A Phonetic Sketch of Naron around Ghanzi

KAGAYA, Ryohei

Institute for the Study of Languages and Cultures of Asia and Africa

0. Introduction

San (Bushman) languages are usually divided into three dialectical groups, i.e., the northern, the central and the southern group, each group consisting of many vernacular (tribal) languages (dialects). And it is said that communication by these vernacular languages exists with in a group but not beyond it. The Naron language belongs to the central group.

In this study, each word was pronounced at least three times on one occasion by one of the two main informants Gu and Du (see below), to check his idiosyncratic free variation of pronunciation. Furthermore, the same word was pronounced by different informants to check free variation of pronunciation among informants, as occasion demanded. In speech communication between Naron informants and the author, interpreters were used, i.e., Naron speech was translated into Setswana (Tswana language, one of the Southern Bantu languages) or English by interpreters who speak Naron, English and Setswana, and vice versa.

All six informants were born around Ghanzi. Strictly speaking, they were born at different places around Ghanzi (see below), but at the present they are living beside Tswana village of Ghanzi, constituting the speech community of Naron. At times, they live with people of other groups of San, but both the mother tongue and everyday language of all these informants are Naron. Some of them can also speak Setswana as well as Naron (see below).

The informants are listed below. Each of two letters parenthesized is an abbreviated form of each informant's name, which shall be used when there is a difference in the pronunciation among informants.

(1). guek'ai, /eni (Gu, male, about 35 years old). He was born and raised on a farm near Ghanzi, where many Tswana people worked. Therefore, he began to speak Setswana naturally, although he was never forced to speak Setswana or any other foreign languages on the farm. This is also true for the other informants who were born or grew up on the farm managed by the Tswana people or the European immigrants. He has never moved out of Ghanzi. He speaks no other language except for Naron and Setswana.

(2). du/owa, /in/ai (Du, male, about 50 years old). He was born on a farm, about 20 km north of Ghanzi. His parents are Naron and his wife is a
Lozi woman (one nation of Bantu). He can speak both Naron and Setswana.

(3) /hara (Kh, male, about 50 years old). He was born at ≠na≠ai near Kalkfontein of Ghanzi district, and his parents are Naron. When he was still young, his parents moved to a farm, near Ghanzi, to work, and there he grew up. He speaks both Naron and Setswana.

(4) /eko, kamae (Te, male, about 55 years old). He was born at a place about 10 km north of Ghanzi, and he has not moved out of Ghanzi. His parents are Naron and he speaks both Naron and Setswana.

(5) hansi (Ha, male, about 25 years old). He was born in Dekar, about 40 km north-east of Ghanzi, and grew up there until about 8 years of age. He then moved to Ghanzi and has never gone out since then. He speaks only Naron.

(6) /ani (Da, male, about 40 years old). He was born on a farm, about 5 km north of Ghanzi. His parents are Naron and so is his wife. He speaks only Naron.

1. Syllable structure

The following syllable structures are found, where “C” stands for a consonant, “V” for a vowel and “N” for a syllabic nasal.

1. V
2. CV
3. N

Of these, the CV type occurs most frequently, and the N type least frequent. Most of words collected in this study consist of one to three syllables, words consisting of more than three syllables are rare, except in compounded words.

2. Vowels

Each vowel is phonetically characterized by “colour,” “length” and “quality of voicing”. By the colour, which depends on “place of articulation” (tongue position), vowels are roughly divided into five sounds, i.e, [i, e, a, o, u].

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1) Phonetic sounds shall be surrounded by brackets, and phonemes by apostrophes to avoid the confusion caused by a click noise symbol “/”. Phonemes may be also described without apostrophes.

2) Each vowel has a few phonetic variants, for example, the vowel i has variants [i] and [I], [I] being articulated further low and back compared with [i]. These variants are either pronounced very closely to the variants of the nearest vowel, or as though they belonged to the different vowel.

This phenomenon in the Naron language is described by Bleek as follows (1928): “The Naron speak with their teeth almost or quite closed. In consequence it is difficult to distinguish vowels clearly. They apt to run into one another.” The same phenomenon is also found in other San languages. For example, Maingard describes the phenomenon
and by the length, vowels can be also divided into the short vowels and the long vowels. The vowels of Naron are further divided phonetically by the difference in voice quality as shown below. The distinction is phonetically based on both presence or absence of nasalization and whether the voicing being harsh or not. The latter harsh quality of voicing is called “faucalization” by Traill (1973), or “croaking” by Snyman (1970).

1. Plain vowel: This is heard neither harshly nor nasalized.
2. Nasalized vowel: This is heard nasalized, but not harshly.
3. Pressed vowel: This is heard harshly, but not nasalized.
4. Nasalized pressed vowel: This is heard both harshly and nasalized.

Based on the above phonetic characteristics, the following vowels are found in this study.

<table>
<thead>
<tr>
<th>Quality</th>
<th>Short vowel</th>
<th>Long vowel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plain</td>
<td>i, e, a, o, u</td>
<td>ii, ee, aa, oo, uu</td>
</tr>
<tr>
<td>Nasalized</td>
<td>ë, ǣ, ǭ</td>
<td>ëë, Æ̂, Ǣ, Æ̝, Æ̟</td>
</tr>
<tr>
<td>Pressed</td>
<td>ǣ, ǭ</td>
<td>ǣ</td>
</tr>
<tr>
<td>Nasalized pressed</td>
<td>ð</td>
<td>ðð</td>
</tr>
</tbody>
</table>

of the Dzu/ʔoa:si language (one dialect of /khu language of the northern group of San) as follows (1957): “The most outstanding feature of the vocalic system of the Eastern dialect is the existence of ‘sound area’, within which pairs of phonemes having fairly close tongue position to each other seems to move freely and are inter-changeable. These fluctuations occur not only in the speech of one individual speaker as against to another, but may and do occur in the speech of the same individual speaker at different times, within the limits of the particular ‘sound area.’ To describe these vowels, he uses the term “sound area” of the five vowels as follows:

(1). i-e, (2). e- (3). a- (4). o- and (5). u-o.

In the ≠honi language of the northern group of San, Doke describes the phenomenon as follows (1956): “This (i-phoneme) is variously heard with different spakers, and with the same speaker on different occasion as i (front close) or as e (front half-close).” (Words in the first parentheses are the author’s)

In this study, vowels were phonemically determined by the tendency of the sound distribution of available samples (which were uttered at various occasions by an individual or by different informants), when the sound fell in an ambiguous area and when it did not make any minimal pairs with other vowels. Such a phoneme determination occurred mainly when the sound was between [i] and [e] or between [u] and [o].

In her book *The Naron*, Phonetically Bleek found [i, y, e, ɛ, ɔ, a, ɑ, ø, o, u] for short vowels and [iː; eː; ɛː; aː; ɔː; oː; uː] for long vowels (1928). Furthermore, she states that: “all vowels and diphthongs can be nasalized.” On the other hand, in *A Bushman Dictionary*, Bleek states that the number of vowels are phonemically five, i.e. ‘i, e, a, o, u’ according to place of articulation (1956).

4) This is called “clean vowels” by Snyman (1970).
The followings are examples of vowels classified by the quality of voicing.

1. Plain vowel:
   aisa, (mother); au, (to give); ae, (hole, pit); aoba, (father); ui, (to help); k'ai, (face); k'ao, (arrow); xom, (sand); xam, (lion); /om, (to hide); /am, (two); /'ara, (to be defeated); /'are, (few); /oe, (to sleep); /oi, (to refuse); / nai, (to sing); / nai, (to jump); / nui, (fat); / noe, (moon); / noa, (stone); / hao, (knife); / hau, (forest); / ai, (to run after); / hae, (to stop); / hoe, (doctor); lam, (penis); lom, (heavy); laru, (to fly); lari, (power, strength); lai, (bracelet); /'ao, (neck); baa, (father); bee, (to fear); bii, (milk); boo, (to see); doo, (to put); duu, (eland); tsaa, (water); / fe, (work); /=aa, (to enter); /=ii, (to call); /=oo, (to toast); /=aa, (to know); /=oo, (white).

2. Nasalized vowel:
   /ʔo/, (hair); /ʔo wagon, (arm, bone); /năm, (to love); !æ, (to clean); k'ai, (liver); /=ʔo, (food); !a, (to wait); !o, (to go); k'aï, (to laugh); /'o, (to kill); /=nû, (to sit); /=o, (smoke); /=ʔe, (to think); ðe, (to stand); /=ʔa, (wind).

3. Pressed vowel:
   /dðe, (salt); /døbe, (root); /dam, (tongue); /nâm, (to search); /ơro, (nail); /=ơno, (star); /=nãq, (louse); gãq, (to bite); gõq, (to play);
   gõoba, (new).

4. Nasalized pressed vowel:
   /=əm/=əma, (ant); /a, (to wear); /nô, (to take off); /ô, (teeth, by
   Kh. Gu and Du pronounced the word / /ôò).

Only the above four are the words having the nasalized pressed vowels found in my samples.

