syntactical relation.

CHAPTER XVI

LENGTH, STRESS, AND SOUND-GROUPS

§ 1. General Observations

In Zulu, the questions of length, stress, and sound-groups are interdependent, being to a great extent bound up one in the other. There are numerous cases of length of vowels quite independent of the position of stress, but even then at times the quality of such vowels is affected on account of this very independence.

We read, and hear it repeatedly stated, that normally in Bantu the stress falls on the penultimate syllable of each word; and that every word in Bantu normally ends in a vowel; but how often is it asked what it is that defines or limits a word in Bantu?

How should Zulu words be divided? Is the disjunctive method correct? Or is the conjunctive method the right one? And, when these questions are settled, what are the limits of such divisions? These questions must be faced, and the real Zulu divisions, not according to the traditions of classical or modern European grammar, must be definitely ascertained.

All human thought is expressed in **sound-groups**; and on analysis these sound-groups in Zulu are found to divide themselves as follows:

- (i) *Concept-groups*, containing one or more
- (ii) *Sense-groups*, which latter are made up of one or more
- (iii) *Words or Word-groups*; and these words or word-groups may again be divided into one or more
- (iv) *Syllables*. The syllables again may be analysed and found to contain one or more
- (v) *Elementary Sounds*.

Hitherto our study has been confined to an investigation of the sounds in Zulu speech, and it will be seen that such a study must be the preliminary step to a consideration of the sound-groups. In this investigation the principle of indicating each elementary sound by a separate symbol has been followed. The logical consequence is that when these sound symbols are joined to indicate syllables, the syllables should be joined together to indicate words or word-groups, when the true nature of the word or word-group is ascertained, that is "written up" as one entity. Now in one sense-group, words or word-groups, it will be found, are separated one from the other through the action of stress, and so in writing a

slight space is left dividing them into these entities. Further, it will be found that sense-groups are divided one from the other within the larger concept-group, by the action of tone and by an appreciable pause. This is where true punctuation comes in ; and so the first mark of punctuation in Zulu is used to divide the sense-groups. Each concept group is easily ascertained. The action of tone, together with a decided pause, breaks up Zulu speech into distinct concept-groups ; and so, at the end of each concept-group the second mark of Zulu punctuation is inserted. Punctuation to indicate exclamation, command, or question is not a part of Zulu phonetics ; these phenomena are clearly indicated by the context, intonation, stress, and length. Similarly, inverted commas, or any such analytical device, we do not indicate ; we are only concerned with recording as accurately as possible the sounds which are spoken.

It can clearly be seen that, if this method of sound-division is followed, a totally new view of Zulu grammar will be presented. Zulu grammar, as it is treated to-day, is run into an already-prepared mould of European or Classical grammar. Hence the confusing exceptions and the unexplainable difficulties. What is required is a new mould, a Zulu mould ; and in order to ascertain how to construct this mould a minute analysis of Zulu thought and Zulu phonetics is necessary.

In this chapter I shall first of all discuss the syllable, and then the questions of length and stress, before investigating the rules which underlie word-division.

§ 2. The Syllable

The general rule for Bantu languages is that every **syllable** should end in a vowel or a syllabic voiced continuant, and this rule holds good for Zulu. The one exceptional sound found in Zulu is the voiced rolled lingual, **r**, which forms a syllable by itself in two onomatopœic words.¹ The occurrence of syllabic nasals in Zulu has been very fully treated in Chapter VI, and need not be dealt with here, except again to emphasize that the "homorganic nasals" when syllabic have **no** influence whatever on the stress of the word-group.

The final vowels of words at the end of sense-groups in Zulu, if they have normally the low No. 9 tone, have a tendency to be devocalized.

^{22-4 33 8-9} ùmfundí:sì (teacher), ^{22-43 3-5 4} ùmfána wá:mì (my boy).

¹ See Chapter VII.

These are heard almost as ^{22-433 8-9} ùmfu^{ndi}:s and ^{22-43 3-5 4} ùmfá:na wá:m, but the vowel is never actually lost; it is heard as a breathing. As soon as these words take their position elsewhere in the sense-group the final vowels become once more vocalized.

Examples : ^{66 6 2 3 3-5 4} ù^{ng}gikufú:m ló:kh^u (I don't want that).

^{4 3 3-5 5 8-3} silú:pwa jizí:s^u (we have bad stomach-ache).

^{6 5 3-3 3-8 8 3 3-5 3-8} ngi^βoné: í:ndza è^má:phé (I saw a white dog).

^{6 5 3-3 3-8 8 3 3-5 5 5 5 3-8} ngi^βoné: í:ndza è^má:phé kakhú:l^u (I saw a very white dog).

This same tendency is to be noticed to a greater extent in other Bantu languages. For instance, in Lamba we find *ingú:m* (chief), *ùmuká:fj* (wife), where there is naturally a low level tone. In Kaonde, the interrogative interjection *ám* (written *aam* ?) was in all probability originally *ám*. In Xosa the 1st person singular possessive is now consistently *-am* (Zulu *-ami*), and has been used in several Zulu hymns, e.g., "*Lapo ezulwini Vikaya lam*." In Suto and Chwana the locative suffix has been worn down from *-ni* to *-ni* and now to *ni*, e.g., *thabé:ni* (to the mountain). This tendency is much more liable to become complete with the nasals than with any of the other consonants, as they may so easily become syllabic.

Thus the Zulu syllable is usually made up of a vowel or of a consonant followed by a vowel. Compound consonants are only found in one of the following forms : (a) a combination with a nasal ; (b) an affricate combination, or (c) a combination with the semi-vowel *w*.

§ 3. Length

As has already been noticed when dealing with the vowels, each of the vowels (and *m* when not a homorganic nasal) may occur short or with half-length or with full length. In addition to this, however, especially in certain onomatopœic radicals, a very prolonged length is found.

(i) *Short length* : (unmarked, e.g., *a*).—Short syllables are usually found where there is either no stress at all or only secondary stress. They are also found in many onomatopœic words preceded by some form of the verb ^{3 2 9} ukú:thi, even though main stress is upon them.

^{6 66 3-8 8 9} izint²á:m^mbo (string).

^{3 3-5 8 8-9}
wá:thi bíni (he writhed).

^{5 5 6-3 8-9 9}
èṅṅgozí:ni (in danger).

^{2 2-4 3 9}
ùmfá:na (boy).

(ii) *Half-length*: (indicated by ' , e.g. a').—When words are combined, by elision or by reduplication, to form word-groups, the long vowel of the final word retains its full length and main stress, while the long stressed vowels of the prior word or words assume half-length and usually secondary stress.

^{6-3 9 3-8 8-3 9 6-3 3-6 6-3 9}
lé:tha + i:fá:f1 > lè'thi:fá:f1 (bring the horse).

^{6-3 9 3 2 2 9 6-3 3-4 3 3 9}
lé:tha + umú:ntʔu > lè'thumú:ntʔu (bring the person).

^{6-3 9 3 2 2 9 6-3 3-4 3 3 9}
lé:tha + aḥá:ntʔu > lè'thaḥá:ntʔu (bring the people).

^{6 3 9 3 2 2 9 6 3 3-4 3 3 9}
ṅḡiḥó:na + umú:ntʔu > ṅḡiḥó numú:ntʔu (I see the person).

^{3 9 3-5 4 3 3-5 4}
ló:lu + ú:thi > lo'lá:thi (this stick).

^{8-3 9 3-8 8-3 8-3 3-8 8-3}
jí:sa + í:pdza > j'í:sí:pdza (send the dog).

^{2-4 4 4 3-8 9 3 2 2 9 3 3-5 4 2-4 4 4 4 3 3 3 3-5 4}
sa:fùmaní:sa + umú:ntʔu + om̃:ḥi > sa:fùmaní'sum̃:ntʔom̃:ḥi (we came upon an evil man).

^{3 3-4 8 8 8 3-8 8 9}
ùkuhâ mmbahá:mmba (to walk about a little).

(iii) *Full length*: (indicated by :, e.g., a').—Full length is usually found in position of main stress, and with the contracted forms of the noun prefixes of Classes 2 (sing.), 3, 4, and 6 (plur.), and 6 (sing.), even if the vowel concerned is not in the position of main stress.

^{2-4 3-8 8 9}
i:khá:nnda (head).

^{3-5 5 4}
í:ntʔo (thing).

^{3-7 7 4}
í:ntʔo (things).

^{3 3-5 4 3-5 4}
ulú:thi or ú:thi (stick).

^{3 3-5 3-8 9 3-5 3-8 9}
ùlukhú:ni or u:khú:ni (piece of firewood).

^{3 3-5 3-8 3 4 9}
ùḥukhú:lu bé:zwe (the size of the country).

^{5 5 5 6-3-6 3 3-5 3-8}
ḥàhammbé: ḥá:ja lé:: (they travelled far).

- ² ⁸⁻⁹ ⁹
ɛzwé:ni (in the country).
²² ²⁻⁸⁸ ⁸⁻³
ɪnt²ó:mmbi (maiden).
²² ²⁻⁸⁸ ⁸⁻³ ⁹
ɛnt²ommbi:ni (to the maiden).
³³⁻⁵ ⁴
um:khwe (father-in-law).

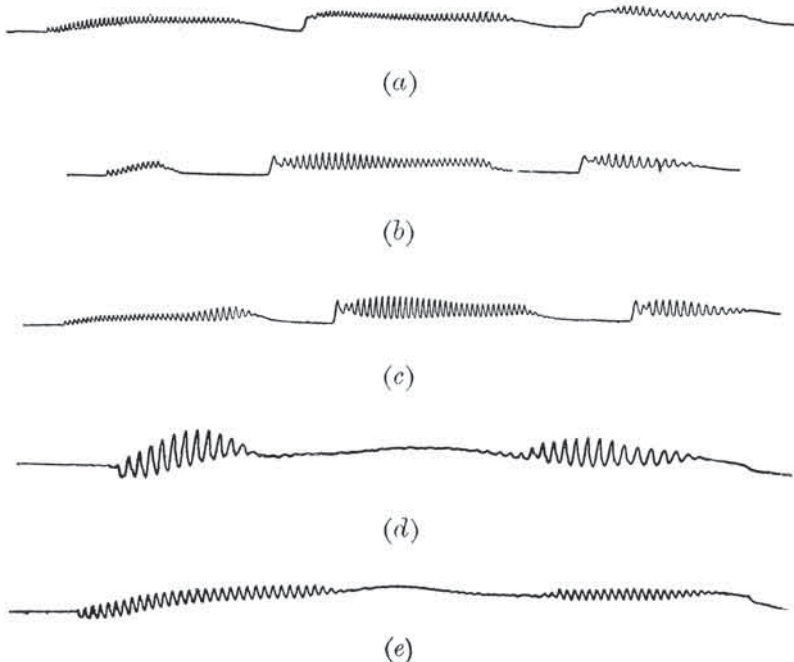
The vowels **ɑ:**, **ɪ:**, **u:**, **e:**, and **o:** are found long in positions of main, secondary, or no stress, but **ɛ:** and **ɔ:** are only found long in position of main stress. Examples :

- ³⁻²²⁻⁸⁸ ⁹ ⁵⁻³³⁻⁸⁸ ⁹
u:śá:mmbə (rib), **no:**śá:mmbə (with a rib).
²⁻⁴ ³⁻⁸⁸ ⁹ ⁵⁻³⁻⁵ ³⁻⁸⁸ ⁹
ɪ:khá:nnda (head), **ne:**khá:nnda (and the head).
²⁻⁴ ³⁻⁸⁸ ⁹
śa:há:mmba (they travelled).
²⁻⁴ ⁴ ³ ⁹
ò:khuní:ni (in the firewood).
³ ² ⁹ ⁹
ò:śandzé:ni (on the rib).
³ ² ⁹ ⁹
ù:śandzá:na (a little rib).
³⁻⁸ ⁹
phé:la (come to an end).
⁵ ⁴
śó:na (them).
⁸ ³³ ³⁻⁸ ⁹
à:śant²wá:na (they are the children).
²²⁻⁶⁶⁶⁻³⁸⁻³⁻⁸⁹
ɪ:niŋguzí:mu (the South).
³⁻⁵ ³⁻⁸ ⁹
u:khú:ni (the piece of firewood).
⁵ ⁵ ⁴ ⁹
à:śíśó:ni (we do not see).
⁵⁻³⁻⁵ ³³ ⁶⁻³ ⁹
nè:jammbá:zi (with porridge).

(iv) *Prolonged length*: (indicated by ::, e.g., **ɑ::**). — Usually found in certain onomatopœic radicals, and in shouting to someone at a distance.

- ³ ² ²⁻⁴ ⁸⁻³⁻⁸
ukú:thi dzá:: (to be stretched out).
³ ² ²⁻⁴ ²
ukú:thi ŋɔf²é:: (to come into view simultaneously).
³ ² ²⁻⁴⁴ ³³⁻⁴³
ukú:thi nt²iní: (to spin along).

Found also in the interjection **h:**ú (wheu !).



(a) ^{2-4 3-8 9} u:khú:khə (mat), (b) ^{3 6-3 9} uđá:đə (sister), (c) ^{3-5 6-3 9} o:da:đə (sisters),
 (d) ^{8 8-9} bí:í (sliding apart), (e) ^{5 4} bí:í (slide apart).

(Tracings by F. Nxele; speed $4\frac{1}{2}$ secs. per metre.)

(Kymograph tracings showing length of vowels.)

Whilst length is used in Zulu, to a certain extent, to distinguish words, it is accompanied by a variation of tone at the same time, e.g.:

^{2 2 2-8 9} ɪŋkʔá:βɪ (ox), ^{3-7 7 3-8 9} ɪ:ŋkʔá:βɪ (oxen).
^{2 2-8 8-3} uβó:vu (puss), ^{3-2 2-8 8-3} u:βó:vu (bog).

Nevertheless, there does not seem to be the same phonemic length distinction in Zulu, as there is in Bemba, Lamba, and other Central Bantu languages, e.g. léla (nurse) and lé:la (fade).¹

§ 4. Stress

In Zulu there are two types of stress: (i) main stress, which is indicated by the **accent aigu** (´), and (ii) secondary stress, which is indicated by the **accent grave** (`). The main stress is very strong and

¹ Is this semantic tone hitherto unrecorded in Central Bantu, and mistaken for phonemic length?

immediately recognizable. Secondary stress is much slighter than main stress, and it is not quickly recognized by the untrained ear; but, with a little practice, its occurrence is quickly noticed. In Zulu there is no emphatic or "sentence" stress. If emphasis is required on any particular word, the word-order of the sentence is usually altered, and the part to be emphasized placed first.

§ 5. Main Stress

Normal main stress in Zulu is on the penultimate syllable of the word or word-group, and, as we have already noticed, is usually accompanied by length of the vowel or syllabic nasal on which it rests. Examples :

^{8 8 8-9 9}
ngijabó:nyga (I am thankful).
^{5 5 3 3-5 6 6 3-5 4}
abafù:nizink'ó:mò (they do not want oxen).

Cases in which main stress falls on syllables other than penultimate will be considered later. In the case of certain onomatopœic radicals, penultimate main stress is found on short syllables. Numerous examples of this have been given already. In addition ^{3 9}cedε (as soon as) has main stress on a short syllable.

When a word or word-group is increased in length by the addition of formative suffixes, the main stress automatically moves forward.

Examples : ^{5 9} bó:na (see).
^{4 3 9} boní:sa (show).
^{4 4 3 9} bônaká:la (be visible).
^{4 4 4 3 9} bônakalí:sa (cause to appear).
^{4 4 4 4 3 9} bônakàlisi:sa (be clearly visible).
^{2-8 8-3} í:pdza (dog).
^{3 8-3 9} ipdzá:na (little dog).
^{3-8 8 3-8 9} ipdzapá:na (very little dog).
^{2 8 3 3-8 9} ipdzapapá:na (extremely tiny dog).

§ 6. Secondary Stress

Secondary stress, not necessarily involving length, is found, as a general rule, on every second syllable back from the penultimate of

Owing to excessive contraction involving consonants, there are exceptional cases of secondary stress upon a syllable immediately preceding one having main stress, e.g. :

⁶⁶⁶⁻³⁻⁵³⁻⁸⁹ **αῦγγῦ:ρά:λα** (I shall not begin) < ^{66 6-3433-53-89} **αῦγγι:ῦκῦρά:λα**.

In the case of word-groups formed by the fusion of two or more words, each of which contains main stress, the last case of main stress remains, the other case or cases lapsing into secondary stress :

^{22-66 633-53-89 3-23-66 6 6 33-89} **υλᾶ ἠγγαλιβαλέ:λε** < **ι:ρά:ῦγγα λιβαλέ:λε** (the sun is scorching).

^{22-43 3 63-89 4 3 9 3 63-89} **ὑψαβᾶ negυ:λε** < **ψαβᾶ:να + ἐγυ:λε** (kill in battle + he kneeling).

^{22-6 68-33 6-3 9 63-6 6 8-33 6-3 9} **υπά:ωζεῦγγά:νε** < **ι:πά:ω ζεῦγγά:νε** (baby's feet).

^{22-6 6 3 33-54 2 2-6 6 22-4 33-54} **υμά:ζοκῦσβαβᾶ:ῶ** < **υκῦ:ζα οκῦσβαβᾶ:ῶ** (bitter food).

^{3 3 3 2 6 22 3-66 63 33 3-4 5} **βαθηκελεζεῖ:λητᾶ ῥα μμβεμῖκχοντᾶ:ῶ:νε** (they tie the rope to the spear).

In the last example above are to be found twelve full syllables composing one single word-group with only one main stress and four secondary stresses.

Syllabic **-m** (**ῖ**), when not homorganic, may take main and secondary stress, e.g. :

^{22-43 3 22 2-44 34 9 22-44 33-89} **υῖ:φο** (fellow), **ῖμντᾶ:ωά:να οῖ:δε** (a tall child), **κῦσεῖμλοπέ:νε** (it is in the mouth).

§ 7. Main stress carried forward by miscellaneous formatives¹

The following formatives suffixed to words, principally verbs, draw forward the main stress :

(i) **-κε** (now ! so ! then !).

^{3 9 3 3-5 4} **φῦ:μα** (go out !), **φυμά:κε** (go out then !).

^{4 4 3 9 4 4 33-5 4 5 4} **σιφῦμῖ:λε** (we went out), **σιφῦμῖλέ:κε κῦθ:να** (so we went out from there).

^{6 3-4 3 4 4 6 3 3-4 4 3 6-33-66 666 33-5 4} **ἠγῖθῦ:κῦ:βα ἠγγῖ:κε κῦθ:να** — **ἠγά:σε ἠγγῖαμῖβονά:κε** (as soon as I arrived there, I saw him).

^{6-33-5 4 4 6-33-5 33 6 33-56 6 33-566 6 3 9} **ἠγενά:κε ἠγγῖ:βα σεῖἠγγῖκῦ:δε:λε ἐκαδῆἠγγῖκῦ:νε:δα.**²

¹ Hitherto generally called "enclitics".

² In rapid speech, **ἐκαδῆἠκῦ:νε:δα**, with fully syllabic **ἠ** before non-ejective **k**.

(ii) **-phi** (where ?)

^{8 8-9 9} **uvé:la** (thou proceedest), ^{8 8 8-9 9} **ùvelá:phi** (whence proceedest thou ?).

^{8 8-9 9} **uǃé:zi** (thou sittest), ^{8 3 9 9} **ùǃezi:phi** (where sittest thou ?).

^{2 2-4 4 3 3-8 9} **ùkuǃùlalé:la** (to kill at), ^{8-3-5 3 3-5 5 3-8 9} **wàmǃùlalé:phi** (where didst thou kill him ?)

^{2 2-4 4 3 9} **ǃàsǃoná:le** (they saw us), ^{3 2 2-4 3-8 9} **ǃàsǃoné:phi**² (where did they see us ?).

(iii) **-ni** (what ?).

^{3 2 9} **ufú:na** (he wants), ^{3 2 2-8 9} **ùfuná:ni** (what does he want ?).

^{3 2 9} **ǃaǃó:na** (they see), ^{3 2 2-8 9} **ǃaǃoná:ni** (what do they see ?).

^{6-3-5 4} **ná:thi** (you said), ^{6-3-5 3-8 9} **na:thi:ni** (what did you say ?).

^{2 2-4 3 9} **ùlethi:le** (he brought), ^{3 3 2-8 9} **ùlethé:ni**² (what did he bring ?).

^{8 7 7 3-8 3 3 3-5 4} **ùkhulumé:ni kujé:na** (what did you say to him ?).

(iv) **-ze** (naked, without anything).

^{3 3 9} **há:mmba** (travel), ^{3 3 8 8-3} **hammbá:ze** (travel unloaded).

^{2 2-6 6 3-9} **ùhammbi:le** (he travelled), ^{5 5 5 6-3-6 8-3} **ùhammbé:ze**¹ (he travelled empty).

^{8 8 3-5 2 2-4 4 3 3-4 3 3-8 8-3} **ùphumé: ipi:na kʔamaǃujá:ze** (thou hast gone on a hunting-party of Mabuyaze's—the name Mabuyaze being derived from **ǃujá:ze**, return empty, unsuccessful).

(v) **-ǃǃǃze**.

This formative is found with only one word in Zulu as far as we know :

^{3 3-8 9} **nam:ǃa** (to-day), ^{3 3-8 3 8-3} **námǃá:ǃǃǃze**.

(vi) **-jǃ** (used in closing certain relative constructions).

^{3 3 3 2 2-8 9} **uǃǃakaniphí:le** (he is wise), ^{2 2-4 4 4 3 9} **ǃǃǃakaniphí:le:jǃ** (who is wise).

^{3 2 2 9} **uhá:mmba** (he travels), ^{3 2 2 2-4 2 3 3 7 4} **umú:ntʔu ðhammbá:jǃ** (the person who travels).

§ 8. Antepenultimate Main Stress

The formative **ǃǃǃze** (just, merely, not perfectly), when added to nouns and verbs does not draw the main stress forward, while itself becoming an integral part of the word-group. In this way ante-

¹ Used with contracted, never full-form perfect stems.

penultimate main stress results. But it must be noted that the long syllable originally holding main stress becomes half-long, while *ndzè* has half-length and secondary stress.

^{6 6 3 8 8-3}
ngija⁶βó⁶nap³dzè^{8 8-3} (I see somewhat).
^{6-7 7 8 8-3}
si⁶⁻⁷é⁷zi⁸ndzè⁸⁻³ (we are just sitting).
^{3 2 2 2-8 8-3}
umá³nt^{2 2}ndzè^{2-8 8-3} (a mere person).
^{3 2 2-8 8 8-3}
ísilwá^{3 2}ne^{2-8 8}ndzè^{8 8-3} (just an animal).
^{2 2-5 5 6-3 8 8-3}
úh^{2 2-5}ambí^{5 6-3}le^{8 8-3}ndzè⁸⁻³:¹ (he has only gone).

§ 9. Ultimate Main Stress

In the following cases main stress is found on the last syllable of words :

(i) *Contracted Verb perfects* :

^{5 9} βó:na (see)	^{5 5 3-8} sigoné:
^{3 2 9} khulú:ma (speak)	^{5 5 5 3-8} sikhulumé:
^{4 4 3 9} ákaní:pha (be wise)	^{5 5 5 5 3-8} si ⁴ ákaniphé:
^{2 2-4 3-8} sèlífé: (it has now been dead . . .).	

(ii) *Locative Adverbs formed from monosyllabic 1st demonstratives* :

Class 1s.—^{3 4}kuló (to this; contrast ^{3 9}kú:lo, to it, Class 2s).

Class 2p.—^{3 4}kulá (to these).

Class 3s.—^{3 4}kulé (to this).

(iii) *Final ja of the 3rd Demonstrative.*

^{3 9}lá:pha (here), ^{4 4 3 4 4 3 9}là:phajá, là:phajána.
^{3-5 5 4}ná:mp²a (here they are), ^{3-5 5 5 3 3-5 5 5 3 9}ná:mp²ajá, ná:mp²ajána.²

But notice : ³lé (this), ^{4 3 4 3 9}lé:ja, le:jána.

(iv) *Miscellaneous* :

^{3 3-8}
íñá: (when, if).

¹ Notice that the full form of the perfect is used with *-ndzè*.

² The long *a*: with secondary stress in these cases may be drawn out to great length, e.g., ^{3-5 5 5 3 3-9}ná:mp²ajána: (they are right away on the horizon yonder). The final *na* is also drawn out, and the tone 3-9 on it is worthy of remark.

§ 10. Monosyllabic Main Stress

Certain monosyllables may in themselves be complete words, and take main stress in the signification-group.

(i) This is especially true of numerous radical descriptives:¹

^{3 2 2-4 6-3}
ukú:thi dú: (to be very quiet).

^{6-3 2-4 3-8}
ngú:thi hí: (I have exhausted my words).

^{3 2 2-4 8-3 8 8-3 8 8-3 8}
ukú:thi bú: bú: bu: (to thresh).

(ii) The interrogative interjection ná: (³⁻⁸perhaps equivalent to 'eh' ? in English) always composes a separate word :

^{8 8 8 8 3-8}
ùjagú:la ná: (art thou sick ?).

^{8-3-5 5 5 5 3 3 3-5 3-8}
wa:fi:ka wámfá:ja ná: (thou arrived'st, didst thou hit him ?).

^{8-3-5 5 5 5 3 3 3-5 3-8}
wafi:ke wámfá:ja ná: (didst thou hit him on thine arrival ?).

§ 11. General Rules of Word-division in Zulu

A. T. Bryant, writing on word-division, states: "Accentuation, then, is the only guide by which we know whether particles of speech are to be regarded as independent, or as forming part of a compound word. Thus, *leyo'nkomo* is not a compound word because there are two penultimate or full accents, showing that, in the native mind, each particle of speech stands alone; but *leyo'ndhlu* is a compound word, and must be united in writing, since both the particles of speech are united under a common penultimate; which is the case again in such instances as *tel'amanzi*, or *wangip'amasi*, where the first accent has become shortened and subordinated to the full accent in the penultimate, thus being accentuated differently from the sentences *tela amanzi*, or *wangipa amasi*, where there are two separate full accents."²

Mr. Bryant has here touched the main point in this question, especially when he advocates the joining up of words "united under a common penultimate". He has also recognized the existence of secondary stress, "where the first accent has become shortened and subordinated to the full accent in the penultimate"; but he has not recognized that it is still secondary stress on the ε of ^{3 3-5 5 5 4}lê'jɔŋk'ó:mɔ,

¹ There are no monosyllabic radicals without length.

² *A Zulu-English Dictionary*, by A. T. Bryant, p. 86*.

somewhat obscured by the presence of half-length.¹ In other words *leyo'nkomo* is as much one single word-group as *leyo'ndhlu*.

From a careful investigation of the rules of stress and length, the following Bantu law of word-division comes to light: **In each word or word-group there is one, and only one, main stress**, usually on the penultimate syllable, secondary stresses falling according to the rules already noticed.

Examples:

^{6 6 6 6 6-3 3-4 3 3-4 4 3-8 9} ngijithenyngi:le lè:ɲɔŋkʔá:fi ^{6 6 6 6 6-3 3-4 3 3 3-4 4 3 9} ngijithenyngi:le ɲɔŋkʔá:fi lé:ɲɔ. ^{6 6 6 2 3 3-8 9} ngiʔá:la kùlèjɔ:ndɟu ^{6 6 6 3 6 6 3 9} ngiʔá:la endɟi:ni lé:ɲɔ ^{2 6 3 3-5 5 6 6 6 3 9} í:ndɟu lé:ɲɔ ɲɲngiʔá:la kú:ɲɔ ^{3 3-6 6 6 6 6 6 3 9} lejɔ:ndɟu ɲɲngiʔá:la kú:ɲɔ ^{8-3 3 6 3 3 3-8 9} ndzènyngasantʔwá:na ^{8-3 3 6 2 2 2-4 3 3-8 8 9} ndzènyngasempʔumalá:nyga ^{5 5 5 5 3 4 9} ndseziŋkʔómé:ni ^{2 2-6 6 3 3-4 4 3 3-8 9} ukú:ɟa kùsèmlòpé:ni ^{2 2-6 6 3 3-4 4 4 3 3-8 9} ukú:ɟa òkusèmlòpé:ni ^{3 2 2 2-4 3 4 3-8 9} aʔá:ntʔu ʔàsèkhá:ja ^{3 2 2 2-4 3 3-5 4 3-8 9} aʔá:ntʔu ʔàsèkhá:ja ^{5 5 3 3 5 2-4 8-3 9} màlìhà mmbè i:fiá:fi ^{5 5 3 3 6-3-8 8-3 9} màlìhà mmbi:fiá:fi	}	(I bought that ox) but (I live in that house). (just like children). (as in the east). (and among the cattle). (the food is in the mouth). (the food in the mouth). (the people are at home). (the people at home). (let the horse travel).
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When two words or word-groups are brought together in such a way that elision of vowels (or coalescence) takes place, the resultant is a single word-group. Examples:

^{3-5 5 5 3 9} i:ɡá:ma lé:li ^{3 2 2 2-4 3 3 9} aʔá:ntʔu ʔò:ŋkʔe ^{3 3-8 8-3-8 9} lè:li:ɡá:ma ^{3 3 3-4 3 3 9} ʔò:ŋkʔaʔá:ntʔu	(this word), but (all people), but
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¹ Similarly secondary stress on a long vowel makes it resemble main stress, but it must be distinguished therefrom.

² In slow speech there may be an appreciable break between the words, in which case the quality of ϵ is not altered by the following l at the beginning of the next word.

In these examples, lé:lɪ and bɔ:ŋkʔɛ, when becoming parts of the larger word-groups, have lost their main stress and the full length of their vowels, these taking half-length and being relegated to secondary stress.

The presence of an *i* or an *u* in the first syllable of a word or word-group does not affect the final *ɛ* or *ɔ* of the prior word or word-group.

Examples :

^{3 3-5 3 5 4 3 3-5 3 9}
 ɬá:la ká:de ukú:ba ú:kɛ¹ (sit down before thou eatest).

^{6 6 6 6 3 3 6 6 6 3-6 6 6-3}
 aŋŋiβoná:ŋŋe ŋŋiθá:nnde² (I never loved).

^{6-3-6 6 6 6 3 3-6 6 6 3 3 9}
 ŋga:gú:la ŋgaβú:je ŋgasí:nnda² (I was ill and then
 I recovered again).

^{3 2 2-4 3 3-8 8-3}
 umá:nɛ uhá:mmbɛ (simply go).

^{5 5 3 9}
 má:nɛ ú:ze (simply come).

^{3 2 2-4 4 3 3 9}
 isi:lɔ sɪjáhá:mmba (the leopard travels).

§ 12. The Word and the Word-group

But what distinction do we make between a word and a word-group? A word may be defined as "that sound or group of sounds which is subject to one main stress and one only". Hence a word is a "part of speech" which has in itself a main stress, and thus may stand alone not necessarily attached to anything else. A word-group is a combination or fusion of two or more words brought about through vowel elision (or coalescence). Hence a word-group is easily split up into its component words, each of which is capable of standing alone. Words may be further analysed into formative parts (stems, prefixes, concords, suffixes, auxiliaries, etc.); but these formative parts can **never** stand alone; they are not "parts of speech" but "formatives in speech". For example, ^{2 3 3-8 9} kúlejɔ:ndɔ is a word-group composed of the words ^{3 3-8 9} kulé:jɔ and ^{3 9 3 3-8 9} índɔ; kulé:jɔ is a locative adverb formed from the demonstrative pronoun ^{3 9} lé:jɔ, by prefixing the adverbial formative ^{3 9} ku; índɔ is a noun of Class 3 singular.

^{3 3-5 3 5 3 3-5 3 9}
¹ This is more commonly : ɬá:lɔ kádukú:ba ú:kɛ.

² This last part is a separate word-group because it is in the Dependent Mood.

§ 13. Word-division with Verb Auxiliaries

An examination of word-division throws a great deal of light on the question of the Verb Auxiliaries and Auxiliary Verbs in Zulu. Generally speaking auxiliaries may be divided into (i) infixional, (ii) those followed by the Situative¹ Mood, (iii) those followed by the Infinitive Mood, and (iv) those followed by the Dependent² Mood. From an examination of the word-division in each of these cases it is plain that the first, those which act as infixes between the subjectival concord and the verb stem, are the real auxiliaries in Zulu, for they invariably form one word-group with the main verb; whilst the other cases which constitute the true auxiliary verbs may only under certain circumstances form single word-groups.

(i) It is accepted that the infixional auxiliaries, *sa*, *ngga*, *ja*, etc., become part of one word-group with the verb stem.

The true auxiliaries, viz. *βε-* and *σε-*, followed by the verb in the situative mood, invariably form a single word-group

6 2 2 6 3 3 9	}	<i>ngisēnggihá:mmba</i>	(I am now travelling).
4 4 4 3 3 9	}	<i>sifēsihá:mmba</i>	(we were travelling).
4 4 3 3 9	}	<i>βēsihá:mmba</i>	
8 3-4 3-8 8 9	}	<i>usēuthá:nnda</i>	(you are now liking).
8 3-4 3-8 8 9	}	<i>ùsuthá:nnda</i>	

(ii) Auxiliary Verbs followed by the verb in the Situative Mood form two word groups.

6 3 3-6 6 6 3-8 8 9	}	<i>ngiló:ku nggihá:mmba</i>	(I keep on travelling).
6 6 6-3 6-3 3-6 6 6 3-8 9	}	<i>anngizusú:ka nggíá:la</i>	(I am not going to sit first here and then there).
6 3 3-6 6 6 3-8 9	}	<i>ngasú:ka nggíá:la</i>	
6-3-6 6 6 6 6 3-8 9	}	<i>nggá:sú:ka nggíá:la</i>	(I sat first here then there—Remote Past).

(iii) Verbs followed by the Infinitive Mood may make two words, which by elision usually become one.

6 2 2-4 2 2-4 3 3 9	}	<i>ngifá:na ùkuhá:mmba</i>	(I want to go).
6 2 2 2-4 3 3 9	}	<i>ngifù:nukuhá:mmba</i>	

¹ This is generally called the Participle.

² The so-called Subjunctive Mood.

^{4 3 3 6 2 2-4 3 9} ḡathá:ḡnda ùkuḡḡ:na ^{4 3 3 6 2 3 9} ḡathà:ḡndukuḡḡ:na ^{6 6-3 3-4 3 2 2-8 8 9} zìvá:ma ùkulá:mmba ^{6 6-3 3-4 3 3-8 8 9} zìvà:mukulá:mmba	}	(they like to see).
^{6 6-3 3-4 3 3-8 8 9} zìvá:ma ùkulá:mmba ^{6 6-3 3-4 3 3-8 8 9} zìvà:mukulá:mmba	}	(they are wont to starve).

(iv) Verb forms followed by the Dependent Mood usually form two words; but if the second begins in a vowel, elision may take place and a single word-group result.

^{2 2-4 3 5 4 3 3-4 4 3 9} kuthé: ḡéḡe ukú:ḡa ḡafi:ke ^{3 3-4 3-4 4 9} ḡafi:ke ḡéḡe	}	(as soon as they arrived).
^{3 2 2-4 6 6 6 6 3-6 3} uḡá:je uvù:mmbulú:ke ^{3 2 2-6 6 6 6 3-6 3} uḡá:jvù:mmbulú:ke	}	(and then he came to the surface).
^{3 2 2 6 5 3 3-5 4} ḡaphi:ḡnde ḡawuḡá:ḡe		(they stabbed it again).
^{2 6 6 3 9} sì:ze sifi:ke		(until we arrive).

It must be noted that such conjunctions as ^{3 9}á:ḡe and ^{6 3}aké: always constitute separate words.

^{3 3-4 3 3-6 6 6 3-5 3} á:ḡe á:je ḡḡḡom:sò		(just let him go to-morrow).
^{6 3-5 3 3-4 4 3 9} aké: aḡá:le lá:pha		(just let him stay here).

§ 14. ^{3 2 9}uku and ukú:thi

Whilst the infinitive prefix is always inseparable from its verb-stem, being merely a formative, it must be noticed that ^{3 2 9}ukú:thi, the verb used before radical descriptives, is **always** a separate word from the radical which follows.

Examples :

^{3 2 2-4 8-9 9 9} ukú:thi hálakafa		(to run through long grass, of a tall person).
^{3 2 2-4 8 8-9} ukú:thi kḡánu		(to stretch apart).
^{3 2 2-4 3} ukú:thi ntḡḡó:		(to jab at the eye).

§ 15. Conclusions regarding Word-division

From the above investigations into word-groups several conclusions may be arrived at.

(i) The reversal of the order of words may alter the number of word-groups in any sense-group. This is noticeable when pronouns (absolute or demonstrative) are placed before the nouns instead of after them. In certain cases, of course, a reversal does not make any such alteration, e.g. :

³ ^{6 3-8} ⁹ í:zwε lé:thu (our country) and ^{3 3-5} ^{5 3} ⁹ élé:thu í:zwε¹

(ii) The presence of half-long vowels usually indicates a word-group made up of more than one word; the half-long vowel indicating the vowel of the word which had originally the main stress. Thus word-groups which contain one or more half-long syllables may often be analysed into real words, e.g. :

^{3-4 4} ^{3 3} ^{8-3-8 9} **ḡa:lè:th^umbú:zi** (they brought the goat). In this word-group there is a half-long vowel (e); hence the word-group may be analysed as ^{3-4 3-8} ⁹ **ḡa:lé:tha** + ^{3 3} ^{8-3-8 9} **mbú:zi**. In the case of reduplications of the stem, when a half-long vowel appears, it is impossible to split up the words into smaller entities.

(iii) An entirely new, a Zulu, view of Zulu grammar is suggested from these investigations. Grammatically the complete words, not the individual parts, which are never used alone, must be treated as parts of speech. The inseparable parts must be treated as formatives and not parts of speech. Take, for instance, the following sentences :

(a) ^{3 3} ⁵ **só:ḡkʔε** ^{6 6} ⁶ **sizó:ja** ^{4 3 6 6} **èḡzí:ni** ⁶ ^{6 3-5 4} **ḡḡḡóḡ:só—**
 We-all we-shall-go to-the-village to-morrow.

^{3 3} ⁹ **só:ḡkʔε**—Enumerative Pronoun (Substantive).

^{7-8-8-9 9} **sizó:ja**—Verb (Predicative).

^{4 3} ^{9 9} **èḡzí:ni**—Locative Adverb (Descriptive).

^{6 3-5 4} **ḡḡóḡ:só**—Adverb (Descriptive).

(b) ^{2 2} ^{2-4 3 3} ³⁻⁵ ^{3 3-5} ^{5 5} **ḡḡḡkʔaḡá:ntʔu** **ḡḡakhú:lu** **ḡḡakhùlú:mí:le** ^{2 2-4 3 3-5 5} ^{5 6-3-6 8-3} ^{3 3-5 4} **ḡḡḡé:zwí** **elí:ḡε—**
 All-people they-big they-spoke with-a-voice it-nice.

