

IX.—THE PHONETIC STRUCTURE OF THE SECHUANA
LANGUAGE. By DANIEL JONES, M.A.

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THE Sechuana language is the third in importance of the South African Bantu languages, the two more important ones being Zulu and Xosa (Kaffir). It is spoken in Bechuanaland, the Orange Free State, and in parts of Rhodesia, the Transvaal, and Cape Colony. The number of people speaking the language is difficult to compute, but it is probably somewhere near 750,000.

My work on this language was done in collaboration with Mr. S. T. Plaatje (plá:ki), who belongs to the Rolong (barolo:ŋ) tribe, and is a native of Mafeking (marikè:ŋ), one of the chief centres where the Sechuana language is spoken.

The object of this paper is to describe the pronunciation of Sechuana, and incidentally to show how important it is that a proper phonetic analysis should be made in order to understand the grammatical structure of such a language.

The Sechuana language appears to contain twenty-eight phonemes, i.e. twenty-eight sounds or small families of sounds which are capable of distinguishing one word from another. These twenty-eight phonemes are not adequately represented in any of the five conventional orthographies at present in use (see Plaatje, *Sechuana Proverbs*,¹ p. 13). In international phonetic orthography they would be written with the following letters: p, b, t, ʃ, k, tʃ, m, n, ɲ, l, r, ʁ, s, ʃ, ʒ, x, h, w; i, ɛ, e, a, o, u, u.

Several of these phonemes have variant forms in certain circumstances. The chief of these are ʃ, k, tʃ, l, w, a,

¹ Published by Kegan Paul, 1916.

which, in certain cases, take the values *j*, *c*, *tʃ*, *l* (or *d*), *ɥ* (also *ʍ*), and *ʌ* respectively.

We now give a few brief notes on such of the above sounds as present difficulty to the English learner. Further information will be found in the introduction to the *Sechuana Reader*, published by the University of London Press.

CONSONANTS.

p, *t*, *k*, are pronounced with closed glottis when emphasized. This gives the consonants a peculiar hollow sound. These variants may be written *p'*, *t'*, *k'*. Thus, the word meaning "a request" is pronounced either *tò:pò* or (with emphasis) *t'ò:p'ò*.

ɟ is the voiced palatal plosive (voiced front stop, in Sweet terminology); it is the plosive consonant corresponding to the semivowel *j*. *j* (the English sound of *y* in *yes*) is sometimes substituted for it in rapid speech. Examples: *xò:ɟā* ("to eat"), *ɟākā* ("like this").

c is the breathed (voiceless) sound corresponding to *ɟ*. It is the sound heard in certain kinds of dialectal French instead of *k* in such words as *quai*, *quinze* (*ce*, *cē:z* for *ke*, *kē:z*). In Sechuana *c* occurs as a variant of *k* in similar cases. Thus, *kɪ:mɔ* ("thick") is often pronounced *oɪ:mɔ*; *plà:ki* (Plaatje) is often pronounced *plà:ci*.

c also occurs as the plosive element of two important "affricate" consonants, which may be written *cʃ*, *cʒ*. Examples: *p:cʃā* ("dog"), *cʒɛ:cʒɛ* ("please").

ɬ is a *t* exploded laterally. It seems to be always combined with closed glottis, with the result that the sound has rather the effect of a click. It is not, however, a true click; the air passes outwards, not inwards. Examples: *xo-bɔ:ɬɔ* ("to search for"), *xo-tʃlɔ:ɬɔ:lɔ* ("to jump about").

ɲ is the voiced palatal nasal consonant. It is much the same as the normal French "*n* mouillé". Example: *ɲà:lɔ* ("marriage").

r is rolled, and may be syllabic. Example: r̄r̄a ("father").

ɾ is the breathed bi-labial fricative; it is rather like the sound made in blowing out a candle. Example: leɾi:ɾi ("darkness").

ʃ is much the same as the English sound of *sh*, but pronounced with spread lips. Example: seʃe:ʃe ("flower").

The symbol ʎ represents a very peculiar sound. It has tongue-position about as for the German sound *ç* (the *ch* of *ich*) combined with a curious kind of lip-rounding. The lips are rounded and protruded, but the essential thing is that the upper teeth must be touched by a point of the inner side of the lower lip, which is about half an inch from the edge of the lip; this point is a little further back than the point of articulation of a lip-teeth whistle. Example: xo-ʎè:tsɔ ("to finish up").

x is much the same as the Scotch sound of *ch* in *loch*, but is accompanied by distinct uvular vibration. Example: xo-xò:xɔ ("to pull").

x also occurs in the affricate group **kx**. Example: kxò:sɪ ("king", "chief").

h occurs both as an independent sound and as the "aspiration" of p, t, k, tɪ (which then becomes tɪh), cʃ, c, and ts. Examples of aspiration: phò:hɪ ("eland"), thà:tɔ ("strong"), khù:khu ("beetle"), xo-tɪhɔ:tɪhɔ ("to filter"), p:cʃhē ("ostrich"), cʃhɛ:ū ("white"), xo-tshɛ:xɔ ("to laugh").

w is as in English, except before a, in which case it starts from an o-position rather than from an u-position.