As to length of vowel, no minimal pair between a short and a long vowel was phonemically found in this study. The duration of vowel seems to depend mainly on the context of the word, i.e., when the word is pronounced in isolation, the duration of the vowel terminating the word tends to be long and when it is pronounced sentence-medially, the same vowel tends to be short. (The vowel also tends to become long when it has a contour tone.) Therefore, vowel sounds shown earlier are phonemically interpreted as follows: The plain and nasalized vowels consist of five vowels, i.e., [i, e, a, o, u] and [i, ê, ã, ô, ū], respectively. The

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5) In *A Bushman Dictionary*, Bleek states that 'i, e, a' of the five vowels occur both short and long. In the case of 'u', she quotes Doke's two descriptions, that is, in the Chu: language of the north-west Kalahari, "it (the vowel 'u') ... occurs both short and long. (Doke, 1925, p. 139)" and in the ≠khoman language of the southern group, "This vowel (u) occurs short. When long two phonemes are found, viz, uu, ou, diphthongs. (Doke, 1956, p. 64) (Words in parentheses are the author's) No reference is made to the length of 'o' in the dictionary.
pressed and nasalized pressed vowels consist of two vowels, i.e., [a, ə] and [ä, ã], respectively.

Minimal pairs between the plain and the corresponding nasalized vowels were found in this study (see below), but no other minimal pair was found. On the other hand, in the words pronounced by Te, the following idiosyncratic free variation was found between a plain and a pressed vowel:

≠nåa, or ≠nåə (meaning "louse, to dance")

In conclusion, it may be plausible that in the vowels of Naron, "nasalization" is phonemically significant, whereas both the feature "pressedness" and the "length" are not.6,7

The followings are examples of minimal pairs between the plain vowels and the nasalized vowels. In the examples, the tone of each word is not described, but both words of the minimal pair have the same tone, respectively. This is true for all words exemplified as minimal pairs in this manuscript.

≠nuu, (back): ≠nûu, (to sit)
≠hoo, (to get wht): ≠hôô, (brain)
≠hai, (eye): ≠haï, (paper, by Gn)
!aa, (to want): !ââ, (lower part of back)
!hae, (to dive): !haë, (to saw)

3. Consonants

3-1. Plain consonants8

Phonemes of the plain consonants found in this study are shown in the following table. In the table, the phonetic variants are also shown within parentheses and are liked by a line to the phoneme to which they belong. Phonemes surrounded by angled-brackets are found in loan words only.

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6) In her book *The Naron*, Bleek does not refer to the pressed vowels or the nasalized pressed vowels. She states only the following (1928): "All vowels and diphthongs can be nasalized."

In Maingard’s description of the //ganakwe language (1957), which belongs to the central group, the plain and the nasalized vowels can be found, but the pressed and the nasalized pressed vowels cannot.

7) In the northern and the southern groups of San, the pressed vowels are phonemically distinctive from the plan vowels or the nasalized vowels. (see, e.g. Snyman, 1970; Trail, 1973)

8) Bleek describes the following plain consonants in her Book *The Naron* (1928).

\[
\begin{array}{cccc}
\text{b,} & \text{v, f,} & \text{w, m,} \\
\text{d, t,} & \text{z, s, r,} & \text{n} \\
\text{j,} & \text{s, f} \\
\text{g, k, kh, k', k",} & \text{kk', k"x,} & \text{x,} & \text{ŋ} \\
\text{h} \\
\end{array}
\]

She comments up on the above sounds as follows:
Table 1

<table>
<thead>
<tr>
<th>manner</th>
<th>place</th>
<th>bilabial</th>
<th>dental/velar</th>
<th>palatal</th>
<th>velar</th>
<th>glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>stop</td>
<td>voiced</td>
<td>b</td>
<td>d</td>
<td>g</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>voiceless</td>
<td>⟨p⟩</td>
<td>t</td>
<td>k</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>aspirated</td>
<td>(th)</td>
<td>(t′)</td>
<td>(kh)</td>
<td>k′</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ejected</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>affricate</td>
<td>voiced</td>
<td></td>
<td>(dz)</td>
<td>dṣ</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>voiceless</td>
<td>(ts)</td>
<td>tʃ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ejected</td>
<td>(ts′)</td>
<td>tʃ′</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>fricative</td>
<td>voiced</td>
<td>(β)</td>
<td>f</td>
<td></td>
<td>x</td>
<td>(h)</td>
</tr>
<tr>
<td></td>
<td>voiceless</td>
<td>(ɸ)</td>
<td>f</td>
<td></td>
<td>x</td>
<td>(h)</td>
</tr>
<tr>
<td>nasal</td>
<td>non-syllabic</td>
<td>m</td>
<td>n</td>
<td>⟨ny⟩</td>
<td>η</td>
<td></td>
</tr>
<tr>
<td></td>
<td>syllabic</td>
<td>mᵝ</td>
<td>nᵝ</td>
<td></td>
<td>η</td>
<td></td>
</tr>
<tr>
<td>tapped</td>
<td></td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>glide</td>
<td></td>
<td>(w)</td>
<td>(y)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b; [b, B]

Prevoicing (glottal vibration before articulatory release) is usually heard. In the case of Gu.'s pronunciations, the prevoicing tends to become short and the voice attack (the characteristics of glottal vibration at the initiation) abrupt. (sharp). This is true for all voiced stops uttered by Gu (They are symbolized [B, D, G], respectively). 'b' is found in either word-initial or intervocalic position.

bii, (milk); boo, (to see); buri, (to inform);
/thabi, (wound); dañbe, (salt); goroba, (cock);

In intervocalic position, 'b' tends to become [β], e.g. [khoβu] (perspiration, by Gu). It also tends to become [w] in intervocalic position, e.g. [/khawə] or [/khaba] (upper part of back; by Te.), [/ʔawa] or [/ʔaba] (thread made out of sinew; by Kh.) (see Table-2).

1. b at the end of a word is pronounced p by some individuals, otherwise there is no p.
2. f and v only occur in imitations of sound, as of birds.
3. n in the middle of a word often approaches a non-rolled r.
4. l does not occur. In foreign words it is replaced by r.
5. j occurs in endings, probably as a contraction of a vowel.
6. h and x occur alone and after gutturals.
7. The last (i.e., k"x) is a strong plosive croak.

(Words in parentheses are the author's)
p; [p]  
This is found word-initially, which may be a loan word.9)  
piri, (by Kh.) or puri, (by Gu) (goat)  
The minimal pair between 'p' and 'b' is found as follows:  
puri, (goat) vs buri, (to inform) (by both Kh.)

d; [d, D]  
This is found in either word-initial position or intervocalic position.  
duu, (eland); debe, (salt); dai, (gemsbok); dom, (throat) dare, (trip,  
to travel); dao, (road);  
gaadoe, (to swim); /nuudom, (river or water place, by Gu. 135-I)

t; [t, th, t']  
[t] is found in either word-initial or intervocalic position. In word-initial  
position, the following vowels are [a, i, u].  
tu, (rain); tabee, (thunder); tikiba, (my elder brother); aitu (eight,  
loan word)  
[th] is found in word-initial position only. The frequency is low. The  
following vowels are [e, o]. [th] occurs in complementary distribution with [t]  
in word-initial position.  
qhoi, (wound); thoowa, (yesterday, by Gu. & Du.) theri, (dull);  
[t'] is found in word-initial position of only two words. This may be a  
free variant of [th], since [t'] of the word [t'owa] pronounced by Te ([t'owa]  
means 'yesterday') is replaced by [th] in the pronunciation of Gu. and Du.  
t'owa, (yesterday, by Te) or thoowa, (by Gu & Du), t'oi, (clean,  
beautiful, by Te & Ha)

g; [g, G]  
This is found in either word-initial or intervocalic position.  
gai, (to grow, win); goro, (fowl); goee, (cattle); guu, (sheep); guru,  
(to do, make);

9) In her A Bushman Dictionary, Bleek refers to the voiceless bilabial stop 'p' as follows:  
"The unvoiced labial plosive is not a Bushman sound. In the purer languages it is only  
found in borrow words, or in imitations of noise." Maingard also states as follows (1958):  
"p is not a genuine !kx3 phoneme. As far as my observations go, it has been found only  
in loan words, e.g. pi:pi (pipe), tsipi (iron), and pili (goat)." Doke states as follows  
(1996): "To the same phoneme (voiced labial stop b) evidently belongs p. . . . The  
pronunciation p is heard often with words of Hottentot origine, particularly among proper  
names, as atap . . . , but it must be observed that ≠khomani speaker as often omits this  
final -p . . . . When the ≠khomani does use this final -p he does not complete the enunciation,  
producing only the stop consonant and not releasing the explosion." (Words in parentheses are the author's)
ãagú, (dog); dàngi, (thank you, loan word); sóŋguri (dream);

k; [k, kh]

[k] is found in either word-initial or intervocalic position.
kin, (person); ketere, (kettle; loan word); koko, (lightening); kom, (to hear); kai, (many); kako, kaokoe, (man);
≠ ?amaka, (sky); sikjsi, (six, loan word); k’aokoe, (husband, male)

[g]/aikoe, (wife, female); seeku, (marriage); tikiba, (my elder brother); //?aaku, (to fight);

[kh] is found in word-initial position only. The frequency is low. This is a free variant of [k], because the word “person” is pronounced in two different ways, i.e, [koe] or [khoe] (by Ha). [kh] occurs when the following vowel is [o], but this does not occur in a complementary distribution with [k] in my data, unlike in the case of ‘t’.

k’; [k’, ǩ, q’]

[k’] is found in word-initial position and the frequency is high. Very often, this is produced at post-velar position and the ejective noise is relatively strong and long and it bursts out abruptly (i.e, [q’]). Idiosyncratically, informant Du tends to pronounce this sound with a stronger and longer noise, compared with that of [q’], as shown in Table 4 where the sound is symbolized [ǩ].