^{2 2} ^{2-4 3 3} ⁹ **ḡḡḡkʔaḡá:ntʔu** is a word-group composed of the two words,

^{3 3} ⁹ **ḡḡḡkʔε**—Enumerative Pronoun (Substantive), and

¹ The possessive qualificative has here become a qualificative pronoun, on taking initial position.

- ^{3 2 2 9}
afá:nt?u—Noun (Substantive) in apposition.
- ^{3 3-5 3-8 9}
àbakhú:lu—Adjective (Qualificative).
- ^{2 2-4 3 3-8 9}
bakhùlumí:le—Verb (Predicative).
- ^{6-3-6 8-3}
ngé:zwi—Adverb (Descriptive).
- ^{3 3-5 4}
elí:ǀε—Adjective (Qualificative).
- (c) ^{6 6 6 3 3-4 3 3 6} ^{6 3} ^{3 3-4 4 3 3-4} ^{3 3-4 4 3 3 6}
àngngùm̀bóná:ngga **ká:ǀε** **lǎ·womfá:na** **ǎwajehá:m̀mba**
 I-did-not-him-see well that-boy he-who-went
- ^{5 3-8 9}
nak?é:ne—
 last-year.
- ^{6 6 6 3 3-4 3 3 9}
àngngùm̀bóná:ngga—Verb (Predicative).
- ^{5 4}
ká:ǀε—Adverb (Descriptive).
- ^{3 3-4 4 3 9}
lǎ·womfá:na is a word-group composed of the two words,
- ^{3 9}
lǎ:wǎ—Demonstrative Pronoun (Substantive), and
- ^{3 3-5 4 9}
ùm̀fá:na—Noun (Substantive), in apposition.
- ^{3 3-4 4 3 3 9}
ǎwajehá:m̀mba—Relative (Qualificative).
- ^{5 3-8 9}
nak?é:ne—Adverb (Descriptive).

This bearing of phonetic word-division on Zulu Grammar will be discussed more fully in Chapter XXIII.

§ 16. Sense-groups and Concept-groups

One or more words or word-groups compose a sense-group, and one or more sense-groups compose a concept-group. The concept-group in Zulu is the expression of a complete concept or thought: the sense-group is but an incomplete concept-group and seems usually to end at convenient spaces for breathing, though possibly further investigation will reveal definite rules under which sense-group division is made. The main difference phonetically between the sense-group and the concept-group is that the main stress of the last word in the concept-group is more heavily stressed than any other, and the length of that vowel usually considerably increased. This does not happen at the end of sense-groups. The pause between

concept-groups is decidedly longer than that between sense-groups. A careful examination of the following texts, and of those appearing in Chapter XXII, will give a good idea of this distinction which is behind Zulu thought.

§ 17. Zulu Text No. 1¹

2 2-4 3 3 2 2-4 5 3 3 3-4 6-3 5 5 3 3-5 4 9
 ú:ma ùkhulú:ma nomú:nt?u — mbé:ke èbusoé:ni — —

If thou-speakest with-a-person him-look-at in-the-face.

3 2 2-4 2 2 2-4 2 2-4 3 3 7 4 4 4 6-3 3 3-4 3
 khòkhé:la kó:ŋk?e òkuthèŋgá:jò — — sèbèndzè'limá:li

Pay-for it-all thou-who-it-buyest. Work-for-money

3 3-4 3 3 6 3 3 3-5 4 5 6-3 6 3 3 6 6
 já:kho ùŋgákàjìhí:thi — — jè'ndzizithemmbi:sò

it-thy thou-not-yet-it-having-spent. Make-promises

3 6 3 3 6 8-3 9 3 3 6 6 3 3 3-4 3 3-5 6 6 3 3 3-4
 èziŋŋyòzà:na — — há:mmba náá:nt?u àbalùŋgílé:jò —

them-few. Travel with-people them-righteous

3 3-4 4 4 4 4 3 3-4 4 3 3 3-4 3 7 8 8 8 8-9 9
 ú:ma ufú:na ukú:sa abá:nt?u sá:thi — ùlŋŋgí:le — —

if thou-wantest that people they-should-say thou-art-righteous.

The above text in current Zulu orthography, disjunctive method :

Uma u kuluma nomuntu m bheke ebusweni. Kokela konke okutengayo. Sebenzela imali yako u nga ka yi citi. Yenza izitembiso ezi incozana. Hamba nabantu abalungileyo, uma u funa ukuba abantu ba ti, u lungile.

§ 18. Zulu Text No. 2²

5 3 6-8 8 6 6 3 3 6 6 6 3 3-8 8 6-3
 àsèlú:ŋgu³ sàhá:mmba ŋgèmkhú:mmbi⁴ —

White-people they-travel by-means-of-boats

3 3-5 6 6 2-8 9 3 1 3 3 3-4 3 3 3 3-4 4-8 8 6-3
 sàjuziŋgí:le — — sàphá:tha imikhò:nt?emini:ŋgi⁵

they-them-hunt. They-take spears-them-many

3 3 4 4 3 3-4 6 3-8 9 6 6 6 3-8 8 9
 èmkhú:lu — — ènezint?é:ndža — — nèziŋt?á:mmbò —

them-big which-with-barbs and-ropes

¹ From *Incwadi yesibili yesikole*, p. 36.

² From *Incwadi yesibili yesikole*, p. 14.

³ Syllabic homorganic nasals, **ŋ**, **n**, **m**, always take the tone on which the previous vowel ends; this gives the impression of their being in one syllable with that vowel, **a-ŋe-lu-ŋ-ŋgu** being erroneously read as **a-ŋe-lu-ŋ-ŋgu**.

⁴ The tones of this word isolated would be 6, 3, 3-8, 8, 9.

3 1 3 3-4 3 3 3 3-4 4-8 8 6-3

⁵ Or **sàphá'thimikhò'nt?emini:ŋgi**, three words fused into one word-group.

6 3 3-55 6 3 3-44-88 9	— —	1 3	3 5
nēmiphəŋgō·lemíní:ŋgí		ḡá:thí	ḡéde
and-barrels-them-many.		Then	as-soon-as
5 3 3 3-7 6-3	3 2 3-4 4	4 4 3 3-4 4	—
ḡafi'ke:lwá:ndḡe ¹	ùmkhó:mó	ùḡonaká:le	
they-arrive-in-the-sea	the-whale	it-appears	
4 44 6-33-5	5 4	3 3 3 2 6 2 2 3-66	63 33 3-4 5
ḡásonndé:la	ká:ḡe	—	ḡathèkèlezè·lɪntʔá·m̩mbeḡkhontʔóé:nɪ
they-approach	carefully		they-fasten-the-rope-onto-the-spear
	5 5-6 6-8 9	— —	
	ḡàwugwá:ze		
	they-it-stab.		

The above text in current Zulu orthography, disjunctive method :

Abelungu ba hamba ngemikumbi, ba yi zingele. Ba pata imikonto eminingi emikulu e nezinhlehlhla, nezintambo, nemipongolo eminingi. Ba ti, qede ba fike elwandhle, umkomo u bonakale, ba sondela kahle, ba tekezelele intambo emkontweni, ba wu gwaze.

¹ *ĩ* half-long, original *ĩ:*, but shortened and stress made secondary through fusion into one word-group. *e:* = *ɛ* + *ɛ* placed in unstressed position but having full length, therefore becoming of high quality.

CHAPTER XVII

TONE IN ZULU

§ 1. General Observations on Tone

Generally speaking, tone, or as it is often called—"intonation," in spoken languages may be classified under two heads: first, characteristic tone, and second, significant tone.

By **characteristic tone** I mean the particular method of grouping or succession of musical pitches which characterizes a particular language or language-group. In this connexion, in English, the regular beat of the stress is perhaps more characteristic of the language than is the system of pitch-sequence. There is, however, even in English, a well-defined system of tone, the examination of which is still in its initial stages.¹ In French there seems to be a more noticeable tone-sequence taking the place of stress, the general scheme of which is to run up the scale in each word-group, starting the next word-group low and running up the scale again; in many cases there is a sudden drop and rise towards the end of the group.² Now when the untrained Englishman speaks French he is apt to substitute his system of stress and tone for the characteristic tone-sequence of French: he will not, perhaps, be misunderstood, but he will be recognized immediately as a foreigner. In the same way the untrained Frenchman, speaking English with French "accent", will be understood, but instantly recognized as a foreigner. Characteristic tone is the label of the language or language-group, but it is not an essential to the grammatical or semantic significance of any language.

Significant tone, on the other hand, plays an active part in the grammatical significance of the language, and is the means of distinguishing words of different meanings phonetically alike. Perhaps the classic language using significant tone is Chinese, in its various forms. In Chinese one phonetic syllable may hold various meanings according to the musical pitch with which it is pronounced. In certain Chinese languages there are as many as seven of these different "tones". The Sudanian languages of West and Central Africa are also languages in which tone is significant. In these languages, as also in Hottentot, there are generally believed to be three "tones". In **chū**: Bushman there are five tones.

¹ See Mr. H. E. Palmer's very suggestive book, *English Intonation* (Cambridge, 1922), and Klinghardt's *Übungen im Englischen Tonfall* (Otto Schulze, Cöthen).

² See Klinghardt and Fourmestreaux, *French Intonation Exercises* (Cambridge, 1923).

The existence of tone, other than characteristic tone, in the Bantu languages, has been by no means generally recognized. Recently, however, it has been noted and treated in the Kongo (Fiote) language,¹ in the Rolong dialect of Chwana,² in Suto,³ in Jaunde,⁴ in Duala,⁵ in Shambala,⁶ and in Xosa,⁷ besides several other Bantu languages. Apart from the doubtful case of Swahili, tone is believed to play a "significant" part in all Bantu languages. To this assertion Zulu is no exception.

§ 2. The Importance of Tone in Zulu

The question of tone in the Bantu languages is extremely complicated, and its study demands as careful an analysis as that of grammar or phonetics. It is questionable whether tone comes under the study of phonetics at all. In all probability it should be treated under the title of "tonetics"⁸ as a subject equal to and not subordinate to or included under phonetics. Phonetics treats of phones, phone-groups, and phonemes: tonetics treats of tones, tone-groups, and tonemes.

In Zulu, as in other Bantu languages, there is characteristic tone, and if this type of tone-sequence is not employed, the foreign speaker is betrayed. But in addition to this, there is an extensive use of tone as significant, determining grammatical relations and indicating semantic differences. For this reason it is extremely important that of this subject cognizance should be taken by all students of Zulu. A wrong employment of tone in Zulu may merely indicate that a foreigner is speaking, or it may result in "bad tonal grammar", or it may convey an entirely wrong meaning. For this reason, then, it is important that the subject of the tonetics of Zulu should have its rightful place in the study of the language.

¹ By K. E. Laman in *The Musical Accent or Intonation in the Kongo Language* (Stockholm, 1922).

² By D. Jones and S. Plaatje in *A Sechuana Reader* (London, 1916).

³ By K. Endemann in *Wörterbuch der Sotho-Sprache* (Hamburg, 1911).

⁴ By P. H. Nekes in *Die Sprache der Jaunde in Kamerun* (Berlin, 1913) and M. Heepe in *Jaunde-Texte* (Hamburg, 1919).

⁵ By E. Dinkelacker in *Wörterbuch der Duala-sprache* (Hamburg, 1914), and C. Meinhof in *Die Sprache der Duala in Kamerun* (Berlin, 1912).

⁶ By K. Roehl in *Versuch einer systematischen Grammatik der Schambalaspache* (Hamburg, 1911).

⁷ By Carl Nauhaus in an article in the *S.A. Outlook*, July, 1924, entitled "The Tones in the Xosa Language".

⁸ A term first used by Dr. D. M. Beach of Capetown University.

§ 3. The Nature of Tone in Zulu

In Zulu there are two types of tone: level tones and gliding tones. When using a level tone, one musical note is struck and that pitch is maintained as long as the syllable lasts. With gliding tones the syllable commences on a certain musical note, and glides to another during its duration. Gliding tones are, in Zulu, of three types: rising tones, falling tones, and rising-falling tones. Rising tones commence at one particular musical note and glide up the scale to another, a higher note, during one syllable. Falling tones commence at one particular musical note and glide down the scale to another, a lower note, during one syllable. Rising-falling tones commence at a certain musical note, glide up to a higher, and then, before the completion of the syllable, glide down again to a lower. There is a strange correspondence between these Zulu tones and vowels. We might liken the level tones to pure vowels, the rising and falling tones to rising and falling diphthongs, and the rising-falling tones to triphthongs,¹ remembering that in each case only one syllable is involved.

A careful investigation and analysis of the Zulu tones reveals the fact that the Zulu speaker uses a nine-tone system: that is to say, that his range of tones in speech covers nine different pitches. Some investigators of tonetics have tried to apply a five-tone system to Bantu languages, others a three-tone system.² Only a most exhaustive study to discover the true tonemes could make any system less than one of nine tones accurate for recording. K. E. Laman³ has recorded nine separate tone-points for Kongo speech and he puts them in musical notation as: f#, f, e, d#, d, c#, c, b, and b♭.

In Zulu the nine tone-points represent the scale within the limits of which the Zulu normally keeps when speaking. He may strike one of the notes and maintain it upon the particular syllable, or he may start at one of the notes and slide down to a lower or up to a higher in one and the same syllable. It is important to realize, however, that he never strikes between any two tone-points. There are no more than nine points at his disposal, and his full range never covers less than nine points. As will be emphasized presently, it is not the actual pitch of these tone-points which is important, but the relative pitch—the extent of the intervals. Even if, through excite-

¹ It is further interesting to note that triphthongs are only rising-falling. A falling-rising sequence of vowels would make two syllables, as in the English word "flower."

² Cf. C. Nauhaus for Xosa.

³ See p. 13 of his *Musical Accent*.

ment or emotion, the whole range of this speech-scale is raised, the relative pitches of the nine tone-points remain constant. Different speakers use different heights of speech-scales, some base, some bary-tone, some tenor, but the relative pitches of the tone-points within those scales correspond. A woman uses a much higher pitch-scale in speech than does a man, but the distance between her lowest tone-point and her highest will be the same as between those of the man.

4. The Musical Analysis of Zulu Tone


Having ascertained the existence of the nine-tone system in Zulu, it was necessary to analyze the musical notes used by a particular speaker on a particular occasion in order to ascertain the intervals between the tones. Key-words giving examples of each of the tones were found, and kymograph curves taken. The method pursued was as follows: A kymograph tracing was taken from an electric tuning-fork vibrating at a speed of 100 vibrations per second. The nine tones were then pronounced by a native in rotation through a mouth-piece and the tracings recorded immediately beneath that of the tuning-fork. The number of vibrations in each of these "tone-curves" corresponding to the length of 100 vibrations of the tuning-fork was then counted, and the results compared with the table of notes of the chromatic scale as given by Rayleigh in his *Theory of Sound*.¹ The mean results were as follows:—


<i>Zulu</i> Tone No.	<i>No. of Vibrations</i> <i>per. sec.</i>	<i>Approx. notation</i> (a' = 440).
1.	187·5	F# ⁺
2.	167·5	E ⁺
3.	155	D#
4.	147·5	D ⁺
5.	130	C
6.	120	B ^b
7.	116·25	A#
8.	107	A ^b
9.	89	F ⁺

[*Note*.—⁺ indicates that the pitch is slightly above the note indicated.]

¹ Vol. i, p. 11.

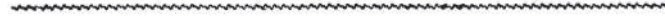
Tuning Fork— 

No. 1. 

No. 2. 


No. 3. 

Tuning Fork— 


No. 4. 

No. 5. 

No. 6. 

Tuning Fork— 

No. 7. 

No. 8. 

No. 9. 

Kymograph tone-curves for the nine Zulu tones.

(Speed $4\frac{1}{2}$ secs. per metre.)

Translated into Staff Notation,¹ the nine notes used by F. Nxele on the morning of 15th August, 1924, show approximately as follows :



In an experiment two days before, the No. 5 tone used by Nxele was $C\flat$ compared with C in the experiment detailed above ; and all

¹ With the kind assistance of Professor P. R. Kirby of the University of the Witwatersrand.

the other tones were correspondingly altered. The intervals, then, between the notes are the important things to consider. It is impossible to give an accurate idea of these intervals in musical nomenclature. The ratios, however, can be gathered from the table of vibrations given above. The whole range is slightly above an octave. The biggest drops are between Nos. 1 and 2, 4 and 5, and 8 and 9; whilst the smallest is between 6 and 7.

The Zulu key-words used in these investigations, giving examples of all nine tones, were the following:—

2 ε pha: thwa 1 u mu: nt'u 9 ja: ja

6 ηgi fu: na 3 nɔ ba: ni 9 u fu: na

Gliding tones, whether "diphthongic" or "triphthongic", when represented in musical notation according to the above key, appear as follows:—

3 a 3-5 ma: fa 4 i: zwi 3 im 8-3 mbu: zi

The following is an example of continuous sentences of spoken Zulu according to the same musical notation:—

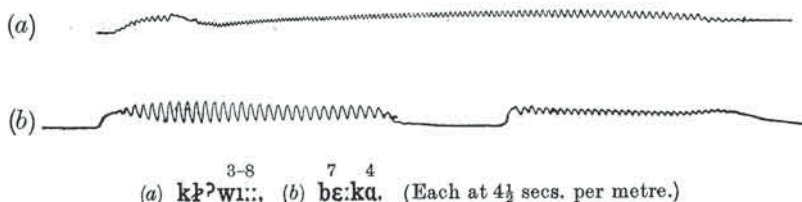
a be lu: ηηgu ba ha: mmba ηηge mi khu: mmbi

— e mi khu: lu — ε ne zi nt'a?ε: ndka ne zi

nt'a: mmba — ba ji zi ηηge: le — ba

pha: tha i mi kh'o nt'e mi ni: ηηgi — —

Kymograph Tone-curves showing gliding tones and level tones.



§ 5. The System of Tone-marking adopted for Zulu

Since the musical transcriptions in the previous section show the exact musical notes employed by but one individual speaker at one particular time, it is evident that any fixed musical notation for recording this phenomenon of Zulu speech will convey an entirely wrong impression. As far as can be seen at present, it is necessary to record all nine of the tones. As will be noticed later, certain substitutions of one tone for another under certain circumstances are possible, but nevertheless all nine tones have definite use in Zulu. A careful reduction to tonemes may lead to slight simplification in one direction, but that advantage would be counter-balanced by the necessity for remembering many very intricate rules, and by a mere approximation to the tone-sequence in many cases. Now, to indicate the nine tones, using diacritic marks either above or below the syllables concerned would, I fear, cause complications and confusions, as each syllable would have to be marked, and stress marks are already being used. This would be especially confusing with gliding tones, when it is necessary to indicate the pitch of commencement and the pitch of finishing. It is for this reason that I have finally adopted the figure system for indicating tone, using the numbers 1, 2, 3, 4, 5, 6, 7, 8, and 9 to indicate the highest to the lowest tones. These numbers have the advantage over the musical notation in that they indicate the relative pitches only, and do not indicate fixed musical notes. Gliding tones are marked by hyphening the numbers indicating the commencing pitch and the finishing pitch of the syllable, thus: 3-4, 2-8, 6-3, 8-3, etc. Rising-falling tones, in the same way are indicated by hyphening the limits, e.g.: 8-3-8, 6-3-5, etc. Unfortunately this system in its precision in the case of every syllable, is too involved to be suggested for purposes other than those of scientific recording.

In this system of recording, the key-words given in the last section appear as follows:—¹

2 1 9 3 2 9 5 4 6 3 9 7 7 4 8 3 9
 ephá:thwa, umú:nt?u, já:ja, ηgífú:na, nǝbá:ni, and ufú:na.

§ 6. Tonemes and Tonal Nuclei

In tonetics are found tonemes, even as in phonetics there are phonemes. Groups of tones which follow the same sequence or sequences which may be interchanged without altering the significance in any way are called tonemes. For instance the tonal sequences of the tones 2.9.9 and 3.9.9 are interchangeable without alteration of significance. These two groups of tones, therefore, belong to the same toneme. Similarly do 2.2-4.3 and 3.3-4.5; as also 3.2.9, 2.1.9, 4.3.9, and sometimes 5.4.9. Words, of which the tone sequence belongs to the same toneme, will vary tonetically in a uniform way. Examples of this will be seen under "Tonal Morphology" in Chapter XX. In examining the tonemes there is found to be a tonal nucleus in each case, which gives the tone-group a special colouring. These nuclei may be monosyllabic, duosyllabic or fully expressed when trisyllabic. In Zulu these nuclei are limited, and it is around them that the other tones group themselves or from them that they take their colouring. Tonal nuclei in Zulu are dealt with in Chapter XIX.

§ 7. Isolated Tone and Tone in Sentences

In syntactical construction, in sentences, there is an economizing tendency to level up the tones; so that a word, which has decidedly marked variations of tone in its isolated form, may, in a sentence, lose such distinction. For example:—

(Isolated): ^{3 2 2-4 3} isikhá:thi (time), ^{4 3-8 9} kakhú:lu (exceedingly).

(In sentences): ^{5 2 2-4 3 3 6 6 6 3 3-5 5 6 6 6 6 6-8 9} amú:khǝ ò:ηηgaǝǝkani:pha ηηgásikhà:thisi:pe
 (There is no-one who can become wise all at once).

^{2 2-4 4 3 6 6 6 3 6 6 6 6 5 5 5 6 3 3 3 9}
 kukhó:na izi:nt?ǝ èzini:ηηgi kakhú:lu² zòkufú:ndwa (There are very many things to be learnt).

It is further to be noticed that a word commencing with a high tone,

¹ Numerous further examples are seen in all illustrative words and in the texts.

² Or kakhú:lu.

immediately following in a sentence a word ending in a low tone, has a tendency to raise that low tone. For example :—

³ ⁹ **ḡé:ka** (put) and ³ ³⁻⁵ ³ ⁹ **ḡé:ka lá:pha** (put here).
³ ² ² ⁹ **umú:ntʰu** (person) and ³ ² ² ²⁻³ ³ ² ²⁻⁸ ⁹ **umú:ntʰu ùfikí:le** (the person has arrived).

Subordinate sentences beginning with **ú:ma** do not drop the tone at the end, unless they also end a concept-group, e.g. :

³ ³⁻⁵ ⁴ ⁴⁻⁵ ⁵ ⁵ **ú:ma ilammbi:le** — ³ ³⁻⁵ ⁶ ⁶ ⁶⁻³ ⁹ **ijazun̄gḡé:la** — — (when it is hungry, it hunts).

A final No. 9 tone tends to devocalize the final vowel, e.g. ² ²⁻⁴ ³ ³ ⁹ **umfundí:sí** (minister). Similarly an abnormal attempt to raise the tone higher than No. 1, in emotional speech, may result in devocalization (or whisper), e.g. ⁵ ⁶⁻³⁻ ¹⁻² **wendzḡ: ká::ḡé:** (you *have* done well !). In either case this seems to point to the fact that in Zulu speech it is not possible to go beyond the nine-tone limits.

The characteristic tones of any word are shown in full when that word is final in a concept-group.

§ 8. The Influence of Phones on the Tone

Certain Zulu phones (units of speech-sound) naturally favour specific tones. For instance, the voiced explosives, **b**, **d**, and **g**, normally form with vowels low-toned syllables, Nos. 5, 6, or 7. On the other hand the bi-labial implosive, **ḡ**, is more often found with high tones. The voiced affricates, too, favour low tones; so also the voiced fricatives, **v**, **z**, **ḡ**, and **f**. This is most noticeably the case with **z**. The following comparisons illustrate this :

² ²⁻⁴ ³ ⁹ ùkwakhí:wa (to be built)	}	³ ⁹ sá:la (remain)	}
² ²⁻⁴ ⁸⁻³ ⁹ ùkwazí:wa (to be known)	}	⁸⁻³ ⁹ zá:la (beget)	}

In the contracted plurals, where **z** has been elided, its low tone influence is left. **z** is generally found with No. 8 or No. 6 tone, though No. 7 is sometimes used, and No. 9 in final positions.

The nasals, **m** and **n**, when not used in conjunction with voiced explosives or voiced affricates, favour high tones or the middle tone (e.g., **n** of **na**), as also does the voiced lateral, **l**; for instance the prefixes **il-** and **ulu-** are usually found with such tones as these : 3.3, 3.2, or 2.2-4.

The semi-vowel *j*, when used in predicative formation, takes a low tone, but, when used in the derivative suffix *-aja*, is considerably higher, e.g., $\overset{5}{j}\overset{4}{a}:\overset{5}{g}\overset{4}{a}$ (strike), $\overset{5}{g}\overset{4}{a}:\overset{5}{g}\overset{4}{a}$ (grind), $\overset{5}{\text{fw}}\overset{4}{a}:\overset{5}{j}\overset{4}{a}$ (search), etc.

Voiced clicks favour low tones, nasal clicks usually tones somewhat higher.

It seems, therefore, that of consonants, voiced explosives and fricatives, together with sounds in which they play a part, favour low tones; whilst the continuants, which may be used syllabically, favour high tones.

§ 9. Notes regarding Individual Tones

No. 1.—This high tone is used (*a*) when shouting at a distance, (*b*) in emotional speech, (*c*) in emphatic speech, and (*d*) in normal speech in a few words, such as the following sense-groups illustrate:—

$\overset{3}{u}:\overset{3-5}{m}\overset{3}{a}\overset{1}{e}\overset{1}{t}\overset{1-3}{h}:\overset{8-3}{nt}^?w\overset{3}{a}\overset{3}{n}\overset{3}{d}\overset{3}{z}\overset{3}{e}$ (if he is merely touched).

$\overset{3}{u}:\overset{3-5}{m}\overset{3}{a}\overset{1}{e}\overset{1}{t}\overset{1-3}{h}:\overset{8-3}{nt}^?w\overset{3}{a}\overset{3}{n}\overset{3}{d}\overset{3}{z}\overset{3}{e}$ (if they are merely touched).

No. 2.—This indicates the normal height reached generally in speaking, No. 1 being exceptional. Key-word for 2 and 3: $\overset{3}{u}:\overset{2}{m}\overset{2}{a}:\overset{9}{nt}^?u$.

No. 3.—Commonly interchangeable with No. 2 in a series, e.g. 2.9.9 or 3.9.9; 3.2.9 or 4.3.9; 2.2-8.9 or 3.3-8.9. Nevertheless, this belongs to a different toneme, as evidenced by the tri-tonal nucleus 3.2.9.

No. 4.—Commonly used as the tone of the initial ϵ of locatives. Key-word for 4 and 5: $\overset{5}{j}\overset{4}{a}:\overset{5}{j}\overset{4}{a}$.

No. 5.—The predominating tone of the conjunctive formative *na*, and the middle tone of the whole series.

No. 6.—The first of the low tones, predominant in the 1st person subjectival verb concord, *ngi*. Also works in conjunction with No. 3, as 6.3 or 6-3. Never followed in a series by either 2 or 4.

No. 7.—A rarely-used tone. Often takes the place of final No. 9, when the word ends a sense-group and not a concept-group. Sometimes represents a No. 5, when under the influence of a "low" phone. Seldom used in gliding tone, but regularly followed by No. 4, e.g. 7.4.

Key-word: $\overset{7}{n}\overset{7}{o}\overset{4}{b}\overset{4}{a}:\overset{7}{n}\overset{4}{i}$.

No. 8.—Full low tone, exemplified in the 2nd person singular subjectival verb concord. Also common with *z*. Found in rising tone 8-3, and common in falling tones, 2-8, 3-8, and 8-9.

No. 9.—The lowest tone. Never found in the middle and rarely at the beginning of a word or word-group. Seldom found at the end of a sense-group, except when ending a Vocative interjection, e.g. :

6 3 9 6 6 6 3 3 6 6 6 3-5 3 6 6 3-8
 ḡokwé:ní — sizokuhá:mmba ḡḡgajì phindḡé:la ná: — —

(Dhlokweni, by which path shall we travel?).

No. 9 tone is noticeably found on the final *-ní* of Locative Adverbs, and the final *-ná* of Noun and Qualificative Diminutives.

CHAPTER XVIII
SIGNIFICANT TONE

§ 1. Types of Significant Tone in Zulu

We have noticed that there is characteristic tone-sequence in every Zulu word and Zulu sentence, a tone-sequence which if violated, betrays the foreign speaker. A violation of the characteristic tone does not necessarily produce a wrong meaning in a sentence, but it causes a harsh lack of reality in what is said, and an incorrectness which often fails to convey any meaning to natives unaccustomed to the uncouth attempts of white men to speak Zulu, especially so if the natives are on in years.

But quite apart from this characteristic tone in Zulu, tone is also **significant**. That is to say, a variation of the tone may vary the meaning or the grammatical relationship of words or of whole sentences. It is for this reason that a study of tone in Zulu is so essential. Significant Tone in Zulu I divide into three main divisions : (i) Semantic, (ii) Grammatical, and (iii) Emotional.

§ 2. Semantic Tone

Semantic Tone distinguishes words different in essential meaning, but phonetically alike. The alteration of the tone on these words is the **only** factor in a complete alteration in meaning. True semantic tone is exemplified principally in distinguishing (a) nouns from one another, and (b) verbs from one another. Many cases of a miscellaneous character are also found in Zulu. The instances given hereunder do not pretend to be in any way exhaustive.

(a) Examples of Nouns :—

<p>3-2 2-4 3 i:ǃé:le (corn)</p> <p>22-43-8 9 ùǃǃá:la (colour)</p> <p>3 2 2-8 9 isikhó:va (owl)</p> <p>22-88 9 ipá:ǃǃga (doctor)</p> <p>22-43-8 9 isisi:la (tail)</p> <p>3 88 8-3-8 9 izǃǃndé:ǃé (lips)</p> <p>22-44 6-3 9 isǃǃǃgá:ne (babyhood)</p>	<p>2-4 4 9 i:ǃé:le (breast).</p> <p>3 2 2-8 9 ùǃǃá:la (shin-bone).</p> <p>3 2 2-8 8-3 isikhó:va (banana plantation).</p> <p>22-88 8-3 ipá:ǃǃga (moon).</p> <p>3 22-8 9 isisi:la (disfavour).</p> <p>88-33 8 3 izǃǃndé:ǃé (calabash dippers).</p> <p>3 22 9 9 isǃǃǃgá:ne (friend).</p>
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3 2 2-4 3 isí í :li (the second)	3 2 8-9 9 isí í :li (truth).
2 2-4 3 9 isí fá :na (little disease)	3 2 2-8 9 isí fá :na (little garden, trap).
2-4 3 9 i fá :na (little inheritance)	3-2 2-8 9 i fá :na (little cloud).
2 2-4 3-8 9 um í á á : á (earth)	3 2 2-8 9 um í á á : á (aloe).
3-2 2-8 8 9 i thá : ny ga (pumpkin)	3-2 2-5 5 6-3 i thá : ny ga (thigh).
3-2 2-8 9 i gá :la (blame)	2-4 3-8 9 i gá :la (side).
2 2 2-4 3 9 i nk ʔ opá :na (little beast)	2 2 2-4 3-8 9 i nk ʔ opá :na (calf, muscle).
2 9 9 ind gá :la (hunger)	2 7 4 ind gá :la (gland).
2 2 8-3-8 9 im mbá :lu (iguana)	2 2 7 4 im mbá :lu (dirt on feet).
3 3 8-3-8 8 9 im mbá : ndé (flute)	3 3 8-3 3 9 im mbá : ndé (Norfolk jacket).
2 2-4 3 3 9 9 um fu ndí:sí (minister)	2 2-4 4 4 6-3 9 um fu ndí:sí (teacher).
2-4 3-8 9 i í ó:bó (ornament)	3-2 2-8 9 i í ó:bó (summer).
3 2 9 9 isí í : á (pool)	3 2 6 3 isí í : á (rag).
3 2 9 um í :zì (village)	3 3-8 8-3 um í :zì (grass for mat-making).
2 2-4 4 3-8 9 um se bé:ndzì (work)	2 2-4 4 3 9 um se bé:ndzì (workman).
3 4 9 ints í :ní (dancer)	2 2-4 3 ints í :ní (gum of teeth).
2 2-4 3-8 9 isí hó :lò (arrogance)	3 2 2-8 9 isí hó :lò (perfume).
2 2-4 3-8 9 um sí :zì (powder)	2 2-4 3 9 um sí :zì (helper).
3 3 4 9 im t ʔú:lò (lizard)	3 3 3-8 9 im t ʔú:lò (want).
3 2 6 6 6-3 um ví : mb í (continuous drizzle)	3 2 8-9 9 um ví : mb í (door-keeper).
2 2-4 3 9 um fú :ndzì (one who feeds)	3 2 2-8 9 um fú :ndzì (surprise packet).
3-2 9 9 i gú :gú (treasure)	3-5 6-3-6 6-3 i gú :gú (cockroach).
2 2-4 3-8 8 9 isí khá : mb a (group of mikamba trees)	3 2 2-8 8 9 isí khá : mb a (large-mouthed pot).
2 2-4 3 9 isí k hó:bá (group of mikoba trees)	2 2-4 3-8 9 isí k hó:bá (threshed ear of corn).

3 3-5 4 u <u>u</u> :na (brother)	3 2 9 u <u>u</u> :na (scab on baby's head).
3 3-5 5 6-3 m <u>é</u> :m <u>mb</u> e (medicine at child-birth)	3 4 4 9 m <u>é</u> :m <u>mb</u> e (number).
3 3 6-3 9 u <u>u</u> g <u>ó</u> : <u>ñ</u> o (paunch)	3 3 7 4 u <u>u</u> g <u>ó</u> : <u>ñ</u> o (grain-house).
3 3 8-9 9 9 u <u>u</u> g <u>ó</u> : <u>ñ</u> o (experience)	3 3 6-3 3 9 u <u>u</u> g <u>ó</u> : <u>ñ</u> o (habitual criminal).
3 3-5 4 i <u>s</u> i: <u>p</u> e (bladder)	3 2 9 i <u>s</u> i: <u>p</u> e (one).

(b) Examples of Verbs :—

6-3 9 j <u>á</u> :la (refuse)	7 4 j <u>á</u> :la (begin).
6 6-3 <u>ǃ</u> á: <u>nd</u> za (wash)	3 3 9 <u>ǃ</u> á: <u>nd</u> za (vomit).
6 6 6-3 s <u>í</u> : <u>nd</u> a (smear)	3 3 9 s <u>í</u> : <u>nd</u> a (escape).
6 6 6-3 th <u>á</u> : <u>nd</u> a (wind round)	3 3 9 th <u>á</u> : <u>nd</u> a (love).
5 4 <u>ǃ</u> é: <u>ñ</u> a (be wealthy)	3 9 <u>ǃ</u> é: <u>ñ</u> a (report).
8-9 9 p <u>ú</u> :ma (solidify)	3 9 p <u>ú</u> :ma (cut).
3-8 8 9 f <u>ú</u> : <u>nd</u> a (feed oneself)	3 3 9 f <u>ú</u> : <u>nd</u> a (learn).
3 3-8 9 s <u>in</u> é: <u>ka</u> (show the teeth)	3 2 9 s <u>in</u> é: <u>ka</u> (be danceable).
8 8-3 9 z <u>az</u> é: <u>la</u> (have certain knowledge)	8-3 8-9 9 z <u>az</u> é: <u>la</u> (try to walk).
5 6-3 f <u>ú</u> :za (pull down hut)	3 9 f <u>ú</u> :za (imitate).
4 4 3 3-8 9 ùkwem <u>uk</u> é: <u>la</u> (to receive)	2 2-4 4 3 9 ùkwem <u>uk</u> é: <u>la</u> (to abandon nest).
4 4 3 3-8 9 ùkuf <u>ip</u> é: <u>la</u> (to blow nose on to)	2 2-4 4 3 9 ùkuf <u>ip</u> é: <u>la</u> (to bend the leg).
2 2-4 4 4 6-3 9 ùkul <u>u</u> g <u>á</u> :na (to try one another)	3 3 2 2 9 9 ùkul <u>u</u> g <u>á</u> :na (to be equal in size).

(c) Miscellaneous Examples :—

3 3-8 8-3 3 9 9 è <u>s</u> id <u>u</u> m <u>b</u> í: <u>n</u> i (in the garden)	3 2 8 8 8-3 9 è <u>s</u> id <u>u</u> m <u>b</u> í: <u>n</u> i (on the corpse).
2 nt' <u>ǃ</u> i: (of sharp sting)	3-8 nt' <u>ǃ</u> i: (of sipping).
5 4 ǃ <u>ó</u> :na (them)	4 9 ǃ <u>ó</u> :na (see).
2-4 3 í: <u>w</u> a (cliff)	3 9 í: <u>w</u> a (he falls)
	7 4 í: <u>w</u> a (fall !).

6-3-8 9	jó:na (do evil)	5 4	jó:na (it).
3-8 9	só:na (we doing evil)	5 4	só:na (it).
3-8 9	kwá:khə (its)	3 9	kwá:khə (at your place).
5 4	ḡá:la (count)	3-8 9	ḡá:la (truly).
3 3-5 4	aḡó:nɛ (let him see)	3 3-8 9	aḡó:nɛ (let him destroy them).
3 2 9	aḡá:lɛ (let him count)	3 3-8 9	aḡá:lɛ (let him refuse them).
3 6 3	azá:lɛ (let him beget)	3 8-3-8 9	azá:lɛ (let him refuse them).
3 3-5 4	asá:lɛ (let him remain)	3 3-8 9	asá:lɛ (let him refuse us).
3 3-5 4	uḡá:ḡa (my father)	3 2 2-7	uḡá:ḡa (it smarts . . .).
3 6-3 9	udá:dɛ (sister)	8 8-3 9	udá:dɛ (you tired out, Dep. Mood)
3 2 2-8 9	ùjabɛ:ḡa (it rides on the mother's back)	2 2-4 3 9	ùjabɛ:ḡa (you are stealing it).
2 2-4 3	ikhó:na (it is there)	6 3-5 4	ikhó:na (so that).
2 2-4 3 3-8 9	1jə'najó:na (it sins a little)	6 3-4 3 3-5 4	1jə'najó:na (it is the very one).
3 9	lá:ḡə (those)	3-8 9	lá:ḡə (their).
3 2 2-4 8-3-8	ukú:thi bú: (of hitting with branch)	3 2 2-4 8-3	ukú:thi bú: (of sudden emission of air).
4 3 9	ḡulá:la (kill)	5 5-3-5 4	ḡulá:la (recumbently).
5 4	thúthu (be a step higher)	8-9 9	thúthu (sound of motor cycle).
3 3-5	uḡá: (if)	8 8-9	uḡá: (who ?).
6-3-5 4	jí:ni (what is it ?)	6-3 9	jí:ni (it is you).
7 8-3	jí:za (come)	6-3 9	jí:za (it is a wave).
5 4	mí:na (I)	6-3 9	mí:na (here you are).
3 9	wé:thu (our)	5 4	wé:thu (mate).
3-5 4	ná:khə (there it is)	7 4	ná:khə (it also).
6-3-5 4	ḡḡá:ni (why ?)	6-3 9	ḡḡá:ni (by means of you).