ɥ is an advanced variety of w, similar to the French consonantal sound of *u* in *nuit*. It is used in Sechuana as a special member of the w-phoneme when situated between ɟ or ɓ and a front vowel. Example: ke-bò:pɥe ("I have been seen").

The symbols ɺ, ɹ denote breathed (devoiced) l and w. ɺ only occurs in the aspirated form of tɪ; ɹ only

occurs in the groups $t\dot{w}h$, $t\dot{w}h$. Examples: $t\dot{w}h\dot{a}:n\dot{i}$ (a kind of wild cat), $t\dot{w}h\dot{a}:t\dot{w}h\dot{a}$ ("prize").

The sound \dot{l} , which occurs as a variant of the l-phoneme, is a very peculiar sound. In making it the tongue-tip is placed to one side against the hard palate (behind the teeth-ridge), and is then given a kind of flap forwards and downwards. The sound has an effect intermediate between the English d and l . \dot{l} is used in Sechuana as a member of the l-phoneme whenever the following sound is i or u , but in no other cases.

VOWELS.

i is a very "close" variety. Example: $le\dot{r}i:\dot{r}i$ ("darkness").

ε is half-way between i and e . Example: $p\dot{i}:\dot{r}p\dot{i}:\dot{r}$ ("first of all").

e is a fairly close e , similar to the French sound of \acute{e} . Example: $le\dot{t}e\dot{b}e:\dot{l}e$ ("a Matabele").

ε is a very open e -sound, similar to the French sound of \grave{e} . Example: $t\dot{s}h\dot{e}\dot{s}\dot{e}:\dot{b}\dot{e}$ (a kind of antelope).

a is a middle a -sound tending to back. Example: $t\dot{h}\dot{a}:\dot{t}\dot{a}$ ("strong"). It becomes a fully back a after w , as in $n\dot{t}\dot{w}\dot{a}$ ("war"). When the preceding syllable contains u , the a -phoneme takes the value Λ (a sound of the type of the English vowel in *up*). Example: $p\dot{u}:\dot{l}\dot{a}$ ("rain").

o is a very open o -sound, rather similar to the Southern English vowel in *hot*. Example: $p\dot{a}:\dot{s}$ ("bull").

o is a fairly close o -sound, similar to the French vowel in *beau*. Example: $m\dot{o}:\dot{t}h\dot{o}$ ("person").

u is an extremely close and over-rounded o -sound. Example: $m\dot{m}\dot{o}:\dot{k}u$ ("chaff").

u is a rather advanced variety. Example: $kh\dot{u}:\dot{k}hu$ ("beetle").

TONES.

Voice-pitch or "tone" forms an essential and characteristic feature of the Sechuana language. Every

syllable in a Sechuana sentence has to be said with a certain pitch of the voice relatively to the other syllables of the sentence. If the pitch of a syllable is changed, the word may be converted into another totally different word.

The number of words differing by "tone" only is enormous. The following are a few examples :

botsè:nò ("entrance").	botsè:nò ("madness").
tshèki:ǀo ("purification").	tshèki:ǀo ("prosecution").
leku:rú ("big boy").	leku:ru (a kind of bird).
sehù:li ("wild duck").	sehù:li ("an animal that grazes").
xo-bà:ká ("to stop doing", "to bake").	xo-bá:ká ("to praise").
xo-bù:ǀa ("to speak").	xo-bu:ǀa ("to skin").
xo-tábò:xa ("to run").	xo-tabò:xá ("to be torn").

The following are the main facts regarding the tones.

There are five main and easily recognizable tones ; they are represented in this paper by the following notation :

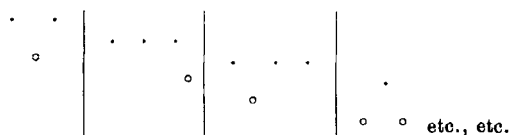
- A high-level tone, represented thus, **ā**.
- A mid-level tone, which is left unmarked.
- A low-level tone, represented thus, **a**.
- A high-falling tone, represented thus, **ǎ**.
- A low-falling tone, represented thus, **ǎ**.

All these tones will be found in the above list of words distinguished by tone.

In addition to these five main tones there exists a curious way of modifying the tones for certain grammatical purposes. At certain points in sentences (these points being apparently determined mainly, if not entirely, by grammatical considerations) the whole of the tones have to be made slightly lower than what they were in the previous part of the sentence, and during all the rest

of the sentence the tones do not return to their original level. They continue to the end of the sentence at the lower pitch, unless there comes another of these special grammatical points, in which case the tones all go down another stage. The amount of descent may be taken for practical purposes to be one semitone, but it is really often less than this.