In many cases, each of these sounds has a short voiceless period between the offset of the ejective noise and the initiation of the following voicing.

k’ai, (face); k’am, (mouth); k’oo, (flesh, meat); k’a, (to drink); k’on, (to wipe out, make clean)

The minimal triad among ‘g, k and k’’ is found as follows:

kai, (to grow); kai, (many); k’ai, (face);
Such minimal triad is not found among ‘d, t and t’.

dʒ; [dz, Dz, dʒ]

‘dʒ’ is found in either word-initial or intervocalic position. The frequency is low. [Dz] (which are phonetically characterized by the very short prevocing and the strong voice attack, compared with [dz]) is an idiosyncratic free variant of [dʒ], as shown in Table 2.

dʒara, (bird); dʒam, (pole); dʒaan, (bitter); ti!oihadʒi, (my younger sisters); /nidʒa, (younder)

tʃ; [ts, tʃ]

‘tʃ’ is found in either word-initial or intervocalic position. The frequency is high. [ts] is a free variant of [tʃ], as shown in Table 2.

tsaa, (water); tsano, (to cook); tʃoatʃoa, (to begin); tʃau, (hand);
tʃʃ, (work); tsamoo, (good-day, hellow);
ลำaatʃabe, (proper name of a bird); dutʃo, (which);

tʃ’, [ts’, tʃ’]
'tʃ’' is found in word-initial position only. Sometimes, there is a short
voiceless period between the ejective noise and the beginning of the following
vowel. 'ts’ ’ is a free variant of 'tʃ’', as shown in Table 2.
ts’aa, or tʃ’aa, (to steal); ts’aa, or tʃ’aa, (to run away); tʃ’ii, (buttock);

Φ, [Φ]
[Φ] is found in either word-initial or intervocalic position. This is found
in only two words borrowed from English that are uttered by Gu and Te.
Φoo, (four); ΦaiΦu, five);

s, [s, ʃ]
[ʃ] is found in either word-initial or intervocalic position.
[s] is a free variant of [ʃ] as shown in Table 2.
sikisi, (six); som, (shadow); sukurui, (sugar); sao, (cold season); saa,
(to take rest); see, (to take); subu, (soft, light);
/nïʃika, (now, at present); /nïʃi, (this); aisa, (mother);

h; [x, h]
[x] is found in either word-initial or intervocalic position.
 xom, (sand); xoo, (to give back);
iixabxa, (or, by Ha.);
[h] is found in either word-initial or intervocalic position.
hāā, (horse); hoo, (to find);
 tiloihadi, (my young sisters); /oahi, (dumb);
tsanho, (to cook); iihaba, (or, by Da.)

 It is not clear whether [x] is phonemically distinctive from [h] in word-
initial position, but in intervocalic position, they vary freely.
[iihaba] by Da. or [iixaba] by Ha, (or);

r; [ɻ]
‘r’ is found in intervocalic position except one word.
/an/are, (eyebrow); //nara, (shoulder); !hari, (Tsuwana people’s local
beer); sore, (tabacco); goro, (fowl); //naru, (edge);

 There is only one example in which ‘r’ occurs initially, i.e, [ra] (personal
pronoun meaning “I”). This is also pronounced [da].

w; [w]
This is found in intervocalic position only. In most cases, it follows the
vowel [o].
y; [y]

This is found in intervocalic position only. In most cases, ‘y’ immediately follows [i], and in other cases it follows [a] or a syllabic nasal [ŋ]. It may be also assumed that [y] is a process sound, as well as in the case of [w].

10) In the other case, when a noun is qualified by an adnoun, [w] may be derived through a phonological rule which inserts the [w] between one of the back vowels ‘o, u’ and the immediately succeeding vowel. The example of this insertion was not found in this study, but in the !xū language of the northern group, Snyman refers to the w-insertion as follows (1970, p. 95): “they (regular descriptive adnouns) require a transitional -a which takes the form of glides -wa or -ya: (i) -wa between singular nominals ending in -o and -u and regular adnouns. (Words in parentheses are the author’s)”

[w] may be also derived from ‘u’ when another vowel follows immediately after it. In A Bushmen Dictionary, Bleek refers to it as follows: “... in these cases (i.e. ua, ue, u) it (i.e. u) often glides into w. (Words in parentheses are the author’s)”

11) In the !xū language of the northern group, when a noun belonging to certain classes is qualified by the following adnoun, a “transitional a” is required between the two, and then the transitional a takes the form of ya if the noun terminates in i or e (Snyman, 1970). This phenomenon can be interpreted phonologically as the y-insertion in certain environments. This y-insertion is also true in Naron in the case of that the transitional a is required between the noun and the following adnoun. (But, in my data of Naron, the transitional a seems to be required optionally, since it is not clear whether the nouns of Naron may be divided into different classes, or not.) Including the above, in Naron, it can be said that y is always inserted between i and the following vowel a or o, irrespective of the environments. (One apparent exception to the above is found in the word [≠kxaio] meaning “hello!, good day!”, the tone of which consists of high + high + mid tones. But, when the word is pronounced with the tone high + high + high-falling, y appears between the i and o, i.e. [≠kxaiyo]. This must be further studied from the view points of both the tone system of Naron and the relationship between the tones and the syllabification.)

Most of cases where y is found in this study can be explained by the above y-insertion. The remaining y found in this study is in [≠kxhaya] (paper) and [gaŋya] (kaŋje) in Setswana, name of Tswana village.

In the case of [≠xhaya], it is also pronounced [≠hai] by other speakers. Then, if the terminating vowel [a] of [≠xhaya] is a kind of morphological unit, it is inferred that [≠xhaya] is derived from ‘≠hai+a’, and, the y can be explained the above.

The only exception not explained by the above is [y] of [gaŋya], which is the village name of Tswana people and is [kaŋje] in Setswana. This shall be left in future.
(loincloth); siya, (to destroy); gaŋya, (Kanye, a proper name of Tswana people’s village) ≠xhaya, (paper, by Du. This is also pronounced [≠hai] by Gu & Kh).

m; [m].

This is found in either word initial or intervocalic position.
moo, (to see. This is also pronounced [boo] or [hoo] by Ha, or [maa] by Te.); mai, (meal); !oma, (hunting net); mari, (money. ← Setswana); ≠?amaka, (sky); mama, (grandparent);

ŋ. [ŋ].

This syllabic nasal [ŋ] is found in word final position, except in one word given below.
k’aŋ, (mouth); daŋ, (tongue); doŋ, (throat); /oŋ, (navel); /aŋ, (taste); xoŋ, (sand); /aŋ, (sun).
The word initial [ŋ] is found in only one word.
ŋʃi, (food);

n, [n].

This is found in either word initial or intervocalic position.
nì, (old, used); ≠thoni, (elbow); /deni, (fly, insect, worm); ≠ño; (star); !nônà, (three); koena, (people); naiŋ, (nine, ←English);

ŋ, [ŋ].

This syllabic nasal [ŋ] is found in word medial or word final position only.
The frequency is low.
sebũ, (seven, ←English); naiŋ, (nine, ←English); tsãŋho, (cooking, to cook);

ny, [ŋ].

This is found in word initial position of only one loan word.
nyaa, (no, ←Setswana);

ŋ, [ŋ].