^{6-3-5 4} ngá:thi (I said)	⁶⁻³ ngá:thi (by means of us).
^{3 3-8 9} umú:pu (commiseration)	^{3 4 9} umú:pu (it is sour).
^{3 9} phé:la (come to an end)	^{3-8 9} phé:la (just).

§ 3. Grammatical Tone

Grammatical Tone constitutes a morphological distinction between words of which the stems are identical in phone, vowel-length, and meaning. The alteration of the tone on these words is the **only** factor in an alteration in grammatical significance. The outstanding cases, in which grammatical tone exemplifies itself in Zulu, are those of (a) the formation of copulative predicatives from certain nouns and possessive pronouns, (b) contracted plurals of monosyllabic nouns of Class 3, and (c) the situative mood when compared with corresponding forms of the assertive mood. In addition there are numerous examples of miscellaneous grammatical tone. A few representative examples of each are given hereunder.

(a) Examples of Copulative Predicatives¹ :—

^{3 2 9} amá:ndǵa (strength)	^{8 3 9} amá:ndǵa (it is strength).
^{3 2 2 9} umú:nt?u (person)	^{8 3 3 9} umú:nt?u (by a person).
^{2-4 3} ú:thi (stick)	^{8-3-5 4} ú:thi (it is a stick).
^{2 9 9} u:fió:fió (large hut)	^{8-3 9 9} u:fió:fió (it is a large hut).
^{3-2 8-9 9} u:zí:pho (claw)	^{8-3 8-9 9} u:zí:pho (by the claw).
^{3 3-8 9} uǵó:mi (happiness)	^{8 3-8 9} uǵó:mi (it is happiness).
^{3 3-8 9} amá:ndzi (water)	^{8 3-8 9} amá:ndzi (it is water).
^{3 3-5 4} amá:fa (inheritances)	^{8 3-5 4} amá:fa (by inheritances).
^{3 3-5 4} uǵú:fi (evil)	^{8 3-5 4} uǵú:fi (it is evil).
^{3 3-8 8-3} ukú:ǵa (eating)	^{8 3-8 8-3} ukú:ǵa (it is food).
^{2-4 3-8 9} u:khú:mi (firewood)	^{8-3-5 3-8 9} u:khú:mi (it is firewood).
^{3-5 5 3-8 8 9} om̩p?á:ndε (the Mpandes)	^{8-3-5 5 3-8 8 9} om̩p?á:ndε (by the Mpandes).

¹ An alternative form to most of these copulatives formed from nouns is made by preplacing ng- (or j- when the noun commences in i-).

2-2-4-3-8-9	ùmfá:zi (woman)	8-3-3-8-9	ùmfá:zi (it is a woman).
3-8-8-3-9	u:zi:mE (walking-staff)	8-3-8-8-3-9	u:zi:mE (by a walking-staff).
3-7-4	u:gwá:1 (tobacco)	8-3-7-4	u:gwá:1 (it is tobacco).
2-3-9	aḥá:mi (mine)	8-3-9	aḥá:mi (they are mine).
2-3-9	olwá:khə (thine)	8-3-9	olwá:khə (it is thine).
2-8-3-8-9	ezé:thu (ours)	8-3-8-3-8-9	ezé:thu (they are ours).

From the above examples, the following rules may be deduced :—

(i) When the tone in the second syllable of the absolute form is higher than No. 5, the tone of the first syllable becomes level No. 8 in the copulative.

(ii) When the tone of the second syllable of the absolute form is lower than No. 5, the tone of the first syllable becomes rising 8-3 in the copulative.

(iii) Whenever the tone of the first syllable of the absolute form is falling 2-4 or 3-5, this becomes 8-3-5 in the copulative, and if 3-8 it becomes 8-3-8.

(b) Examples of Contracted Plurals :—

3-5-5-4	í:ntʔə (thing)	3-7-7-4	í:ntʔə (things).
3-5-5-4	í:mpʔ1 (army)	3-7-7-4	í:mpʔ1 (armies).
3-5-4	í:ntʃʔE (ostrich)	3-7-4	í:ntʃʔE (ostriches).
3-5-8-3	í:ndza (dog)	3-8-8-3	í:ndza (dogs).
3-5-8-3	í:nyəvu (sheep)	3-8-8-3	í:nyəvu (sheep).
3-9	í:ndku (house)	8-3-9	í:ndku (houses).

Notice that contracted plurals have the same tonal nuclei as full-form plurals : e.g. ³⁻³⁻⁸⁻⁸⁻⁹ í:ndza (doctor) becomes ⁶⁻⁶⁻³⁻⁸⁻⁸⁻⁹ izí:ndza or ⁶⁻³⁻⁸⁻⁸⁻⁹ í:ndza, thus indicating the presence of the z in intent. With stems of more syllables than one, the length of the initial 1, as well as the tone, is altered.

(c) Examples of the Situative Mood :

(Indicative Mood.) ¹	(Situative Mood.)
⁶⁻³⁻³⁻⁶ nyíhá:mmba (I travel)	⁶⁻³⁻⁸⁻⁹ nyíhá:mmba.
⁶⁻⁶⁻⁶ nyíḥá:ndza (I wash)	⁶⁻³⁻⁹ nyíḥá:ndza.
⁶⁻³⁻³⁻⁶ nyíḥá:la (I play)	⁶⁻⁶⁻³⁻⁸⁻⁹ nyíḥá:la.

¹ The simple indefinite forms cannot stand alone in a concept group; something must follow them, and the final tone (usually No. 6) shows this incompleteness.

$\left\{ \begin{array}{l} \overset{3}{s}\overset{2}{i}\overset{2}{h}\overset{6}{a}:\overset{6}{m}\overset{6}{b}\overset{6}{a} \text{ (we travel)} \\ \overset{6}{s}\overset{6}{i}\overset{6}{\acute{a}}:\overset{6}{n}\overset{6}{d}\overset{6}{z}\overset{6}{a} \text{ (we wash)} \\ \overset{6}{s}\overset{6}{i}\overset{6}{\acute{g}}\overset{6}{\acute{a}}:\overset{6}{l}\overset{6}{a} \text{ (we play)} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{3}{s}\overset{2}{i}\overset{8}{h}\overset{8}{a}:\overset{9}{m}\overset{9}{b}\overset{9}{a} \text{ (or 3.2.2.9).} \\ \overset{3}{s}\overset{2}{i}\overset{9}{\acute{a}}:\overset{9}{n}\overset{9}{d}\overset{9}{z}\overset{9}{a}. \\ \overset{6}{6}\overset{6}{6}\overset{3}{-}\overset{8}{9} \\ \overset{3}{s}\overset{2}{i}\overset{9}{\acute{g}}\overset{9}{\acute{a}}:\overset{9}{l}\overset{9}{a}. \end{array} \right.$
$\left\{ \begin{array}{l} \overset{8}{u}\overset{8}{h}\overset{8}{\acute{a}}:\overset{6}{m}\overset{6}{b}\overset{6}{a} \text{ (thou dost travel)} \\ \overset{8}{u}\overset{8}{h}\overset{8}{\acute{a}}:\overset{8}{n}\overset{8}{d}\overset{8}{z}\overset{8}{a} \text{ (thou dost wash)} \\ \overset{8}{u}\overset{8}{h}\overset{8}{\acute{g}}\overset{8}{\acute{a}}:\overset{6}{l}\overset{6}{a} \text{ (thou dost play)} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{3}{u}\overset{2}{h}\overset{9}{\acute{a}}:\overset{9}{m}\overset{9}{b}\overset{9}{a}^1 \text{ (or 3.2.2.9).} \\ \overset{3}{u}\overset{2}{h}\overset{9}{\acute{a}}:\overset{9}{n}\overset{9}{d}\overset{9}{z}\overset{9}{a}. \\ \overset{6}{6}\overset{6}{6}\overset{3}{-}\overset{8}{9} \\ \overset{3}{u}\overset{2}{h}\overset{9}{\acute{g}}\overset{9}{\acute{a}}:\overset{9}{l}\overset{9}{a}. \end{array} \right.$

(d) Miscellaneous Examples :

$\overset{6}{a}\overset{6}{n}\overset{6}{n}\overset{6}{g}\overset{6}{\acute{a}}:\overset{3}{z}\overset{3}{i}$ —(1) 6.6.6–3.9 = I don't know.

(2) 6.6.6–3–6.8–3 = He can know.

(3) 3.6.6.8–3 = He mustn't know.

$\overset{3}{\acute{u}}\overset{3}{j}\overset{2}{a}\overset{9}{f}\overset{9}{u}:\overset{9}{n}\overset{9}{a}$ (he wants)

$\overset{8}{\acute{u}}\overset{8}{j}\overset{8}{a}\overset{9}{f}\overset{9}{u}:\overset{9}{n}\overset{9}{a}$ (thou wantest).²

$\overset{3}{w}\overset{2}{a}:\overset{2}{h}\overset{2}{\acute{a}}:\overset{9}{m}\overset{9}{b}\overset{9}{a}$ (he went)

$\overset{8}{w}\overset{8}{a}:\overset{8}{h}\overset{8}{\acute{a}}:\overset{9}{m}\overset{9}{b}\overset{9}{a}$ (thou didst go).

$\overset{6}{\acute{a}}\overset{6}{n}\overset{6}{n}\overset{6}{g}\overset{6}{\acute{a}}:\overset{9}{s}\overset{9}{\acute{a}}:\overset{3}{z}\overset{3}{i}$ (I don't know it)

$\overset{6}{\acute{a}}\overset{6}{n}\overset{6}{n}\overset{6}{g}\overset{6}{\acute{a}}:\overset{6}{s}\overset{6}{\acute{a}}:\overset{6}{z}\overset{6}{i}$ (I no longer know).

$\overset{6}{\acute{a}}\overset{6}{n}\overset{6}{n}\overset{6}{g}\overset{6}{\acute{a}}:\overset{3}{h}$ (I don't refuse)

$\overset{3}{\acute{a}}\overset{3}{n}\overset{7}{g}\overset{4}{\acute{a}}:\overset{3}{h}$ (he mustn't refuse).

The following example shows the importance of tone sequence :

$\overset{3}{u}\overset{3}{f}\overset{9}{u}:\overset{9}{n}\overset{9}{a}$ (1) 3.2.9 = He wants.

3.2.2–4 = He wants (in continued speech).

(2) 8.3.9 = Thou wantest.

8.3.3–5 = Thou wantest (in continued speech).

(3) 3.2–8.9 = It wanting (Cl. 5).

(4) 4.4.3 = Thou wanting.

§ 4. Emotional Tone

I have grouped under this general heading cases of significant tone used to convey some emotional change of meaning in words. This species of tone may be indicated on single words or in whole sentences ; and I have arranged the examples which have come to my notice under four heads ; (a) the expression of a question by mere alteration of the tone, (b) the reversal of the meaning by tone in sarcastic speech (c) emphasis expressed by tone, and (d) surprise or wonder expressed by tone.

¹ There is no lowering of the tone here to No. 8, because there can be no confusion with the 3rd person, Class I singular, which, in the Situative reads ϵ not u .

² This lowering of the tone of the 2nd person singular to No. 8 is not found in the Dependent Mood, where the 3rd person, Class I singular is \acute{u} , nor in the Situative Mood, where it is ϵ , there being no longer any possibility of confusion.

(a) *Interrogative Tone*.—Plain statements may be cast into the form of questions, by a mere alteration of tone or tone-sequence, without the necessity of adding the usual interrogative interjection, ná.³⁻⁸

Examples :

22-43 7 7 4 9 = He went there yesterday.

uji'li:zó:ló lá:phó

11-32 5 5 2 7 = Did he go there yesterday ?

33-44 3 3-43 3-43-88 9 = You killed that person.

umfulé:lé ləwomú:nt'u

22-33 2 2-32 2-32-44 4 = Did you kill that person ?

3 2 5 5 3 3-444 9 = These people are ill.

fa:jagú:la là:faá:nt'u

2 1 4 4 2 2-322 4 = Are these people ill ?

48-44 3 3-4 43-4 4 = We shall see him in the morning.

sizomfó:na kusá:sa

38-33 2 2-3 3 2-3 2 = Shall we see him in the morning ?

3-5 43-8 9 = They saw us.

fá:sifó:na

2-43 3-5 5 = Did they see us ?

22 633-55 6-39 = He is a teacher.

unngumfunndí:sí

22 433-44 4-24 = Is he a teacher ?

88-99 = You said so.

ufí:ló

5 5 5 = Did you say so ?

7-49

fá:l (No !).

5-22-5

fá:l (Are you sure ?).

5 9

jé:fó (Yes !).

6-3 7

jé:fó (Is it so ?).

(b) *Sarcastic Tone*.—As is done in English in such phrases as “not half !”, “you’re a fine one”, etc., so in Zulu, by a change of tone or tone-sequence in certain words or word-groups, a complete reversal of the idea is expressed. Sometimes other features than merely that of tone-change, such as change of vowel length, stress or even a contraction of the throat roughening the vowels, are brought into play as well. These must be carefully noted whenever they occur.

Examples :

66 63 44 9 = I don't like it.

unngumfuthá:ndi

55 5 2 1 1 4-5 = I like it very much indeed.

66 6 33 66 3 9 = I like you very much.

ngijakuthá:ndimp'é:la

3 3 3 1 1 33 1 7 = ditto (sarcastic).

$\left\{ \begin{array}{l} \overset{5}{\text{w}}\overset{6-3-5}{\text{e}}\overset{5}{\text{z}}\overset{3}{\text{é}}\overset{5}{\text{k}}\overset{3}{\text{á}}\overset{3}{\text{á}}\overset{3}{\text{é}} = \text{You did very well.} \\ \overset{6}{\text{w}}\overset{6-3-6}{\text{e}}\overset{7}{\text{z}}\overset{4}{\text{é}}\overset{4}{\text{k}}\overset{4}{\text{á}}\overset{4}{\text{á}}\overset{4}{\text{é}} = \text{ditto (sarcastic).} \end{array} \right.$

Notice also the emphatic form, where whisper comes into play :

$\overset{5}{\text{w}}\overset{6-3-}{\text{e}}\overset{1-2}{\text{z}}\overset{1-2}{\text{é}}\overset{1-2}{\text{k}}\overset{1-2}{\text{á}}\overset{1-2}{\text{á}}\overset{1-2}{\text{é}} = \text{You did very well indeed.}$

(c) *Emphatic Tone*.—When extra emphasis is required, this is conveyed by a raising of the tone. We have noticed already ² that the fricative phones *f* and *h* become *tʃh* and *x* respectively when emphatic in addition to a raising of the tone. With other phones, the raising of the tone alone expresses the emphasis. Examples :

$\overset{4}{\text{g}}\overset{3}{\text{d}}\overset{9}{\text{z}}\overset{3}{\text{i}}\overset{2}{\text{m}}\overset{9}{\text{a}} > \overset{3}{\text{g}}\overset{2}{\text{d}}\overset{9}{\text{z}}\overset{3}{\text{i}}\overset{2}{\text{m}}\overset{9}{\text{a}}$ (run !).

$\overset{6}{\text{a}}\overset{6}{\text{n}}\overset{3}{\text{g}}\overset{3}{\text{i}}\overset{3}{\text{t}}\overset{9}{\text{h}}\overset{9}{\text{á}}\overset{6}{\text{n}}\overset{6}{\text{n}}\overset{6}{\text{d}}\overset{1}{\text{i}} > \overset{6}{\text{a}}\overset{6}{\text{n}}\overset{6}{\text{g}}\overset{6}{\text{i}}\overset{1}{\text{t}}\overset{1}{\text{h}}\overset{9}{\text{á}}\overset{9}{\text{n}}\overset{9}{\text{n}}\overset{9}{\text{d}}\overset{9}{\text{i}}$ (I don't like !).

$\overset{3}{\text{c}}\overset{3}{\text{h}}\overset{3}{\text{á}}\overset{3}{\text{:}}$ (No !) > $\overset{2}{\text{c}}\overset{2}{\text{h}}\overset{2}{\text{á}}\overset{2}{\text{:}}$ (No ! I can't listen to you !).

$\overset{5}{\text{m}}\overset{3}{\text{k}}\overset{9}{\text{h}}\overset{9}{\text{ú}}\overset{9}{\text{:}}\overset{9}{\text{l}}\overset{9}{\text{u}}$ (he is big) > $\overset{4}{\text{m}}\overset{1}{\text{k}}\overset{1-2}{\text{h}}\overset{1-2}{\text{ú}}\overset{1-2}{\text{:}}\overset{1-2}{\text{l}}\overset{1-2}{\text{u}}$ (he is very very big !).

(d) *Surprised Tone*.—This alteration in tone usually converts an interrogative sentence into one of surprised acknowledgment. Examples :

$\overset{2}{\text{u}}\overset{2}{\text{k}}\overset{2-4}{\text{ú}}\overset{3}{\text{:}}\overset{9}{\text{l}}\overset{9}{\text{u}} \overset{3}{\text{k}}\overset{3}{\text{á}}\overset{3}{\text{n}}\overset{3}{\text{d}}\overset{3}{\text{z}}\overset{3}{\text{á}}\overset{3}{\text{m}}\overset{3}{\text{:}}$ = How big is it ?

$\overset{1}{\text{u}}\overset{1}{\text{k}}\overset{1-3}{\text{ú}}\overset{2}{\text{:}}\overset{4-6}{\text{l}}\overset{4-6}{\text{u}} \overset{4}{\text{k}}\overset{4}{\text{á}}\overset{4}{\text{n}}\overset{4}{\text{d}}\overset{4}{\text{z}}\overset{4}{\text{á}}\overset{4}{\text{m}}\overset{4}{\text{:}}$ ⁴ How big it is !

$\overset{2}{\text{u}}\overset{2}{\text{k}}\overset{2-4}{\text{ú}}\overset{3}{\text{:}}\overset{9}{\text{l}}\overset{9}{\text{u}} \overset{9}{\text{k}}\overset{9}{\text{á}}\overset{9}{\text{n}}\overset{9}{\text{d}}\overset{9}{\text{z}}\overset{9}{\text{á}}\overset{9}{\text{m}}\overset{9}{\text{:}}$ ⁹ = How big is it then ?

$\overset{1}{\text{u}}\overset{1}{\text{k}}\overset{1-3}{\text{ú}}\overset{2}{\text{:}}\overset{4-2}{\text{l}}\overset{4-2}{\text{u}} \overset{4}{\text{k}}\overset{4}{\text{á}}\overset{4}{\text{n}}\overset{4}{\text{d}}\overset{4}{\text{z}}\overset{4}{\text{á}}\overset{4}{\text{m}}\overset{4}{\text{:}}$ ²⁻⁷ = Well, how big it is !

§ 5. Significant Sentence Alteration by Tone

There are instances in which tone alone gives the meaning of sentences, which otherwise might bear two meanings owing to coalescence of vowels or formatives, etc. This is noticeable in the following examples, where the presence of the possessive concord, *a*, and the relative concord, *u*, are only noticeable by the change in tone :—

$\overset{5}{\text{j}}\overset{3}{\text{a}}\overset{3}{\text{w}}\overset{5}{\text{á}}\overset{3}{\text{z}}\overset{3-4}{\text{á}}\overset{4}{\text{s}}\overset{3}{\text{i}} \overset{3-4}{\text{á}}\overset{3-4}{\text{z}}\overset{3-8}{\text{á}}\overset{9}{\text{u}} = \text{He called chiefs of hundreds.}$

$\overset{5}{\text{j}}\overset{3}{\text{a}}\overset{3}{\text{w}}\overset{5}{\text{á}}\overset{3}{\text{z}}\overset{3-4}{\text{á}}\overset{4-3-4}{\text{s}}\overset{4}{\text{i}} \overset{3-8}{\text{á}}\overset{9}{\text{u}} = \text{He called great chiefs.}$

$\overset{6-3-5}{\text{j}}\overset{3-3-4}{\text{á}}\overset{3-4}{\text{z}}\overset{4}{\text{á}}\overset{4-3-8}{\text{s}}\overset{9}{\text{i}} \overset{9}{\text{u}} = \text{I gave to the wet chiefs.}$

$\overset{6-3-5}{\text{j}}\overset{3-3-4}{\text{á}}\overset{3-4}{\text{z}}\overset{4}{\text{á}}\overset{4-3-8}{\text{s}}\overset{9}{\text{i}} \overset{9}{\text{u}} = \text{I gave water to the chiefs.}$

¹ With roughening of the voice caused by throat narrowing.

² Chapter VII, § 9.

³ Notice additional lengthening.

⁴ Notice stress and length alteration.

§ 6. Words Semantically alike but differing in Tone

In Zulu there are many instances of words which have two sets of tones, either of which may be used without alteration of meaning or intent.

Examples :

^{2 9 9}
u:fió:fió (large hall).
^{2-4 8-3 9}

^{3 2 9 9}
ù:jivá:za (wanderer).
^{3-2 2-8 8-3 9}

^{3 9}
sí:za (help, or we coming).
^{3-8 9}

^{5 5 4}
ɲkʔám̐pʔu (of striking with soft stick on the small of back).
^{3 3 9}

^{4 4 3 3-8 9}
sifònaké:le (we appeared).
^{4 4 4 3 9}

^{4 4 3 3-8 9}
sɪnámálé:le (it has disappeared).
^{4 4 4 3 9}

^{3 9}
lá:la (sleep).
^{8-3 9}

^{5 3 3-8 8-3}
màkahá:m̐mbe (let him go).
^{5 5 3 3 9}

^{6 6 6 3 3-6 3-6 6-3}
ngizibùlali:le í:ndza (I killed the dog).
^{6 6 6 6 3 3-4 3-6 6-3}

^{6 6 6 3 3-4 4 4 3-8 9}
ngizibùlali:le kakhú:lu (I hurt myself badly).
^{6 6 6 6 3 3-4 4 3-8 9}

§ 7. Words and Forms differing in Meaning but alike in Tone

As in all languages many words in Zulu bear more than one meaning without differing one from the other even in tone. Examples :

^{4 3 9}
lalé:la (1) obey. (2) sleep at.

^{3 9}
fé:la (1) die for. (2) spit.

^{3 3 9}
sí:n̐nda (1) be heavy. (2) escape.

^{5 5 4}
sò:ntʔa (1) twist. (2) attend Church, preach.

^{3 2-8 9}
isifá:na (1) little garden. (2) little trap.

Further, in Zulu, certain verb tenses carrying radically different meanings, have identical tones. Example :

^{6 6 6-3 9}
 aṅṅá:zi means (1) I must know, (2) I don't know.

The Simple Past Continuous tense has tones identical with those of the Optative form, though it must be observed that the latter comprises two words, e.g.

^{6-33 6 3 3 9}
 ṅḡḡḡḡḡhá:mmba (I was travelling).
^{6-3 3 6 3 3 9}
 ṅḡá: ṅḡḡḡḡhá:mmba (I should travel).

§ 8. Words Tonemically different becoming alike under Morphology

Words tonemically different and differing in meaning may under certain morphological circumstances become tonemically alike.

(a) Examples of Verbal Derivatives from different tonemes becoming tonemically alike :

^{3 3 9} thá:nnda	>	^{55 6-3 9} thāṅṅé:la,	^{55 5 3 9} thāṅṅisi:sa,	^{55 6-3 9} thāṅṅá:na.
^{5 4} fá:ja	>	^{4 3 9} fajé:la,	^{4 4 3 9} fājisí:sa,	^{4 3 9} fajá:na.
^{8-3 9} kǎ:la	>	^{6 3 9} kalé:la,	^{6 6 3 9} kǎlisi:sa,	^{6 3 9} kalá:na.
^{3 9} bó:na	>	^{4 3 9} boné:la,	^{4 4 3 9} bōnisi:sa,	^{4 3 9} boná:na.

(b) In certain tenses, too, tonemic difference is lost ; for instance in the Negative Present Simple :

^{6 6 6 3 9}
 āṅḡḡḡá:ndzi (1) I do not wash. (2) I do not vomit.

CHAPTER XIX

TONAL NUCLEI

§ 1. The Toneme and the Nucleus

In Chapter XVII, § 6, we noted the existence of tonemes or sequences of tones which may be interchanged without the meaning or purport of the word being in any way altered. These tonemes contain tonal nuclei, which give the general "shape" to the tone-group. Several different tonemes may exhibit the same nucleus in their make-up. In order, therefore, to understand more fully the nature of tone in Zulu, it is necessary to attempt some sort of classification of the nuclei. Owing to the fact that in Zulu we deal with words which are monosyllabic, others duosyllabic, others trisyllabic, and others of many more syllables, it can be imagined to be a well-nigh hopeless task to classify all the varying tone-groups. But, after a fairly exhaustive investigation of such groups for words of one, two, three, four, and even five syllables, I found that in many cases, where there was other disparity, there was a certain stock resemblance, a nucleus which was recognizable, no matter how many syllables the word contained. A closer examination of these tonal nuclei showed that with monosyllables there was but the germ of the nucleus recognizable; with dissyllables the nucleus was more developed, but still not quite complete; with trisyllables the complete nucleus was seen. With words of more syllables the full nucleus was seen with modifications, additions, or embellishments either before it or after it. Take as an example the tonal nucleus which runs 3.2.9. In the monosyllable this may be either 3 or 9; in the dissyllable this appears as 3.9; in quadrisyllable we see it as 3.2.9.9 or 3.3.2.9 (usually under the form 4.4.3.9, which belongs to the same toneme).

In this chapter, then, I have classified as far as possible all the real Tonal Nuclei of three-syllabled words, with as many variants as possible, and the incomplete nuclei for one- and two-syllabled words, leaving words of more syllables to be picked out from the texts and examples of this book, except where a few are referred to. It must be remembered that the form of the phone (whether voiced or unvoiced, explosive or implosive, semi-vowel or fricative, etc.) has a great deal to do with the form of the tone. For instance, the tone sequences of the following two words belong to the same nucleus, the

actual tones differing because the form of the phones differs, *z* demanding a low tone :

^{3 3-8 9}
asá:lɛ (let him remain).

^{3 8-3-8 9}
azá:lɛ (let him beget).

Each of these has the standard nucleus 3.3-8.9.

Furthermore for clearness and simplification, in this nucleus analysis, I have left unindicated the tones of the homorganic syllabic nasals, as they have no bearing on the stresses or the general shape of the nuclei, and always have the tone on which the previous syllable ends.

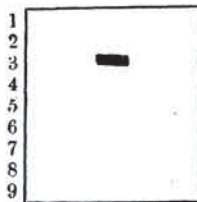
§ 2. Mono-tonal Nuclei

In examining monosyllabic tones, we find six sets of incomplete nuclei, the main representatives of which are as follows : 3, 8-9, 3-8, 3-5, 6, and 4. It is difficult to tell whether the last two are really distinct nuclei, or whether they may not belong to the first. Most of the examples of mono-tonal nuclei are, naturally, radical descriptives.

Mono-tonal Nucleus No. 1.

(Main representative, 3 ; Subsidiary representatives, 2 and 6-3.)

(a)

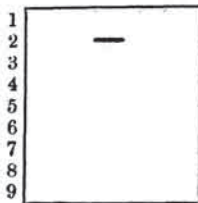


3. Examples :

ǂhá: (No !).

ǂhá: (No !).

(b)



2. Examples :

ná:¹ (of nothing happening).

ŋkʔé: (clang).

tʔwá:: (of going right into liquid).

ŋɔfʔé: (sound of flute).

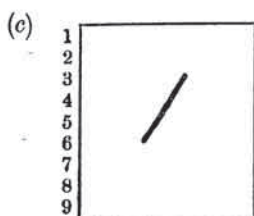
mú: (of being complete, of tens, hundreds, etc.)

né: (of sticking fast).

ntʔí: (of sharp sting or prick).

ntǀʔó: (of feinting to poke in the eye).

¹ All these radical descriptives usually become No. 3 after ^{3 2 9}ukú:thi, e.g.,
^{3 2 2-4 3}ukú:thi tʔwá:.

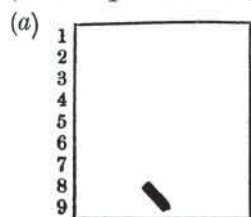


6-3. This rising tone is used if the syllable contains a voiced explosive, click, or affricate.¹ Examples :

- dú: (of being very quiet).
- mbó: (of being covered over).
- ɲyí: (of pressing hard).
- ɲɔví: (of scooping up spoonful).

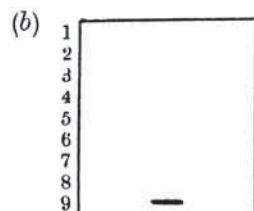
Mono-tonal Nucleus No. II.

(Main representative, 8-9; subsidiary representative, 9.)



8-9. Examples :

- bé:: (of roaring of fire in grass).
- ntʔwé:: (of sailing along).
- ɲkʔá: (of opening mouth about to speak).
- ntʔó: (of being born).
- xóu: (exclamation of irritation).



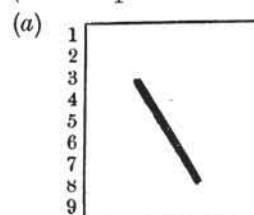
9. This level No. 9 is probably due to epiglottal vibration.

Examples :

- bḥ: } (of striking in the small of the
- bḥ: } back

Mono-tonal Nucleus No. III.

(Main representative, 3-8; subsidiary representative, 8-3-8.)



3-8. Examples ²:

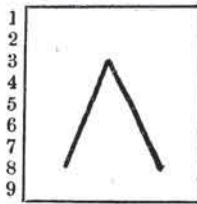
- ná: (eh ?),
- ɕwá: (of spotless whiteness).
- ɲhí: (of exhausting words).
- thwá: (of paleness).
- tʔwí: (of tearing cloth).
- thá: (of flatness).
- ntʔé:: (of splitting right down).
- ntʔá: (of first sighting anything).
- ntʔó:: (of going straight). ɲá: ³ (when).
- á: (of doing something on sighting).
- ntʔí: (of sipping).

¹ This might be found as 8-3 with certain phones.

² These might in emphatic position appear as 2-8.

³ Notice that the other form of this, ɲá, is not reckoned as a bi-tonal nucleus owing to the position of stress, and the more common form which appears here.

(b)



8-3-8. This rising-falling tone is used if the syllable contains a voiced explosive, affricate or fricative. Examples :

ǀǀú: (of lying down as drunkard).

bú: (of striking).

zwí: (of a big noise).

zwí:¹ (of being quite alone).

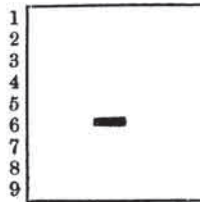
Mono-tonal Nucleus No. IV.



3-5. Example :

h:óu: (wheu !).

Mono-tonal Nucleus No. V.



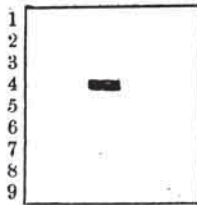
6. Example :

ndǀ: (whirr !).

Mono-tonal Nucleus No. VI.

(Main representative, 4; subsidiary representative, 3.)

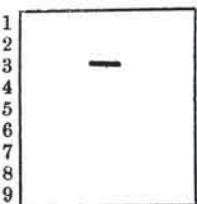
(a)



4. Example :

lǀ (this, Class 1s.).

(b)



3. Example :

lé (this, Class 3s.).

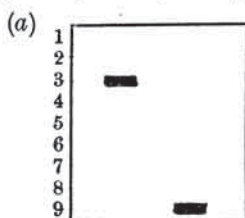
¹ When repeated several times this is used of "swinging".

§ 3. Bi-tonal Nuclei (incomplete)

From an examination of the types, the following six sets of bi-tonal nuclei appear: 3.9, 8.8-9, 3-8.9, 5.4, 7.4, and 3.4. There are many variants within each nucleus, and it has been difficult to decide in every case whether we have not more than one nucleus under one heading.

Bi-tonal Nucleus No. I.

(Main representative, 3.9; subsidiary representatives, 2.9, 4.9, 1.9, 3-2.9, 5-3.9, 6-3.9, 8-3.9.)



3.9. Examples:

ʔá:u (ach!).

phú:ma (go out).

βó:pha (tie).

thwá:la (take).

thá:mnda (love).

khá:kha (be acrid).

βé:ka (put).

βá:βa (be acrid).

βí:za (call).

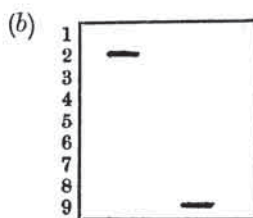
βú:za (ask).

há:mmba (travel).

nó:ma (even if).

í:ŋɔfʔε (sweet-reed).

tʔáŋkʔa (of striking on the stomach).



2.9. A variant of 3.9, showing no significant distinction and usable with all the above words; found more commonly, perhaps, with such as:

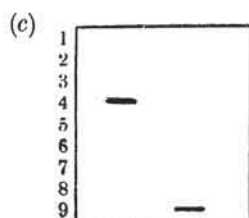
í:zwe (country).

í:ndɔ (house).

kí:mɪ (to me).

thú:ma (send).

thé:ŋŋa (barter).



4.9. Examples:

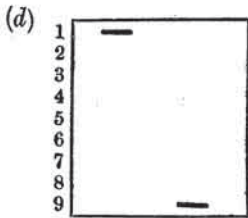
lé:lɪ (this).

ló:lu (this).

lé:zɔ (those).

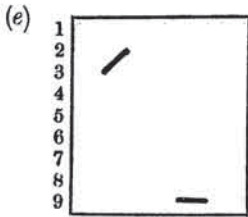
tʃé:da (complete).

βú:mmba (mould).



1.9. Used in emphatic position, e.g.:

á:u (wheu !).



3-2.9. Found with monosyllabic noun roots when used with contracted prefixes of Classes 2 and 6. Examples:

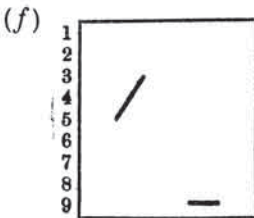
ú:su (stomach).

ú:gu (bank of river).

í:tfʔε (stone).

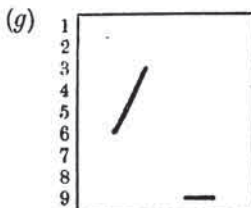
ú:ʔá (digging-stick).

í:fu (cloud).



5-3.9. Found under the influence of the conjunctive formative, na, e.g.:

né:ɬhɪ (with contradiction).



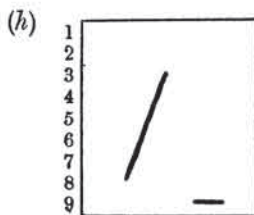
6-3.9. Low-rising tone influenced by certain voiced phones. Examples:

lé:tha (bring).

fí:á:ɪ (no !).

dé:la (be satisfied).

dwé:fa (scratch).



8-3.9. Also influenced by phones taking low tones or by copulative or 2nd person forms. Examples:

fí:ɪ (I say !).

bí:na (use obscene language).

bá:la (write).

wá:ʃə (thou saidest).

lá:la (sleep).

ǀá:la (play)

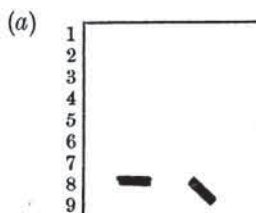
ǀú:la (pass).

zwé:la (feel for).

- yá:ba (tattoo).
 ʒá:na (eat).
 zá:na (come).
 má:na (stand).
 jí:tʃʔɛ (it is a stone).
 díntsʔɪ (of dropping a heavy dead
 weight).
 mbéʒɛ (of striking on mouth with back
 of hand).

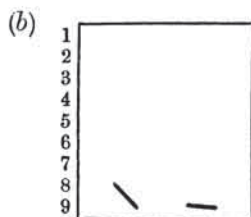
Bi-tonal Nucleus No. II.

(Main representative, 8.8-9; subsidiary representatives, 8-9.9 and 8.9.)



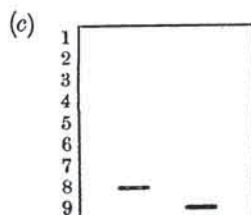
8.8-9. The vast majority of Radical Descriptives of duo-syllabic form are found with this tonal nucleus. Examples :

- bíɲɪ (of writhing).
 ɲhífi (of squashing).
 báʒa (of careless sitting).
 á:u (dear me !).
 sóʒo (of smashing).
 bíɬɪ (of sliding apart).
 dázu (of splitting).
 ndwáza (of sitting like a fool).
 bíʒɪ (of overturning soft porridge).



8-9.9. Examples :

- kú:de (far).
 mú:ntʔu (O man !).
 lí:tʃʔɛ (O stone !).
 lú:su (O stomach !).

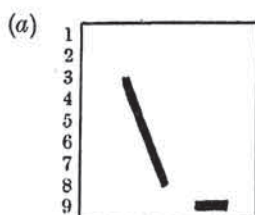


8.9. Example :

- ɲgí:ʒo (I saying).

Bi-tonal Nucleus No. III.

(Main representative, 3-8.9; subsidiary representatives, 2-8.9 and 8-3-8.9.)



3-8.9. Examples :

ŋkʰó:sɪ (O chief !).

jé:thu (our).

kʰwé:thu (our home).

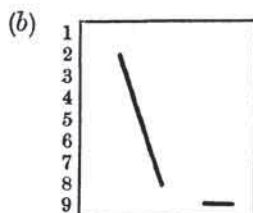
é:zwa (he hearing).

nwá:ɓa (O chameleon !).

lí:mɪ (O tongue !).

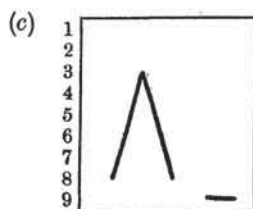
sá:la (we refusing).

phé:la (come to an end).



2-8.9. Example :

tʃʰá:mɪ (O grass !).

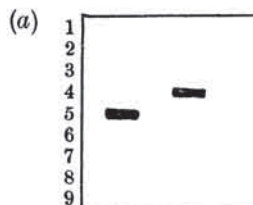


8-3-8.9. Under the influence of a low-tonal voiced phone : Example :

zí:mu (O ogre !).

Bi-tonal Nucleus No. IV.

(Main representative, 5.4; subsidiary representatives, 4.3, 6.3, 7.4, 6.5, 2-4.3, 3-5.4, 5-3-5.4, 6-3-5.4.)



5.4. Examples :

wé:na (thou).

le::já (yonder one).

phí:la (be in health).

tʰú:ɓa (soften).

thú:ɓa (become dark).

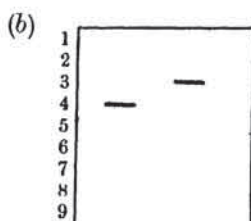
ká:ɛ (carefully).

ná:ka (concern oneself).

nú:ka (smell).

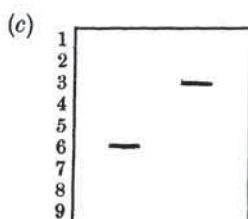
ntʰá:ntʰa (float).