The following diagram illustrates the sort of way in which the tones gradually descend in a Sechuana sentence. The black dots represent high-level tones; the circles represent mid-level tones:



The mark ' is used in this paper to denote these points of tone lowering.

The following is an interesting point in connexion with the low-level tone. If a vowel has the low-level tone, there is always an alternative pronunciation which consists in devoicing the vowel completely. Thus, the word for "springbok" (said by itself) is *tshè:phè*, but it would as often as not be pronounced *tshè:phɛ*. No other tone can be treated in this way.

The consonants *m*, *n*, *ɲ*, *ŋ*, *r*, are often syllabic, and in such cases they have tones just like vowels. Examples are the first *n* in *mo:n:na* ("man"), the *m* in *xõmpɛ:ŋ* ("to-day"), the first *r* in *r:rũ* ("father"). The fact that these consonants have tones is no doubt the secret of the mysterious "heavy *m*" which we hear about in various books on African languages. What people have called "heavy *m*" is no doubt simply *m* with a special tone on it.

One of the most interesting points relating to the Sechuana tones is their use in grammar.¹ The tones are

¹ I am indebted to Mr. H. E. Palmer for much help in connexion with the elucidation of the grammatical functions of tones in Sechuana.

used not only for distinguishing one word from another, but also very largely for distinguishing one grammatical form from another. In fact, Sechuana words have "tone-inflections".

Thus, Sechuana nouns have a sort of tone declension. No noun has less than three tonal "cases", and some have as many as eight. For instance, *tshè:phē* ("springbok") has four tonal cases, viz. *tshè:phē*, *tshēphē*, *tshēphē*, *tshēphē*. *kū:bū* ("hippopotamus") has five tonal cases, viz. *kū:bū*, *kū:bū*, *kubū*, *ku'bū*,¹ *kubū*. *ŋ:kwe* ("tiger") has seven tonal cases, viz. *ŋ:kwe*, *ŋ'kwe*, *ŋkwē*, *ŋkwē*, *ŋkwē*, *ŋ'kwē*, *ŋ'kwē*.²

It is worthy of note that certain prepositions govern certain tonal cases of some nouns. Compare :

<i>tq:ū</i> ("the lion").	<i>lī tq:ū</i> ("with the lion").
<i>lekokq:mq</i> ("the bundle").	<i>lī lēkokq:mq</i> ("with the bundle").

The verbs have a wonderful system of tone conjugation. In the ordinary grammars of the language the verb meaning "see" is written *bōna* (the *o* denoting that the sound is an open *o*); in reality this one written form stands for eight different grammatical forms of the verb, each of which has its own definite use! These forms are (in international phonetic orthography) *bò:nq*, *bq:nq*, *bōnq*, *bong*, *bōnā*,³ *bōnā*, *bōnā*, *bōnā*.³

The following are examples of some of these forms :

ka bō:nq ("I saw"),
ka bōnā phōlorō:lq ("I saw the animal"),
ka bōnā kā-bonq:kq ("I saw quickly"),
ke-ne-kē bq:nq ("I was seeing"),

¹ The mark ' means that the final *ū* has a slightly lower pitch than the last preceding high-level tone in the sentence.

² The mark ' means that the second syllable has a slightly lower pitch than the first.

³ The mark ' here means that any succeeding high-level pitch in the sentence is slightly lower than that of the last syllable of the verb.

ŋ kā bōnā kā-bonā:kɔ ("I can see quickly"),

ke-ne-kē bonā' phōlōrō:lɔ ("I was seeing the animal").

After collecting many thousand sentences, Mr. H. E. Palmer has come to the conclusion that there are seven tonal conjugations in Sechuana. Each of these conjugations has its own characteristic features, and must be learnt by the student who wishes to be able to speak the language properly.

Various syntactical relations are shown by the system of tone-lowering described above. Thus, when a noun subject is expressed, the verb regularly undergoes lowering of pitch relative to it. Again, the direct object undergoes lowering of pitch relative to most of the verbal forms. These two phenomena are shown by the following examples:

taū' ū bōnā' phōlōrō:lɔ ("the lion sees the animal").

taū' ū bātla' phōlōrō:lɔ ("the lion is searching for the animal").

(Note.—bōnā' and bātla' belong to different tone-conjugations, the infinitives being xo bōnā and xo bātla respectively.)

In taū' ū bātla kā-bonā:kɔ ("the lion is searching quickly") there is no lowering after bātla, because kā-bonā:kɔ is not a direct object. In ŋ kā bātla phōlōrō:lɔ ("I can search for the animal") we see one of the exceptional cases in which the direct object does not undergo lowering.

Tone, then, forms an immensely important feature of the Sechuana language both from the semantic and from the grammatical point of view. It is evident that in the future the subject of tone must be taken much more seriously than hitherto by those who write grammars or other manuals of Bantu languages. I have reason to believe that conditions similar to those described in this paper prevail, not only in Sechuana, but in most, if not all, Bantu languages.