This is found in word medial position or as a particle following an object of a sentence. In the latter, neither the function nor the meaning is clear for me.
songuri, (dream);
kako mu ko tʃaŋ ŋk’a, (the man drinks water);
This is also found in the word [≠?ŋ:] meaning “food, to eat”. The word is the only example where the syllabic nasal occurs immediately after a click consonant (see below).
<table>
<thead>
<tr>
<th>word</th>
<th>Gu</th>
<th>Du</th>
<th>Te</th>
<th>Ha</th>
<th>Kh</th>
</tr>
</thead>
<tbody>
<tr>
<td>back (21-1)</td>
<td>//kbawa</td>
<td>//khawa</td>
<td>//khawa</td>
<td>//kxaba</td>
<td></td>
</tr>
<tr>
<td>thread (77)</td>
<td>/?awa</td>
<td>/?awa</td>
<td>/?aba</td>
<td>/?aba</td>
<td></td>
</tr>
<tr>
<td>face (17)</td>
<td>k'ai</td>
<td>k'ao</td>
<td>k'ao</td>
<td>k'ao</td>
<td></td>
</tr>
<tr>
<td>liver (35)</td>
<td>k'ai</td>
<td>k'aí</td>
<td>k'aí</td>
<td>k'aí</td>
<td></td>
</tr>
<tr>
<td>arrow (75)</td>
<td>k'ao</td>
<td>k'ao</td>
<td>k'ao</td>
<td>k'ao</td>
<td></td>
</tr>
<tr>
<td>to wipe out (414-2)</td>
<td>k'ono</td>
<td>k'ono</td>
<td>k'ono</td>
<td>k'ono</td>
<td></td>
</tr>
<tr>
<td>male, man (224)</td>
<td>k'aokoe</td>
<td>k'aokoe</td>
<td>k'aokoe</td>
<td>k'aokoe</td>
<td></td>
</tr>
<tr>
<td>deaf (222)</td>
<td>gaa≠e</td>
<td>kaa≠e</td>
<td>koe</td>
<td>koe</td>
<td></td>
</tr>
<tr>
<td>person (226)</td>
<td>koe</td>
<td>koe</td>
<td>koe</td>
<td>koe</td>
<td></td>
</tr>
<tr>
<td>tongue (11)</td>
<td>Dâm</td>
<td>dâm</td>
<td>dâm</td>
<td>dâm</td>
<td></td>
</tr>
<tr>
<td>milk (25)</td>
<td>Bii</td>
<td>bii</td>
<td>bii</td>
<td>bii</td>
<td></td>
</tr>
<tr>
<td>to move (40n)</td>
<td>Gori</td>
<td>gorî</td>
<td>gorî</td>
<td>gorî</td>
<td></td>
</tr>
<tr>
<td>salt (53)</td>
<td>Dâbe</td>
<td>dâbe</td>
<td>dâbe</td>
<td>dâbe</td>
<td></td>
</tr>
<tr>
<td>wall (109-2)</td>
<td>Goetfo</td>
<td>goetfo</td>
<td>goetfo</td>
<td>goetfo</td>
<td></td>
</tr>
<tr>
<td>road (132)</td>
<td>Dao</td>
<td>dao</td>
<td>dao</td>
<td>dao</td>
<td></td>
</tr>
<tr>
<td>to swim (139)</td>
<td>Gaadoe</td>
<td>gaadoe</td>
<td>gaadoe</td>
<td>gaadoe</td>
<td></td>
</tr>
<tr>
<td>year, age (167)</td>
<td>Gori</td>
<td>gorî</td>
<td>gorî</td>
<td>gorî</td>
<td></td>
</tr>
<tr>
<td>to hear (277)</td>
<td>Gom</td>
<td>gom</td>
<td>gom</td>
<td>gom</td>
<td></td>
</tr>
<tr>
<td>to grow (396)</td>
<td>Gai</td>
<td>gai</td>
<td>gai</td>
<td>gai</td>
<td></td>
</tr>
<tr>
<td>to play (399)</td>
<td>Goêe</td>
<td>goêe</td>
<td>goêe</td>
<td>goêe</td>
<td></td>
</tr>
<tr>
<td>water (143)</td>
<td>tsaa</td>
<td>tsaa</td>
<td>tsaa</td>
<td>tsaa</td>
<td></td>
</tr>
<tr>
<td>to boil (346)</td>
<td>tsaa</td>
<td>T'jaaa</td>
<td>tsaa</td>
<td>T'jaaa</td>
<td></td>
</tr>
<tr>
<td>to run away (348-2)</td>
<td>ts'âaa</td>
<td>ts'âaa</td>
<td>ts'âaa</td>
<td>ts'âaa</td>
<td></td>
</tr>
<tr>
<td>to steal (372)</td>
<td>ts'aaa</td>
<td>ts'aaa</td>
<td>ts'aaa</td>
<td>ts'aaa</td>
<td></td>
</tr>
<tr>
<td>bird (63-1)</td>
<td>D'gara</td>
<td>D'gara</td>
<td>D'gara</td>
<td>D'gara</td>
<td></td>
</tr>
<tr>
<td>tabacco (56)</td>
<td>sore</td>
<td>sore</td>
<td>sore</td>
<td>sore</td>
<td></td>
</tr>
<tr>
<td>to find (392-1)</td>
<td>hoo</td>
<td>oo</td>
<td>haa</td>
<td>haa</td>
<td></td>
</tr>
<tr>
<td>to come (412)</td>
<td>aa</td>
<td>aa</td>
<td>aa</td>
<td>aa</td>
<td></td>
</tr>
</tbody>
</table>
3.2. Click (progressive) consonants

Phonemes of click consonants are shown in the Table 3.

Table 3

<table>
<thead>
<tr>
<th></th>
<th>denti-alveolar</th>
<th>alveo-prepalatal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>burst-type</td>
<td>affricate-type</td>
</tr>
<tr>
<td>1. voiced</td>
<td>g≠</td>
<td>g/</td>
</tr>
<tr>
<td>2. voiceless</td>
<td>≠</td>
<td>/</td>
</tr>
<tr>
<td>3. aspirated</td>
<td>≠h</td>
<td>/h</td>
</tr>
<tr>
<td>4. glottalized</td>
<td>≠?</td>
<td>/?</td>
</tr>
<tr>
<td>5. ejected</td>
<td>≠’</td>
<td>/’</td>
</tr>
<tr>
<td>6. nasalized</td>
<td>≠ n</td>
<td>/n</td>
</tr>
</tbody>
</table>

In the following, articulation of clicks shall be stated in brief (in detail, see e.g. Doke, 1925 or Traill, 1973).

3.2.1. Place of articulation

Along the vocal tract, there are two closures, one of which is called the "primary closure" and the other the "secondary closure". The secondary closure is on the velar position for all types of clicks, and the primary closure is on denti-alveolar for [/] and [≠], or on alveo-prepalatal for [£] and [!]. First, the primary closure is released with ingressive noise (click noise) and immediately following it, the secondary closure is released. The place of the explosion of the primary closure is roughly the tongue blade for [£], [≠] and [!] types, and the side-edge(s) of the tongue for [/] type.

3.2.2. Manner of articulation

3.2.2.1. Click noise

Click noise caused by the primary release is phonetically divided into two types.12) Here, for convenience, one is called "burst-like" noise type, the duration of which is relatively short. The other is called "affricate-like" noise, where the duration of the noise is relatively long. [≠] and [!] belong to the former and [/] and [£] to the latter.13) Click noise can be also divided into two types, i.e., in one, the dominant frequency range of the noise is low and in the other,

12) The difference in click noise characteristics has been said to be “with friction vs without friction, gradual release vs sudden release, affricated release vs non-affricated, or delayed release vs not-delayed etc., from view points of the manner of the release to cause the noise characteristics (see e.g. Traill, 1973).

13) Most languages of the southern group of San has a bilabial click [ḅ], the noise characteristics of which belongs to the "affricative-like" noise (cf. Traill, 1973), but languages of the northern and the central groups do not have the bilabial click (see e.g. Traill, 1973).
it is relatively high. [i] and [u] belong to the former and [≠] and [/] to the latter (Kagaya, 1978).

3.2.2.2. Click accompaniments

Each click sound may be given the phonetic accompaniment by the manner of the release of the secondary closure (i.e., the velar closure), the laryngeal adjustments and/or the nasalization. By accompaniments, click sounds are divided phonetically and phonemically into approximately ten, depending on each dialect.\(^{14}\) The maximum number of phonetic accompaniments found in this study, based on the material from all informants' utterance samples, are 11 for [/], 12 for [≠], 11 for [u] and 13 for [i]. The maximum number of accompaniments found in one individual is eight for [/] by Gu, eight for [≠] by Gu, Du and Ha, eight for [u] by Gu, Du and Ha, and eight for [i] by Gu, Du and Ha.

To distinguish the above accompaniments phonetically, the author noticed the following phonetic characteristics: (1) Voice onset time from the offset of the click noise. (2) The noise characteristics and the duration after the click noise, i.e., the noise except the click noise. (3) The nasalization. Table 4 shows the accompaniments found in this study.

<table>
<thead>
<tr>
<th>Accompaniment</th>
<th>Phonetics</th>
<th>Phonemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>voicing+click</td>
<td>g/</td>
<td>g ≠ g</td>
</tr>
<tr>
<td>click+voiced formant transition</td>
<td>/g</td>
<td>≠g</td>
</tr>
<tr>
<td>click+no formant transition</td>
<td>/</td>
<td>≠</td>
</tr>
<tr>
<td>click+voiceless formant transition</td>
<td>/k</td>
<td>≠k</td>
</tr>
<tr>
<td>click+glottalization</td>
<td>/?</td>
<td>≠?</td>
</tr>
<tr>
<td>click+aspiration</td>
<td>/h</td>
<td>≠h</td>
</tr>
<tr>
<td>click+long aspiration</td>
<td>/H</td>
<td>≠H</td>
</tr>
<tr>
<td>click+velar fricative</td>
<td>≠kx</td>
<td>≠kx</td>
</tr>
<tr>
<td>click+velar fricative+aspiration</td>
<td>/kxh</td>
<td>≠kxh</td>
</tr>
<tr>
<td>click+ejective noise</td>
<td>/k'</td>
<td>≠k'</td>
</tr>
<tr>
<td>click+ejective with strong velar fricative</td>
<td>/kx'</td>
<td>≠kx'</td>
</tr>
<tr>
<td>nasalized voicing+click</td>
<td>n/</td>
<td>n ≠ n</td>
</tr>
<tr>
<td>click+nasalized voicing</td>
<td>/n</td>
<td>≠n</td>
</tr>
</tbody>
</table>

\(^{14}\) The number of the accompaniments found by researchers are as follows:

<table>
<thead>
<tr>
<th>Language</th>
<th>Number</th>
<th>Researcher</th>
</tr>
</thead>
<tbody>
<tr>
<td>≠khomani (S)</td>
<td>phonetically 9</td>
<td>Doke, 1936.</td>
</tr>
<tr>
<td>'khû (S)</td>
<td>phonemically 8</td>
<td>Maingard, 1958</td>
</tr>
<tr>
<td>!xō (S)</td>
<td>phonetically 11</td>
<td>Traill, 1973</td>
</tr>
<tr>
<td>Dzu/ʔoa:si (N)</td>
<td>phonemically 8</td>
<td>Maingard, 1957</td>
</tr>
<tr>
<td>(a dialect of 'khu)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'xû (N)</td>
<td>phonemically 14</td>
<td>Snyman, 1970</td>
</tr>
<tr>
<td>Naron (C)</td>
<td>phonetically 12</td>
<td>Bleek, 1928</td>
</tr>
</tbody>
</table>

In the case of Naron, Bleek does not clearly state the number of the accompaniments.
In the above table, the difference in voice onset time among [g'], [l], and [k], for example, is as follows: In [g'], the prevocing before the offset of the click noise is clearly heard. Actually, the voicing initiates before the onset of the click noise. The voice onset of [l] is heard at almost the same time as the offset of the click noise, and the voiced formant transition after the click noise is heard. In the case of [k], the initiation of the voicing is heard clearly after both the offset of the click noise and the following voiceless formant transition. [l] shows a sound not distinguished definitely by voice onset time, i.e., it is heard like [g] on one occasion and like [k] on another occasion, or a sound where the formant transition is not clearly heard, but there is no silent period between the offset of the click noise and the initiation of the following voicing unlike in the case of [l].