- fɛ:fa (make haste).
 fá:jwa (be struck).
 phé:ka (cook).
 ní:pa (squeeze together).

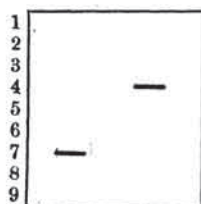


4.3. Examples :

- ní:na (you).
 lí:thi (O stick !).
 kʔá:kʔa (surround).
 khá:pa (shine).
 khí:pha (take out).
 tʃhɛ:tʃha (be quick !).
 mí:na (I).
 thí:na (we).

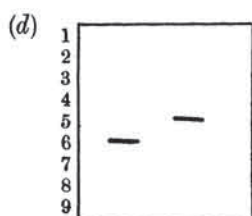


OR



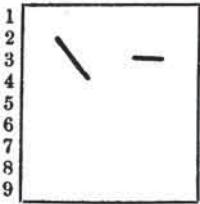
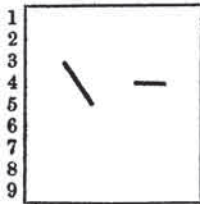
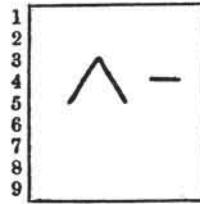
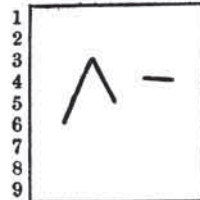
6.3 or 7.4. Owing to low-tonal voiced initial consonants. The latter form 7.4 seems to be the main representative of a sub-nucleus, which I have entered as No. V. Examples :

- zó:na (they).
 bú:za (buzz).
 bí:za (have concern).
 bó:ɲga (roar).
 bɛ:ka (look).
 dí:ɲga (need).
 gú:la (be ill).
 gú:ɾa (kneel).
 gá:jwa (be ground).
 ʔwá:ʔa (dig up potatoes).
 jí:fo (say !).
 jí:ma (stand !).



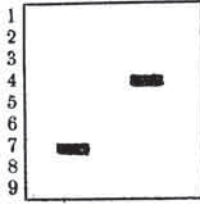
6.5. Mostly found with Radical Descriptives. Examples :

- góɾo (of rattling).
 khóse (of dependence upon).
 ɲíɲi (of being extinguished).
 tʃʔóʔe (of getting right inside).
 bí:ɬa (slide apart).

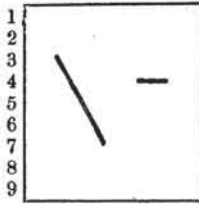
- (e)  2-4.3. Mostly found with nouns of monosyllabic stem, having contracted prefixes of Classes 2 and 6. Examples :
 í:fa (inheritance).
 ú:thi (stick).
 í:ntʃʔε (ostrich).
 í:kʔwa (spear).
- (f)  3-5.4. Examples :
 ú:tʔwa (bog).
 í:ntʔo (thing).
 í:mpʔi (army).
 ná:mpʔa (here they are).
 phá:ntsʔi (down).
 ná:ŋkʔu (here it is).
 wó:thi (of the stick).
- (g)  5-3-5. 4. Found under the influence of the conjunctive formative, na. Examples :
 né:fa (and inheritance).
 né:so (and the eye).
- (h)  6-3-5.4. Found influenced by the adverbial formative ŋga, and by remote past tense. Examples :
 ŋgé:fa (by the inheritance).
 ná:thi (you said).

Bi-tonal Nucleus No. V.

(Main representative, 7.4; subsidiary representatives, 3-7.4, 3-8.8-3, 8.8-3, 6.8-3, 7.6-3, 6.6-3, 5.6-3, 3-5.6-3, 5-3-8.8-3, 6-3-6.6-3.)

- (a)  7.4. This nucleus seems to be a sub-form of No. IV, due to two sets of low tone influences in most cases. For examples of this main representative, cf. No. IV (c).

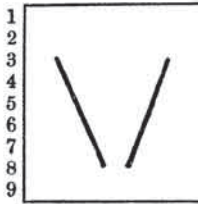
(b)



3-7.4. Though possibly belonging to the same tonal nucleus as 3-5.4, notice that this belongs to a different toneme, e.g.:

$\dot{\text{i}}:\text{nt}^{\text{3-5}}\text{a}^{\text{4}}$ (things, $\dot{\text{i}}:\text{nt}^{\text{3-5}}\text{a}^{\text{4}}$ = thing).

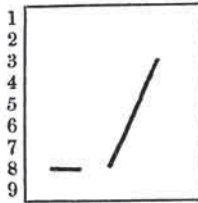
(c)



3-8.8-3. Due to contracted prefix followed by low-tonal phone. Examples:

$\dot{\text{i}}:\text{zw}_1$ (word).
 $\dot{\text{i}}:\text{ŋ}\phi\text{vu}$ (sheep, plur.).
 $\dot{\text{u}}:\text{zwa}$ (abyss).

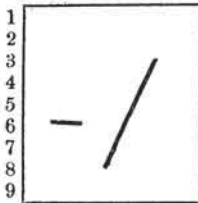
(d)



8.8-3. Low-tonal phone followed by low-tonal phone. Examples:

$\beta\acute{\text{a}}:\text{mmba}$ (catch).
 $\text{l}\acute{\text{i}}:\text{zw}_1$ (O word!).
 $\text{n}\acute{\text{d}}\acute{\text{i}}:\text{za}$ (fly).
 $\text{ŋ}\acute{\text{é}}:\text{ŋa}$ (split open the head).

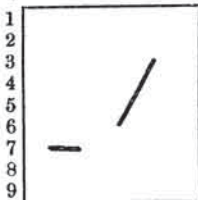
(e)



6.8-3. Examples:

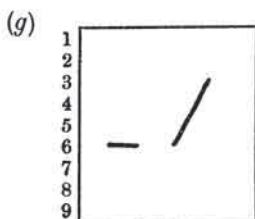
$\text{k}\text{p}^{\text{3}}\acute{\text{é}}:\text{za}$ (milk into mouth).
 $\text{j}\acute{\text{i}}:\text{ka}$ (eat).
 $\text{j}\acute{\text{i}}:\text{za}$ (come).
 $\text{j}\acute{\text{i}}:\text{mmba}$ (dig).

(f)



7.6-3. Example:

$\text{j}\acute{\text{é}}:\text{ndza}$ (make).



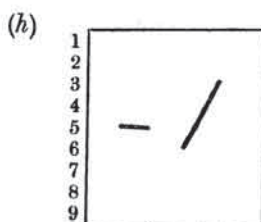
6.6-3. Examples :

tʔé:ṅga (wave about).

lú:ṅga (be straight).

há:za (shower down).

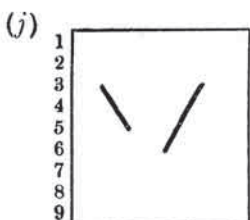
bú:ba (die).



5.6-3. Examples :

fwé:za (glide along).

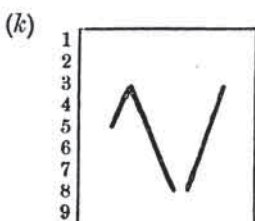
lí:nda (wait).



3-5.6-3. Examples :

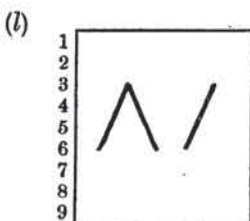
í:ṅga (dog).

í:dwi (black toad).



5-3-8.8-3. Influenced by conjunctive formative, na. Example :

né:zw1 (and the word).

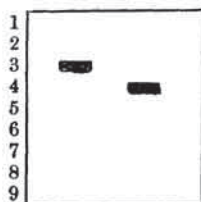


6-3-6.6-3. Influenced by the "triphthongal" phone mbu, e.g. :

mbúṅya (of becoming deflated).

Bi-tonal Nucleus No. VI.

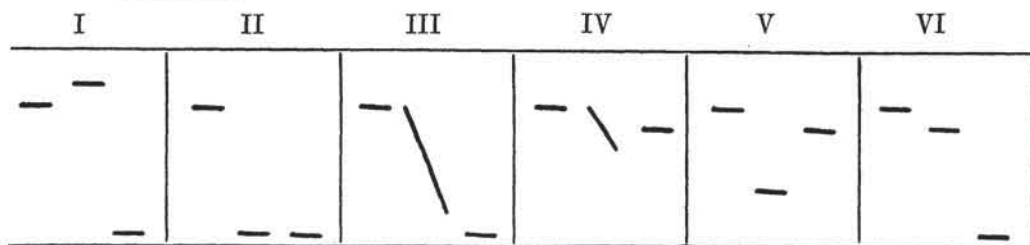
(Main representative, 3.4.)



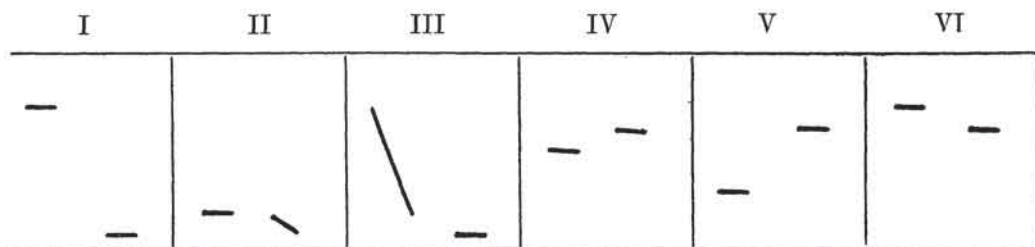
3.4. Examples :
 kuló (to this).
 kulá (to these).
 kulé (to this).

§ 4. **Tri-tonal Nuclei (True Nuclei)**

The true complete nuclei, which I have identified, are six in number, the main representatives of which I take to be as follows: 3.2.9, 3.9.9, 3.3-8.9, 3.3-5.4, 3.7.4, and 3.4.9. Graphically these appear as follows:—



These are seen to correspond to the somewhat indefinite incomplete forms of bi-tonal nuclei already shown, which appear graphically as follows:—



The great number of varieties in which one nucleus may appear is due to the influence of altering phones, of grammatical morphology, or to some additional prefixal or suffixal influence. Because words have the same nucleus, they do not necessarily belong to the same toneme; for instance both ³umú:²nt⁹u (person) and ⁸umú:³nt⁹u (it is a

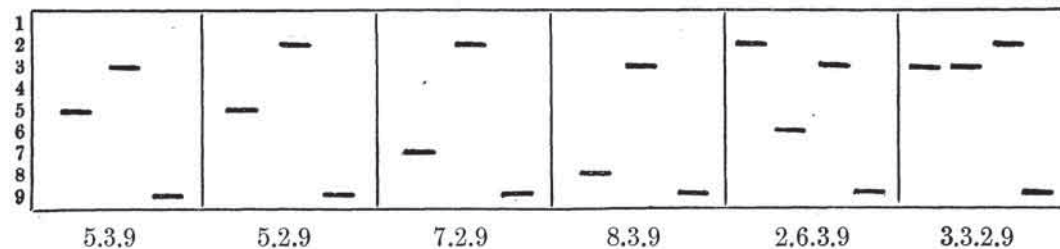
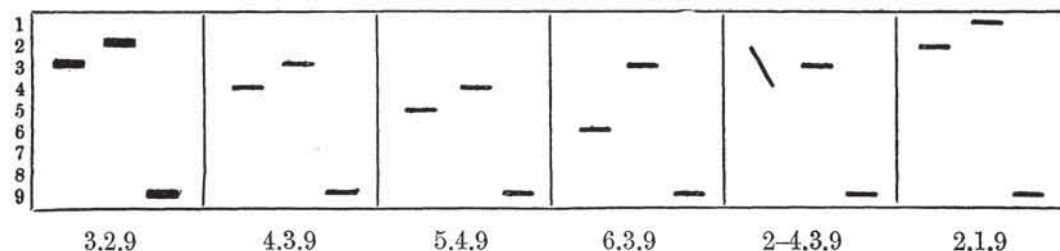
person) have Nucleus No. 1, but they do not mean the same, the lowering of the initial tone to No. 8 having the effect of making the word a copulative predicative. A classification of all the possible tonemes has not been attempted. The analysis carried out hereunder does not pretend to be in any way exhaustive of the forms under which the nuclei may appear, but is merely illustrative and suggestive.

Tri-tonal Nucleus No. 1.

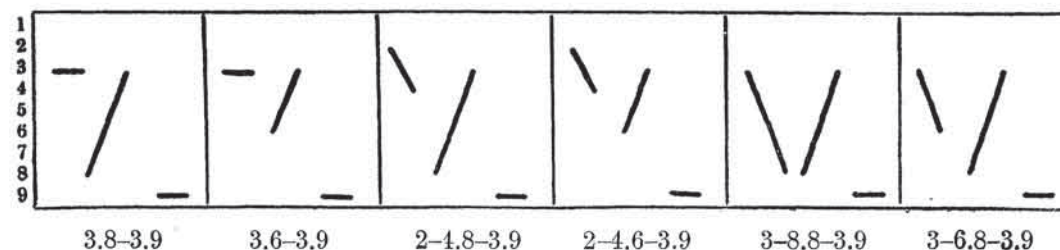
(Main representative, 3.2.9; subsidiary representatives, first series—4.3.9, 5.4.9, 6.3.9, 2-4.3.9, 2.1.9, 5.3.9, 5.2.9, 7.2.9, 8.3.9 (quadrisyllabic examples: 2.6.3.9, 3.3.2.9); second series—3.8-3.9, 3.6-3.9, 2-4.8-3.9, 2-4.6-3.9, 3-8.8-3.9, 3-6.8-3.9, 7.8-3.9, 4.6-3.9, 5.6-3.9, 6.6-3.9, 3-5.6-3.9, 5-3-5.6-3.9 (quadrisyllabic examples: 3-2.2-8.8-3.9, 2-4.3.6-3.9, 2.2-4.6-3.9, 2.6.6-3.9).)

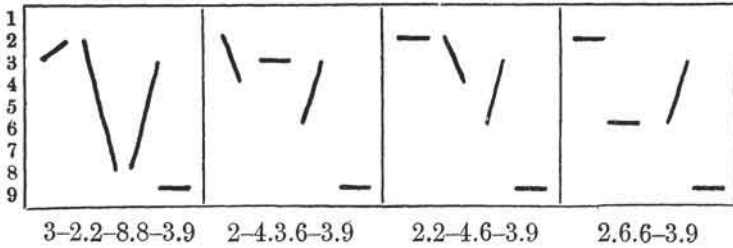
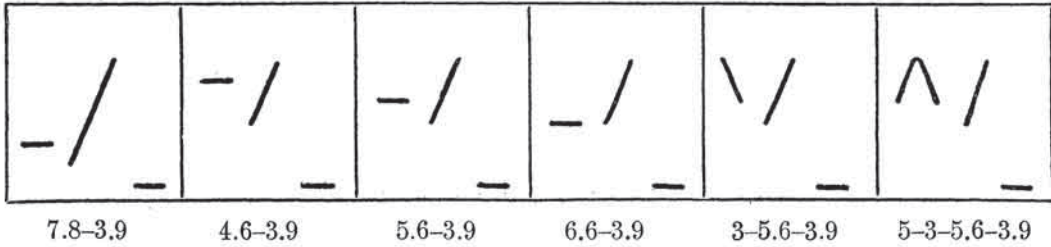
The following tables show these varieties graphically:—

First series:—



Second series:—





Examples :

- | | |
|--|------------------------------------|
| 3.2.9. ɪsɪ:lɔ (leopard). | ukú:thɪ (to say). |
| umú:ntʔu (person). | aʃá:ntʔu (people). |
| umé:ndzi (maker). | ntʔantʔá:tha (crunch up). |
| amá:ndʒa (strength). | ɪsɪ:tʃʔa (plate). |
| jolí:sa (make tasty). | ukú:lwa (to fight). |
| ɪsɪ:mmbɔ (digging-stick). | |
| 4.3.9. tʔamá:sa (enjoy life). | tʔwaná:za (feel over). |
| səké:za (enclose). | ʒathá:ma (stalk). |
| 5.4.9. thumé:la (send for). | pʔətʃʔó:za (spit). |
| lɔʃó:la (pay marriage compensation). | |
| ɲkʲɲkʲʔi:za (breathe with difficulty). | |
| 6.3.9. gaú:la (chop) | bɔʃó:za (bore a hole). |
| (influenced by voiced phones). | |
| 2-4.3.9. Occurring with lengthened prefix vowels : | |
| u:há:n (loin-cloth). | u:hú:mɛ (chain of people). |
| u:xí:dɪ (long thing). | o:thí:nɪ (in the stick). |
| ɪ:tʔwé:tʔwɛ (nervousness). | ɪ:tsʔwé:ʃa (fleshy part of thigh). |
| ɪ:kʔwí:lɪ (short-horned beast). | ɪ:hwá:ɲa (hairly man). |
| 2.1.9. With certain stems and in emphasis : | |
| ɛphá:thwa (he carrying). | |
| 5.3.9. ɛthé:mmba (trust). | lɛthé:la (bring for). |
| 5.2.9. moɲú:la (pull out nail). | pʔeú:la (push over). |

7.2.9. **boŋú:la** (pull out of mud).

8.3.9. Found in predicative formations :

amá:ndza (it is strength). **ŋgumú:ntʰu** (it is a person).

2.6.3.9. **iziixí:dí** (long things), and other Class 6 plurals.

3.3.2.9. Found in many verbal derivatives :

pʰèketʰú:la (throw into disorder).

phàkamí:sa (elevate).

bònisí:sa (see clearly).

3.8-3.9 This is the main representative of the second series of the Tri-tonal nucleus No. I. The general feature of the series is the presence of a low-tone phone in the penultimate syllable. Example :

ɪdʒá:na (little dog).

3.6-3.9. **ugó:gə** (grandmother). **eŋθvínɪ** (to the sheep).

ɪndú:na (captain). **uɔʒó:ɔʒə** (Kafir fink).

2-4.8-3.9. **u:fió:fiə** (large hut).

2-4.6-3.9. **u:fiú:mɛ** (mine shaft), **u:fiá:fɛ** (quick-tempered person).

3-8.8-3.9. **u:zí:mɛ** (walking-staff).

3-6.8-3.9. **ɪ:kʒé:lə** (pasture-ground).

7.8-3.9. **bubí:sa** (kill).

4.6-3.9. **hammbí:sa** (drive).

5.6-3.9. **tʰwɛŋŋú:la** (tear up rags), **edʒwí:fə** (he hurling),
θanndá:na (love one another).

6.6-3.9. **kʰəbú:la** (tear), **kʰəbú:za** (wade), **gidʒí:ma** (run).

3-5.6-3.9. **o:dá:dɛ** (sisters).

5-3-5.6-3.9. Under the influence of the conjunctive formative,
ne:fiá:fɪ (and the horse).

3-2.2-8.8-3.9. **ù:jvú:za** (wanderer).

2-4.3.6-3.9. **ù:házú:nɛ** (quick walker).

ù:xwezú:nɛ (collection of grains).

2.2-4.6-3.9. **umbú:lɪ** (writer).

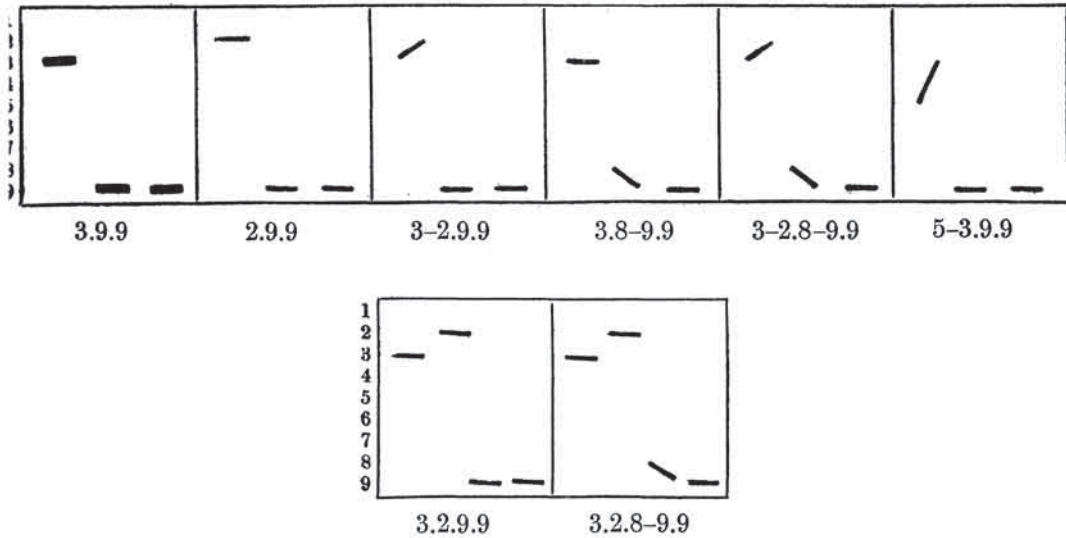
2.6.6-3.9. **iziifí:mɛ** (mine shafts).

iziifá:fɛ (quick tempered persons).

Tri-tonal Nucleus No. II.

(Main representative, 3.9.9; subsidiary representatives, 2.9.9
3-2.9.9, 3.8-9.9, 3-2.8-9.9, 5-3.9.9; quadrisyllabic examples,
3.2.9.9, 3.2.8-9.9.)

The following tables show these varieties graphically:—



Examples :

- | | | |
|----------|---------------------------|-----------------------------------|
| 3.9.9. | <u>ɪ</u> ndó:da (man). | <u>ɪ</u> ndú:ku (stick). |
| | phezú:lu (above). | kudzá:na (a little distance off). |
| | <u>ɪ</u> ndá:ɓa (affair). | |
| 3-2.9.9. | u:fió:fió (large hut). | ɪ:vó:vó (knot). |
| | ɪ:zú:lu (sky). | u:gó:gó (shrivelled man). |
| | u:ʒó:kó (wooden tray). | |

The initial rising tone is here due to contracted prefixes resulting in long vowels.

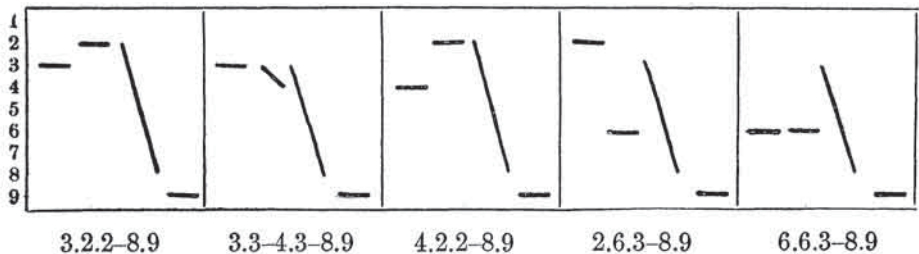
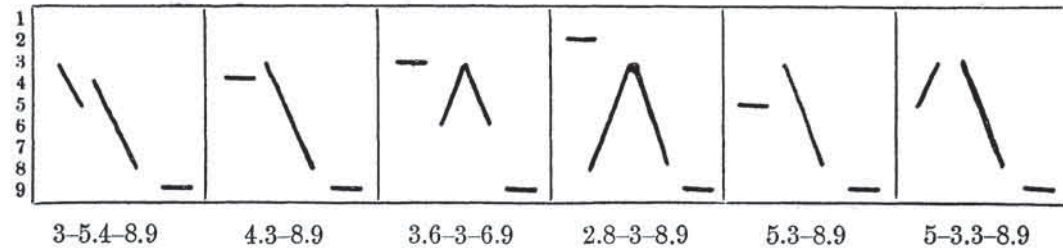
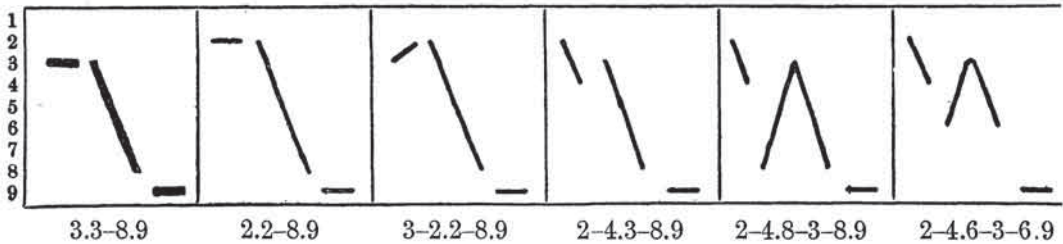
- | | | |
|------------|---|----------------------------------|
| 2.9.9. | <u>ɪ</u> ndkɛ:la (path). | <u>ɛ</u> ndkí:ni (in the house). |
| 3.8-9.9. | <u>ɪ</u> mpʔé:pho (medicinal plant). | |
| 3-2.8-9.9. | u:zi:pho (claw). | u:pʔé:tʔe (knock-kneed person). |
| 5-3.9.9. | Under the influence of the conjunctive formative, na.
<u>ɛ</u> ndkwá:na (and a small hut). | |
| 3.2.9.9. | ɪsígó:kó (chief's enclosure). | ámazó:ló (dew). |
| | ùjivá:za (wanderer). | |
| 3.2.8-9.9. | ò:khezóé:ni (in the spoon). | |

Tri-tonal Nucleus No. III.

(Main representative, 3.3-8.9; subsidiary representatives, 2.2-8.9, 3-2.2-8.9, 2-4.3-8.9, 2-4.8-3-8.9, 2-4.6-3-6.9, 3-5.4-8.9, 4.3-8.9,

3.6-3-6.9, 2.8-3-8.9, 5.3-8.9, 5-3.3-8.9; quadrisyllabic examples, 3.2.2-8.9, 3.3-4.3-8.9, 4.2.2-8.9, 2.6.3-8.9, 6.6.3-8.9).

The following tables show these varieties graphically:—



Examples :

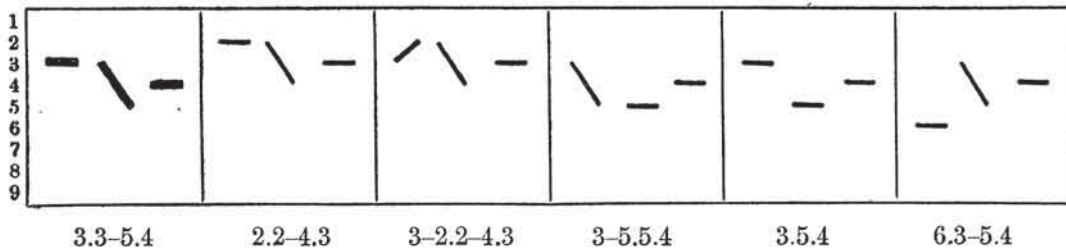
3.3-8.9.	εjá:khe (his).	elá:khe (his).
	ɪmpʔé:phə (medicine for twins).	ɪmpʔé:ne (baboon).
	amá:ndzi (water).	ɪkʔó:sɪ (chief).
	efí:ni (in the cloud).	utʃʔá:ni (grass).
	ɪntsʔí:mu (garden).	ɪpá:ma (ram).
		uʔó:mi (happiness).
2.2-8.9.	ɪmpʔá:ɪnde (root).	ulwí:le (he fought).
	u:khé:zə (spoon).	ɪ:phú:phə (dream).
	ɪntsʔí:m̩mbɪ (metal).	
3-2.2-8.9.	u:ʔá:m̩mbə (rib).	u:já:ɪa (loin-girdle).

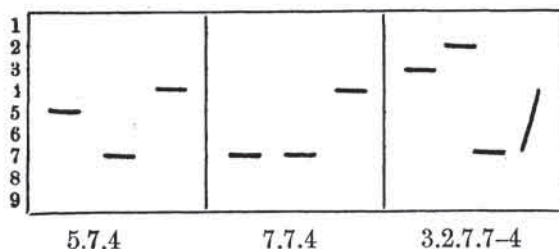
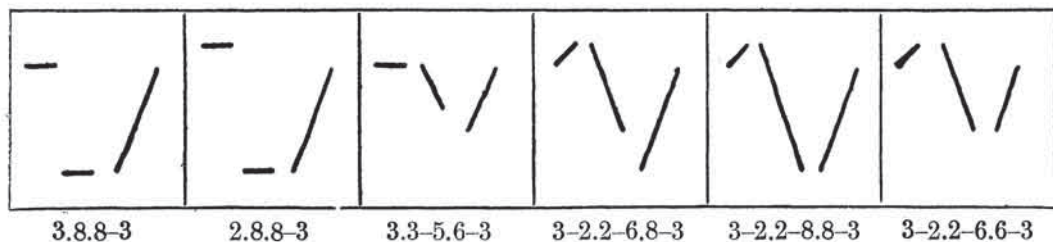
- u:ǰá:lu (mixture of pumpkins and mealies).
 ɪ:ǰhó:phə (corner).
- 2-4.3-8.9. u:khó:khə (scab). ɪ:só:ndə (foot-print).
 ɪ:tʔwá:ni (lower stomach). u:thá:ŋgə (fence).
- 2-4.8-3-8.9. ɪ:zi:mu (ogre).
- 2-4.6-3-6.9. ɪ:gá:ma (name).
- 3-5.4-8.9. u:nwá:ba (chamelion). u:khú:ni (firewood).
- 4.3-8.9. sithwé:le (we carried).
- 3.6-3-6.9. ɪmbú:zi (goat).
- 2.8-3-8.9. ɪŋwú:la (rain).
- 5.3-8.9. Under influence of conjunctive formative, na:
 nentʔá:mə (and the neck), notʔá:ni (and grass),
 nempʔá:ka (and the witch's cat).
- 5-3.3-8.9. no:ǰá:ni (and lightning).
- 3.2.2-8.9. ɪsɪǰó:nda (pole). ̀̀m̀l̀ó:ndɪ (guardian).
 ̀̀mp̀hé:kɪ (cook). ̀̀sɪl̀ó:na (small leopard).
 ̀̀sɪl̀ó:ni (to the leopard).
- 3.3-4.3-8.9. ̀̀m̀th̀ó:ŋga (a Tonga person).
- 4.2.2-8.9. ̀̀phup̀hó:ni (in the dream).
- 2.6.3-8.9. ̀̀ziɪǰá:ba (swarms). ̀̀zɪntʔá:ŋgə (fences).
- 6.6.3-8.9. ̀̀ziɪǰá:lu (mixtures). ̀̀ziɪǰá:ɰa (loin-girdles).

Tri-tonal Nucleus No. IV.

(Main representative, 3.3-5.4; subsidiary representatives, 2.2-4.3, 3-2.2-4.3, 3-5.5.4, 3.5.4, 6.3-5.4, 5.3-5.4; quadrisyllabic examples, 2.2-4.3.9, 3.3-5.4.9.)

The following tables show these varieties graphically:—



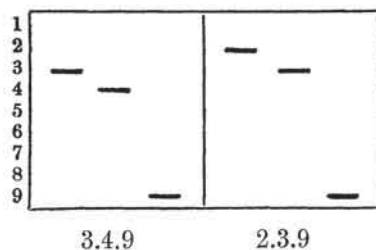


Examples :

- | | | |
|--------------|---|--------------------|
| 3.7.4. | ugwá:1 (tobacco). | izí:ntʔ1 (sticks). |
| 3-2.8.3. | u:ǰú:ǰu (ground nut). | |
| 3.3-8.8-3. | ɪntʔó:mmbɪ (maiden). | eǰ:va (behind). |
| 2.2-8.8-3. | ɪwá:dɪ (book). | ukú:ǰa (food). |
| 3.3-6.6-3. | ukwí:ndǰa (autumn). | |
| 2.2-6.6-3. | utʃʔwá:la (beer). | |
| 3.8.8-3. | izí:ndzwa (abyss). | |
| 2.8.8-3. | ɪndwá:ɲǰu (rags). | |
| 3.3-5.6-3. | um:dwa (a scratch). | |
| 3-2.2-6.8-3. | u:ǰé:zu (slice). | u:ǰí:ɲǰo (wire). |
| 3-2.2-8.8-3. | ɪ:ǰá:nnda (egg). | |
| 3-2.2-6.6-3. | u:ǰú:bu (mealie-meal water). | |
| 5.7.4. | Influenced by the conjunctive formative, na : | |
| | nokhú:lu (and grandmother). | |
| 7.7.4. | nǰá:m (and so and so). | |
| 3.2.7.7-4. | ùǰgó:dɪ (mine). | |

Tri-tonal Nucleus No. VI.

(Main representative, 3.4.9.; subsidiary representative, 2.3.9.)
 The following tables show these examples graphically :—



Examples :

3.4.9. ukʔə:kʔə (ancestor).

ɪtʃʔɔ:βa (projection).

2.3.9. ɪntsʔwɛ:mpʔɛ (quail).

utʔɛ:ɪnde (tent).

ɔlwá:kho (thine).

ɪntɬʔɔ:kɔ (head).

kufú:phɪ (near).

ɪntʔá:na (little thing).

aβá:mɪ (mine).

CHAPTER XX
TONAL MORPHOLOGY

§ 1. **Tonal Morphology in conjunction with Phonal Morphology**

In the previous chapter the influence of different phones upon the tone or sequence of tone was very apparent. The influence of vowel length, as in the cases of contracted Class 2 and Class 6 prefixes, was also very noticeable in bringing into play rising or falling tones. It was further noticed that a differing grammatical significance often had a bearing in an alteration in tone. In this chapter some of the outstanding changes in tone, which take place in connexion with Zulu morphology, will be surveyed.

Verbs are formed from radical descriptives, and it is noteworthy that, given descriptives bearing like tone-sequences, and given the same type of morphology in the verb formation, the tone-sequence of the resulting verb form will be constant. In the same way, in contractions of noun prefixes, in formation with the conjunctive formative, *na*, in the formation of nouns from verbs, and in many other such morphological formations, definite rules of tonal morphology are to be found, and these rules are adhered to.

The following instances and rules of tonal morphology are in no way intended to be exhaustive: in fact they but touch the fringe of a very large subject. The question of tone in Zulu demands much more research than is possible at present, and is, without any doubt, a subject worthy of study separately from that of phonetics.

§ 2. **Tonal Morphology influenced by the Conjunctive Formative, *na***

The conjunctive formative, *na*, though it may never stand alone as a complete word, seems very definitely to have as its characteristic tone that of No. 5, and the following rule is found to act in these formations:

Rule.—If the syllable *na*, *ne* (*ne*) or *no* (*no*), formed by coalescence with the conjunctive formative *na*, is short, the tone on that syllable is level No. 5; if it is long, the tone is rising 5-3, except when the original syllable before coalescence has a falling tone, such as 2-4, 3-5, 3-6, or 3-8, in which case the resulting tone will be 5-3-5, 5-3-6, 5-3-8, etc., as the case may be.

This No. 5 na has a tendency to lower a succeeding No. 2 tone to 3, and consequently may have a lowering effect on several succeeding syllables. Examples :

³ ³⁻⁵ ⁴ u á : á (my father)	>	⁵ ³⁻⁵ ⁴ n á : á .
² ²⁻⁸ ⁹ i nts ?i: mbi (metal)	>	⁵ ³⁻⁸ ⁹ n ents ?i: mbi .
³ ⁷ ⁴ u khú :lu (grandmother)	>	⁵ ⁷ ⁴ n okhú :lu.
³ ² ⁹ ⁹ i nk ? enygá : ne (famine)	>	⁵ ³ ⁹ ⁹ n enyk ? enygá : ne .
³ ⁸⁻³ ⁸⁻⁹ ⁹ i ndzavú :la (person with protruding teeth)	>	⁵ ⁸⁻³ ⁸⁻⁹ ⁹ n endzavú :la.
³⁻² ²⁻⁸ ⁹ u: á : mb o (rib)	>	⁵⁻³ ³⁻⁸ ⁹ n o : á : mb o.
³⁻² ⁹ i: hi (contradiction)	>	⁵⁻³ ⁹ n é : hi .
²⁻⁶ ⁶⁻³ ⁹ i: á : f 1 (horse)	>	⁵⁻³⁻⁶ ⁶⁻³ ⁹ n e : á : f 1.
³⁻⁸ ⁸⁻³ i: zw 1 (word)	>	⁵⁻³⁻⁸ ⁸⁻³ n é : zw 1.
²⁻⁴ ³ i: fa (inheritance)	>	⁵⁻³⁻⁴ ³ n é : fa .

Notice the exceptional form : ⁷ ⁷ ⁴ n**á**:**á**:**m**1 (and so-and-so).

§ 3. Tonal Morphology in the Formation of Verbs from Radical Descriptives

As a rule, verbs are formed from duo-syllabic radicals in one of two ways : (a) by suffixing **la** or **ka** to form transitive and intransitive verbs respectively, or (b) by lengthening the radical vowel and terminating the stem in **a**.

(a) The following change of tone-sequence has to be noticed :—

8.8-9. k é bu (of ripping)	>	6.6-3.9. k é ? ebú :ka.
b é du (of streaming forth)	>	„ bed ú :ka.
b ó qu (of pulling out of mud)	>	5.3.9. bo qú :la.
m ó pu (of pulling out nail)	>	4.3.9. mo pú :la.
6.5. kh ó sε (of taking shelter)	>	„ kh osé :la.
t f ? ó sε (of going right in)	>	„ t f ? osé :la.
8-3.9. d í nts?1 (of throwing down)	>	6.3.9. d ints ?i:la.

Rule.—The imperatives of trisyllabic verbs formed from duo-syllabic radicals, of whatever bi-tonal nucleus, belong to the tri-tonal nucleus No. 1, the forms varying according to the phones.

(b) The following tone changes take place, when the duo-syllabic radical descriptive becomes a duo-syllabic verb stem :

{	^{3 2} ^{2-4 8 8-9}	ukú:thi βipi (to writhe)	>	^{3 2 2-8 9}	ùkuβi:pa.
{	^{3 2} ^{2-4 6 5}	ukú:thi ρhifi (to squash)	>	^{3 3-5 6-3 9}	ùkuρhi:fa.
		ukú:thi góṛṛṛ (to fold)	>		ùkugó:ṛa.

§ 4. Tonal Morphology in the Contraction of Noun Prefixes

The prefixes *u*h and *u*l of Classes 2 and 6 in Zulu are regularly contracted to *i*: and *u*: respectively. In this contraction the following tonal changes take place :

3.2	>	3-2.	^{3 2 2-8 9}	ùluja:ṛa (loin-girdle)	>	^{3-2 2-8 9}	u:ja:ṛa.
			^{3 2 9 9}	ùlufi:ḥḥo (large hall)	>	^{3-2 9 9}	u:ḥi:ḥḥo.
			^{3 2 9}	ilí:ṛhi (contradiction)	>	^{3-2 9}	í:ṛhi.
3.3	>	3.	^{3 3 2 2-8 9}	ùluhḥḥó:ḥḥo (long thin thing)	>	^{3 2 2-8 9}	ù:hḥḥó:ḥḥo.
2.2-4	>	2-4.	^{2 2-4 6-3 9}	ùlufú:mé (prospecting shaft)	>	^{2-4 6-3 9}	u:ḥú:mé.
			^{2 2-4 3 6 3 9}	ùluxùbulú:zi (liquid food)	>	^{2-4 3 6 3 9}	ù:xubulú:zi.
			^{2 2-4 3-8 9}	ihgá:ma (name)	>	^{2-4 3-8 9}	i:gá:ma.
			^{2 2-4 3}	ilí:fa (inheritance)	>	^{2-4 3}	í:fa.

§ 5. Tonal Morphology in the Formation of Noun Plurals

Taking nouns class by class, we notice the following tonal correspondences and changes :—

Class 1.—In this class there is complete correspondence in tone-sequence between singular and plural. This is because the singular phones *um* have the same tone preference as the plural phones *aβa*.
Examples :

{	^{3 2} ⁹	umú:nt ⁹ u (person)	{	^{3 3-5 4}	umú:fo (brother)
		aβá:nt ⁹ u			aβá:fo
	^{2 2-4 3-8 9}	ùmfá:zi (wife)		^{2 2-4 4 3 9 9}	ùmnùmzá:na (head man)
		àβafá:zi			àβanùmzá:na

Class 1a.—In this class since the plural has a long vowel for prefix, this appears as 2-4 or 3-5 and sometimes influences the tone of the succeeding syllable.

$\left\{ \begin{array}{l} \overset{2\ 2-4\ 3}{\text{u}^{\text{f}}\text{á:}\text{fá}} \text{ (my father)} \\ \overset{2-4\ 4\ 3}{\text{o:}\text{fá:}\text{fá}} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{3\ 2\ 2-8\ 9}{\text{ù}\text{f}^{\text{e}}\text{lé:}\text{m}} \text{ (shilling)} \\ \overset{2-4\ 3\ 3-8\ 9}{\text{ò:}\text{f}^{\text{e}}\text{lé:}\text{m}} \end{array} \right.$
$\left\{ \begin{array}{l} \overset{3\ 4\ 9\ 9}{\text{ù}\text{n}^{\text{o}}\text{g}^{\text{w}}\text{á:}\text{d}^{\text{z}}\text{a}} \text{ (hare)} \\ \overset{3-5\ 4\ 9\ 9}{\text{ò:}\text{n}^{\text{o}}\text{g}^{\text{w}}\text{á:}\text{d}^{\text{z}}\text{a}} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{3\ 3-8\ 9}{\text{u}\text{m}\text{p}^{\text{a}}\text{á:}\text{n}\text{d}^{\text{e}}} \text{ (Mpande)} \\ \overset{2-4\ 3-8\ 9}{\text{ò:}\text{m}\text{p}^{\text{a}}\text{á:}\text{n}\text{d}^{\text{e}}} \end{array} \right.$

Class 2.—In this class the tone-sequence of the plural corresponds to that of the singular having the full form of the prefix, *u*, *li*. Examples :

$\left\{ \begin{array}{l} \overset{3\ 2\ 2-4\ 3}{\text{ì}\text{l}^{\text{i}}\text{f}^{\text{e}}\text{:}\text{l}^{\text{e}}} \text{ (corn)} \\ \overset{3\ 2\ 7\ 8-3}{\text{ì}\text{l}\text{g}^{\text{a}}\text{:}\text{z}\text{i}} \text{ (blood)} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{2\ 2-4\ 3}{\text{ì}\text{l}^{\text{i}}\text{:}\text{f}\text{a}} \text{ (inheritance)} \\ \overset{3\ 2\ 9}{\text{ì}\text{l}^{\text{i}}\text{:}\text{v}\text{a}} \text{ (thorn)} \end{array} \right.$
$\left\{ \begin{array}{l} \overset{3\ 2\ 7\ 8-3}{\text{à}\text{m}\text{a}\text{f}^{\text{e}}\text{:}\text{l}^{\text{e}}} \\ \overset{3\ 2\ 9}{\text{à}\text{m}\text{é:}\text{v}\text{a}} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{2\ 2-4\ 3}{\text{a}\text{m}\text{á:}\text{f}\text{a}} \\ \overset{3\ 2\ 9}{\text{a}\text{m}\text{é:}\text{v}\text{a}} \end{array} \right.$

Notice the one exception of *ilí:sò* (eye), which becomes *amé:fo*, probably on account of the irregular alteration of the phone *s* to *f*.

Class 3.—In the formation of plurals in this class there is no alteration of the tonal nuclei, but the tone on the plural prefix, *zi*, varies between No. 6 and 8-3. This is solely due to the influence of the altered phone. Examples :

$\left\{ \begin{array}{l} \overset{3-6\ 6-3}{\text{ì}\text{p}^{\text{n}}\text{d}^{\text{z}}\text{a}} \text{ (dog)} \\ \overset{3\ 6\ 6-3}{\text{ì}\text{z}\text{i:}\text{p}^{\text{n}}\text{d}^{\text{z}}\text{a}} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{3\ 3-5\ 4}{\text{ì}\text{z}\text{i}\text{k}^{\text{a}}\text{á:}\text{m}\text{ò}} \text{ (beast)} \\ \overset{6\ 6\ 3-5\ 4}{\text{ì}\text{z}\text{i}\text{z}\text{i}\text{k}^{\text{a}}\text{á:}\text{m}\text{ò}} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{3\ 8-9\ 9}{\text{ì}\text{n}\text{d}\text{z}^{\text{e}}\text{:}\text{l}\text{a}} \text{ (path)} \\ \overset{6\ 8-3\ 8-9\ 9}{\text{ì}\text{z}\text{i}\text{n}\text{d}\text{z}^{\text{e}}\text{:}\text{l}\text{a}} \end{array} \right.$
$\left\{ \begin{array}{l} \overset{3\ 3-6\ 6-3}{\text{ì}\text{m}\text{t}^{\text{a}}\text{á:}\text{m}\text{b}\text{i}} \text{ (maiden)} \\ \overset{6\ 6\ 3-6\ 6-3}{\text{ì}\text{z}\text{i}\text{m}\text{t}^{\text{a}}\text{á:}\text{m}\text{b}\text{i}} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{2\ 6-3\ 9}{\text{ì}\text{z}\text{i}\text{z}\text{i}\text{g}^{\text{a}}\text{:}\text{n}\text{e}} \text{ (baby)} \\ \overset{2\ 6\ 6-3\ 9}{\text{ì}\text{z}\text{i}\text{z}\text{i}\text{z}\text{i}\text{g}^{\text{a}}\text{:}\text{n}\text{e}} \end{array} \right.$	

With those nouns of Class 3 which take plural prefixes from Class 2, there is no radical change of tone-sequence, apart from the addition of an extra syllable requiring an extra tone. Examples :

$\left\{ \begin{array}{l} \overset{3\ 9\ 9}{\text{ì}\text{n}\text{d}^{\text{o}}\text{:}\text{d}\text{a}} \text{ (man)} \\ \overset{3\ 2\ 9\ 9}{\text{à}\text{m}\text{a}\text{d}^{\text{o}}\text{:}\text{d}\text{a}} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{3\ 3-8\ 9}{\text{ì}\text{z}\text{i}\text{k}^{\text{a}}\text{á:}\text{s}\text{i}} \text{ (chief)} \\ \overset{3\ 3-4\ 3-8\ 9}{\text{à}\text{m}\text{a}\text{k}\text{h}^{\text{o}}\text{:}\text{s}\text{i}} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{3\ 3-8\ 9}{\text{ì}\text{n}\text{t}\text{s}^{\text{i}}\text{:}\text{m}\text{u}} \text{ (garden)} \\ \overset{3\ 3-4\ 3-8\ 9}{\text{à}\text{m}\text{a}\text{s}\text{i:}\text{m}\text{u}} \end{array} \right.$
$\left\{ \begin{array}{l} \overset{3\ 3-4\ 3-8\ 9}{\text{ì}\text{z}\text{i}\text{k}^{\text{a}}\text{á:}\text{n}\text{e}} \text{ (calf)} \\ \overset{3\ 3-4\ 4\ 3-8\ 9}{\text{à}\text{m}\text{a}\text{z}\text{i}\text{k}^{\text{a}}\text{á:}\text{n}\text{e}} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{3\ 3-5\ 6\ 8-3-8\ 9}{\text{ì}\text{n}\text{t}^{\text{a}}\text{á:}\text{m}\text{b}\text{a}\text{z}\text{a:}\text{n}\text{e}} \text{ (little girl)} \\ \overset{3\ 3-5\ 5\ 6\ 8-3-8\ 9}{\text{à}\text{m}\text{a}\text{z}\text{i}\text{t}^{\text{a}}\text{á:}\text{m}\text{b}\text{a}\text{z}\text{a:}\text{n}\text{e}} \end{array} \right.$	

Class 4.—In this class the nuclei remain the same, but owing to the lowering influence of the plural prefix *z*-phone, they appear lower in pitch than in the singular. The tones on the plural prefix may vary between 6.6 and 2.6 or 3.6. Examples :

$\left\{ \begin{array}{l} \overset{3}{\text{i}} \overset{2}{\text{s}} \overset{2-8}{\text{í}} \overset{9}{\text{lo}} \text{ (seat)} \\ \overset{6}{\text{i}} \overset{6}{\text{z}} \overset{3-8}{\text{í}} \overset{9}{\text{lo}} \\ \text{í} \overset{2-4}{\text{z}} \overset{3}{\text{í}} \overset{9}{\text{lo}} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{3}{\text{i}} \overset{2-2-8-9}{\text{s}} \overset{9}{\text{í}} \overset{9}{\text{la}} \text{ (disfavour)} \\ \overset{6}{\text{i}} \overset{6}{\text{z}} \overset{3-8}{\text{í}} \overset{9}{\text{la}} \\ \text{í} \overset{2-4}{\text{z}} \overset{3}{\text{í}} \overset{9}{\text{la}} \end{array} \right.$
$\left\{ \begin{array}{l} \overset{2-2-4-3}{\text{i}} \overset{6}{\text{s}} \overset{3}{\text{í}} \overset{9}{\text{ndo}} \text{ (lesson)} \\ \overset{2}{\text{i}} \overset{2-4}{\text{z}} \overset{3}{\text{í}} \overset{9}{\text{ndo}} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{2-2-4-3}{\text{i}} \overset{3}{\text{s}} \overset{3}{\text{í}} \overset{9}{\text{fo}} \text{ (disease)} \\ \overset{3}{\text{i}} \overset{3}{\text{z}} \overset{3}{\text{í}} \overset{9}{\text{fo}} \end{array} \right.$

Class 5.—In this class there is exact tonal correspondence between singulars and plurals. Examples :

$\left\{ \begin{array}{l} \overset{3}{\text{u}} \overset{3-5}{\text{m}} \overset{4}{\text{í}} \overset{9}{\text{thi}} \text{ (tree)} \\ \text{í} \overset{3-5}{\text{m}} \overset{4}{\text{í}} \overset{9}{\text{thi}} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{3-2}{\text{u}} \overset{2-8-9}{\text{m}} \overset{9}{\text{p}} \overset{9}{\text{í}} \overset{9}{\text{la}} \text{ (river)} \\ \text{í} \overset{3-2}{\text{m}} \overset{2-8-9}{\text{p}} \overset{9}{\text{í}} \overset{9}{\text{la}} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{3}{\text{u}} \overset{2}{\text{m}} \overset{9}{\text{í}} \overset{9}{\text{z}} \overset{9}{\text{i}} \text{ (kraal)} \\ \text{í} \overset{3}{\text{m}} \overset{2}{\text{í}} \overset{9}{\text{z}} \overset{9}{\text{i}} \end{array} \right.$
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Class 6.—In this class the *zi* of the plural is generally a No. 6 tone, though it may go as low as 8-3. When the singular prefix *u:* is 2-4 or 3-5, the corresponding plural *izi* is 2.6 or 3.6; when *u:* is 3-2, *izi* is 6.6. Further, in the plural there is a general tendency to lower the tone-sequence, for instance :

$$3-2.2-4.3 > 6.6.3-5.4 \text{ and } 3.2.2-8.9 > 6.6.3.3-8.9.$$

Examples :

$\left\{ \begin{array}{l} \overset{2-4}{\text{u}} \overset{3}{\text{í}} \overset{3}{\text{thi}} \text{ (stick)} \\ \overset{2}{\text{u}} \overset{2-4}{\text{í}} \overset{3}{\text{thi}} \\ \overset{2}{\text{iz}} \overset{6}{\text{í}} \overset{3}{\text{nt}} \overset{9}{\text{í}} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{2-4}{\text{u}} \overset{3-8-9}{\text{kh}} \overset{9}{\text{í}} \overset{9}{\text{ni}} \text{ (firewood)} \\ \overset{2}{\text{u}} \overset{2-4}{\text{í}} \overset{3-8-9}{\text{kh}} \overset{9}{\text{ni}} \\ \overset{2}{\text{iz}} \overset{6}{\text{í}} \overset{3-8-9}{\text{nk}} \overset{9}{\text{í}} \overset{9}{\text{ni}} \end{array} \right.$	$\left\{ \begin{array}{l} \overset{3-2}{\text{u}} \overset{2-4}{\text{ph}} \overset{3}{\text{í}} \overset{9}{\text{ph}} \overset{9}{\text{e}} \text{ (feather)} \\ \overset{3}{\text{u}} \overset{2-4}{\text{í}} \overset{3}{\text{ph}} \overset{9}{\text{ph}} \overset{9}{\text{e}} \\ \overset{6}{\text{iz}} \overset{6}{\text{í}} \overset{3-5}{\text{mp}} \overset{4}{\text{í}} \overset{9}{\text{ph}} \overset{9}{\text{e}} \end{array} \right.$
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Note the exceptional case :

$$\overset{3}{\text{u}} \overset{2}{\text{l}} \overset{7}{\text{ud}} \overset{7-4}{\text{ó}} \overset{9}{\text{ng}} \overset{9}{\text{ga}} \text{ (ravine)} > \overset{6-8-3}{\text{iz}} \overset{7}{\text{í}} \overset{7-4}{\text{nd}} \overset{9}{\text{ó}} \overset{9}{\text{ng}} \overset{9}{\text{ga}}.$$

There are no plural forms in Classes 7 and 8.

§ 6. Tonal Morphology in the Formation of Nouns from Verbs

Here, of course, the initial tone-sequence will depend upon what class the noun is in, as to whether there is any special influence of length or of the phones used. The presence or absence of a nasal at the commencement of the noun stem is another factor making for divergence. A few simple verb stems with their derivative nouns are treated hereunder, and the morphological effect is best noted in the examples.

$\overset{2-2-4-3}{\text{i}} \overset{9}{\text{sh}} \overset{9}{\text{h}} \overset{9}{\text{á}} \overset{9}{\text{m}} \overset{9}{\text{mb}} \overset{9}{\text{i}} \text{ (visitor)}$	$\overset{2}{\text{iz}} \overset{6}{\text{í}} \overset{3}{\text{sh}} \overset{9}{\text{h}} \overset{9}{\text{á}} \overset{9}{\text{m}} \overset{9}{\text{mb}} \overset{9}{\text{i}} \text{ (pl.)}$
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Bi-tonal Nucleus No. I. $\overset{3}{\text{há}} \overset{9}{\text{m}} \overset{9}{\text{mba}}$ (travel).

^{2 2-4 3} ⁹ ùmhá:mmbi (traveller)	^{2 2-4 3} ⁹ âbáhá:mmbi (pl.).
^{2-4 3} ⁹ u:há:mmbò (journey).	
^{2 2-4 3} ⁹ ùmhá:mmbò (life)	^{2 2-4 3} ⁹ ìmhá:mmbò (pl.).
² ³ ⁹ ìnkʔá:mmbò ¹ (life)	^{2 6} ³ ⁹ ìzìnkʔá:mmbò (pl.).
^{2 2-4 3} ⁹ ùkuhá:mmba (travelling).	

It is noteworthy that the following words have no connexion with this stem, and this is suggested even by the non-correspondence of the tone-sequences :

^{2 2-4 3-8} ⁹ ùmkhá:mmba (species of tree)	^{2 2-4 3-8} ⁹ ìmkhá:mmba (pl.).
^{2-4 3-8} ⁹ ìkhá:mmba (medicinal herb)	^{2 2-4 3-8} ⁹ âmakhá:mmba (pl.).
^{3-2 2-8} ⁹ u:khá:mmba (beer pot)	^{6 6 3-8} ⁹ ìzìnkʔá:mmba (pl.).
^{3 2 2-8} ⁹ ìsikhá:mmba (wide-mouthed pot)	^{6 6 3-8} ⁹ ìzìkha:mmba (pl.).
^{2 6 3-8} ⁹ ìzìnkʔá:mmbi (refuse).	

But notice that ^{2 3 6 3-5 4}ìnkʔá:mmbaphá:ntsʔ₁ (blind worm, lit. the under-ground traveller) is by tone connected with ^{3 9}há:mmba.

	^{3 9} thé:ngga (buy).
^{2 2-4 3} ⁹ ùmthé:ngga (buyer)	^{2 2-4 3} ⁹ âbathé:ngga (pl.).
^{2 2-4 3} ⁹ ùkuthé:ngga (buying).	

But ^{3 3-8 9}ìntʔé:nggò (price), ^{3 6 3-8 9}ìzìntʔé:nggò (pl.), where the nasalization of the commencement of the stem causes an alteration in tone-sequence.

^{3 9}
bó:na ² (see).

^{2 2-4 3} ⁹ ùkubó:na (seeing).	
^{3 6-3 9} ìmmbó:ni (spy)	^{3 6 6-3 9} ìzìmmbó:ni (pl.).

Here the voiced explosive phone **b** has influenced the tone. Notice ^{2 2-4 3-8 9}ìsibó:ni (sympathiser) ^{2 6 3-8 9}ìzìbó:ni (pl.) in all probability has no connexion with the stem ^{3 9}bó:na.

¹ Notice the change of **h** to **k** under nasal influence. The regular modern Zulu method is by pre-placing **ĩ** to **h**.

² More commonly perhaps found as 5-9.

	3 9	
	fú:nda (learn).	
2 2-4 3	9	2 2-4 3
ùmfú:ndi (learner)		àbafú:ndi (pl.).
2 2-4 3	9	2 6 3
isífú:ndə (lesson)		izífú:ndə (pl.).
2 2-4 3	9	
ùkufú:nda (learning).		
2	3 9	
imjɔfʔá:ndə (education).		

Bi-tonal Nucleus No. III.

3 3-8 9	umó:m (sinner)
3 3-8 9	isó:m (sinner)
3 3-8 9	isó:nə (sin)
3 3-8 9	ukó:na (sinning).

6-3-8 9	jó:na (spoil).
3 3-8 9	abó:m (pl.).
3 8-3-8 9	izó:m (pl.).
3 8-3-8 9	izó:nə (pl.).

Bi-tonal Nucleus No. V.

3 2 2-8 9	ùmɛ́:ndzɪ (wash-man)
3 2 2-8 9	ùkuɛ́:ndza (washing).
3 3-8 9	intɛ́:ndzɪ (fish)

5 6-3	ɛ́:ndza (wash).
3 2 2-8 9	àbaɛ́:ndzɪ (pl.).
6 6 3-8 9	izintɛ́:ndzɪ (pl.).

Here the nucleus of the simple verb stem is entirely different from that of the noun derivatives.

	5 6-3	
	lú:ngga (be straight).	
3 2 2-8 9	ùmlú:nggu (European)	3 2 2-8 9
3 2 2-8 9	isilú:nggu (European language)	6 6 3-8 9
3 2 2-8 9	ùbulú:nggu (quality of a European).	izilú:nggu (pl.).
3 2 2-8 9	ùkulú:ngga (to be straight).	
3-2 2-8 9	ɪ:lú:nggu (limb)	3 2 2-8 9
		àmálú:nggu (pl.).

As with ɛ́:ndza, there is here a change to the tri-tonal nucleus No. III in the noun derivatives.

	5 6-3	
	thó:mmba (have first menstruation).	
3 2 2-8 9	ùkuthó:mmba (first menstruation).	
3 3-6 6-3	intʔó:mmbɪ (maiden)	6 6 3-6 6-3
		izintʔó:mmbɪ (pl.).

^{3 2} ²⁻⁶ ⁶⁻³
 ùbunt²ó:mmbi (maidenly quality).

^{3 2} ²⁻⁶ ⁶⁻³
 isint²ó:mmbi (group of maidens).

The irregularity in these instances is, in all probability, due to the influence of *n* before the stem.

Notice that, from tonal evidence alone, ukú:thi (to say) has no connexion with the root -thi, which appears in umú:thi (tree), ú:thi (stick), and ufú:thi (poison).

§ 7. Tonal Morphology in the Formation of Noun Diminutives

When the diminutive suffix *-ana* is suffixed to nouns, it is always found that the final *-a* is No. 9 in tone. This suffixing often has a retrogressive effect on the previous tones. Note the following examples :

^{3 3-8} ⁹ ipá:nyga (doctor)	>	^{3 2} ^{9 9} ipanygá:na.
^{2-4 3} ⁹ i:fé:le (breast)	>	^{2-4 3} ^{9 9} i:fé:ká:na.
^{2 2-4 3} ⁹ àmafé:le (breasts)	>	^{2 2-4 3} ^{9 9} àmáfeká:na.
^{2 2-4 3} umú:thi (tree)	>	^{22-4 3} ⁹ umthá:na.

The rules for the diminutive correspond to those for the locative in the next section.

§ 8. Tonal Morphology in the Formation of Locative Adverbs from Nouns

As in the formation of Noun Diminutives, so in the formation of Locative Adverbs from nouns by suffixing *-eni* or *-ini*, the tone on the final syllable is No. 9. Taking examples from different tonal nuclei we note the following :—

Tonal Nucleus No. I. No change of nucleus.

^{3 2 9} umú:zi (kraal)	>	^{3 2 9 9} èenzi:ni.
^{2 9} í:zwe (country)	>	^{3 9 9} èzwe:ni.

Tonal Nucleus No. II. This nucleus gives place to No. III in the locative.

^{3-2 9 9} i:zú:lu (sky)	>	^{6 6 3-8 9} èzulwí:ni.
^{6 6-3 8-9 9} izɪŋgú:ɓə (blankets)	>	^{6 6 6 3-8 9} èzɪŋgutsʔé:ni.

Tonal Nucleus No. III. In certain cases this nucleus remains ; in others it gives place to No. I or No. IV ; and in others to No. II.

^{2 2-8 9} ɪpó:ni (bird)	>	^{3 2 2-8 9} ɛponí:ni	} No. III.
^{3 2 2-8 9} ùmló:mə (mouth)	>	^{3 3 2 2-8 9} èmləpé:ni	
^{2 2-4 3-8 9} ùɓuphó:mpʔə (shamelessness)	>	^{2 2-4 5 3 9} èɓuphəptʔé:ni	} Element of both I and IV.
^{3 3-5 3-8 9} ìsɪɓó:phə (grass rope)	>	^{3 3-5 5 3 9} èsɪɓəʃé:ni	
^{2 2-8 9} ɪŋkʔá:ɓi (ox)	>	^{2 2-4 3 9} ɛŋkʔaɓí:ni	
^{3-2 2-8 9} i:sá:ŋgə (gateway)	>	^{3 2 9 9} èsəŋgəóé:ni	} No. II.
^{3-2 2-8 9} u:khé:zə (spoon)	>	^{3 2 9 9} ò:khezəé:ni	

Tonal Nucleus No. IV. No change of nucleus.

^{3 3-5 4} isí:fo (disease)	>	^{3 3-5 4 9} èsifé:ni.
^{3 3-5 4} uɓú:ɓi (evil)	>	^{3 3-5 4 9} èɓuɓí:ni.

Tonal Nucleus No. V. No change of nucleus.

^{3-2 2-6 6-3} u:ɟú:bu (mealie-meal water)	>	^{4-3 3-6 6-3 9} ò:ɟudzí:ni.
^{3 2 8 8-3} ìsidú:mmbu (corpse)	>	^{3 2 8 8-3 9} èsidummbí:ni.
^{3-6 6-3} í:ŋəvɪ (sheep)	>	^{3 6-3 9} eŋəví:ni.

Tonal Nucleus No. VI. No essential change of nucleus.

^{3 4 9} intsʔwé:mpʔɛ (quail)	>	^{3 4 3-8 9} èntsʔwempʔé:ni.
^{3 4 9} intsʔú:mpʔa (wart)	>	^{3 4 3-8 9} èntsʔumpʔé:ni.

§ 9. Tonal Morphology in the Formation of Verb Passives

As a general rule, in the formation of the passive, there is no change of tone sequence, e.g. :

^{5 4} ɬú:pha (tease)	>	^{5 4} ɬú:ɟwa.
^{3 9} thá:nda (love)	>	^{3 9} thá:ndwa.
^{6 6-3 9} bubí:sa (kill)	>	^{6 6-3 9} budzí:swa.

In the formation of the passives of monosyllabic and vowel verbs, however, owing to the fact of the addition of an extra syllable, there is slight alteration. The final syllable of the passive in these cases is always No. 9 tone, and this may reflect a difference in tone sequence. Examples :

² ²⁻⁴ ³ ukú:pha (to give)	>	² ²⁻⁴ ³ ⁹ ùkuphí:wa.
² ²⁻⁸ ⁸⁻³ ukú:ǵa (to eat)	>	² ²⁻⁸ ⁸⁻³ ⁹ ùkuǵí:wa.
² ²⁻⁸ ⁹ ukwá:zi (to know)	>	² ²⁻⁴ ⁸⁻³ ⁹ ùkwazí:wa.

§ 10. Tonal Morphology in the Formation of Verbal Derivatives

Whatever the nucleus of the simple stem of the verb, in the case of most derivatives, e.g. Applied, Causative, Neuter, Reciprocal, Intensive, the nucleus employed is that of No. 1. The following examples will make this clear :

³ ⁹ thé:nyga (buy),	⁵ ⁶⁻³ ⁹ thénygé:la,	⁵ ⁶⁻³ ⁹ thénygí:sa,	⁵ ⁶⁻³ ⁹ thénygá:na,
⁶ ⁶⁻³ ⁹ thénygisí:sa.			
⁶⁻³ ⁹ lá:la (sleep),	⁶ ³ ⁹ lalé:la,	⁶ ³ ⁹ lali:sa,	⁶ ³ ⁹ lalé:ka, ⁶ ⁶⁻³ ⁹ lálisí:sa.
⁶ ⁶⁻³ sá:mmba (hold),	⁶ ⁶⁻³ ⁹ sá:mmbé:la,	⁶ ⁶⁻³ ⁹ sá:mmbí:sa,	⁶ ⁶⁻³ ⁹ sá:mmbé:ka,
⁶ ⁶⁻³ ⁹ sá:mmbá:na,	⁶ ⁶⁻³ ⁹ sá:mmbisí:sa.		

§ 11. Tonal Morphology in the Formation of Vocative Interjections

In the regular formations by elision of the initial vowel the following main forms are noticed :

³ ² ⁹ umú:nt?u (person)	>	⁸⁻⁹ ⁹ mú:nt?u.
³ ³⁻⁵ ⁴ uǵó:ja (wool)	>	⁵ ⁴ ǵó:ja.
² ²⁻⁸ ⁹ iǵk?ó:sí (chief)	>	²⁻⁸ ⁹ ǵk?ó:sí.
³ ³⁻⁵ ⁴ ⁹ ǵsáfá:na (boys)	>	⁵ ⁴ ⁹ sáfá:na.

Other forms may be seen on reference to Chapter XIII, § 7.

§ 12. Further General Observations

It is generally to be observed that when a noun takes position **after** the verb, not necessarily as object, its whole tone-sequence is liable to be slightly lowered. This position in word-order is generally

that of the object of the sentence, but the lowering of tone is not due to the grammatical work of object, but solely to the word-position; for, if the object be placed before the verb the tone is found to be higher, and similarly if the subject be placed after the verb it undergoes tone-lowering. This same lowering of the tone is noticeable when nouns come under the influence of possessive formatives, or such a locative adverbial formative as *ku*, e.g.:

^{3 2 9}umú:ntʔu (person), ^{4 3 9}womú:ntʔu (of the person), and
^{4 3 9}kumú:ntʔu.

When adverbs are formed from nouns by the formative *ngu* (by means of), this formative has the characteristic tone No. 6, but, apart from a lowering tendency, does not alter the nuclei. Examples:

^{3 3-8 9}ɪná:ngga (doctor) > ^{6 3-8 9}ngɛná:ngga.
^{2-4 3 9}ɪ:ŋé:lɛ (breast) > ^{6-3-6 3 9}ngɛ:ŋé:lɛ.
^{2 2-4 3}umú:thi (tree) > ^{6 3-5 4}ngom̄:thi.

In summing up this cursory survey of tonal morphology, the following tonal changes on a word belonging to tonal-nucleus No. I may be instructive:

^{3 2 9}umú:ntʔu (person).
^{3 2 2-4 4 3 3-8 9}umú:ntʔu ùfikí:lɛ¹ (the person arrived).
^{6 3 3-5 4 3 9}ngiŋó:na umu:ntʔu (I see the person).
^{6 3 3-5 4 9}ngiŋó:numú:ntʔu (I see the person).²
^{3 3-5 5 4 3 9}kukhó:na umú:ntʔu (there is a person).
^{4 3 9}kumú:ntʔu (to the person).
^{4 3 9}komú:ntʔu (of the person).
^{6 6 3 9}nginomú:ntʔu (I have a person).
^{4 3 4 3 9}mí:na umú:ntʔu (I, the person).
^{4 3 3-8 9}mì:namú:ntʔu (I, the person).²
^{8 3 9}umú:ntʔu (it is a person).
^{8 3 9}ngumú:ntʔu (it is a person).

¹ Note: A No. 9 tone is never found, but at the end of concept groups.

² After elision resulting in one word-group being formed.

⁸⁻⁹ ⁹
mú:ntʔu (O person !).

⁸ ⁸ ⁸ ⁸⁻⁹ ⁹
ngamú:ntʔu mú:ɲɛ (one person at a time).

Such words as ³ ² ⁹umú:zi (kraal), ³ ² ⁹amú:ndkɔ (strength) will go through similar changes with altering effect according to the phones of which they are composed, the voiced phones, **z** and **k** in these particular cases, causing a necessary lowering and alteration in certain instances. Examples from other nuclei will show changes according to the effect of such nuclei.

It can readily be understood that, taking into consideration the number of syllables possible, the constant changing influences of phones, the several types of nuclei influenced and the many grammatical relationships possible, the complexity of the tonology of Zulu is such that a very detailed and laborious series of investigations is necessary before any final conclusions can be arrived at. In this work on Zulu "phonetics", I am content to devote but these four chapters to tonetics; nevertheless, in doing so I do not wish to minimize in any way the importance of Zulu tonetics.

I would emphasize the conclusion to which I have come, that the speech of the Zulu people has three main factors, no one of which we have any right to neglect. These factors are (1) Phonetic structure, (2) Grammatical structure, and (3) Tonetic structure. In the study of each one of these, the other two cannot be disregarded in any way. The present work deals with the Phonetic structure, and I have had to deal to a certain extent with both the grammatical and the tonetic side of Zulu. I realize, however, that in both these spheres, I have but touched the fringe of the questions.

CHAPTER XXI
ZULU PHONETIC TEXTS

§ 1. Introductory

In this chapter I give examples of Zulu phonetic texts, taken from very varied sources, in order to illustrate as diverse forms of Zulu as possible. The texts are as follows: a short extract from a Zulu newspaper, the *Ilanga lase Natal*; a story from Callaway's *Nursery Tales of the Amazulu*; a folk-tale recounted to me direct by a native, and recorded on the dictaphone; an extract from Fuze's *Abantu abamnyama*; a piece written by a Zulu named William, and published by Bishop Colenso in his *Three Native Accounts*; and lastly an extract from *uTulasizwe*, written by P. A. Stuart.

§ 2. Zulu Text No. 1

<p>2 2-5 6-3 6 6 6 6 inqwà devùlekí:lè A-letter-it-open</p>	<p>3 3-4 é:ja it-going</p>	<p>3 3-4 3 3 6 6 kùmfunndí:sí to-the-reverend</p>	<p>4 3 9 lam:lá¹ — — Lamula.</p>
<p>3 2 2 5 3 3-5 5 3-4 3 mfundí:sothàndéká:jo Minister-who-is-dear,</p>	—	<p>6 6 3 3-4 4 3 3-4 4 ngisafi:sukukhùlulé:ka I-still-desire-to-express-myself-freely</p>	
<p>4 6-3-6 6 3 3-4 4-8 9 nggé:zwi libelí:ne with-a-word it-one.</p>	— —	<p>6 6 6 6 3 3 3-4 4 4 ngí:thi nggokwà mukubá:ka I-say according-to-it-mine-the-seeing,</p>	— —
<p>3-4 4 3 3-5 6-3 3 6 6 kù'fujè:kizindá:ba it-is-well-that-thou- leavest-the-matters</p>	<p>6-3 6-3 3-4 zendzá:lò them-of-the-offspring</p>	<p>4 3-4 3 3 9 jaò:nont'f'è:vu — — it-of-the-first-believers.</p>	
<p>4 4 4 4 3 5 3-4 4 3 6 6 mì:nayngikudélè lukuzá:ma I-I-don't-it-despise-the-trying</p>		<p>3 3-4 3 3-8 9 kwà:khukhó:la — — it-thine-to-lead.</p>	
<p>2 2 2 6 3 3 3-4 kè:phindá:wò But-the-position</p>	<p>3 3-4 já:kho it-thine</p>	<p>4 6 6 3 3-4 nggijubó:na — I-it-see,</p>	
<p>4 3 3 3 3-5 5 3-5 5 kufá:nt'afásabinjá:jo amongst-the-people-they-who-still-gird-the-loins, and-the-clothed-ones.</p>	—	<p>5 3 6 3 nàma2ó:ka — —</p>	
<p>2-2 4 3 3-4 3 3-4 isik'ó:lè lé:sí Educated- these</p>	<p>2 2-4 4 3 6 6 3 sijaunkwè:ndzì:nt'ò they-will-do-to-thee-something</p>	<p>3 3-8 9 jamÉ:fo — — it-of-the-eyes.²</p>	
people			

¹ Extract from the *Ilanga lase Natal*, a Zulu newspaper published by Rev. J. L. Dube at Ohlange, Natal; 20th June, 1924.

² i.e., they will do you "a shot in the eye".

^{3 3-5 5} bà:fiká:ke		^{5 3 3 3-5 5} ná:jmp ² i:sí	—	^{5 5 5 5 3 3 3-5 3 3-5} wafámmbelè:lemthí:ní
They-arrived-so		with-it-the-hyaena,		she-caught-hold-on-the-tree
^{3 9 9} phezú:lu	— —	^{6 3 3 3-4} jà:mbo:na	^{6-3 3-5} já:thi	— ^{6 3 9} ǰokwé:ní
above.		It-her-saw	it-said,	Dhlokweni,
^{5 5 5 6-3 3-5} wàhammbé:la		^{3 6 6} phezú:lu	³⁻⁸ ná: —	^{8-3 9} wó:za — —
(why)-do-you-walk		right-up-there	eh ?	Come !
				^{6 3 3-5} It-then
^{6 3 3 3-5} jàmthwá:la		^{6-3 3-5} já:thi —	^{6 3 9} ǰokwé:ní —	^{3 2 2-4 4} isilí:lò
it-her-carried		it-said,	Dhlokweni,	lamentation
				^{3 3-5} it-thine
^{5 6-3 3-5} sidú:ma		^{3-5 4} phá:nts ² i	— —	^{6 3-6 6 3 3-4 3} ubù:ngakaná:ní
it-thunders		on-the-ground.		³⁻⁸ ná: —
				Thou-wast-how-great
				eh ?
^{3 2 2-4 3 3-4 4} ukù:sisilí:lò		^{3 3-4} sá:khò	^{3 3-5} sí:βε	^{5 6-3 3-5 6-3} nggá:kapdze — —
That-the-lamentation		it-thine	it-be	so-much-just.
				^{6-3 3-4} She-said,
^{6 6 6 3-4 4 3 3-5} ngibeyngimkhú:lu	—		^{6-3 6 6 3-4 3 3-5 6 6 3-4 4} ngijjnk ² osiká:zenk ² ú:lu	—
I-was-great,			I-being-a-queen-she-great,	
^{6 6 6 6 3 3 3-4} ngibeyngibaphá:tha		^{4 4} ká:φε	^{3 3 3-4 3 3-4} bò:ŋk ² abá:nt ² u	^{4 3 6} bom:zi
I-used-to-them-treat		well	they-all-the-people	they-of-the-kraal
^{3 9} wá:mí	— —	^{3 2 2-4} sá:βú:je ¹	^{3 3-5 5 6} saphí:nnda	^{3 3-4} fú:thi
it-mine.		It-then	it-again	also
				^{3 3-4} it-said,
^{6 3 3-4 4} isilí:lò		^{3 3-4} sá:khò	^{3 3-8} lé:sí — —	^{8 3-6 6 3 3-4 3} ubù:ngakaná:ní
lamentation		it-thine	it-this !	Thou-was-how-great
				eh ?
^{3 2 2 2-4} abá:nt ² u		^{5 5 5 3-5 5} βajadaβú:ka	^{6 3 4 9} ùkukhá:la	— —
people		they-are-grieving	(in)-mourning.	Thou-wast-great
^{6 3 5} ǰokwé:ní	—	^{6-3 3-4} ná:mí	^{4 6 6 6 3 6 3-5 5 3 3-5} nggjè:zukù:thuβù:mkhú:lu ²	—
Dhlokweni,		and-I	I-feel-that-thou-wast-great,	

¹ Note the change of concord here from Class 3 to Class 4. The narrator has begun to substitute in his mind the term ^{3 2 6 3 9} isidawáne (a kind of goblin with a large basket on its head). This actual term is used before the end of this piece.

² = nggjè:zwa ukú:thi ú:βε ùmkhú:lu. Notice zwa + u becomes by elision zu, not zwu, Zulu not using such forms as zwò, zwu, kwò, kwu, etc.