Each accompaniment of no. 1, 2, 4, 6, 12, and 13 in Table 4 may be phonetically further divided into two groups. In one group, the formant transition after click noise is heard as dental stop’s formant transition, and in the other, it is heard as velar stop’s formant transition. The transitional characteristic is inherent to a word pronounced by an individual in most cases, but it varies from informant to informant and from word to word. For example, the word meaning “to be tired” is pronounced [//toe] with the dental stop’s formant transition by Gu, but the same word [//koe] with the velar stop’s formant transition by Du. From the result, it may be plausible that the transitional characteristic is one of the allophonic characteristics of click accompaniments. The transitional characteristic also seems to depend on the place of articulation of the primary closure. That is, both ‘/’ and ‘≠’ tend to be pronounced with dental stop’s formant transition and both ‘//’ and ‘!’ with velar stop’s formant transition.

Minimal pairs of click sounds, based on the phonetic discrimination in Table 4, are shown in the following, where the characteristics of formant transition are unified into ‘k’.

1. ‘/’ type:
   Gu. [/?oi], (bag netted out of leather strips): [/oi], (one).
   Ha. [/kham], (urine): [/kam], (day)

2. ‘≠’ type:
   Du. [≠aa], (plain field): [≠naa] (to dance)

but the number can be derived from following the description in her book The Naron (1928): “Clicks may precede the vowel directly, or be followed by any guttural, or by n, h, or x.” Because the number of the gutturals is 8, the number of the accompaniments is phonetically 12.

“S” in the parentheses stands for “Southern group of San”, “N” for “northern group” and “C” for “central group”.
[≠khoo], (to wipe): [≠oo], (to roast)

Te. [≠naa], (to dance): [≠khaa], (wide)
[≠ii], (to call): [g≠ii], (fat)

Ha. [≠ara], (friend): [g≠ara], (to allow)

3. ‘//’ type:

Gu. [//aï], (to hide): [//nai], (to jump)
[//oe], (to sleep): [//nœ], (moon)
[//awa], (to starve): [//khawa], (upper part of back)
[//gōō], (teeth): [//k’ōō], (bark)
[g//om], (walking stick?): [//nom], (cloud)
[g//oo], (chest): [//=oo], (to die)
[//khai], (to run after): [g//ai], (wife, female):
[//=ai], (family): [//=ai], (to hide)

Du. [//=oe], (to sleep): [//=nœ], (moon)
[gai], (to hide): [//=nai], (to jump)
[khoo], (pig): [//=k’oo], (to take off)
[khawa], (upper part to back): [//=gawa], (to starve):
[//=awa], (thread made out of sinew)

Te. [//=awa], (thread made out of sinew): [//=khawa], (upper part of back)

Kh. [//=aba], (thread made out of sinew): [//=kaba], (upper part of back)

4. ‘!’ type:

Gu. [ɬoo], (water place): [!]khoo], (pipe for smoking)

Du. [ɬaa], (to want, hope): [!]aa], (to know)

In the above minimal pairs found in the speech of each informant, the following points must be noticed: (1) there is no minimal pair among no. 2, 3 and 4, (2) no minimal pair between the two nasalized accompaniments, i.e., no. 12 and 13, and (3) no minimal pair among the “aspirated”, the “long aspirated”, the “velar fricative” and the “velar fricative with aspiration” accompaniments, i.e., no. 6, 7, 8 and 9. In the following, we shall discuss the phonemic relationship among the above groups of accompaniments (cf. Table 5a to 5c.)

At first, free variants found in Table 5a are [//=g], [//=] and [//=k] which phonetically distinguished by the difference in voice onset time counted from the offset of the click noise (see above). As shown in the table, the word meaning “taste” is pronounced [//=kam] or [//=am] by both Gu and Du, and the word meaning “to shoot” [//=gao] or [//=ao] by Ha. From these examples, it can be concluded at least for the click noise type of ‘//’ that [//=g], [//=] and [//=k] are free variants among informants. Furthermore, we may conclude that these three accompaniments are phonemically the same for other types of click noise, i.e,
‘/, ≠ and !’.

In the case of two nasalized accompaniments, no. 12 and 13 the two may be free variants, since the word meaning “hut” is pronounced [n'lo] or [l'no] by an individual, Ha. (The frequency of the accompaniment no. 13 is very low compared with that of no. 12.)

Another example of free variation is seen among the aspirated, the velar

<table>
<thead>
<tr>
<th>word</th>
<th>Gu</th>
<th>Du</th>
<th>Te</th>
<th>Ha</th>
<th>Kh</th>
</tr>
</thead>
<tbody>
<tr>
<td>grass (121)</td>
<td>d/aa</td>
<td>≠tu</td>
<td>≠du</td>
<td>g/aa</td>
<td>≠u</td>
</tr>
<tr>
<td>head (1)</td>
<td>≠tu</td>
<td>≠tu</td>
<td>≠du</td>
<td>≠tu</td>
<td>≠u</td>
</tr>
<tr>
<td>heart (56)</td>
<td>≠ao</td>
<td>≠ao</td>
<td>≠ao</td>
<td>≠ao</td>
<td>≠ao</td>
</tr>
<tr>
<td>teeth (13)</td>
<td>/gōō</td>
<td>/dōō</td>
<td>/gōō</td>
<td>/dōō</td>
<td>/gōō</td>
</tr>
<tr>
<td>nail (32)</td>
<td>/gora</td>
<td>/gora</td>
<td>/gora</td>
<td>/gora</td>
<td>/gora</td>
</tr>
<tr>
<td>taste (57)</td>
<td>/kam</td>
<td>/kam</td>
<td>/kam</td>
<td>/kam</td>
<td>/kam</td>
</tr>
<tr>
<td>to shoot (299)</td>
<td>/gao</td>
<td>/gao</td>
<td>/gao</td>
<td>/gao</td>
<td>/gao</td>
</tr>
<tr>
<td>to starve (331)</td>
<td>/awa</td>
<td>/awa</td>
<td>/awa</td>
<td>/awa</td>
<td>/awa</td>
</tr>
<tr>
<td>back (21-2)</td>
<td>!āā</td>
<td>!āā</td>
<td>!āā</td>
<td>!āā</td>
<td>!āā</td>
</tr>
<tr>
<td>joint (34)</td>
<td>!guru</td>
<td>!guru</td>
<td>!guru</td>
<td>!guru</td>
<td>!guru</td>
</tr>
<tr>
<td>to fly (337)</td>
<td>!garu</td>
<td>!garu</td>
<td>!garu</td>
<td>!garu</td>
<td>!garu</td>
</tr>
<tr>
<td>to die (350)</td>
<td>!gae</td>
<td>!gae</td>
<td>!gae</td>
<td>!gae</td>
<td>!gae</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>word</th>
<th>Gu</th>
<th>Du</th>
<th>Te</th>
<th>Ha</th>
<th>Kh</th>
</tr>
</thead>
<tbody>
<tr>
<td>body (47-1)</td>
<td>/khau!ʔoo</td>
<td>/kxhai!ʔoo</td>
<td>/khao</td>
<td>/khao</td>
<td>/khao</td>
</tr>
<tr>
<td>eye (5)</td>
<td>≠khai</td>
<td>≠khai</td>
<td>≠khai</td>
<td>≠khai</td>
<td>≠khai</td>
</tr>
<tr>
<td>elbow (29)</td>
<td>≠thōni</td>
<td>≠thōni</td>
<td>≠thōni</td>
<td>≠thōni</td>
<td>≠thōni</td>
</tr>
<tr>
<td>wing (64)</td>
<td>≠kxhama</td>
<td>≠kxhama</td>
<td>≠kxhama</td>
<td>≠kxhama</td>
<td>≠kxhama</td>
</tr>
<tr>
<td>paper (80)</td>
<td>≠khai</td>
<td>≠khai</td>
<td>≠khai</td>
<td>≠khai</td>
<td>≠khai</td>
</tr>
<tr>
<td>knife (70)</td>
<td>/khuo</td>
<td>/kxho</td>
<td>/khuo</td>
<td>/khuo</td>
<td>/khuo</td>
</tr>
<tr>
<td>pig (99)</td>
<td>/khaw</td>
<td>/khaw</td>
<td>/khaw</td>
<td>/khaw</td>
<td>/khaw</td>
</tr>
<tr>
<td>back (21-1)</td>
<td>/khaw</td>
<td>/khaw</td>
<td>/khaw</td>
<td>/khaw</td>
<td>/khaw</td>
</tr>
<tr>
<td>liquor (55)</td>
<td>/khar</td>
<td>/khar</td>
<td>/kxari</td>
<td>/kxari</td>
<td>/kxari</td>
</tr>
<tr>
<td>pipe (72-3)</td>
<td>/khoo</td>
<td>/kxho</td>
<td>/kxari</td>
<td>/kxari</td>
<td>/kxari</td>
</tr>
<tr>
<td>cloth (97)</td>
<td>/khai</td>
<td>/khai</td>
<td>/khai</td>
<td>/khai</td>
<td>/khai</td>
</tr>
<tr>
<td>to run (319-2)</td>
<td>/khoe</td>
<td>/khoe</td>
<td>/khoe</td>
<td>/khoe</td>
<td>/khoe</td>
</tr>
<tr>
<td>word</td>
<td>speaker</td>
<td>Gu</td>
<td>Du</td>
<td>Te</td>
<td>Ha</td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>snake (82)</td>
<td>/k'ao</td>
<td></td>
<td></td>
<td></td>
<td>/kx'ao</td>
</tr>
<tr>
<td>neck (18)</td>
<td>!khao</td>
<td>!kx'ao</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fricative, the velar fricative with aspiration and the long aspirated accompaniments which are shown in Table 5b. For example, the click sound of the word meaning “elbow” is pronounced [≠th] by Gu, Du and Te, but [≠H] by Kh. The click sound of the word meaning “eye” is also pronounced [≠kh] by Gu and Te, whereas [≠kx] by Du and Kh. The click sound of the word meaning “wing” is pronounced [≠kxh] by Du, but [≠kh] by Kh. Thus, it may be plausible that these accompaniments “aspirated”, “velar fricative”, “velar fricative with aspiration” and “long aspirated” are free variants in this group of Naron.