8 3 3-4 3 3	6 6 3 3 9		3 3-5 5	3 3-4
uβù·βαλυνγι·σαβάντ?u	— —	sa:phí:nda	fú:thi	
thou-used-to-care-well-for-the-people.		It-again	also	
6-3 3-4	3 3-4	3 3-4 5 5	5 3 3 3-5 5	
pdzá:lo	sá:thi	sèkukhá:la	nábant?wá:na	
continually	it-said,	now-there-cry	even-the-children	
3 6-3-5 4		6-3 3-4	6-3 3-4 3 3 3-5 5	
mapdzé:ke	— —	wá:thi	jè·βαβant?wá:na	
now-then.		She-said,	yes-the-children	
5 6 6 6 6 3 3-5 5 6		5 5 5	3 3 3-4	
ηγιβενηγιβathá:nda		kakhú:lu	βó:ηk?ε	—
I-used-to-them-love		very-much	them-all,	
5 3-4 4	4 6 6 6 6-3 3 6 6 6	6 3-5 5	5 3-4 4 4	
nào:mí:na	— ηγιβενηγγá·βizi:nt?o	— ηγιβá:phε	— náo:mí:na	
also-their-	I-used-to-portion-to-them-	(and)-give-to-	both-their-	
mothers	things,	them,	mothers	
5 3-4 4	6 6 6 6-3 3 6 6 3	3-4 4	6-3 3 6 6 6	
nào:jí:se	— ηγιβενηγγιγγαβú:kí	lú:tho	— zò·ηk?izi:nt?o	
and-their-	I-used-not-merely-to-	at-anything,	all-things	
fathers,	look-on			
6 6 6 6 6 3 3-5 6-3		2 2-4	6-3 3-4	6 3 3-5
ηγιβενηγγεφá:napdzè	— —	sá:thi	— jé:βo	ξokwé:ni
I-used-to-share-merely.		It-said,	yes	Dhlokweni,
6-3 3-5	5 6 6 6 3 3-5	5 5 5 3-4 4 3 3 3-5	5 6-3 9	
ná:mí	ηγγijè·zukú:fa	βá:jadaβú·kaβá:nt?u	ηγγá:we	— —
I-too	I-feel-that	they-are-sorrowful-the-	on-account-of-	
		people	thee.	
3 5	4 4	3 3 6 3 3-4 4 4	6-3 3-4	3 3-4 3 3 3-4
kó:dwa	mí:na	sèηηγikùthabé:thε	pdzá:lo	kù·βαβá:nt?u
But	I	I-have-now-thee-taken	for-good	from-them-the-
				people
3 3-4	4 3 6	3 9	5 5 5	5 3 3-4 3 3-4
lá:βo	βoím:zi	wá:kho	— —	wa:βámmbelè·lemthí:ni
them-those	them-of-the-	it-thine.		She-held-on-to-a-tree
	kraal			
3 3-4	5 3 3-4	4 3 3 5	3 5 5 3 5 3 3-4	
fú:thi	wepú:ka	— sahá:mmba	sodwá·kúsidawá:ne	—
again	she-went-further-up,	it-went	it-alone-then-the-goblin,	
4 3 3-4 4	3 3-4 4	3 6 3 3-5	3 3 3-5	3 3-8
safi·kemmjof?ulé:ni	sázilá:fa	sakhá:la	sá:thi	—
it-arrived-at-a-river	it-itself-threw-down	it-cried	it-said,	
6-3 3-4	6 3 3-4	5 5 3-5 6 3	3-5	
má:jε	— ξokwé:ni	— ká·zujεηγγá:phi	ná: —	
alas !	Dhlokweni,	I-wonder-where-thou-	eh ?	
		hast-gone		

^{6-35 4 33-5} ngàzibulá:la ^{5 6-3 3-5} nggá:thi ^{5 63 3 6 3 3-5} nggilá:4ukókwé:ni —
 I-am-myself-killing I-thinking I-am-throwing-down-Dhlokweni,
^{4 4 3 6 3 3-43-444 4 4} ká:nt?ukókwè:nusefálekí:le — ^{3 3-4 4 4 4} usè:6ujé:le
 while-all-the-time-Dhlokweni-has-now-made-off, she-then-went-back
^{4 33 3-4} kuśá:nt?u ^{4 33-44 4 33-54} śá:khaśámkhálelá:jó — —
 to-the-people them-hers-who-are-crying-for-her.

§ 4. Zulu Text No. 3

^{2 3 4 3 4 9} ints?umánts?umá:né¹ — —
 A-marvellous-happening.
^{2-4 3 3 6-3-5 33-55 5} kwá:thi ^{6 66 3-66 6} izint?ó:mmbi ⁶⁻³³⁻⁵ zá:ja
 Then on-a-certain-day, maidens they-went
^{3-5 5 5 3 4 9} kòkweśù:luśé:ndžé — — ^{6 33 6 5} záhammbá:ké — ^{6-3 5} zá:jé
 in-order-to-strip-ubendhle-bark. They-travelled-so, until
^{6 3 5 5 4} zafi:ka ^{5 4} khó:na — ^{6 33-6 6} záśeśá:la ^{6 33-8 9} záśeśá:la — —
 they-reached there, they-it-stripped they-it-stripped.
^{6 6 3 3-663-66 6} zá:śuśò:phizipá:nnda — ^{6 3 3-5} zathwá:la ^{6 3 9} zaśú:ja — —
 They-it-tied-(in)-bundles, they-carried they-returned.
^{6 2-4 3 4 6 6 66 6-3-6 3-2-2-66 63-67 3 3-5} zithé: lá:pha ^{6 6 66 6-3-6} sezihammbé: ^{3-2-2-66 63-67} i:śá:nggelí:de — ^{3 3-5} é:pé
 And-then when they-had-now-gone distance-it-long, she-one
^{5 6-3 4 4 4 2 2-4 2 2-4} já:zò ^{2 2-4 3-5} jáfumani:sukú:thi — ^{2 2-4 3-5} ikhò:4wé: ^{8 2 8 8} jisiğó:ğó
 she-of- she-found-that, she-has-been-slipped- by-the-
 them the-memory headdress
^{8 8 33-66-3 6-33-56 3 3-5 2 2-4 3 3-5 5 6} śá:jó ³³⁻⁶⁶⁻³ em:va — — ^{6-33-56 3 3-5} zá:sezethú:la ^{2 2-4 3 3-5} imithwá:lò ^{5 6} já:zò
 it-hers behind. They-then-put-down loads them-theirs
^{6-33 4 6 3-55 3-5 4 3 3 2 2 6 3 3-5} zó:ñk?é — ^{6 3-55} zifá:la ^{3-5 4} phá:nts?i — — ^{3 3 2 2 6} isiśá:mmba ^{3 3-5} lé:jó
 them-all, they-sat down. She-now-travels that-one
^{3 2 2 6 33-66-3 5 5 5 3-5 5 2 2-77 7 4 3 7} iphi:ndelem:va — — ^{5 5 5 3-5 5 2 2-77 7} isiśumè:kum4á:ngga — ^{4 3 7} isi:thi —
 she-returning-back. She-now-sticks-in-the- she-now-says,
 ground-a-reed,

¹ As told me by F. Nxele, and recorded on the dictaphone.

♩ = 80

C = 517.3 vibr. per sec.



nggi - sò - me - ni nggi - sò - me - ni . . . sa - s1 - jò - kwe -



bu - lu - bε - ndkε nga - ɬa - ngga - na no - zi - mu nggε - dwa u -



zi - mu wa - be - thi - sa - ndka sa - sa - la na - mi ngga - be - thi -

(1) (2)



sa - ndka sa - sa - la nga - ni - wa . . . ji - jo . . . - ni

^{3 3-5 3 3-5 3 3-6 6} bāsebe¹ phipā menī:nggi — ^{6 6 6} seli:ka ^{6 3 9} lesú:tha — — ^{3 4 4 6} la:há:mmba
They-then-him-gave-meat- he-then- he-became- He-travelled
it-much, ate filled.

^{3 3-4 4 3 3-4} lājelafi:ka ^{3-4 3 3-4 3 6} komù:pumú:zi — ^{5 3 3-5 5 5} sèllammbi:le — ^{4 3 3 3-6 6} lajè:lukú:ka
until-he- to-another-kraal, he-now-being-hungry, he-asked-for-
reached food

^{3 3-5} lá:thi — ^{6 6 3 6 3 3 4 3 4 9} ngizòndzè lnts'ù mants'umá:ne — — ^{3 3-5} bá:thi
he-said, I-will-do-for-you-something-wonderful. They-said

^{3-6 6-3} jé:ndzε — ^{3 3-4 4} lasú:ka ^{4 3 3 3-5 6-3 6} lafá:jumgó:go ^{5 5} wá:lo ^{3 3-5} lá:thi —
do-it, he-started he-struck-the-bag it-his he-said,

^{6 6 3 9} úsò:mε — — ^{6-3 3-4} já:fò ^{3 3-5} fú:thi ^{3 3-6 6} int'ò:mmbi ^{6 3-4 3 3-5 6-3 6 6} isemgòkwé:mi ^{6-3 3-5} já:thi — —
let-it- She-said again the-maiden she-in-the- she-said.
perform. bag

¹ For this record of the music, I am indebted to Professor P. R. Kirby.

² The actual pitch of the song varies in successive performances. The above is the average.

3 2 2-4 seβé:thi	4 4 4 6-3-3-5 kà nt'uká:la	5 6-3 7 γγgá:thi	— —	3 2 2-4 3 3 sèβeβá:mmba
then-they- said	after-all-thou- jestest	with-us.		Then-they-him- caught
3 3-5 6 3-5 3 6 6 βèβvalè:lendkí:ni	— 6 6 ká:pe	6 3 6-3 5 nòmǵó:ǵo	5 5 wá:lo	— 3 2 2-4 3 3-5 sèβewuǵá:ǵa
they-him-shut-in- in-the-hut,	together	with-the- bag	it-his,	then-they-it- untied
3 3 2 2 6 6 6 sèkphù:mizipó:ka	6 3 6 nemí:vi	6 6 ná:zo	6-3 3-6 6 3 3-4 4 zò ǵk'izilwápaná:na	
then-there-came- out-snakes	and-wasps	and-they	all-insects	
3 6 6 6 6 6 èzit'ipielá:jo	— 3 2 2-5 3-5 5 sèβeβvalé:la	5 6-3 ná:zo	— 5 5 3 3-4 4 sèziǵlú:ma	
they-which-sting,	then-they-him- shut-in	with-them,	then-they-him- stung	
2 3 3-5 la:khá:la	3 3-5 lá:thi	— 5-2 3 3 2 2-4 γγivulelé:ni	4 3 2-3 3 γγgiphú:me	
he-cried	he-said,	open-for-me	(that)-I-may-come-out	
3 5-2 5 3 γγgá:fa::	— — 3 3-5 βá:thi	6-3 3-4 4 3 6 6 ǵá'npámazá:me	3 9 já:kho	— —
I-am-dying.	They-said	eat-the-buck	it-thine.	
3 3 3-4 la:khá:la	3 6 lá:ze	3-5 4 lá:fa	— —	
He-cried	until	he-died.		

§ 5. Zulu Text No. 4

2 2-4 ǵá:	4 2-4 kufé:	2 2 2-8 9 ǵk'ó:sí ¹	— —
When	there-is-dead	a-chief.	
2 2-4 ǵá:	4 2 2 2-4 4 kufi:ǵk'ó:sí	— 2 6 6 3 3-5 kùzaumé:pwa	2 2 2-4 3 3 3-5 βò ǵk'abá:nt'ǵu
When	there-is-dead-a- chief,	there-are-going-to-be- invited	all-the-people
5 5 βá:jo	— 3 6 3 3-5 3-5 6 3-5 5 5 βè'zeβeǵò mizíǵá:γγgu	— 4 3 3-5 3 3-5 3-5 5 5 5 βahù'βamahù'βamakhá:lu	—
they-his,	they-come-they-armed- (with)-shields,	they-sing-the-chants-them- great,	
3 3 6 5 3 βàγγgásí:ni	4 9 kó:dwa	— —	3 3 2 2-3 2 2-3 2 6 6 6 kùfanè'lukù'βisidú:mmbu
they-not-dancing	however.		It-is-fitting-that-the-dead-body

¹ From *Abantu abamnyama lapa bavela ngakona*, by E. M. M. Fuze, p. 33.

3 3 3-5 5 seŋkʔó:sí	—	3 3-5 5 sí:lá:lé	6-3 3-5 nó:ma	6 3 3-5 5 6-3-5 3 3-5 5 ámalaŋgamathá:thu	—
it-of-the-chief,		it-lies	either	days-them-three,	
6-3 3-5 nó:ma	6-3 3-4 má:né	—	3 3-5 ŋá:	3 3 6 3 3-5 5 3 3 3-5 βeŋgakáphelè:labá:ntʔu	
or	them-four,		if	they-have-not-yet-finished-	
				(coming)-people	
5 3 6 besi:zwe	3-8 9 sá:jó	— —	5-3 3-5 nó:ma	5 5 6-3 6 kunŋgá:ze	3 3-5 3 3-8 8 9 kuphè:li:só:ntʔo
they-of-	it-his.		Yet	it-might-	there-finishes-a-week.
the-tribe				(wait)-until	
6-3 3-5 5 5 3 6 6 6 lòkhuphè:lisidú:mmbu				3 4 6 3 3-5 4 4 4 6-3 3-5 síʔé:zisikhà:thesiŋgá:kó	
Now-since-the-corpse				it-has-lain-a-time-it-so-much	
6-3 3-4 ndzá:ló	—	3 6 6 6-3-5 kùziŋgé:		5 3 3 6 6 6 6 kuʔà:tʃʔwiziŋkʔá:βi	—
thus,		there-are-habitually		there-are-killed-oxen,	
3 2 6 6 6 isidú:mmbu		3 3-6 6 6 sísó:ŋgwe		6 6 6 3-6 6 6 3 6 ŋŋgèzikhù:mmbukú:ze	
the-corpse		it-is-rolled		by-means-of-skins-in-order-that	
3 3 6 3 3 3-5 5 3 5 3 3-4 3 3-4 3 3-4 4 liŋgabi:khi:phù:ŋgelizwakà:lukuβò:lèkhá:ja				—	
it-must-not-be-a-stench-which-is-smelt-rotting-at-the-kraal,					
5 3 9 9 nàsendkí:ni	— —	3 3 3-4 βathá:βa	4 3 3-4 4 3 3-4 βàphelè:labá:ntʔu	4 4 βá:jó	—
and-in-the-house.		When	they-have-finished-	they-his,	
			(coming)-people		
3 3-5 6-3-4 4 3 6 6 6 sikhwe:zwè:kisidú:mmbu	—	5 5 ká:né	5 5 3-5 5 nempʔá:ʔa	5 5 já:jó	
it-is-kept-so-the-corpse,		together	with-possession	them-his	
3 3 3-5 jó:ŋkʔé	—	3 3-4 4 3 3-4 4 sipù:pwisió:jo	3 3 5 5 simbé:lwe	5 5 ká:né	
them-all,		it-is-cut-off-the-headring	it-is-buried	together	
5 3 6 6 6-3 nèsidú:mmbu	— —	3 6-3 3-5 6-3 3-5 5 6-3 6 3 3 3-5 5 kupdzá:lopdzà:lamàdodà:nò:ŋkʔá:jo			
with-the-corpse.		And-so-it-goes-on-the-sons-they-all-they-his			
3 3-4 é:mi	3 3 3-4 4 3 3 6 6 3 eŋkʔù:liphè:thizikhá:li		6 3 3-5 5 zika:li:se	5 3 3 3-5 nabá:ntʔu	
they-	the-elderst-he-holding-the-		them-of-his-	and-the-people	
standing,	weapons		father,		
3 3 3-5 βó:ŋkʔé	5 5 βé:mi	5 5 3-5 5 6-3 nèziʔá:ŋgu	6 6 zá:βo	6 3 3 6 6-3 βakʔà:kʔi:gó:dí	— —
they-all	they-	with-the-shields	them-	they-surround-the-	
	standing		theirs	grave-pit.	

³ ⁶⁻³⁻³⁻⁵ ^{3 3} ^{3 3-5 5} ^{3 3-5 3 9} ³ ^{3 3 3-5 5}
 kupdǎ:lo kò ɲkʔukú:fa kùjafá:na — — ðkwenkʔó:sí
 It-is-so it-all-death it-is-alike. It-of-the-chief

^{5 3 3-5} ^{5 6-3 3 3 3-5 3 6 6 3 3-5 3 3-5 5 5 6} —
 kwaú:ka ɲɲgò'fò'ɲkʔamadò'dajaphù'ɛmakhá:nnda —
 it-is-different because-they-all-the-men-they-shave-the-heads,

⁶⁻³⁻³ ^{6 3-3-5 5 6} ^{3 3-5 3 3-5} ⁵ ^{6 3-3-5 5} ^{3-8 9} ^{6-3-5 3}
 pdǎɛɲɲgabésifazà'naǎfá:lwe ɲɲgùmǎjé:ni wá:fò — — ɲǎé:ɲa
 like-the-women-they-who- by-the-husband he-theirs. On-account-
 have-been-bereaved of

^{3-5 3 3-5} ^{5 3 3 3-5 3 3 6 3 3-5 5} ^{5 3 3 3-5 3 6 6 3-5 3 9} — —
 jokú:fa phè'ɲkʔò'sɲɲgùmǎjé:ni wá'wò'ɲkʔamadò'dewáfélé:jò — —
 because then-the-chief-is-the- he-theirs-they-all-the-men-for-whom-
 husband he-has-died.

^{3 3} ^{6 3-5} ^{3 3 3-5 6} ^{3 3 3-5} —
 aǎndú:fa kù'thém:va kwaló:kho —
 Afterwards it-is-after that,

^{3 3-5 3 3-5 3 3 3-5 3 3-5 6 6 3-3-5 6 6 3 9 9} ^{3 3-5 3-5}
 kuphù'mɲi'nɛɲkʔù'ɲjòzɲɲgè'lwɪzɪpámazá:ne — — kù'thɲá:
 there-goes-out-a-hunting-party-it-large-it- going-to-hunt-buck. Then-if

^{3-5 5 3 6 3 3-5 6 6 6 6-3-3-5} ^{5 3 3-4 4 4} —
 kukhò'nɪzi'thɛbezizòndá:na nalè'jɲkʔó:sí —
 there-are-enemies-they-who-hate-each-other with-that-chief,

^{3-2-2-5 5 6} ^{3 3-5} ^{3 3-5 5} ^{6-3-3-6-3-5 5 3 3-5 3 3-5}
 i:fá:mmbò lé:lò liphú:mɛ pdǎɛɲɲgè:mpʔɛfásé:la
 the-purification it-that it-goes-out just-like-the-army-which-
 attacks

^{3 4 4-5 5 3-8 9} ^{3 5 3-4} ^{3-5 5 3-5 5 6-3} ^{6-3 3-5}
 kulè'jɲkʔó:sí — — kò'dwɲá: kùjɲkʔó:sɪndze — nó:ma
 upon-that-chief. But-if it-is-a-chief-merely, whether

^{5 5 5} ^{5 3 3-5 3 6 6} ^{3 3-5 5 6 6 3 3-6 6 3 6 6}
 kù:mmbɛ ùm̀nùm̀zá:na — kùjakùzɲɲgè'lwɪzɪpámazá:ne
 perhaps a-headman, there-will-be-hunted-the-buck

^{3-5 5 3 3 6 6 6 6-3 6 6} ^{5 3-5} ^{5 5 3 3-5 4 4 9} — —
 kuphè'ɲɲgàqatʔà'ɲɲgwɪndá:fa jokú:ja kùsulà'laǎá:ntʔu — —
 only-it-will-not-be-thought-an it-of-to-go to-kill-people.
 affair

^{3 6 6 6 3-6 6} ^{6 6 3-6 6 6-3 6 3 3-5} ^{3 3-5 5 3 6} —
 kùzauthi'kem:va kwèzɪpà'ɲɲgezithi:lɛ — kumè'pɲwisi:zwe —
 At-length-after months-they-certain, there-is-invited-the-tribe,

³ kwendzi ⁶ ³³⁻⁵ wisi ⁶ ³ g ³⁻⁴⁻⁴ oesikhú:lu ¹	—	⁴ kúβuji ³³⁻⁴ ³³ s ³⁻⁸ wi ⁹ nk ⁶ :ó:sí	— —
there-is-made-a-feast-it-big,		there-is-brought-back-the-chief.	
⁶⁻³⁻⁶ ngalò ³ ³⁻⁵⁻⁵ wom ³ ³⁻⁴ 4:ipá:ma ⁴	³ lè ³ ³⁻³⁻³ nini ⁵ :nyngi	—	³ ja ² ²⁻⁴ 4:ú:la
On-that-day-meat	this-is-plenty,		it-overcomes
⁶⁻³⁻⁶ nezi ⁶⁻³⁻⁶⁻³⁻³⁻⁶⁻³⁻⁶⁻⁹ ^{— —} ndgezimmbá:la	³ ut ³⁻⁴ ³ ʔwá:la	³ ló:βu	³ βuphí:swe ³⁻⁴ ⁴
even-the-dogs-indeed.	The-beer	it-this	it-is-given-out
⁵ nasèzi ³ ⁶⁻⁶ ndè ⁶⁻³⁻⁶ nygezi ⁶ :ni	⁶⁻³⁻⁸ zamá:ndzi ⁹	— —	³ kà ³ ³⁻⁵⁻⁶⁻³⁻³⁻⁴ kh ³⁻³⁻⁴ :phuzi ⁴ :so:mú:nye
even-in-potsherds	them-of-water.		There-is-none-who-serves-another
³ là ³⁻⁴ ³⁻⁸⁻⁹ phekhá:ja	— —	³⁻²⁻⁵ isidá:kwa ³	³⁻³⁻⁴ lé:sí
there-in-the-home.	The-drunkard	he-this	he-now-acts-foolishly-merely,
⁵ àsisajà ³ ³⁻⁶⁻⁶ zint ³⁻³⁻⁴⁻³ ⁶ ʔoēsijendzá:jò ³	— —		³ àmakhòsíká:zi ³⁻⁴ ³⁻³⁻⁵⁻⁶
he-no-longer-knows-anything-which-he-does.			The-chief-wives
⁶⁻⁶ àvunù ³⁻³⁻⁴⁻³⁻³⁻⁴ ⁴ lajaqó:nts ⁴ ʔa	—	³⁻⁶⁻⁶ àzakukhè ⁵ ³⁻³⁻⁵⁻⁵⁻³ thabáfanè ³⁻³⁻⁵ ⁵⁻⁵ lukùwanyggé:na ⁶⁻³⁻⁹	
they-dress-up-they-look-fine,	they-will-choose-them-who-are-fitting-to-them-marry.		
— —	⁶⁻³⁻³⁻⁵⁻⁶⁻⁶ ngalè ⁶⁻⁶ ³⁻⁵⁻⁵ lòlà ⁵⁻⁵⁻³ ³ nyngi ³⁻⁸⁻⁹ nk ⁶ ʔò ³ ³⁻⁸⁻⁹ síβù:jisè ³ ³⁻⁸⁻⁹ lwekhá:ja	— —	
On-that-day-the-chief-he-is-brought-back-to-the-home.			

§ 6. Zulu Text No. 5

² iqwá:di ²⁻⁶⁻⁶	⁶⁻⁶ jam ⁶ :4a	³⁻³⁻⁵ sí:ja	⁴⁻⁴ kwânòdwé:nyngu ⁸⁻³⁻³ ⁹	— —
The-book	it-of-the-day	we-going	to-Nodwengu's-kraal.	
² sáphumá:ke ²⁻²⁻⁴ ⁴	³⁻³ kulòwom ³⁻⁵⁻⁶ :zi	—	³⁻³⁻⁵⁻⁴⁻⁴⁻⁶⁻⁶ èla:lisivimmbé:le ⁶⁻³	³ kuwó:na ³⁻⁵⁻⁴ —
We-went-out-so	from-that-kraal,	it (weather)-which-us-	at-it,	
		prevented		
³ saphú:ma ²⁻²⁻⁴	³⁻³⁻⁶⁻⁶⁻³ sèkuisemí:ni ³⁻⁴	—	³⁻²⁻² sahá:mmba ⁶	²⁻²⁻⁴⁻³ sáq ⁶ çè ⁶ ³⁻³⁻⁵ dithafána ⁵
we-went-out	it-now-being-midday,	we-travelled	we-it-completed-the-small-plain	

¹ Notice that the final vowel of ³⁻³⁻⁵⁻⁴isi:k⁶ʔo is not elided, but a coalescence made forming the diphthong *œ*.

² From *Three Native Accounts of a visit to Mpande*, by J. W. Colenso, p. 35.

3 3-4 3 3-8 8-3 9	---	3 2 2 5	3 2 2 5	5 5 5
sɛɬɛːleɬandzɛːni	---	sa:há:mmba	sihá:mmbɛ	siɖwɛːtʃʷwa
we-going-down-towards- thorn-scrub.		We-travelled	we-went	we-being- scratched
6-3-5-5 5	---	3 6 3 3-5 3 3	3-5 5 5 3 3-5 4	---
jiːɬá:ndze	---	sázesáiwɛːlmɔpʰɔlɔː	zɛmɬɔːphɛ	---
by-the-thorn-scrub,		until-we-it-crossed-the-Umfolozi-it-white,		
3 3 3-6 6 6	3 5 5 5 3-8 9	---	3 2 2-4 2 6 6-3 3-5	
lâ:phɪ:lâ:ŋgga	lâ:sêɬɬɔːna	---	sɛɬɛːlesigodíːni	
where-the-sun	it-was-now-setting.		We-travelled-down-into-the- valley	
3 2 2-5	5 6-3 4	3 3-5	2-4 4 4 4 4 2 2 3 9	---
semú:ka	ŋgá:sɔ	---	lá:phɔ	lâ:sɛɬɬɔːniːlɪmpʰɛːla
we-kept-on	by-it,	then		it-had-set-indeed.
3 3 2 2-4	3 2 2-4 4 4	3 3-5 3 3 6-3 3 6-3-6 6 6-3-5		---
sâ:çamú:ka	sêksuwɛɬɛ	---	sâmbɔːnunɔdɔwɛːŋgɛːpɬzɛjâː ¹	---
We-appeared	it-now-being-		we-him-saw-Nodwengu-he-being- dusk,	yonder,
3 3-5	5 6-3-5 5 5	3 3 3-5	5 6-3 3-5	3 3-4 3 3-5 5 5 5
sɛːɬa	ŋgɔːkhá:lɔ ²	---	sathú:ɬa	siɠɛːlɛ
we-went-	by-the-incline,	as-soon-as	we-appear,	we-it-saw-the- down
				head-kraal
3 3 3 6 6 3 3-8 8 3	---	3 2 2-4	2-5 5 3 6 6-3 3-5 6-3	---
lâkwaŋndâːɬaká:sámmbɛ	---	saːbɔːna	kùmzizíːmáɬzɛ	---
it-of-at-Ndabakaombe.		We-saw	it-is-something-indistinct- merely,	
5 3-5 5 3 3-5	5 3 3-5	5 8-3-5 5 3 5	6-3-5 3	3-4 4
akwâːçɛ̀daká:la ⁴	nokú:ɬa	ŋgâ:umú:zi	jíːni	---
it-was-not-quite-	whether	it-may-be-a-	is-it ?	We-stood,
clear		kraal		
3 3-4 3 4	3	2 3 3 6	3 2 2 2-6 6 6	---
sâlálɛːla	---	çhá:---	sabɔːniːsá:ŋgɔ	---
we-listened,	no !	we-travelled	we-saw-a-gateway,	

¹ A better reading would be: sâkubɔːna kwânodwɛːŋgɔ kúpɬzɛjâː. The reading in the text is liable to imply a person Nodwengu, not a kraal Kwa-Nodwengu. Notice the exceptional position of main stress, preceded immediately by secondary stress.

² The original text reads here sêːɬu:khá:lɔ, which is not good Zulu.

³ i:khá:nda is not good Zulu for "head-kraal"; the proper term is uŋmzimkhú:lu.

⁴ Notice exceptional stress, because kwâ: is contracted from kwâ:zekwa.

4 3 3 3-5 5 3 3 3-5		5 5 3 3-5		3 3 6-3 3-5	
saçà'lukù'zwaβá:nt?u		bèkhulú:ma		sanngé:na	—
we-began-to-hear-people		them-speaking,		we-entered,	
6-3 3-6 6 6 3 6 3		3 2 6 3 3 3-5		4 3 6-3 3 6-3 3-5	
lòkuphè'lakuvá:lwa	—	sabi'zumú:nt?u	—	safù'zinnú:na	
since-of-course-it-is-		we-called-someone,		we-asked-for-the-	
never-closed,				headman,	
3 3-5		3 3-4 3		3-8	
sá:thi	—	ùmsiyà'nukhó:na	na: — —	ukhó:na	— —
we-said,		Msiyana-is-present	is-he ?	He-is-present.	We-said-so
2 2 6 3		2 2-4 4 3 3-5		5-3 3 3-5 3	3 3-4
hammbá:ke	—	ùmtf?è'lú:thi	—	nà'nts?iŋk?ó:sí	lé:jò
go-then,		tell-him-say,		here-is-the-chief	that-one
3 3-4 3 6-3-4 4		5 3 3 3-5		3 3-5 5 6-3 3-5 5 5 5 5 6-3 8-9 9	
èjajizobí:kwa		umú:nt?u		òwajevè'lemgùŋgundkó:vu	— —
who-was-to-have-		by-a-person		who-was-coming-from-Maritzburg,	
been-announced					
2 2-4		3 3-4 3 3-4		4 3 3 3-4 4 3-5	
sá:ja		kùmsiyá:na	—	safi'keβáneké:	ŋyge:ló:ŋygewe
We-went		to-Msiyana,		we-arrived-he-having-	with-dry-cow-dung
				made-a-light	
3-5 3-8 9		6 6 6 6-3 3 3-6 6		6-3 6 3 3 3-6 6-3	
lo:nwá:li	— —	wá:lanndù'lukú:ga		wà'thakù'khukú:ga	—
it-of-fat.		He-pleaded-non-possession-		he-said-there-is-not-food,	
		of-food			
3 3-4 3 3 3 6 6-3-5 3		3-8		3 2 2 6	
ùsoβà'nt?uzòkǎ:ni		ná: — —		sà:ní'kwí:ndkǎ	sàjólá:la —
Sobantu-he-will-eat-		eh ?		We-were-given-a-	we-went-to-
what				room	sleep,
4 3 3 3-5 4 4-5		6-3 6 6		3 6 6	
kwafi'kumfá:na	—	wabé:ka	wabé:ka	—	ŋgá:thi mí:na —
there-arrived-a-boy,		he-looked	he-looked,		I-said I,
4 3		6 6 2 6 3		3-8	
wé:thu	—	nizemkǎ:mí	ná: ¹ — —	wá:thi	jé:na —
Friend,		you-eat-what	eh ?	He-said	he,
4 5 3-8 9		6-3 5 3 3-5 5 6 6 6-3 3-5 3		3-5 3	
si'kamá:ndzi	— —	ŋgà'thakù'jòŋgùphùzísá:ké		wé:thu	— —
we-eat-water.		I-said-just-go-give-me-a-drink		friend.	
3 5 4 9		6 3-5 5		3 3-4 3 3-4	
wà'thawá:kho	— —	ŋgaǎé:ka	— —	sàkhulé:ka	sá:thi —
He-said-there-is-none.		I-laughed.		We-prayed	we-said,

¹ The original reads *nina* here.

3 3 3-5 5 3 3-5 5 5		5 8-5 3-4 4	—	3 5 3 3-5 5 5
ɪŋkʔə'saisiphá:the		ŋŋgom:sa		sizesiwuʔé:dɛ
the-Lord-may-He-look-after-us		with-mercy,		until-we-it-complete
3 3 3 3-5 5 5 8-5	3-5 5	3 3-5 3 3 6		6 6-3 9
wə'ŋkʔə'umseβé:ndzi	wé:thu	èshá:mmba		ŋŋgá:wə — —
all-the-work	it-ours	we-who-are-		about-it.
		travelling		

§ 7. Zulu Text No. 6

2 2-4 3 5	5 5 3 3-4 3 3-5 5 6-3 5 5		5 4	
ùmaqò'ndufukù'lisithò'lagidzi:mɛ			ná:sə ¹	— —
Manqondo-lifts-up-the-heifer-he-runs			with-it.	
2-4 4	3 3-5 5 6-3		3 3-5 6-3-5 5 5 6-3	
kwá:thi	kù'ezí:wəndzɛ	—	kuʔé:zi:βá:ndzəpndzɛ	
When	there-was-seated-		there-being-seated-the-group-of-	
	merely,		men-merely	
5 5 5 5 6-3 5 5	3-5 5 5	3 3-4 5 5	3 3-4 3 3 3-4 4	
èmgù'ŋŋgundzò:vu	— 1:βá:ndzə	lithé: kə'əbu	likʔá'kʔɪŋkʔó:sɪ	—
at-Mgungundhlovu,	the-crowd	it-sitting-in-a-	it-surrounding-the-	
		circle	chief,	
2 2-4 4	5 3 3 3-4 3 3 3-4 3		3 2 2-4 6-3 3 3 3-4 4	
í:thike ²	àkekuβò:'fwɪŋkʔó:mə	— —	βəphá:ni	nà'nts'ɪŋkʔó:mə
he-then-	just-let-there-be-roped-		Tie-ye	this-is-the-beast,
says	the-beast.			
3 3-4 4 4 4 3 3-5 5 5 3-5	5 3-5 5 3-5 5 3-5 5		5 5 4 3 3-4 3	
è'jumthànt'pikà'zomp'èŋdɔvukà'zonts'ùnduká:zi			ŋŋgàsəm'á:nɛ	—
he-meaning-the-heifer-her-with-white-forehead-			on-the-back,	
	her-brown			
2 2-4 4	4 5 3 3 5 5	5-3 3 5 3 3-5 6-3	5 3 3-5 4	
ìβó:fwe	ŋŋgáphammbí:li	nàŋŋgàsəm:va	— —	jàβəfwá:kɛ — —
let-it-be-	in-front	and-at-the-back.		It-was-roped-then.
tied				
6-3 3-4 3 3 3 3-5 5		5 5 5 6-3 3-4 3	3-5 6 6 3-5 4	
jàsi'thɪŋkʔó:sɪ	—	ikhò'mmbi'ihí:βi	lèzɪŋkʔó:mə	—
Then-he-said-the-	he-pointing-at-the-herd		it-of-the-cattle,	
chief,				
3 3-4 4 4 4 3 3-4 3 3-4 4 4 6-3 6 6		6 6		
əjakù'juthà'thajifukù'lagidzi:mɛ		ná:jə	—	
he-who-will-it-take-it-lift-up-he-run		with-it,		

¹ From *uTulasizwe*, by J. Stuart, p. 7.² The original has *i-te-ke*, which does not read well in this instance.

^{3 3-5 5 6 3 3-5} ùjakùzithá:tha	^{6-3 3 3-4} zó:ŋkʔε	^{3 6 6 3-5 4} lè:zi:ŋkʔó:mə	— —
he-will-them-take	them-all	these-cattle.	
^{3-4 4 4 3-4} kwàkujàsuké:	^{3 3-4} ló:wə	^{5 3 3-5 5} wèʔulé:ka	^{3-4 4 4 3-4} kwàkujàsuké:
There-trying	that-one	he-failed,	there-trying
^{3 3-4} ló:wə	^{5 3 3-5 5} wèʔulé:ka	—	^{3-4 4 4 3-4} ló:wə
that-one	he-failed,		that-one
^{5 3 3-5 5} wèʔulé:ka	—	^{5 5 5 5} kuhá:mmba	^{5 6-3 3-4} ŋgǒ:ʔa
he-failed,		there-went	in-a-queue,
^{3-4 4 4 4 3-4} kwàkujàsuké:	^{3 3-4} ló:wə	^{5 3 3-8 9} wèʔulé:ka	— —
there-trying	that-one	he-failed.	
^{3 6} kwá:zε	^{3 3-4 4 3 3-5} kwà:jekwafí:ka	^{5 6-3 3 3-4 3 3 6} ŋgà:jumaqǒ:ŋndo	—
At-length	it-came	to-him-Manqondo,	
^{6-3-5 5 3 3-4 3 3-5 5 6-3 6 3 3-4 3 3-5 6 3-8-9} wá:je:phimisè lamá the:zandǵè nesù:kejidumé:la	— —		
he-then-spat-spittle-on-the-hands-he-started-rushing-at-it.			
^{3 2-2-3 6 3-4 4} usè:jidumé:la	^{3 5 4 4 4-5 6-3 6 6} çède:jithà thegidzì:ma	^{6 6} ná:jǒ	—
He-then-it-rushed-at	as-soon-as-he-it-took-he-ran	with-it,	
^{3 2 6-3 3 3-4 3-8 9} asè:za:jàjethú:le	— —	^{3 2 2 2-4 4} isì:thiŋkʔó:si	^{3-8 9} wé:u
until-he-it-put-		He-then-said-the-	Wheu !
down.		chief,	
^{8-9 9} zú:lu	^{5 5 5 2-4 4 4 4 3 3-5} kàŋngisènakùkhulú:ma	^{6 6 6} zithá:the	^{6-3 3 3-4} zó:ŋkʔε
Zulu-people,	I-can-no-longer-speak,	them-take	them-all
^{4 3 3 6} maqǒ:ŋndo	^{3 3-5 5 6-3 6-3 3-5} sèkuŋgezá:kho	^{5 3 3-4 4 3 3-4} jithùkululé:ni	^{3 3-4} lé:jǒ
Manqondo,	they-are-now-thine,	it-untie	that-one
^{3 3-4 4 6 6 6} niŋngeni:se	^{3 6} kú:zǒ	^{3 9} lé:zǒ	^{6 6 6 6-3 3-4 4} isiŋngená:ke
put-ye-it-in	amongst-	those.	It-then-went-in-so
	them		among-
			them
^{3 6 6 6 3} lè:zǒŋkʔó:mə	—	^{5 3 3 3-4 4} zafi:kekha:ja	^{6-3-5 6-3 3-4 4} zàjǐhí:βi
those-cattle,		they-arrived-at-home	they-became-a-big-herd,
^{5 5 3 5} zàjǐçé:da	^{3 3 3-4 3 9} jǒ:ŋkʔimí:zi	— —	^{3 2 6-3 3-4} èsezá:βa
they-filled-	every-village.	He-then-them-	to-the-villages,
up		apportioned	

³⁻⁴ sē:ptfʔε:sim̩n̩ā mefusóé:n̩	— —	²²⁻⁴³ 5 ībisi:za		
it-of-an-ostrich-it (headdress)-black-on-		It-then-comes		
its (ox)-face.				
⁵ n̩āmakhòsiká:z̩	³ 3-4 lá:pha	⁴ 3 3-4 3 kùkhet̩hwá:j̩	—	²²⁻⁵⁵ 5 ihá:m̩mbe
with-the-chief-wives	when	there-is-a-dance,		it-walks
⁵ 5 3 3 5 ṅṅgaphá:m̩mbi	⁵ 5 3 3-4 4 kwā:waj̩phá:ʔε	³ 3-4 3 phaká:th̩	— —	
in-front	of-them-they-it-place	in-the-midst.		
³ 2 2-4 4 ùkukh̩é:tha	³ 3-4 ló:kh̩	³⁻⁴ 3 6 6 kwá:kwendz̩i:wa	³ 6 3 3 3-5 5 6-3 kugā:n̩ntʔó:m̩mbi	—
The-dance	that-one	it-was-made	there-being-married-a-	maiden,
³ 6 3-4 igan̩é:	³ 3-4 3 3 9 kùmaq̩ó:n̩nd̩	— —	³ 2 2-5 5 5 isikh̩ú:m̩mba	³ 3 3-4 4 4 sal̩é:sosith̩ó:le
she-married	to-Manqondo.	The-skin	it-of-that-heifer	
³⁻⁴ 4 4 s̩a:phá:lwa	—	⁴ 6-3 3-5 6-3 6 6 sendz̩i:wizidwá:ḡa	⁶ 3 3-4 3 3-8 9 z̩amakhòsiká:z̩	— —
it-was-scraped,	it-was-made-skin-dresses	them-of-the-chief-wives.		