Thus, except the ejective with strong velar fricative, i.e, no. 11 in Table 4, it may be plausible that distinctive accompaniments of click sounds in Naron around Ghanzi are as follows:

1. voiced type: phonetically, no. 1 in Table 4
2. voiceless type: no. 2, 3 and 4
3. glottalized type: no. 5
4. aspirated type: no. 6, 7, 8 and 9
5. ejected type: no. 10
6. nasalized type: no. 12 and 13

The problem is in the phoneme determination of the accompaniment of the ejective with strong velar fricative. This accompaniment is found only in [lkx'ao] (meaning “neck”) pronounced by Gu and Kh, and [/kx'ao] (meaning “snake”) by Kh only, and it does not make any minimal pairs with any other accompaniments of click sounds. Therefore, it may be rather assumed that the accompaniment is a phonetic variant of the distinctive accompaniments already established, than that a distinctive accompaniment is specified for the accompaniment in question. Then, the phonemic accompaniment may be plausibly chosen as the “ejected” or the “aspirated”, since the word meaning “neck” is also pronounced ![lkhao] by Gu or ![lkxao] by Du, and the word meaning “snake” [/k'ao] by Gu or [/kx'ao] by Kh, as shown in Table 5c. But it is difficult to choose the one between the two.

Another approach to the above problem may be to assume that the distinctive accompaniment of ![lkx'] is different from that of [/kx']. Then, it may be considered that phonemically, the ![lkx'] belongs to the aspirated type ‘h’. But,
in the case of the [kx'], it is also difficult to choose one distinctive accompaniment between the ejected type ‘/’ and the aspirated type ‘/h’.

One of the plausible interpretations of the above may be that the accompaniment in question fluctuates phonemically from the aspirated accompaniment to the ejected one. The fluctuation of click accompaniments is also noted in the Dzu/?oa:s language (one dialect of the 'khu of the northern group) by Maingard (1957), and he showed examples ‘≠kai’ and ‘≠kx?ai’ (meaning “springbok”) etc., though he does not describe whether the fluctuations occur in an individual or among speakers.

1. Voiced: ‘g/, g≠, g/, g!’

Voicing is heard before the offset of the click noise. Actually, the voicing is heard before the onset of the click noise, i.e., the release of the primary closure. With the prevoicing, the formant transition, a dental transition or a velar transition, is also heard, but the transition characteristics are not distinctive cues, as mentioned earlier. The frequency of the voiced clicks is low.

g/aa, (grass); g/eni, (fly, insect, worm); g≠ii, (fat); g≠au, (bird); g≠obe, (bag); g'aa, (needle); gloi, (rope); g!ani, (chin); g//'ai, (wife, female); g//'oo, (chest);

2. Voiceless: ‘/ , ≠ , / , ! ’

The voice onset time varies ranging from "immediately after" the release of the secondary closure to "shortly after" the release of the secondary closure (see below), but voicing is never heard before the onset of the click noise. No aspiration is heard in any of the cases. The formant transition after the click noise is heard like dental transition or velar one, but they are free variants, as mentioned earlier, though ‘/’ and ‘≠’ tend to be heard like dental transition, and ‘/’ and ‘!’ like velar one. The frequency is the highest among all phonemic accompaniments.

/owa, (child, young); /oi, (one); /ana, (flower); /am, (sun); /ero, (flea); ≠ ii, (disease); ≠ ii, (to call); ≠ aa, (to enter); ≠ ara. (friend, ally); ≠ ao, (heart); ≠ oi, (nose); ≠ oō, (smoke); ≠ ee, (ear); ≠ u, (head); /ai, (to hide); /om, (to sleep); /oo, (tooth); /oe, (to lie down); /awa, (to starve); !ari, (power); !aa, (to want); !am, (penis); !uru, (knee); !oō, (to go, (walk); !oi, (younger brother or sister); !om, (heavy);

3. aspirated: ‘/h, ≠h, /h, !h’

This type may be characterized phonetically as an egressive noise after the click noise. By both the place of the noise-production and the duration of the noise, this type is divided into four phonetic groups, i.e., the pure aspiration, the velar fricative, the velar fricative with aspiration and the relatively long
aspiration, but they are free variants of each other, as mentioned earlier. The frequency is not high.

/ham, (urine); /hobe, (to lend, to borrow); /hoo, (gemsbok); /habi, (wound); ≠ haa, (wide); ≠ hai, (eye); ≠ hama, (wing); ≠ hōō, (brain); //hawa, //haba, (upper part of back); //hao, (knife); //hoe, (doctor); //hai, (to run after); //howa, (to get angry); !hoo, (pipe for smoking); !hari, (local beer of Tswana people); !hai, (clothes); !hoo, (to hold, possess); !hoe, (to run away);

4. glottalized: ‘/?; ≠ , //?, !?’;

This type has a short silent period immediately after the click noise, and the voicing starts all of a sudden after the short silent period. The formant transition of the secondary release is not heard. The frequency is not high.

/?ōwā, (leg, bone); /?ō, (hair); /?oi, (net-bag made out of animal skin); /?ee, (fire); /?ao, (blood); /?endaoka, (sometimes): ≠ ?āā, (wind); ≠ ?ee, (to drink); ≠ ?ano, (clean); ≠ ?ōō, by Kh and Ha, or ≠ ?q:, by Gu and Ha, (food, to eat); //?aba, (thread made out of sinew); //?oo, (to die); //?aa, (flower); //?ai, (family); //?ōwā, (arm); !?oo, (white); !?aa, (to know); !?ai, (to cut); !?ooka, (tomorrow);

5. ejected: ‘/’, ≠ ‘, //’, !’’;

This type is characterized by an ejective noise which occurs immediately after the onset of the click noise. In most cases, the ejective noise is produced at post-velar place, and it is relatively long and strong. The frequency is low.

/’ōō, (to kill); /’ao, (snake); /’ori, (filth, grim); ≠ ’ai, (to roast); ≠ ’owa, (to come out); //’ara, (to finish); //’oo, (to take of); !’am, (necklace); !’ai, (bracelet); !’ao, (neck);

6. nasalized: ‘/n, ≠ n, //n, !n ’;

This is characterized by nasalization, and in most cases, the nasalized voicing starts before the click noise. The frequency is high.

/nam, (to like); /noo, (fight); /nabo, (footwear); /nijika, (now); ≠ nui, (pubes); ≠ nūū, (to sit); ≠ naa, (to dance); ≠ nu, (black, dark); ≠ naq, (louse); //noe, (moon); //nai, (to jump); //nom, (cloud); //no, (bow); //nara, (shoulder); //nui, (fat); !nâm, (to search); !nāre, (foot); !nare, (to be drunken); !nōnā, (three); !nu, (hut);

APPENDIX: NOTE ON GRAMMAR OF NARON

1. Noun
1-1. Noun stem and the suffix
A noun is constituted by a stem and a suffix showing both the gender and the number.\textsuperscript{15} The suffixes are shown in the following. Words underlined are also found in Bleek’s The Naron (1928).\textsuperscript{16}

<table>
<thead>
<tr>
<th></th>
<th>singular</th>
<th>dual</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>masculine</td>
<td>-ba</td>
<td>-tsara, -t\textja</td>
<td>-\text/j\textowa</td>
</tr>
<tr>
<td>feminine</td>
<td>-sa, -\textja</td>
<td>-sara, -\textja</td>
<td>-d\textsi,\textsuperscript{17} -had\textsi</td>
</tr>
<tr>
<td>neutral</td>
<td>-\textempty</td>
<td>-kara</td>
<td>-ni, -ne, -na</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-ana, -ani</td>
</tr>
</tbody>
</table>

In the above, the -ana and -ani (neutral plural) tend to be used for a noun stem which terminates in a syllabic nasal. Examples are xamana (←xam-ana), xamani (←xam-ani, both mean “lions”) and /amana (←/amp-ana, means “days”).

A noun can be formed by two nouns juxtaposed. For example, du/owa (a young of eland) is formed by two nouns, du (eland) and /owa (child, young).