CHAPTER XXII

ORTHOGRAPHY

§ 1. Comparative Orthographies

The symbols of current Zulu Orthography compared with those of the International Phonetic Association as adapted for this work, for the regularly-used phones.

(a) *The Vowels :*

<i>I.P.A.</i>	<i>Current Zulu.</i>
ɪ	i
e	e
ɛ	e
a	a
ɔ	o
o	o
u	u
ɔa	wa
ɔe	we

(b) *The Plain Consonants :*

<i>I.P.A.</i>	<i>Current Zulu.</i>	<i>Bryant.</i>
pʔ	p	p
ph	p	ph
b	b, bh	bh
tʔ	t	t
th	t	th
d	d	d
k	k	k
kʔ	k	k
kh	k	kh
g	g	g
ʒ	b	b
m	m	m
m̄	m, mu	m, mu
n	n	n
ɲ	ny	ny
ŋ	n	n
fi	nh	nh

<i>I.P.A.</i>	<i>Current Zulu.</i>	<i>Bryant.</i>
f	f	f
v	v	v
s	s	s
z	z	z
ʃ	sh, tsh, ty	sh
x	r	h
h	h	h
fi	h	hh
l	l	l
ɬ	hl	hl
ɓ	dhl	dhl
ɱɸf [?]	mf	mf
ɱɸv	mv	mv
ts [?]	ts	ts
nts [?]	ns	nts
ndz	nz	nz
tʃ [?]	tsh, ty	tsh
tʃh	tsh	tsh
dʒ	j	j
ntɬ [?]	nhl	ntl
ndɓ	ndhl	ndhl
kx [?]	hx, kl	rr
kɬ [?]		
w	w	w
ɹ	y	y

(c) *The Click Consonants :*

<i>I.P.A.</i>	<i>Callaway.</i>	<i>Bryant.</i>	<i>Current Zulu.</i>
ɿ	kc	c	c
ɿh	kc	ch	c
ʘ	gc	gc	gc
ɲ	nc	nc	nc
ɲɿ	nkc	nc	nc
ɲʘ	ngc	ngc	ngc
ɕ	kq	q	q
ɕh	kq	qh	q
ɔ	gq	gq	gq
ɸ	nq	nq	nq
ɸɕ	nkq	nq	nq

<i>I.P.A.</i>	<i>Callaway.</i>	<i>Bryant.</i>	<i>Current Zulu.</i>
ŋ	ngq	ngq	ngq
ɬ	kx	x	x
ʃh	kx	xh	x
ɬ	gx	gx	gx
ɺ	nx	nx	nx
ŋɬ	nkx	nx	nx
ŋɬ	ngx	ngx	ngx

§ 2. Script forms of Non-roman symbols used

Though it is quite convenient to use the printed symbols, even for quick phonetic writing, some may prefer a script form, and, for this reason, I here suggest the following script forms for those symbols not employed in ordinary writing.

ɛ	ε	ɸ	ʒ	ɛ	ɸ	ʒ	2	2
ɔ	ɔ	ŋ	ŋ	ŋ	ɸ	ɸ	ɸ	ʒ
ɔa	α	ɸ	ɸ	ɸ	ɸ	ɸ	ɬ	ɬ
ɔe	e	ɸ	ɸ	ɸ	ɸ	ɸ	ɬ	ɬ
ɔ	ɔ	ɸ	ɸ	ɸ	ɸ	ɸ	ɬ	ɬ
ɸ	ɸ	ɸ	ɸ	ɸ	ɸ	ɸ	ɬ	ɬ

§ 3. An Improved Orthography for Current Zulu

Those who have followed the facts and arguments thus far, will have no hesitation in coming to the definite conclusion that the present orthography of Zulu will bear certain improvements. They will also doubtless have come to the conclusion that the scientific minuteness of the orthography employed in this investigation is far too elaborate and unwieldy for everyday use in Zulu. What is the right path to take? I feel that, before any orthography conference can formulate a workable system for everyday Zulu, which will not violate real phonetic rules at every turn, it must know with scientific precision what are the minute rules underlying the language. Once knowing these rules it is possible to argue on a sound basis as to what are the essentials to be marked, and what may be left out without endangering meaning or purport, or breaking consistency.

We have now reached that point in our phonetic survey of Zulu, where we have the facts before us, and should rightly consider to what

extent the knowledge of these facts should be applied in everyday Zulu. Let us consider this question under three heads, viz. (i) Word-division, (ii) Phone-symbols, and (iii) Tone.

§ 4. Word-division

Unhesitatingly I must say that the disjunctive method of writing Bantu languages is contrary to the genius of these languages, and certainly to be discouraged. Natives, too, find it difficult to use. The rules formulated for disjunctive writing are difficult to grasp, and, when applied, are repeatedly inconsistent. Regarding the conjunctive method, I think very little in the way of rules has been grasped or employed. Maybe it is because the "conjunctivist" is not hampered and beset by rules innumerable, that the native prefers to follow his methods—and be untrammelled.

Now coming back to the facts which we have found, we see that the Zulu **speaks** conjunctively. A glance at the texts in Chapter XXI shows how, through continual elision of initial or final vowels, he speaks at times in long word-groups, which place in the shade German compounds or Welsh place-names. But is such a compounding feasible for everyday writing or reading? I think not. In all these huge compound word-groups, we can recognize the **real ultimate words**, and they are what **must** be considered. Take, for instance, such a group as:—

3 3 3 2 6 2 2 3-6 6 3 3 3-4 5
ḡathèkèlezè'ḡnt'á'ḡmbeḡkhont'ḡé:ni.

This naturally resolves itself into the **three real and ultimate words** :
 3 3 3 2 6 3 2 2 2-8 8 9 2 2-4 3 3 3-8 9
ḡathèkèlezé:le, ḡnt'á'ḡmbo and **ḡḡkhont'ḡé:ni.** These are words, and can be subdivided no further.

Regarding the disjunctive method, no disjunctivist would think of writing ^{3 2 2 9} **áḡá:nt'ḡu** in two words, nor ^{2 2-4 3-8 9} **áḡakhú:lu** nor ^{3 3 3-6 6-3} **áḡaḡó:ḡḡḡvu** ; why then should he divide up ^{2 2-4 3 3 7 4 3 3-5 5 6-3 9} **áḡahammbá:jo** or **ḡḡhammbí:le** ? In the first word, **aba** is noun-prefix, in the second adjectival concord, in the third relative concord, in the fourth **also** relative concord, and in the fifth **ba** is subjectival verb concord. I think the reason for this arbitrary method of disjunctive word-division is two-fold. Firstly, there has been no real understanding¹ of what constitutes word-division in Zulu ; and secondly, there is an absolute misunderstanding

¹ Apart from what Mr. Bryant has noted, quoted by me in Chapter XVI, § 11.

of the real function of the concord, contrasted with that of the pronoun.¹ The adjectival concord has been treated as such, but the verbal concord has been treated as though it were a pronoun.

The conclusion to which we come with regard to word-division is this: **For ordinary Zulu requirements each word should be written as one entity, but the joining together of words into word-groups simply because of vowel elision is unnecessary and productive of unwieldiness.** In certain grammatical cases of agreement, such as when demonstrative and other pronouns are used before their nouns, I consider a coalescence and "writing-up" to be of advantage, because they are practically always used in that way.

With reference to the recording of stress and length, I make the following suggestions:—

Stress is a concomitant but not a semantic factor in Zulu phonetics. If the general rule, that the main stress falls on the penultimate syllable, is observed, little error can result; and, so long as the words are written as complete entities, **I would not suggest the recording of stress.**

It is quite another thing with length; and, though half-length and perhaps prolonged length need not be marked, **I consider the indicating of full length (by: if possible) to be essential.** This will in most cases indicate the position of penultimate stress as well. It will further get over the present difficulty of recognizing the contracted prefixes of Classes 2 and 6, and also certain past tenses of verbs.

§ 5. Phone-symbols

(a) *Vowels*: For correct reading it is necessary to distinguish between the high and low varieties of both the mid-forward and the mid-back vowels. Provided that vowel length is consistently indicated, the qualities of these vowels may easily be recognized by an application of the rules, which have already been set out; and **I therefore suggest that the addition of ϵ and \circ to the five symbols is not really necessary in Zulu.** No real object would be served in introducing the diphthongs as the differences between $\circ a$ and wa , $\circ e$ and we are slight and non-semantic.

(b) *Plain Consonants*: Since there are three distinct types of k-sound, it is necessary that the ejective type as well as the aspirated should be distinguished from the plain unvoiced. Since therefore ejection **must** be indicated in this case, it is only consistent to extend

¹ The whole question is discussed in Chapter XXIII.

the practice and indicate it in each case in which it occurs. **Therefore I suggest that all cases of ejection should be indicated by ʔ (e.g. pʔ, tʔ, kʔ, tsʔ, etc.), and that all cases of aspiration should be indicated by h (e.g. ph, th, kh, tʃh, etc.).**

The bi-labial implosive I suggest should be indicated by β. If this is done, there will be no need to indicate the voiced explosives by other than the symbols b, d, and g. The symbol bh must definitely be dropped.

Regarding nasals, there is no need to indicate ŋ but by m; but ɱ, owing to its use before tʃʔ and dʒ, **had better be indicated by ɱ**; and since ŋ may appear as a variant to ŋg, and also occasionally alone with syllabic value, **I suggest the adoption of the symbol ŋ and its use before k, g, and the clicks worthy of consideration.** nh may still well represent fi.

f, v, s, and z will remain as before; but owing to the existence of two pre-palatal affricates, viz. tʃʔ and tʃh, **it is best to use ʃ in place of the present sh**; otherwise it would be difficult to differentiate between the ejective and aspirated affricates. **These I would suggest indicating by tʃʔ and tʃh.**

I fear that, without adopting full phonetic script, and thus using x, the velar fricative will still have to be indicated by the unfortunate symbol r which generally indicates something so different in other languages; or maybe by χ. It is doubtful, however, whether it is really necessary to distinguish x from h, and, if so, I would suggest the entire dropping of r in Zulu.

The two glottal fricatives must be definitely distinguished, and **I suggest the adoption of the symbol fi as well as h.**

The lateral sounds need careful distinguishing, and, since both ɬ and dɬ occur in Zulu (the latter after n), the present dhl will not do. **I propose, therefore, that hl be replaced by ɬ and dhl by ɬɬ, for the future.** The symbol h will thus be used to indicate the aspirate only.

Regarding affricates, I suggest that the following should be used :

mfʔ, mv, tsʔ, ntsʔ, ndz, tʃʔ, tʃh, j, ntɬʔ, ndɬ, klʔ.

The last symbol may well stand for both kxʔ and kɬʔ, as they are mutually interchangeable. Samuelson's kl comes nearest to a correct representation of any of the symbols in current use for this sound, and, with the addition of the glottal stop (ʔ), I would suggest its employment.

w and y will remain as before.

(c) *Click Consonants*: The ramifications of the present Zulu orthography are so great that, for ordinary use **the present symbols used for the clicks will have to be taken as our basis**. Starting then with *c*, *q*, and *x*, as the basis, Callaway's system will have to be re-adopted (and this might with greater insistence be applied to the Xosa language), and the unvoiced forms written *kc*, *kq*, and *kx*; but aspiration must also be marked when it occurs, and *kch*, *kqh*, and *kxh* be used. The voiced forms will remain *gc*, *gq*, and *gx*. Further it is advisable, since we advocate the use of *n* before velars, to indicate the nasal clicks by *ŋc*, *ŋq*, and *ŋx*; these can then be distinguished from the unvoiced and voiced forms preceded by the nasal, thus: *ŋkc*, *ŋkq*, *ŋkx*, and *ŋgc*, *ŋgq*, *ŋgx*. In this way the whole range of eighteen forms may be separately indicated.

§ 6. Charts for suggested revised Zulu Orthography

(a) *Vowels*:

<i>Front.</i>	<i>Back.</i>
i	u
e	o
a	

(b) *Plain Consonants*:

	Bi-Labial.	Denti-Lab.	Alveolar.	Pre-Palatal.	Velar	Glottal.
Explosive ...	p ^ʔ ph b	...	t ^ʔ th d	...	k k ^ʔ kh g	ʔ
Implosive ...	ɓ	...	...	...	...	...
Nasal ...	m m̄	(m)	n	ɲ	ŋ	nh
Fricative ...	...	f v	s z	ʃ	r (or χ)	h f
Lateral ..	...	...	l ɬ ɮ	...	...	...
Affricate ...	...	mf ^ʔ mv	ts ^ʔ ndz	tʃ ^ʔ tʃh j	...	...
Affric.-Lat....	...	...	tɬ ^ʔ ndɮ	...	kl ^ʔ	...
Semi-Vowel	...	...	...	y	w	...

(c) *Click Consonants* :

	Dental.	Alveolar.	Lateral.
Unvoiced... ..	kc keh	kq kqh	kx kxh
Voiced	gc	gq	gx
Nasal	ŋc ŋkc ŋgc	ŋq ŋkq ŋgq	ŋx ŋkx ŋgx

§ 7. Tone

It is much more difficult to give any helpful suggestions regarding the recording of tone in **everyday Zulu**. I have shown that, in scientific analysis, tone is very complicated in Zulu, and some such system, as that of the figures I employ in this work, is necessary to mark the variations. This investigation has revealed the existence of tonemes, and, when the rules for the variations within the tonemes are catalogued—a work which I feel is outside this phonetic treatise—it may be possible to devise symbols of a limited number to indicate them.

If Zulu is to be recorded scientifically, I would urge the use of figures, but I feel that any attempt at a simplified popular method of marking tones in ordinary writing or printing would not be satisfactory. Since the writing of Zulu is mainly for natives, they are able to rely on context to give them the correct tone-sequence. With our present limited knowledge of this intricate and important question, I feel it would be futile to suggest any system of tone-marking for everyday use.

§ 8. Texts in proposed new orthography

(a) See Chapter XVI, § 16.

aβelu:ŋgu βaha:m̄ba ŋgemikhu:m̄bɪ, βayizinge:le. βapha:tha
imikho:ntʰo emini:ŋgɪ emikhu:lu, enezintɬʰe:nd̄ka, nezintʰa:m̄bo
nemiphon̄go:lo emini:ŋgi. βa:thi kqede βafi:ke elwa:nd̄ge umk̄ho:mo
uβonaka:le, βasonde:la ka:ɬe βathekeleze:le intʰa:m̄bo emk̄hontʰwe:ni
βawugwa:ze.

(b) See Chapter XXI, § 2.

inqwa:di evuleki:le e:ya kumfundisi lam:la. mfundi:si othandeka:yo,
 ngisafi:sa ukukhulule:ka nge:zwi libeli:pe. ngi:thi ngokwa:mi
 uku:ka, ku:de uye:ke izinda:ba zendza:lo yao:nontf'e:vu. mi:na
 angikudele:li ukuza:ma kwa:kho ukuho:la. ke:pha inda:wo ya:kho
 ngiyi:fo:na, ku:ant'u a:basabi:ca:yo, namagqo:ka. isik'o:le le:si
 siyaukwe:ndza i:nt'o yame:fo. u:ma ngi:bu:kanje, a:ba:li ba:kho
 ba:ngesi:fo o:nontf'e:vu, nga:kho, woga:la ube:ka mfa:na
 kalutholu:ni. nala:bo osugiji:ma na:bo nam:fa kau:zi, mi:na ngi:bu:ka
 uku:thi, ba:use:ndza nga:we. u:ma se:sekutholi:le a:ba:kufuna:yo,
 ba:kula:sa okwetha:mbo e:belinomk'a:ntf'a.

CHAPTER XXIII

A NEW VIEW OF GRAMMAR FOR ZULU

§ 1. Grammatical Divisions

In Chapter XVI, when dealing with sound-groups and word-division, it was found that for Zulu it is the complete words, and not the individual parts composing words, which must be considered as "parts of speech" while the non-isolatable parts must be treated as formatives and not as "parts of speech". The complete word, as has been noticed, contains one and only one main stress, but when analysed its formatives do not possess main stress, are incomplete and cannot stand alone. This view, then, gives us an entirely new conception of Zulu Grammar; and I propose in this chapter, briefly to outline the main grammatical divisions for Zulu.

To begin with, the treatment of Zulu grammar must take into consideration the two main grammatical divisions: (i) Parts of speech, and (ii) Formatives.

§ 2. The Parts of Speech

Apart from cases of interjections, no concept (or concept-group) in Zulu is complete without its being or containing a predicate. This important part of speech, therefore, which does the work of a predicate, I call the **Predicative**. Now, taking each complete word in Zulu as representing some part of speech according to the work it does in the sentence, we find that there are six of these fundamental parts of speech, and to represent them I use the following terms: Substantive, Qualificative, Predicative, Descriptive, Conjunction, and Interjection.

The following are rough definitions I would suggest as covering these terms:

A **Substantive** is a word signifying anything concrete or abstract or any concept.

A **Qualificative** is a word which qualifies a substantive.

A **Predicative** is a word which signifies an action connected with a substantive or the state in which a substantive is.

A **Descriptive** is a word which describes a qualificative, predicative, or other descriptive.

A **Conjunction** is a word which introduces or links up sentences.

An **Interjection** is an isolated word which has no grammatical or concordial bearing upon the rest of the sentence.

Now, taking these six fundamental parts of speech, and examining them **according to the form in which they appear**, we find certain subdivisions which give us the real parts of speech for Zulu. This subdividing results as follows :

- | | |
|-------------------|-----------------|
| I. Substantive | (a) Noun. |
| | (b) Pronoun. |
| II. Qualificative | (a) Adjective. |
| | (b) Relative. |
| | (c) Possessive. |
| III. Predicative | (a) Verb. |
| | (b) Copulative. |
| IV. Descriptive | (a) Adverb. |
| | (b) Radical. |
| V. Conjunction | |
| VI. Interjection. | |

By this method of subdivision we have **eleven** parts of speech, into one of which every complete word in Zulu fits. We shall now examine a little more closely each of these parts of speech.

§ 3. The Noun

Definition : A noun is a word signifying the name of anything concrete or abstract, or any concept.

In Zulu every noun is composed of at least two formative parts, (i) the stem, which may be primitive or may be derived from some other part of speech, and (ii) the prefix. According to the form of the prefix, nouns are divided into eight classes, six of which have forms for both singular and plural, and one of which has a sub-class with special prefixes. In addition to stem and prefix, the noun may contain a suffix. Suffixes are added to nouns mainly to form diminutives, feminines, and augmentatives.

§ 4. The Pronoun

Definition : A pronoun is a word signifying anything concrete or abstract without being its name.

Each pronoun shows concordial colouring taken from the class of noun which it represents. It may be used in apposition to the noun it represents, or it may stand alone. In Zulu pronouns are of four main types :

- (a) Absolute Pronouns, e.g. *mi:na*, *zo:na*.
- (b) Demonstrative Pronouns, of three varieties :
 (i) this, these, e.g. *la:fa*, *le:zi*.
 (ii) that, those, e.g. *la:fo*, *le:zo*.
 (iii) yonder, e.g. *labaya:*, *leziya:*.
- (c) Enumerative Pronouns, e.g. *fo:ŋkʰe*, *ŋge:dwa*, *fofasi:li*.
- (d) Qualificative Pronouns : pronouns formed from :
 (i) Adjectives, e.g. *aŋa:fe*, *omkhu:lu*.
 (ii) Relatives, e.g. *eliŋo:mvu*, *aŋahamba:yo*.
 (iii) Possessives, e.g. *ela:khe*, *owesili:sa*.

§ 5. The Adjective

Definition : An adjective is a word which qualifies a substantive, and is brought into concordial agreement therewith by the Adjectival concord.

In Zulu there are very few adjectives, yet they are all perfectly regular in their concordial agreement, the adjectival concords preserving the nasal, wherever it appears in the noun prefix. The adjective is composed of root and concord, such roots as *-fe*, *-de*, *-khulu*, *-ŋcane*, *-dala*, *-ŋi*, being adjectival. Suffixes may be added to adjectives, as to nouns, but to a somewhat more limited extent.

§ 6. The Relative

Definition : A relative is a word which qualifies a substantive, and is brought into concordial agreement therewith by the relative concord

Relatives are mainly of two types, either words, possessing relative roots, such as :— *-ze*, *-ŋandzi*, *-ŋomvu*, etc., or words possessing verbs, etc., brought into relative construction, such as : *ohamba:yo*, *ezifikile:yo*, etc. The relative concord closely resembles the adjectival concord, with the exception that there are definite concords for the 1st and 2nd persons used with the verbal forms, and that, wherever in the adjectival concord there appears a nasal, in the corresponding relative concord that nasal and whatever follows it is omitted, thus *a-* for *ama-*, *ezi-* for *ezin-*, *o-* for *om-*, etc. Many of these relative roots have hitherto been looked upon as irregular adjectives, or else the same view has been taken of the adjectival roots in considering the relatives as the regular form.

§ 7. The Possessive

Definition : The possessive is a word which qualifies a substantive, and is brought into concordial agreement therewith by the possessive concord.

There are two types of possessives : (i) pronominal ; (ii) nominal. The pronominal possessives are made up of two parts, the concord agreeing with the " possessed ", and the pronominal possessive root agreeing with the possessor, e.g. *wa:mi*, *za:zo*, *kwa:lo*, etc. The nominal possessives are also made up of two parts, the concord agreeing with the " possessed ", and the nominal possessive root, which is the possessor. This nominal possessive root is the ordinary noun, e.g., *womu:nt?u*, *zeŋk?o:si*, *kwe:la:ŋga*, etc.

§ 8. The Verb

Definition : A verb is a word which does the work of a predicative, and is brought into concordial agreement with a substantive by the subjectival verb concord.¹

The verb, except in the imperative and in the infinitive, which is really a noun, is made up of at least two parts : (i) the verb stem, which may be simple, perfect, dependent, negative, or derivative, and (ii) the subjectival verb concord, which may alter in certain cases in the negative conjugation, and in the dependent and situative moods. This concord has hitherto been regarded as a pronoun, but it is not in itself a word : it is merely a formative. The verb may also contain auxiliary formatives, and objectival verb concords.

In Zulu the verb is divided into **two conjugations**, positive and negative. Each conjugation has **seven moods**, Indicative, Dependent, Situative, Potential, Intentional, Imperative, and Infinitive. The assertive mood contains most of the tenses, divided **according to time**, into Remote Past, Immediate Past, Present, Immediate Future, and Remote Future. **According to mode** the tenses of the indicative mood are divided into Simple, Progressive, and Exclusive ; and most of these modes are subdivided **according to manner** into Indefinite, Continuous, and Perfect. The dependent mood has hitherto been called " subjunctive ", a term ill-suited to its significance. The situative mood has hitherto been called the " participle ", also a term not fitting the use of this mood in Zulu.

¹ This is an unsatisfactory definition, as it leaves no place for imperatives, which have no subjectival concord, and allows for the inclusion of relatives, when used predicatively.

The following present indefinite tenses, in the 1st person plural of the indicative mood positive, will illustrate what is meant by the "modes".

Simple : *sitha:nda* = we love.

Progressive : *sisatha:nda* = we still love.

Exclusive : *sesitha:nda* = we now love.

Verbs are further divided into the following four main varieties :

(i) Regular duo-syllabic verb-stems, ending in *-a*. Examples : *tha:nda, ge:za, fu:na*.

(ii) Derivative verb-stems, usually polysyllabic. Examples : *thandisi:sa, dazuka, ɬakani:pha*.

(iii) Monosyllabic verb-stems. Examples : *-pha, -ɬa, -thi*.

(iv) Vowel-verb stems. Examples : *-endza, -ona, -azi*.

These varieties show differences in conjugation at certain points.

§ 9. The Copulative

Definition : A copulative is a word which does the work of a predicative, and which is formed directly from some other part of speech by modification of the prefix or concord.

Copulative predicatives are formed from :

- (i) Nouns, e.g. *ɣgumu:ntʰu, yisiɬa:lo*, etc.
- (ii) Pronouns, e.g. *yimi:na, yile:zi, ɣgaβa:mi*, etc.
- (iii) Adjectives, e.g. *m:ɬe, zɪŋkʰu:lu*, etc.
- (iv) Relatives, e.g. *u:ze, zimɬo:phe*,¹ etc.
- (v) Adverbs, e.g. *kukho:na, βasendɣini*, etc.

§ 10. The Adverb

Definition : An adverb is a word which describes a qualificative, predicative, or other adverb with respect to manner, place, or time.

Adverbs usually have prefixal formatives (not concords), and are usually formed by means of them from other parts of speech. The following are the main types of such adverbs :

- (i) Locatives, e.g. *emzi:ni, o:βa:la, kumu:ntʰu, ku:ye, ki:thi, em:va, eziŋgutʰe:ni*, etc.
- (ii) By manner formatives, e.g. *ɣga:we, njengomntʰwa:na, ɣgangezi:mvu*, etc.
- (iii) By prefix *ka-* or *ku-*, e.g. *ka:ɬe, ku:ɬe, kakhu:lu*, etc.

¹ Notice that these concords are identical with the subjectival verb concords.

In addition, nouns, either in their full form or in some shortened form, are used as adverbs, e.g. *i:zo:lo*, *izikha:thi zo:ŋkʔe*, etc.

§ 11. The Radical

Definition : The radical descriptive is a word, often onomatopœic, which describes a verb in respect of manner, colour, sound, or action.

Usually, in Zulu, the radicals are used after the verb *uku:thi*, e.g. *uku:thi dazu*; but they may occasionally be found as intensifiers with verbs which have been formed from them, e.g., *ukudazu:ka dazu*. This part of speech has been scarcely recognized as such hitherto in Bantu, but it is an important feature of all Bantu languages.

§ 12. The Conjunction

In Zulu many conjunctions are compounds involving the verb-stems *-thi* or *-ba*, e.g., *kwa:thi*, *ŋgoku:ba*, etc., or are derived from other parts of speech as *ko:dwa*, *ŋgakho:khe*, etc. It must be remembered that *na-* is not a conjunction, but a conjunctive formative.

§ 13. The Interjection

Apart from a number of ordinary interjections in Zulu, all vocatives of nouns are included in this part of speech, e.g. *mado:da*, *ba:ba*, etc.

§ 14. The Formatives

Formatives in Zulu may be divided roughly into, Stems or Roots, Prefixes, Concords, Suffixes, Verbal Auxiliaries, and Prefixal Formatives.

Roots are ultimate forms, generally speaking immutable, except in extreme cases of phonetic mutation as in pre-palatalization, e.g. *thand-*, *-ntʔu*, *-thi*, etc.

Stems are those portions of words shorn of prefixes, or concords, e.g., *-thanda*, *-thandle*, etc.

Prefixes are compounded with noun-stems to form nouns, and vary with the eight classes.

Concords, in Zulu, are of five types, adjectival, relative, possessive, subjectival-verb, and objectival-verb. They must be kept distinct from the pronouns.

Suffixes are used in Zulu to form diminutives, feminines, and augmentatives of nouns, adjectives, and relatives, to form the different

derivative species of verbs, to form many locatives from nouns, and to express negative and interrogative ideas.

Verbal Auxiliaries are mainly of four types: (i) True auxiliaries, e.g. **-ya-**, **-sa-**, **-ngā-**, etc. (ii) Those followed by the situative mood, (iii) those followed by the dependent mood, and (iv) those followed by the infinitive mood.

Prefixal Formatives are employed in the formation of (a) qualitative pronouns, (b) Copulatives, and (c) adverbs.

APPENDIX

No. 1

An Examination of the Orthographies of Lepsius, Steere, Meinhof, and the International Phonetic Association

Quite apart from scientific recording, it is very necessary to have a workable orthography, closely correct, for the ordinary recording of Bantu languages. Almost every Bantu language has its own peculiarities of orthography, due mostly to the isolated nature of investigations, in which each investigator has been limited by his own experience or guided by his own ideas. A serious attempt should be made towards a unification of orthography, without which satisfactory comparative work in Bantu, whether phonetic or grammatical, cannot be carried out. Attempts have been made at unification of areas of Bantuland, and different systems of orthography have been evolved.

The basis of a great deal of orthographical work in Africa has been the **Lepsius Alphabet**. This alphabet, known as the "Standard Alphabet", has proved of immense value as a ground-work for other systems, and on it has Dr. Bleek, the philologist, worked. Dr. Bleek says: ¹ "I have endeavoured to follow Lepsius's Standard Alphabet in general as much as possible. In some cases, however, the typographical difficulties were too great." Lepsius's Alphabet, too, is the ground-work upon which Professor C. Meinhof of Hamburg has built his orthography. In examining Lepsius's Alphabet with a view to its utility as applied to Bantu languages, it is evident that new symbols are necessary in many cases to indicate sounds which were then unknown. The extensive use of diacritic marks to distinguish sounds is not conducive to quick or easy reading, and is liable to be a fruitful source of printer's errors. The use of diacritics to indicate definite positional variations, such as ' to differentiate palatal from velar sounds (e.g. k and k') and . to differentiate alveolar from retroflex sounds (e.g. t and t) is, I consider, a mistake.

Bishop Steere of Zanzibar formed a much simpler, but a much less scientific form of orthography, which has been followed by most English writers of East African and Central Bantu languages. Unfortunately

¹ In *A Comparative Grammar of South African Languages*, p. xii.

Steere used only five vowel symbols. Bantu does not require a large number of vowel symbols, as, generally speaking, Bantu languages have a seven-vowel system. Had Bishop Steere recognized this, a very useful orthography might have been employed in many languages from the very beginning. The symbols *ch* and *j* are used for affricate sounds which vary between palato-alveolar and real palatal; *ny* is used for the same range of nasal sounds, and *ng'* to indicate the velar nasal (η). This last is an unfortunate symbol, the apostrophe tending to separate the nasal syllabically from its following vowel; further η is but the nasal part of *ngg*, which in Steere's orthography would logically be represented by *ng'g*. Despite these drawbacks as a workable system conducive to quick reading, the lack of scientific precision in this orthography is almost preferable to the confusion of diacritics in the more ponderous system of Lepsius.

No one has done more phonetic analysis of Bantu languages than **Professor Meinhof** of Hamburg, and his system of orthography is used by a large following of German investigators, especially in languages of East Africa, South-West Africa, and the Cameroons. As has been already stated, his orthography is based on that of Lepsius, but is carried to far greater scientific precision, and brought right up to date. In his *Lautelehre der Bantusprachen*,¹ Meinhof gives a "Tabelle der gebräuchlichsten Bantulaute", and it is worthy of considerable detailed investigation. This system is at once seen to be a tremendous advance on the previous systems we have noticed. The aspiration of explosives is fully recognized, the presence of homorganic nasals (e.g. \dot{n} before *k*, \dot{n} before *t*, \dot{n} before *t*) is clearly indicated, and dental sounds are distinguished from alveolars.

Perhaps the greatest drawback to this system of orthography is that the already over-employment of diacritic marks by Lepsius is far exceeded by that of Meinhof. Germans have a tendency to connect many fricative sounds with *s* and *z*; for instance, the English "th" sounds appear so to them; so evidently do the lateral fricatives of Bantu. Hence Meinhof, taking simple *s* and *z*, works out symbols for the other fricatives by the employment of different diacritics. Note the following compared with the symbols (mostly of the International Phonetic Association) which I employ: $s z = s z$, $\check{s} \check{z} = \int \mathfrak{z}$, $\underset{\cdot}{s} \underset{\cdot}{z} = \mathfrak{s} \mathfrak{z}$, $\underset{\cdot}{s} \underset{\cdot}{z} = \sigma \varsigma$, $\underset{\cdot}{s} \underset{\cdot}{z} = \theta \vartheta$, in addition to \mathfrak{s} , \mathfrak{z} , \mathfrak{z} , \mathfrak{s} , and \mathfrak{z} , for which the International Phonetic Association has, as far as I know, no symbols as yet. Such piling on of diacritics (\mathfrak{s} , \mathfrak{z} , \mathfrak{s} , \mathfrak{z} , \mathfrak{s} , \mathfrak{z} , \mathfrak{s} , \mathfrak{z})

¹ p. 11.

surely makes reading slow and laborious. These diacritics are each intended to signify something very definite, but in practice this is not always the case ; for instance :

— (a stroke beneath a letter) is used to distinguish :

(a) denti-labial fricatives from bi-labial fricatives, **f̣** and **ṿ** from **f** and **v**.

(b) low qualities of mid-vowels from high qualities : **ɛ** and **ɔ** (**ε** and **ɔ**) from **e** and **o** (**e** and **o**).

(c) lax vowels from tense vowels : **ɪ** and **ʊ** (**ɪ** and **ʊ**) from **i** and **u** (**i** and **u**).

The use of the dot beneath the letter and the use of the tilde for other purposes than the indication of nasalization are other cases in point.

It is especially important that each **quality of vowel** should have a separate symbol. Meinhof uses only the ground vowel symbols of **i**, **e**, **a**, **o**, and **u**, and shows the alterations in quality by diacritics. It is far more easy to read the following words in the International Phonetic Association script than in Meinhof's :—

ṿonɪʂa	vonɪʂa
ɪ̣lyeʔbe	riɟɛβe
ʊ̣lufɪgɔ	ʊlufɪgɔ

In this treatise on Zulu phonetics, I have followed in the main the phonetic script of the **International Phonetic Association**, and it is to be hoped that this will be used much more widely in the transcription of Bantu languages in the future. The main point of difference between the I.P.A. and Meinhof is that the former try, as far as possible, to use separate symbols for each positional type of sound, whereas the latter uses diacritics to indicate these. There are several real improvements that could be made in the script and method of the I.P.A., and I would suggest the following :

(1) Explosive is a better term to use than plosive, especially for Bantu languages where implosive sounds are also found. The term plosive really covers both explosive (plosion outwards) and implosive (plosion inwards).

(2) Some method of differentiating alveolar from dental sounds should be employed. This is not necessary when dealing with individual languages, as such alterations do not constitute a phonemic difference ; but for comparative work it is really necessary.

(3) The pre-palatal affricates **tʃ** and **dʒ** should have the explosive elements distinguished from **t** and **d**.

(4) The use of capitals, such as F, I, U, G, R, etc., is to be deprecated. Other symbols could easily be found to represent these few, and the script would be more uniform in character.

(5) The general use of the symbols ɓ, ɛ, ɛ̃, ɛ̄ is incorrect, inasmuch as they are used to indicate sounds which are not the mere devocalization of l, m, n, ɲ, but the unvoiced fricative forms. ɛ̄ has now been adopted for ɓ, but no suggestion has hitherto been made for the nasals.

(6) A new classification of the vowels is necessary.¹

No. II

Implosive Sounds in Languages other than Zulu

In addition to the occurrence of an implosive sound in the Zulu-Xosa group of Bantu languages, implosive sounds are found in many other Bantu languages especially in those of the East Coast.

The bi-labial implosive (ɓ) is widely used in **Swahili**. In fact almost every Swahili "b" has proved to be implosive, though this has not hitherto been fully recognized.² For example :

maɓɛga (shoulders).	ɓuɓu (spider).
ɓaɓa (father).	ɓalozi (political agent).
ɓunduki (gun).	

Explosive b is used with some words from Arabic, e.g. **birika** (tank).

The same implosive is also found in **Manyika** (near Umtali, S. Rhodesia), e.g. ɓá:ɓa (my father).

The alveolar implosive, for which I use the symbol ɗ, is found as a feature of **Chopi**³ (Portuguese East Africa). Examples: ɗítí:ko (country), ɗíté:mbe (year), ɗí:poɪ⁴ (word). In Chopi ɗ is usually found before the vowel i in nouns of the "LI-MA" Class; but instances of ɗ before a, ɛ, ɔ, and ɟ are also found. Examples: ɗuɗá:ja (to cause pain), ɗuɗá:na (to taste), ɗuɗjí:a (to eat), ɗuɗɔ́ɗé:ka (to stumble), ɗuɗjí:sa (to graze).

¹ See Appendix III.

² Except by Mrs. F. Burt in her *Swahili Grammar*, p. 9, and in a dissertation of mine which appeared in the *Bulletin of the School of Oriental Studies, London Institution*, vol. ii, pt. iv, note to page 699.

³ Such is the sound as enunciated by M. Henri Ph. Junod, who gave me the examples.

⁴ ɔ is a dental fricative sound having the tongue and lip-position approximating to that of the abnormal vowel y (French u). The friction is made so far forward as to cause a whistling note against the lips. This sound is also found in Tswa and Manyika, e.g., in the latter **poɪ:mbe**; as is also the voiced equivalent **p**, e.g. **pité:ɲgu**.

The same sound is found in **Manyika**, e.g. $\overset{5}{\text{f}}\overset{4}{\text{d}}\overset{4}{\text{f}}\overset{4}{\text{u}}$ (our father).

The alveolar implosive has also been identified in the **Ndau** language.¹

In Suto there is a sound which gives very closely the acoustic effect of the alveolar implosive, but which, on investigation with the kymograph, appears **gd**, i.e., alveolar voiced explosive with velarized stop. This is found in Suto only before the vowels **i** and **u**, and has been the cause of much orthographical confusion. In Chwana, the place of this sound seems to be taken by the "flapped-r" (**l**).²

Implosive sounds are found in India. From an interesting article³ by T. Grahame Bailey on the Sindhi implosives, I cull the following points: There are four implosives in **Sindhi**, a bi-labial, which evidently is closely akin to if not identical with, Zulu **ɓ**, a velar, a retroflex tongue-tip palatal, and what is termed in the article a "palatalized blade-front-dento-alveolar". The ordinary **d**-implosive is not found. All four may be initial, medial, or final. The writer of the article hints at further implosive sounds in other Indian languages. An investigation into these sounds, and the ascertaining of the range of the implosives in Bantu should indicate whether there has been much phonetic infiltration from India along the East coast of Africa, or vice versa. The latest opinion seems to be that the implosive sounds reached India from Africa.

No. III

The Division into Vowels and Consonants

A vowel is generally described as a voiced sound, in the production of which the air passes in a continuous stream through the pharynx and mouth (or mouth and nose), there being no obstruction or audible friction in the vocal passages. Our investigation into Zulu phonetics has revealed that full nasal sounds, lateral sounds, and epiglottal sounds may be used as vowels in the formation of syllables. It seems advisable, therefore, to revise our definitions and our divisions of "phones" into vowels and consonants. With this in view I suggest the following method of division.

¹ So Professor Daniel Jones of University College, London, informed me in a recent letter.

² Cf. Jones and Plaatje: *A Sechuana Reader*.

³ In the *Bulletin of the School of Oriental Studies, London Institution*, vol. ii, pt. iv, pages 835, 836.

Definition of a Vowel: A vowel is a voiced speech-sound in the production of which the breath has sustained passage through mouth, nose, or both mouth and nose, sufficient to produce syllabification.