1-2. Personal pronoun

Personal pronouns are shown as follows.

1-2-1. Subjective

\textsuperscript{15} As to the noun suffixes, Maingard states as follows: “... the suffixes used to indicate them (gender and number of a noun) are the short forms of these pronouns (personal pronouns) (1961, p. 119).” (The words in parentheses are the author’s)

\textsuperscript{16} Noun suffixes found by Bleek (1928) are as follows:

<table>
<thead>
<tr>
<th></th>
<th>singular</th>
<th>dual</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>masculine</td>
<td>-b, -m*</td>
<td>-tf\textja, -tf\textja</td>
<td>-\textj\texti, -d\textsi, -kwa\textsuperscript{**}</td>
</tr>
<tr>
<td>feminine</td>
<td>-sa, -se, -s*</td>
<td>-f\textja, -f\textja</td>
<td>-s\texti, -f\texti</td>
</tr>
<tr>
<td></td>
<td>-\textja, -\textje</td>
<td></td>
<td></td>
</tr>
<tr>
<td>common</td>
<td>-\textempty</td>
<td>-khara</td>
<td>-ne, -ni, -n</td>
</tr>
</tbody>
</table>

In the above, she states that (1) the suffixes with single astartiks are used only for proper names, and those with double astartiks one only for men or personified animals, and (2) the -ba changes into -m before -e (to be), -di (possessive) and -kwe (with). Furthermore, she states that: “Anything particular strong, or tall and slender, is masculine; anything small and weak, or round is feminine. ... The right hand being the stronger hand is masculine, the weaker, the left, feminine; (1928, p. 53)"

\textsuperscript{17} The 5\textti (feminine plural) is interpreted as masculine, plural suffix by Bleek (1928), but it is consistently interpreted as feminine in this study (cf. 1-2-1). This is left for further study.
<table>
<thead>
<tr>
<th></th>
<th>singular</th>
<th>dual</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st person</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>masculine</td>
<td>—</td>
<td>tfam</td>
<td>//ai</td>
</tr>
<tr>
<td>feminine</td>
<td>—</td>
<td>sam</td>
<td>si</td>
</tr>
<tr>
<td>neutral</td>
<td>da, ra, ri, ru</td>
<td>kam</td>
<td>ta</td>
</tr>
<tr>
<td>2nd person</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>masculine</td>
<td>tfi</td>
<td>tfao</td>
<td>//ao</td>
</tr>
<tr>
<td>feminine</td>
<td>fi</td>
<td>sao</td>
<td>sao</td>
</tr>
<tr>
<td>neutral</td>
<td>fi</td>
<td>kao</td>
<td>tu</td>
</tr>
<tr>
<td>3rd person</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>masculine</td>
<td>m, xam</td>
<td>tfara</td>
<td>//u</td>
</tr>
<tr>
<td>feminine</td>
<td>fi</td>
<td>sara</td>
<td>dsi</td>
</tr>
<tr>
<td>neutral</td>
<td>fi</td>
<td>kara</td>
<td>ni, ne</td>
</tr>
</tbody>
</table>

In the above, words underlined are also found in Bleek's (1928), though some of the above belong to what Bleek classified as the “short forms” of personal pronouns.

The final vowel o of the 2nd dual and plural, i.e., tfao, sao and //ao, was interpreted as u by Bleek (1928).

---

18) Personal pronouns found by D. F. Bleek are as follows (1928).

**subjective**

<table>
<thead>
<tr>
<th></th>
<th>singular</th>
<th>dual</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st person</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>common</td>
<td>ti, tira, tire</td>
<td></td>
<td>s, fi, sita, ita</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>fi/kai (we, men)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>fi/e (we, women)</td>
</tr>
<tr>
<td>2nd person</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>masculine</td>
<td>satfa, tfa, tf</td>
<td>satfara, satfau</td>
<td>satfi, tfi, fa/kau</td>
</tr>
<tr>
<td>feminine</td>
<td>saja, ja, j</td>
<td>saja, sajau</td>
<td>saji, fi, sajau</td>
</tr>
<tr>
<td>common</td>
<td>—</td>
<td>sakhara</td>
<td>satu:, fa/kau</td>
</tr>
<tr>
<td>3rd person*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>masculine</td>
<td>xaba, xam</td>
<td>xatfara</td>
<td>xatfi, xadsi</td>
</tr>
<tr>
<td>feminine</td>
<td>xasa</td>
<td>xajara</td>
<td>xasi, xafi</td>
</tr>
<tr>
<td>common</td>
<td>xa</td>
<td>xakhara</td>
<td>xa/kau,</td>
</tr>
</tbody>
</table>

As to the 3rd person, D. F. Bleek states that; “in many cases, /xa/ is omitted and the ending alone attached to the verb, shortend to /m/, /s/ /l/ etc. This makes confusion with the 2nd person easy. ... /xa/ in some ways corresponds to “that one”. It is often used with a noun, as “that, those,” ... Perhaps one might best describe xa as the emphatic form of the third person; ...” (1928, p. 55)
In the 1st person singular, there is no masculine or feminine form. In the case of 3rd person singular \( \text{m} \), each of five vowels, ‘i, e, a, o, u’, can be attached to the \( \text{m} \) and the vowel-attached form is more often found in this study than the simple \( \text{m} \) form.

1.2-2. Objective

The objective forms of personal pronouns are the same as those of subjectives, except that ti is used for 1st singular neutral. I have no data of my own for the duals of 2nd and 3rd person.

1.2-3. Possessive

A possessive pronoun usually succeeds the noun possessed, but there are some examples where the possessive pronoun precedes the noun. For example, t\( \text{f} \)au-ti (my hand) is also expressed ti-t\( \text{f} \)au.

<table>
<thead>
<tr>
<th>objective case</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st person</td>
</tr>
<tr>
<td>common</td>
</tr>
<tr>
<td>2nd person</td>
</tr>
<tr>
<td>masculine</td>
</tr>
<tr>
<td>feminine</td>
</tr>
<tr>
<td>common</td>
</tr>
<tr>
<td>3rd person</td>
</tr>
</tbody>
</table>

As to the second person’s objective case, Bleek states that: “... in the objective case, sa is generally omitted (from the subjective form) and the ending alone used; (1928, p. 54)”. (Words parenthesized are the author’s)

<table>
<thead>
<tr>
<th>possessive case</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st person</td>
</tr>
<tr>
<td>ti</td>
</tr>
<tr>
<td>2nd person</td>
</tr>
<tr>
<td>sa</td>
</tr>
<tr>
<td>3rd person</td>
</tr>
<tr>
<td>=subj-di*</td>
</tr>
</tbody>
</table>

The asterisked “subj-di” means that the possessive case is formed by attaching di to the subjective form of the personal pronoun. This is stated by Bleek as follows (1928, pp. 55–56): “The possessive pronouns for the first and second persons singular are ti and sa, used as a rule without any ending. ... The possessive pronoun for the first person plural is either sita or sita-di irrespective of gender. The second person plural hardly occurs, it would probably be formed with -di. ... The third person is treated more as a noun, it always forms the possessive case with -di:’
<table>
<thead>
<tr>
<th></th>
<th>singular</th>
<th>dual</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st person</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>masculine</td>
<td>—</td>
<td>tʃara</td>
<td>/ai</td>
</tr>
<tr>
<td>feminine</td>
<td>—</td>
<td>sara</td>
<td>si, asi</td>
</tr>
<tr>
<td>neutral</td>
<td>ti, di</td>
<td>kara</td>
<td></td>
</tr>
<tr>
<td>2nd person</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>masculine</td>
<td>tʃi</td>
<td>aʃao</td>
<td>aʃao</td>
</tr>
<tr>
<td>feminine</td>
<td>fi</td>
<td>asao</td>
<td>dʃi, adʃi</td>
</tr>
<tr>
<td>neutral</td>
<td>fi</td>
<td>akao</td>
<td></td>
</tr>
<tr>
<td>3rd person</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>masculine</td>
<td>aba</td>
<td>aʃara</td>
<td>/uwa</td>
</tr>
<tr>
<td>feminine</td>
<td>sa</td>
<td>asara</td>
<td>dʃi</td>
</tr>
<tr>
<td>neutral</td>
<td>sa</td>
<td>akara</td>
<td></td>
</tr>
</tbody>
</table>

Noun suffix can be used together with possessive, e.g.,
ti-kïba, (my elder brother); ti-kïsa, (my elder sister);

2. Adnoun
2-1. Descriptive adnoun
Descriptive adnouns are placed just before the noun qualified. In the case
where more than one adnoun is required, the first adnoun is placed immediately
before the noun, the second immediately after the noun, and the third follows
the second adnoun, that is:
AN-N, AN1-N-AN2, AN1-N-AN2-AN3, . . .
In the above, AN stands for an adnoun and N for a noun. The different adnouns
are shown by numeral subscription, respectively.
Examples:

≠ ?ano tsaa                  (clean water)
!haisa tsaa ≠ ?ano           (clean and cold water)
kai tsaa !haisa ≠ ?ano      (much, clean and cold water)
gaiya koeba                  (big man → adult man (cf. 11))

2-2. Demonstrative adnoun
Demonstrative adnoun is placed immediately before a noun qualified, as
in the case of descriptive adnoun. In the case of /ni (this, these), m or fi is
inserted between the /ni and the noun. In the case where the noun has the
masculine suffix, m is required and in the case of the noun with the feminine
suffix, fi is required between the two. Where the noun has the plural suffix
or belongs to the common gender, no infixes is required. m or a is also found
in the intermedial position between isa (that) and the noun. The following
are examples of demonstrative adnouns.
1. /nim, /nifji, /ni (this, theses)
   /nim /am (this day)
   /nim koeba (this man)
   /nifji koesa (this woman)
   /nifji /aosa (this knife)
   /ni kue (at this place)
   /ni xamana (these lions)

2. isiam, isiaa (that)
   isiam kaokoeba (that man)
   isiaa kue (at that place)

3. /nid3a (yonder)
   /nid3a kue (at yonder place)
   /nid3a tetem kaokoeba (yonder man)

3. Copulative sentence
3-1. Nominal copulative sentence
3-1-1. “N1 is N2”
   “N1 is N2” is expressed as “N1+N2”. However, if N1 has a noun suffix
   ba or sa, me or fi appears immediately after N2, respectively. In the case where
   N1 has a plural suffix, nothing appears after N2.
   Examples are as follows:
   
   !harina dabe. (The drinks is the salt.)
   duuba ≠?oo-me. (The eland is the food.)