Definition of a Consonant: A consonant is a speech-sound, voiced or unvoiced, which is not sustained or not sustainable to such length as to produce syllabification.

Following the above definition we find the following types of vowels, which do not, however, exhaust all the possible types:—

- (1) Oral Vowels : **a**, **e**, **i**, etc.
- (2) Naso-Oral Vowels : **ā**, **æ̃**, **ē**, etc.
- (3) Nasal Vowels : **m̄**, **n̄**, **ŋ̄**, etc.
- (4) Lateral Vowels : **l̄** (or **l̄**), **ɹ̄**, **ɻ̄**, etc.
- (5) Retroflex Vowels¹ : **ɻ̄**, **ɹ̄**, **ɹ̄**, etc.
- (6) Epiglottal Vowels : **ʁ̄**, **ʁ̄**, **ʁ̄**, etc.

Such a division will necessitate a slight alteration in nomenclature and treatment of these forms when used consonantly. **j**, **w**, etc., will be called **Orals**; **w̃** (as in the English expression **w̃æ**), etc., will be called **Naso-orals**; **m**, **n**, etc., will still be called **Nasals**; **l**, **ɹ**, etc., will still be called **Laterals**, and **ɻ** will be called a **Retroflexive**. All of these “continuants”, whether orals, naso-orals, nasals, laterals, or retroflexives, will be termed **Semi-vowels**.

When the orals, **j** and **w**, are devocalized they often become fricative as well, and the symbols **ç** and **ɱ** are used. In the same way the unvoiced fricative forms of **m**, **n**, **ŋ**, should have definite symbols to indicate them, and should not be represented by **ɱ̄**, **ɳ̄**, and **ŋ̄**, which indicate devocalization without friction. The same applies to the devocalization of **l**; the symbol **ɻ̄** has been adopted for the unvoiced fricative mainly because there is also the voiced fricative **ɻ**; **ɻ̄** used to be employed to indicate **ɻ̄**.

No. IV

The Origin of the Ejective Velar Lateral Affricate

I believe the Zulu ejective velar lateral affricate to be the same sound, or one very similar to that described by W. H. I. Bleek as used by the Bushmen. Using the symbol **ɻ̄** he describes it as “a strong, croaking sound in the throat”. This, however, I have not yet been able to investigate first hand.

¹ Called “inverted” and sometimes “coronal” vowels; cf. D. Jones: *Pronunciation of English*, pp. 26, 27; G. Noël-Armfield: *General Phonetics*, p. 106; and R. J. Lloyd: *Northern English*, pp. 22, 23.

The !Kora dialect of Hottentot is credited with employing three gutturals, in describing which, Wuras (in Appleyard's *Kafir Language*, 1850, p. 18) writes: "ch resembles the Dutch g; kh is a deeper sound; and x still deeper and very harsh."

In discussing this third sound in *Tsuní Ugoam* (p. ix), Hahn writes: "a harsh faucal sound peculiar to the old Cape Hottentot dialects, . . . to the !Kora Hottentot and to the Bushman languages. I write this consonant, which most resembles a forcibly produced short croaking sound—just as if a person is endeavouring to get rid of a bone in the throat—with the Hebrew \aleph (ajin). The very fact that this sound is produced by expiration and not by inspiration places it among the consonants proper, and not among the clicks."

Further, Vedder, in his "Grundriss einer Grammatik der Buschmannsprache vom Stamm der !Kü-Buschmänner," published in the *Zeitschrift für Kolonialsprachen*, Band I, Heft 1 and 2, speaks of a guttural click, which, from his description, is no click at all, but seems to resemble very closely the sound we are studying. His description is as follows¹:—

"Der gutturale Schnaltzlaut (+), der nur vor vokalen erscheint, könnte allenfalls durch stark explosives $k\chi$ bezeichnet werden. Doch würde diese Bezeichnung ungenau sein, da $k\chi$ nur unter Mitwirkung der Lunge und Ausströmen der Luft hervorzubringen ist. Man wird bei ungenügender Übung verstanden, wenn man statt + ein scharfes "kr" (gaumen r!) einsetzt. + ist derselbe Laut, der unwillkürlich hervorgebracht wird, wenn man einen im Schlund befindlichen Gegenstand durch Räuspeln herausbringen will. Die Kehle wird fest verschlossen als ob man ein starkes k auszusprechen beabsichtige, durch plötzliche Öffnung des Verschlusses entsteht alsdann, jedoch ohne Ausatmen der Luft, der Schnaltzlaut + von selbst."

This is evidently the same sound as that described by Hahn as belonging to !Kora Hottentot, and in each there are all the characteristics of the Zulu sound, some maintaining it to be a click, others that it is not. The sound, then, appears in Cape Bushman and $\text{ch}\ddot{u}$: Bushman; and it is probable that the Cape Hottentots and the !Kora Hottentots derived it from their contact with the Bushmen, and in turn passed it on to the Zulu Bantu.

My own investigations among a certain clan of the $\text{ch}\ddot{u}$: Bushmen identify this sound with the ejective velar affricate, not the lateral

¹ p. 13.

Thonga, Ngoni, and Tebele are directly derived from Zulu. In East Africa, however, there is a seemingly Hamitic language called Sandawe, which, while being influenced in vocabulary by the neighbouring Bantu and Hamitic languages, employs three clicks and shows grammatical affinities to the Hottentot.

The term "click" is by no means the only term used to denote these sounds. Knudsen called them "smack-tones"; Hahn called them "inspirata", "poppysmata", or "schnalzlaute", the last term being the one by which German philologists usually designate them. French writers, such as Paul Passy, use the term "claquement". They might well be termed "injectives" being the reverse in production of the "ejectives".

The Clicks in the Bushman Languages

All of the Bushman languages are noted for the exceptionally frequent use of the click in speech. In addition to having a wider range of positional click types, the Bushmen, in their ordinary speech, use the click with much more grammatical frequency than do the Hottentots or the click-using Bantu. In Hottentot whole sentences are common without the use of a single click. In Bushman this is rare. Unfortunately at present much of our knowledge regarding Bushman phonetics must be second-hand, and our conclusions are deduced from the writings of Dr. W. H. I. Bleek, Dr. L. C. Lloyd, C. F. Wuras, H. Vedder, and personal experience among the *chũ*: tribe. The two best-known types of Bushman from which I draw my conclusions are the "Cape Bushman" and the "*chũ*: Bushman". It will be seen that each of these employs five positional types of click, each language having four types in common, and one peculiar to itself.

Apart from these six types of click used in speech by the Bushmen, Bleek, in his second report to Parliament in 1875, wrote: "A most curious feature in Bushman folk-lore is formed by the speeches of various animals, recited in modes of pronouncing Bushman, said to be peculiar to the animals in whose mouths they are placed. . . . Among the Bushman sounds which are hereby affected, and often entirely commuted, are principally the clicks. These are either converted into other consonants . . . or into clicks otherwise unheard in Bushman . . . as in the language of the Jackal, who is introduced as making use of a strange labial click. . . . Again, the moon—and

it seems also the Hare and the Anteater—substitute a most unpronounceable click in place of all others, excepting the lip click.”

(1) *Cape Bushman*: In the dialects of the Cape Bushmen the following five positional types of clicks were used :

1. Bi-labial, indicated by the symbol \odot .
2. Dental, indicated by the symbol ! .
3. Alveolar (called Palatal), indicated by the symbol \ddagger .
4. Palato-alveolar (called Cerebral), indicated by the symbol ! .
5. Lateral, indicated by the symbol ll .

From the description of these sounds, the dental, palato-alveolar, and lateral clicks seem to be identical in ground-form with the Zulu ! , t , and b ; the alveolar click seems to have the same position as that in Nama and $\text{!}\text{chũ}$. The remaining type, the bi-labial, is foreign to the Bantu and to the Hottentot languages. Wuras, in a very brief *Outline of the Bushman Language*, writes: “The clicks are not stronger than in the Hottentotten language, but there are two peculiar clicks, which are not in the Hottentotten language, a labial \square and a particular dental $>$ click. To produce the labial click, the tongue moves very quickly like that of a performer on the flute. In producing the dental click, the wind is pressed through a very little space between the upper and lower teeth.” With the knowledge of what Wuras had written before him, Bleek still described the labial click as “like a kiss”, and made no mention of the “particular dental”. Comparing this observation of Wuras, with what he says regarding the clicks in !Kora Hottentot, it may be that his “particular dental” is but the voiced form, and corresponds to the Zulu y , or it may resemble the hãŕŕum dental click described by me in an Addendum to my article on $\text{!}\text{chũ}$: phonetics.¹

From an examination of the Bushman texts, collected by Dr. Bleek and published by Miss Lloyd, I have drawn the following conclusions regarding the clicks in Cape Bushman. Unlike the clicks as we know them in Bantu, in Bushman they may be combined with other consonants, chiefly velar, but even bilabial. For instance Bleek gives the Bushman word for “to sleep” as !phkoĩnyé (beginning with a combination of dental-click, aspirated-bilabial-explosive, and unvoiced-velar-explosive). The bi-labial click seems to be used in its unvoiced form, and may be either plain or aspirated. Of dental clicks I have found examples unvoiced followed by glottal stop, voiced and nasal,

¹ Cf. *Bantu Studies*, Vol. II, No. 3.

of retroflex, followed by glottal stop, aspirated after glottal stop, plain unvoiced, voiced, and nasal; of alveolar, aspirated after glottal stop, plain unvoiced, voiced, and nasal; of lateral, followed by glottal stop, aspirated after glottal stop, plain unvoiced, voiced, and nasal. These different forms are indicated by the symbol for the click followed by *h, k, g, or n*.

(2) **çhũ**: *Bushman*: A work has been published on the **çhũ**: language by a German missionary, H. Vedder. It has already been noticed that he includes among the clicks the sound which is the ejective velar affricate. Deducting that we find the following five clicks given by him for the **çhũ**: language:

1. Dental, indicated by the symbol I.
2. Alveolar, indicated by the symbol ‡.
3. Palato-alveolar (called Cerebral), indicated by the symbol †.
4. Forward Lateral, indicated by the symbol II.
5. Back Lateral, indicated by the symbol III.

Vedder refers to Meinhof's Nama Grammar, and says that what Meinhof states there applies in all details also to the **çhũ**: language for clicks 1-4, except that the **çhũ**: language has no clicks with the velar fricatives (**lkh, ‡kh, etc.**). Regarding his fifth click, Vedder states that it sounds almost like II, and is articulated in the same way, except that the tongue is more stretched, and the hindermost part instead of the middle part of the tongue is used to produce the click, causing the click to sound much duller than II.¹

According to Vedder, each of these five clicks may be combined with the consonants **h, k, g, and n**. This I interpret to mean that they may be aspirated after glottal stop, unvoiced plain, voiced or nasal. But further than this Vedder states that the dental I combines with II, and at times with III, so that while the tip of the tongue forms the dental, the rest of the tongue produces the other click, both being heard at the same time. In this way is produced I II and more rarely I III. The physical possibility of this, however, seems to me to be very open to question.

My own recent investigations among a certain section of the **çhũ**: people substantiate certain of Vedder's assertions, but show that in others he is either wrong or has been working among a section

¹ Miss Lloyd had noticed that the **çhũ**: Bushmen pronounced the lateral click somewhat differently from the way other Bushmen pronounced it; and she marked the **çhũ** variety II, the ordinary lateral being marked II.

speaking in an entirely different way from those with whom I worked. I found five positional types of click, as follows :—

1. Dental, which I represent by ɿ.¹
2. Alveolar, which I represent by ʎ.
3. Palato-alveolar, which I represent by ɸ.
4. Retroflex, which I represent by ψ.
5. Lateral, which I represent by ʒ.

Vedder's "back lateral" I found to be a true retroflex click, and the ɸhū: employ unvoiced, voiced, and nasal forms of this click, of which the nasal form seems to be exemplified in Suto, suggesting a direct influence of Bushman on Bantu, not via Hottentot.

I observed that in many cases the ɸhū: used the clicks followed by glottal stop, so that in the unvoiced forms, the release of the velar point of articulation was carried out silently during the closure of the glottis, and hence no "k-sound" was audible.

The Clicks in the Hottentot Languages

In Hottentot, as in Bushman, the clicks are said to combine with other consonants, though each instance of such combination that I have been able to trace has been with velar (or possibly uvular) consonants. It seems that here, too, these consonantal combinations indicate merely the aspirated (after glottal stop), the complete unvoiced, the voiced, the nasal, and possibly affricative forms of the clicks.

In both Nama and !Kora Hottentot there are four positional varieties of clicks, each of which may be followed by glottal stop, aspirated after glottal stop, unvoiced, voiced, or nasal. Using the same symbols as those for Bushman, we find the following :

1. Dental, represented by ɿ.
2. Alveolar (called Palatal), represented by †.
3. Palato-alveolar (called Cerebral), represented by †.
4. Lateral, represented by ʒ.

Neither the bi-labial ɸ nor the retroflex ψ of the Bushman languages appears in any of the Hottentot tongues. Wuras² claims for !Kora eight clicks, but it is evident that the four subsidiary members he mentions he is unable to recognize as the voiced forms of the other four.

Tindall notes that in Nama the clicks only occur at the beginning

¹ This symbol represents the unvoiced forms only; for further symbols and descriptions, see my article on ɸhū: phonetics in *Bantu Studies*, Vol. II, No. 3.

² *Vokabular der Korana-Sprache*, von C. F. Wuras (Berlin, 1820), p. 6.

of syllables, and that "in enunciation the organs of speech first prepare to articulate the click, and any other sound, either vowel or consonantal, is clearly supplementary."¹

The Clicks in Sandawe

The discovery of the Sandawe Language in East Africa has been one of the most important of recent linguistic discoveries. It is not my intention here to discuss the philological position further than to quote the closing words of Dr. Otto Dempwolff in his interesting study of the Sandawe: ² "Immerhin stimmen diese subjektiven Eindrücke zu dem Schluss aus dem objektiven Material der Sprache, dass die Sandawe ein Mischvolk aus einer buschmannartigen Urbevölkerung mit hamitischen Einwanderern sind, die in relativ junger Zeit auch Bantublut in sich aufgenommen haben."

Sandawe is a language which contains clicks; many of its grammatical constructions show close parallels to Nama Hottentot. It shows extensive vocabulary similarities to the Bantu languages of Gogo, Limi, Irangi, Kulia, Ilamba, Buwe, Hehe, Dzalamo and especially Swahili; and also to the Hamitic languages of Tatoga, Burunge, Iraku, and Somali. There is also a striking similarity in many words, especially those involving clicks, between Sandawe and Nama Hottentot. Sandawe has three positional click types:

1. Dental, represented by ɿ.
2. Palato-alveolar (called Cerebral), represented by ɿ̥.
3. Lateral, represented by ɿ̥̥.

According to Dempwolff the Sandawe lateral click is formed differently from the Nama, the former drawing the lower jaw down and letting the front of the tongue slide down from the incisors and gum-ridge while the outer rim of the tongue is opened against the back teeth, the acoustic effect, however, being the same. Dempwolff states that just the simple voiceless k is behind the click, and I take that to mean that there is no aspirated click known in Sandawe.

The Clicks in Suto

E. Jacottet in his *Elementary Sketch of Se-Suto Grammar*,³ wrote: "q, qh, nǃ represent the cerebral click, as in Kafir (till now it was

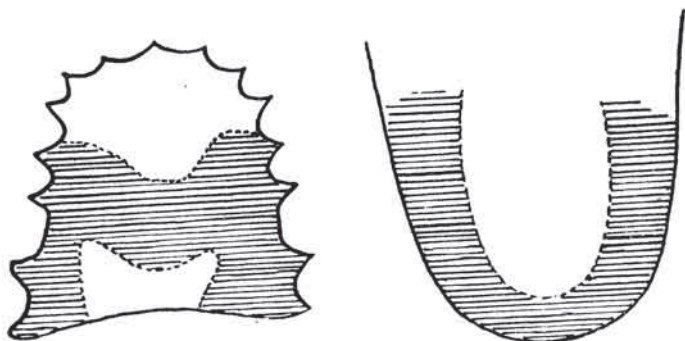
¹ *A Grammar and Vocabulary of the Namaqua-Hottentot Language*, by H. Tindall (1857), p. 13.

² *Die Sandawe, Linguistisches und ethnographisches Material aus Deutsch-Ostafrika*, von Dr. Otto Dempwolff (Hamburg, 1916), p. 180.

³ Published in 1893, together with A. Mabile's *Se-Suto-English and English-Se-Suto Vocabulary*.

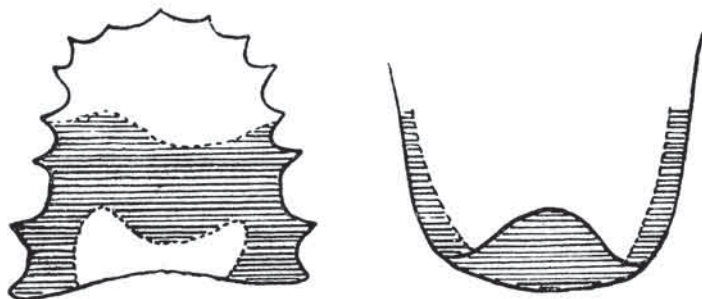
written, *k'*, *k'h*, *ngj*). *q* is the simple click sound ; *qh* is the same followed by the aspiration ; *ngj* (which would be more scientifically written *ngq*) is the nasal sound followed by the click."

Suto is the only language of the Chwana group which possesses clicks ; and the unvoiced forms are correctly represented by *q* and *qh*, showing that they are of the same type as those in Zulu and Xosa.



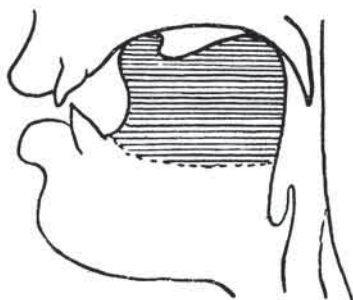
From the palatograph ¹ above, it will be seen that these clicks are made in the same way as the Zulu palato-alveolar clicks, but somewhat further back along the palate. The portion of the tongue employed, and the mode of formation are exactly the same, and the rather backward position on the palate may be due to the individual studied, and not a Suto characteristic. Regarding this I have not had any opportunity to study other Basuto.

The Suto nasal click, on the other hand, is the nasal form of the genuine retroflex click, the ψ of the chũ : Bushmen a click foreign to Zulu.



¹ Of a Mosuto named Happington Moshoeshoe, great-grandson of the well-known chief Moshesh.

Above is a palatograph of the Suto click, and the tongue-position diagram for its formation is as follows :



The back of the tongue is in the usual velar position for all clicks, but the tongue-tip is curled back into the retroflex position, the underside of the tip touching the hard palate. The click is injected by the release of the tongue-tip. Examples :

ŋ:ŋa (side).

ŋá:lə (place).

Of these examples the former is written in Suto as *nǃa*. In Pedi the latter is worn down to *ŋá:lə*, the click dropping, but the velar position of the tongue being maintained.

Zulu has a very strong influence on Suto vocabulary, and many of the words derived from Zulu have been click-containing words. In every case Suto has substituted *ɕ* for the Zulu click, whether it be ɕ, ɕ, or ɕ. Examples :

ɕhú:ba (drive)	<	Zulu	⁵ ⁴ <i>chú:ba.</i>
ɕá:la (begin)	<	„	³ ⁹ <i>á:la.</i>
ɕwí:la (dive)	<	„	⁵ ⁴ <i>ɰwí:la.</i>
ɕá:tʃha (hide)	<	„	⁵ ⁴ <i>á:tʃa.</i>
ɕá:kʔa (baffle)	<	„	³ ⁹ <i>á:ka.</i>
ɕá:mu (monitor)	<	„	²⁻⁴ ³⁻⁸ ⁹ <i>u:á:mu.</i>

On the other hand Suto *ɕamatʃhé:la* (adhere to) corresponds to the Zulu word ⁴ ⁴ ³ ⁹ *námathé:la*; a word not containing a click, and this suggests a separate origin for the clicks in Suto. The fact that Suto uses a click unknown in Zulu, and that many of the click words con-

taining palato-alveolar clicks show no correspondences in Zulu, strongly suggests that Suto derived her clicks elsewhere, before Zulu influence came into play, and that such click-words, as she did borrow from Zulu, she threw into the mould she already possessed.

The Clicks in Xosa

In Xosa are found the same three positional types of clicks as in Zulu; dental, palato-alveolar and lateral. In each case there are, as in Zulu, unvoiced, aspirated, voiced, and nasal forms. But, in addition, there are in Xosa nasal forms followed by a voiced aspirate, e.g. ³í⁹ŋfiá (grass), ⁵pfíé⁴pfíá (lie down), ⁵pfíá⁴ma (go fast). The voiced forms, preceded by the velar nasal, are found in Xosa as in Zulu; and, in addition, the unvoiced forms preceded by the velar nasal, so rare in Zulu, are quite commonly met with in Xosa. For further illustrations of Xosa clicks see Appendix VII.

The Clicks in Thonga

In Thonga and Ronga of Delagoa Bay clicks are only used in words borrowed directly from Zulu since the conquest of the Thonga peoples by the Zulus.

The Clicks in Tebele

In Tebele the three positional types of the clicks of the Zulus are still used. Various phonetic changes seem to be coming over the language since the days of the migration under Umzilikazi, but as yet these do not seem to be affecting the clicks.

The Clicks in Ngoni

The Ngoni people living on the plateau on the west side of Lake Nyassa are an offshoot of the Zulu nation. Their great chief at the time of the European intrusion into Nyasaland was Mombera. Mombera's people had originally been conquered by Shaka, when living as an independent tribe on the banks of the Tugela and Umpisi Rivers in Natal. Their tribal name was Amahlongwa. The Angoni say that they revolted from the tyrannical rule of Shaka, and that rather than return after defeat they chose a new home in the north. The Angoni crossed the Zambezi in 1825, led by Zwangendaba, the father of Mombera. After much fighting and travelling they reached the north end of Lake Nyasa, and then turned southwards and settled on the plateau where they now are. The Tumbukas called them Mazitu,

and the Nyanjas called them Maviti ; but the name Ngoni is that by which they are now known.¹

Even in so short a time considerable changes have crept into the vocabulary, grammar, and even phonetics of this Zulu offshoot. Words have been picked up along the route, and from the neighbouring tribes. The so-called interchangeability of "l" and "r" is found, and other sounds are adopted from the Tumbuka language. Regarding the clicks, Elmslie recorded, thirty years ago, the three positional types as in Zulu, viz. : ɿ, ʈ, and ɓ, and added the following note : " Only among the older Ngoni people may all the clicks be heard as in Zululand. The dental click, being the easiest, takes the place of the others. None of the incorporated peoples have adopted the more difficult q and x clicks, and the Ngoni, not compelling their subjugated people to speak Ngoni, a new dialect has appeared, having various combinations of consonants as substitutes for clicks. The clicks are not destined to survive long among the Ngoni." ² There are, however, still to be found Angoni who use clicks in their speech to this day ; though in most cases the velar explosive element (k) is all that remains.

No. VI

The Origin of the Zulu Clicks

Our study of the clicks in South Africa has revealed the fact that there are definitely used as speech-sounds clicks of no less than six positional types,³ viz. : Bi-labial, Dental, Palato-alveolar, Alveolar, Retroflex, and Lateral. Of these we have noticed that both Cape Bushmen and ɕḥỵ: Bushmen used Nos. 2, 3, 4, and 6, the former using in addition No. 1, and the latter No. 5. Hence each tribe of Bushmen used **five** positional types of click. Further, the four types common to each tribe of Bushmen are used by the Hottentots. Then, of these four types, the Zulu-Xosa peoples use Nos. 2, 3, and 6, and the Sandawe of East Africa also Nos. 2, 3, and 6. From these data it would seem feasible to conclude that the Bushmen who used and still use more clicks than any other people, were the parents of the clicks, and that through them a limited number of these sounds was passed on to the Hottentots. The Hottentots, then, having four positional

¹ See *Introductory Grammar of the Ngoni (Zulu) Language as spoken in Mombera's Country*, by W. A. Elmslie, 1891.

² p. 2.

³ There seem to be further discoveries awaiting investigators in h̄aŋum Bushman.

types of click, left three of these types with the East African Sandawe in their migration southwards. Evidently the Hottentots were strongest along the fertile south-east coast, so that it was the Zulus who came most into contact with them in the vanguard of the Bantu migration southwards, and acquired three types of click as part of this contact influence. It is possible also that the Zulus acquired a certain amount of this influence direct from the Bushmen, as they were to be found in close touch with them until comparatively recent times. No doubt the Sutos borrowed to a certain extent from the Zulus, but their having a retroflex nasal click points to direct contact with Bushman influence as well.

No. VII

An Examination of the Phonetic Peculiarities of Ukuteta, Ukutefula, and Ukutekeza

The Zulu with which we have been concerned throughout this investigation has been the Ukukuluma, or pure Zulu; but there are several dialectal variations which are due to definite influences. Both English and Dutch are having a certain influence on Zulu. Thonga in the north has an influence called **ukuvulavula**, and Suto in the west an influence called **kubua**. But the real dialectal influences, which we examine hereunder, are those of **uketeta**, of which the main representative is Xosa, **ukutefula**, of which the main representative is Qwabe, and **ukutekeza**, represented by Swazi.

(i) *The Phonetic Peculiarities of Xosa*¹ (**uketeta**)

Xosa shares much in common with Zulu in its phonetics. The system of tone-sequence is much the same as in Zulu, e.g. ⁵ ⁴ **wé:na** (thou), ³ ² ⁹ **afé:mi** (citizens), ⁷ ⁴ **vá:la** (shut), ³⁻⁵ ⁴ **ɪntʔo** (thing), ³ ⁹ **kʔú:thi** (to us), etc.

The vowels are the same as in Zulu, and the rules for the occurrence of high and low qualities of mid-forward and mid-back are the same.

Both explosive and implosive **-b** are found, the latter being much more noticeably implosive than even in Zulu, e.g. ³ ⁹ **bá:la** (write), ⁵ ⁴ **ḅá:la** (count), ³ ⁹ **bú:la** (thresh), ³ ³⁻⁵ ⁴ **ufá:wə** (my father).

¹ These notes were written after considerable investigation with a MuXosa named Gordon Zidumbu from Kaffraria, a man of about 38 years of age.

Simple -k is not found in Xosa, its place being taken by the ejective form ($k^?$), e.g. $k^?ú:thi$ (to me), $uk^?ú:thi$ (to say), $k^?ú:ño$ (to them).

The velar nasal is used on its own merits quite frequently in addition to its use before $k^?$ and g , e.g. : $uŋgá:lə$ (arm), $uŋk^?ó:mə$ (beast), $iŋajá:nə$ (blue ibis), $uŋó:ŋə$ (a person's name), $ukú:thi ŋá:$ (to stare open-mouthed), $iŋajá:f:lə$ (a paralysed person).

"p," "t," and "k" are each found with ejective and aspirated forms, e.g. $i:p^?ulú:a$ (plough), $i:mp^?i$ (army), $phá:ja$ (yonder); $t^?ó:la$ (shoot arrow), $thé:tha$ (speak); $k^?ú:jə$ (to him), $khá:fa$ (kick).

The unvoiced velar fricative is found as in Zulu, but with rather more scrape, e.g. $t^?á:xu$ (mercy !), $xó:la$ (draw out). Xosa has the peculiarity, however, of employing the voiced velar fricative (g) instead of the Zulu voiced glottal fricative ($ɦ$), e.g. $i:gó:pa$ (a fabulous insect), $i:gaú:za$ (noisy eater), $i:gá:ŋə$ (dop brandy), $gáŋgázé:la$ (roar like fire), $guzú:la$ (grind away stone), $i:gwá:mmbugwá:mmbu$ (voracious eater), $i:gwá:na$ (small assegai).

$kx^?$ is found as in Zulu, e.g. $i:kx^?á:tʃ^?i$ (pride). So too are used s , $ts^?$, v , w , j , z , ndz , f , as for example : $sá:la$ (remain), $ts^?á:la$ (pull), $phá:nts^?i$ (down), $vá:la$ (shut), $wé:la$ (cross), $jí:ma$ (stand), $i:zín:t^?ə$ (things), $izé:ndzə$ (deeds), $afú:ju$ (hot).

In addition to $tʃh$ (spelt in Xosa *tsh*), Xosa uses two sounds unknown to Zulu, viz. $cə?$ (spelt *ty*) and $cəh$ (spelt *ty'*), and also the voiced corresponding sound $ɟ$. Examples : $tʃhó:na$ (sink), $cə?é:la$ (tell), $cə?á:la$ (plant), $ucə?wá:la$ (beer), $cəhá:la$ (push), $cəhí:la$ (reveal), $ɟó:ba$ (besmear). $cə?$ in Xosa takes the place of Zulu $tʃ^?$, and Xosa $ɟ$ corresponds to Zulu $ɖg$.

Xosa uses p , as does Zulu, e.g. $pá:ŋga$ (cure) and $pá:la$ (be unaccustomed); but in addition has the same nasal followed by voiced aspiration, $ɸi$, e.g. $ɸí:la$ (stuff full), $ɸí:la$ (push away).

$ɬ$, $ntɬ^?$, $ɧ$, and $ndɧ$ are used as in Zulu, e.g. $ɬá:la$ (dwell), $intɬá:la$ (dwelling-place), $ɧú:la$ (pass by), $i:ndɧu$ (house).

In Xosa there is a greater wealth of click forms than in Zulu, though only the three positional types are found. For each of these types there are : (1) unvoiced, (2) aspirated, (3) voiced, (4) nasal, (5) nasal-voiced-aspirated, (6) voiced preceded by velar nasal, and (7) unvoiced preceded by velar nasal. Examples :

- (1) ^{3 3-8 9} i:á:la (side), ^{3 9} ṭá:la (begin), ^{5 4} ʒé:la (tell).
 (2) ^{3 9} ɬá:ɬa (recover health), ^{5 4} ṭhú:ʒa (drive), ^{3 9} ʒhɛ:la (slaughter).
 (3) ^{3 9} ʒó:ʒa (rejoice), ^{5 4} ʒí:ʒa (finish), ^{5 4} ʒɛ:kʰa (slander).
 (4) ^{5 4} ɬɛ:da (help), ^{3 9} ɬá:m̩da (prevent), ^{5 4} ɬi:la (become drunk).
 (5) ^{3 9} i:ɬa (grass), ^{5 4} ɬfi:ɬa (lie down), ^{5 4} ɬfi:ma (go fast).
 (6) ^{3 3-8 9} ɬɬɬá:m̩mbu (roots), ^{3 3-8 9} ɬɬɬɛ:le (cold), ^{3 3-8 9} ɬɬɬɔ:lo (noise).
 (7) ^{3 3-8 9} ɬá:m̩ (an expert), ^{3 3-8 9} ɬṭá: (bald person), ³ ɬsú: (splash !).

(ii) *The Phonetic Peculiarities of Qwabe*¹ (ukutefula)

The outstanding characteristic of ukutefula is the substitution in many cases of j for Zulu l. The tone-system and general phonetic system are the same as for Zulu.

l is retained in isiqwabe in the prefixes and concords of Classes 2 and 6 in the singular, e.g. :

- ^{2-4 4 3 3-4 3-8 9} ú:thi ðlkhú:ju (big stick), ^{4 9} lwá:mi (mine), ^{3 3-5 4 9} lwáphukí:je (it is broken), ^{3 9} ló:dwa (it alone), ^{2-5 6 3 3-4 3-8 9} i:zwi ðlkhú:ju (big word), ^{3 9} lá:mi (mine), ^{3 3-5 4 9} líphej:je (it is ended).

In other cases l of Zulu is replaced by j of Qwabe, e.g. :

- ^{3 3 2 2 9 9} ésiɬɬɬgwi:mi (in the white man's language), ^{3 3 2 9} ɬáʒé:ja (s'ng), ^{3 9} já:phə (there), ^{3 3 2 9} jápha:na (yonder), ^{3 9} jé:zi (these), ^{3 3-5 5 6-3 9} úhambbi:je (he went), ^{3 3 3-5 4} áʒaʒi:ji (two), ^{3 9} thú:ja (be silent), ^{3 9} khá:ja (cry), ^{3 9} jé:ji (this), ^{3 9} jó:ju (this), ^{6 3-5 4} jjó:na (it is it), ^{2 2-4 3 3 3 9} jó:ʒu úʒú:ntʰu (this humanity).

In certain cases the l is dropped altogether, or is so slight a j that it is inaudible, e.g. :

¹ Notes taken after an investigation of the speech of Dick Neube, a Qwabe native born about 1880 at Umhlali near Stanger. He had been in Johannesburg a considerable time, frequently visiting home.

^{2 2} ^{2-4 3 3} ^{3-5 4} ⁶ ⁶ ³ ³ ³ ²
 uŋkʔùuŋkʔú:u (God), jé:ndza ó:khu (do this), khó:na ó:khu
 (this one).

In Qwabe, when the 1st class singular prefix precedes a stem commencing in *j*, the prefix is *umu-* not *um-*; examples :

³ ^{22-8 8} ⁹ ³ ^{22-8 9} ³ ^{22-8 9} ³ ²²⁻⁸ ⁹
 ùmuju:ŋŋgu (white man), ùmuji:jo (fire) or ùmoí:jo, ùmuje:ndze (leg),
³ ²²⁻⁸ ⁹ ^{22-4 8-3-8 8} ⁹
 ùmujo:tha (ashes); but notice *umzi:mmba* (body).

I noticed a hesitancy in the voicing of *z* and *v* with this Qwabe speaker; the following examples show this : ^{3-2 8-9 9} ^{6 6} ^{3-6 6}
^{6-3 3} ⁹ ^{6-3 9} ^{6-3 9} ^{2-4 6-3} ^{6-3 9}
szó:ŋkʔε (all times), *szú:sza* (obtain), *fvú:ka* (wake), *ù:fvεŋθváne*
 (butterfly). There is no hesitancy in the case of the affricates, as exemplified with *ŋθv* in the last example.

(iii) *The Phonetic Peculiarities of Swazi*¹ (*ukutekeza*)

Swazi is perhaps the extreme type of *ukutekeza*, that which is nearer to Zulu being *isilala*, several examples of the phonetic peculiarities of which are given by Bishop Colenso in his *First Steps in Zulu-Kafir*, page 4. I note the following peculiarities of Swazi :—

(a) Zulu *th* corresponds to Swazi *tsh*, except when followed by *u*, *o*, *w*, or *æ*, when Swazi retains *th*. Examples :

⁶⁻⁸ ⁹ ^{6 6} ³ ⁹ ³ ³⁻⁵ ⁴ ³ ⁹
 ŋgí:tshi (I say), ŋgijatshá:nza (I love), umú:tshi (tree), tshé:ŋga
 (barter), tshé:la (pour) :

But, ⁴ ³ ⁹ ³ ⁹ ³ ⁹
 fatshá:thu (three), thú:ma (send), thú:tsha (carry away),
³ ⁹ ³ ⁴ ⁹ ³ ³⁻⁵ ⁴
 thó:la (pick up), o:thæ:ni (in the thing), umú:thwa (Bushman).

Notice ⁶⁻³ ³⁻⁴ ³ ⁹
 wá:tshumú:ntu (the man said), because it is a contraction
 from ⁶⁻³ ⁹
 wá:tshi (he said).

(b) Swazi employs *mp*, *nt*, and *ŋk* where Zulu uses *mpʔ*, *ntʔ*, and *ŋkʔ*. Examples :

³ ³⁻⁵ ⁵⁻³ ³⁻⁵ ⁴ ³ ³⁻⁸ ⁹ ² ²⁻⁴ ³⁻⁸ ⁹
 intó:m̄bi (maiden), í:ntó (thing), impú:nzi (duiker), íŋkomá:tʔi
³ ³⁻⁵ ⁴
 (cow), íŋkó:ŋka (bush-buck).

¹ Notes taken from a examination of Nduku Nkosi, a Swazi born about 1870 near Mbabane, Swaziland. He has lived most of his life at Mbabane, but visited Johannesburg for a few months each time in 1898, 1907, 1913, and 1924.

(c) Swazi employs $p^?$, $t^?$, and $k^?$ as Zulu when uninfluenced by a homorganic nasal. If anything the ejection is slighter in Swazi than in Zulu. Examples :

$p^?eú:ka$ (fall over), $t^?ú:ba$ (crumble up), $úkuk^?a:k^?a$ (to surround).

The aspirated forms *ph*, *th*, and *kh* are also used as in Zulu.

Examples :

$phá:nsi$ (down), $úkukhá:na$ (to shine), $inkú:khú$ (fowl).

For the use of *th*, see section (a).

(d) Zulu *z* is in Swazi $t^?$, but Zulu *ndz* is in Swazi either *nz* or *nd* with different examples :

<i>Zulu.</i>	<i>Swazi.</i>
$zà:mazá:ma$ (wave about)	$t^?à:mat^?á:ma.$
$ábafá:zi$ (women)	$bafá:t^?i.$
$izink^?ó:mò$ (cattle)	$t^?ink^?ó:mò.$
$umú:zi$ (kraal)	$umú:t^?i.$
$ngiáé:zi$ (I am seated)	$ngiáé:t^?i.$
$ink^?ú:ndzi$ (bull)	$inkú:nzi$ or $inkú:nzsi.$
$imp^?ú:ndzi$ (duiker)	$impú:nzi$ or $impú:nzsi.$
$amá:ndzi$ (water)	$amá:ndi.$
$ja:ndi:za$ (it flew)	$ja:ndi:nda.$

(e) η is sometimes used in Swazi in place of Zulu ηg , e.g. $ná:\eta u$ for $ná:\eta g u$ (here he is).

(f) In Swazi when the homorganic nasal precedes a fricative an affricate is not formed as in Zulu ; e.g. $insé:phé$ (springbok), $iná:nda$ (good fortune), $in:fi$ (ostrich), $amá:nka$ (strength), $inkú:nzi$ (bull).

(g) *b*, *β*, *ɬ*, *ɰ*, *ʃ*, and *tʃ^?* are found as in Zulu ; *h* always takes the place of Zulu *x*, but with my informant there was no clear distinction between *h* and *ɦ*, there seemed to be a slight voicing in each case.

(h) Perhaps the most striking feature of the Swazi difference is the substitution of the dental click for every other click in Zulu, Swazis use the dental variety only, whether voiced, unvoiced, aspirated or nasal. Thus :

<i>Zulu.</i>	<i>Swazi.</i>
^{3 9} ǃá:la (begin)	^{3 9} ǃá:la.
^{5 4} ǃó:sa (relate)	^{5 4} ǃó:sa.
^{5 4} ǃhú:sa (drive)	^{5 4} ǃhú:sa.
^{2-4 3 9} ǃ:ǃé:le (left-handed person)	^{2-4 3 9} ǃ:ǃé:le.
^{3-2 9} ǃ:sa (digging stick)	^{3-2 9} ǃ:sa.

University of the Witwatersrand, JOHANNESBURG.

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