3-1-2. “it is N”
   The word meaning “it is” is expressed by me for a noun having a masculine
   by fi for a noun having a feminine suffix.
   The me or fi follows immediately after the noun stem.
   
   dabe me. (it is the salt.)
   dobe me. (it is the root.)
   dao me. (it is the road.)
   ao me. (it is the father.)
   ai fi. (it is the mother.)

   The noun suffix cannot be used together with the me or fi, as seen in the
   above examples, i.e, for the last two examples, aoba me or aisaa fi is incorrect.

3-2. Adnominal copulative sentence
3-2-1. “N is AN”
   In the expression of “N is AN”, two different word-orders are found, i.e,
   N+AN and AN+N. In former, ha, aha, me, fi or saja is often found after the
adnouns\textsuperscript{19}) To be more precise, "me" is often found (otherwise "aha") in the case of the noun having the masculine suffix "ba", "fi" is found in the case of the noun having the feminine suffix "sa", and "saa ha" or the same vowel as the terminating vowel of the adnouns is found in the case of the plural-neutral suffix "na". In latter word-order, "a" or "n" is also found between the adnouns and the noun (the "a" changes into "ya" when the adnouns terminates in the vowel "i", as mentioned in the footnote 11). The number of examples of the latter word-order is smaller in my data, compared with that of the former word-order.

Examples are shown in the following.

1. N-AN
   1-1. N-ba AN (i)-yaha
        \[ /nim koeba gai-yaha. \]
        (This man is old)
        N-ba AN-me
        \[ /nim //haoba theri me. \]
        (This knife is dull)
        \[ !hariba g\text{"a}"ri me. \]
        (The drinks is sweet)
        \[ /nim xamba /'ai me. \]
        (This lion is dangerous)
        \[ /nim koeba !ari me. \]
        (This man is strong)

   1-2. N-sa AN-fi
        \[ //noosa !om fi. \]
        (The stone is heavy)
        \[ //haosa ni\text{"e}" fi. \]
        (The knife is old)

   1-3. N-na AN-saa
        \[ \ne \?\text{"a}"na gai-saa \]
        (The wind is strong)
        N-na AN-ha
        \[ !harina d\text{"a}"be ha \]
        (the drinks is salty)

        N-{na} AN (i)-i
        \[ //hoona g\ne ii \]
        (the pig is fat)
        \[ k\text{"o}"naa !ari i \]
        (The meat is hard)
        \[ /ni xamana kai i \]
        (Lions are many)
        uexamana /'ai i
        (all the lions are dangerous)

        N-{na} AN
        \[ ![harina d\text{"a}"au \]
        (The drinks is bitter)
        \[ //noana !om \]
        (The stone is heavy)
        \[ k\text{"o}"naa !om \]
        (The meat is tough)
        \[ k\text{"o}"naa !ari \]
        (The meat is hard)

2. AN-N
   AN (i)-ya N-ba

\textsuperscript{19} Bleck states as follows (1928 m, p.56): "They (adjectives) are sometimes used without endings, sometimes declined as the noun. (Words in parentheses are the author's)"
gai-ya !nuuba (The house is big)
AN-n N-ba /are n !nuuba (The house is small)

3-2-2. “it is AN”
Only two examples are found as follows.
!ai i. (it is good.)
/’ai i. (it is bad.)

In the above, i may mean “it is” or just a pronoun “it”. This i is also found in the sentence !aru i ko meaning “(something) it is flying”, where !aru means “to fly” and ko is a tense particle which always follows the subject of a sentence (if it is in a sentence) (see 4-2).

3-3. Interrogation of copulative sentence
The example of “Is N AN?” type is found. In the example, the interrogation of the sentence is expressed by attaching ba to the noun instead of me, or the affirmative sentence is changed into the interrogative by the rising intonation.
kakoba !ari-ba. (Is the man strong?)
cp. kakoba !ari-me. (The man is strong.)

4. Descriptive sentence
4-1. Verb-ending
Immediately after the verb of a descriptive sentence, a, ha or aha is often found. In some cases, these endings are omitted from the sentences without changing the general meaning. In the last example given below, the general meaning of the sentence is almost the same as that of the sentence where the words parenthesized are omitted.
kakoba xamba /’oo-wa. (The man already killed the lion)
duuba da moo-wa. (I have seen the eland)
biina tsoo-wa. (The milk is rotten)
xamba //om-aha. (The lion lies)
gaeka /owaba (ko) (At dawn, the child sees the eland)
   duuba moo-(ha).

The meaning or the function of these verb-endings is not clear, but it seems to signify at least the completion of the action or that the action has reached a certain state.20)

20) In A Bushman dictionary, D. F. Bleek refers to verb-endings a and ha (no reference to aha) as follows:
   -a; verb ending, denoting passive.
   /xeani ko ~/o:; tjas kwe /hyru-a, a /na kwa _!nwona-a.
4-2. Tense particles; ko, /na and ka (ga)  
Each of the tense particles ko, /na and ka (or ga) is placed at a certain fixed position in a sentence and forms a tense. The particles are very often omitted from a sentence without changing the general meaning of the sentence, but then the tense becomes very confusing for a foreigner especially when the sentence occurs, isolated from the context of conversation.
4-2-1. ko;
This is always placed immediately after the subject and expresses the present (or infinitive) tense.

duub ra ko moo. (I see the eland)
xamba ko kxai tji. (The lion laughs you)
≠ taa i ko. ((The wind) it blows)
gaa da ko. (I bite)
xamana ko llo ≠ ?au jì. (The lions go slowly)
kakobo ko /nikue xamba bOO. (The man sees the lion at this place)
moo tji ra ko. (I see you)
kakobo ko ≠ ?ano tsa biba au. (The man gives clean water to the horse)

4-2-2. /na;
This appears immediately after the subject as in the case of ko, or sentence-initially before the subject as in the case of temporal adverbs (see below). /na expresses the past tense or present (or infinitive) tense. According to one informant, the meaning of /na is the same as that of ko.

duub ra /na moo. (I see the ekakl)
/na ra moo mi. (I see him)

(The leaves are dry, with water are sprinkled, and then are rolled)
ha, _.h4 , _h4: ; verb particle or ending probably connected, with ha, _h4 , to stay, expressing past, or a state.
tira [k.wia-ha. (I am tired)
/kwiljas h4 uwa-ha. (a name it is)
siJe jana ≠ ke:xa kejia-ha. (we are now only grown-up)
dina ≠ kuu-h4? (who is roasting?)

21) D. F. Bleed refers to verbal formalive as follows: "Verbs are conjugated by means of verbal particles or auxiliaries which may precede or follow them. These alter for tense and mood, but not for person." And she states that ko shows present tense and past tense (if ko is omitted, the tense of the verb is present one), and ka shows future tense (1928, p. 58).

On the other hand, Maingard checked the relationship between the formatives and the English translations found in Bleek's publications, from the view point of tense, and found that; "This analysis clearly proves that the tense in the English translation do not correspond to the functions asigned to the verbal formatives either in the Bushman Dictionary or in the texts of the Naron." And then, he noticed "double-verb, a well-known characteristics in Bushman and Korana" and that ka by itself has the meaning "to come", and ga or ha means "to stay". As the result, he concluded that: "it is not difficult to see that ko and ka (variant ga) have got confused and their original meaning blurred. ha, on the other hand, still retains its function of action continuing." (1963, pp.105–106)
=moo mi ru /na.
agoba da /na maa mi. (I give him the dog)
kakoba /na duuba hoo, a /na /’oo mi.
(The man saw the eland, and killed it)
kakoba /na duuba /’oowa (fj) xosa boo.
(The man saw that the eland was already killed)
kakoba /na duuba boo, xam ta /’oo mi.
(The man saw the eland, (but) he did not kill it)

4-2-3. ka (or ga):
This occurs immediately after the subject as in the case of ko, and expresses
the future tense.
tsanho ru ga. (I will cook.)
!/ooka ma ga moo mi. (Tomorrow, he shall see it.)
kaokoæba ga duuba /’oo, xam iïhabaxa.
(The man will kill the eland, or the lion).

4-2-4. aa and ha;
aa or ha is also found in the same position as the tense particles given
above, except /na, and seems to express the present or continuing state. In
the examples, “=” means that the two sentences are identical in their general
meaning.

//aba ra aa. (I am hungry.)
=//aba ra ko.
≠nuæ da ha. (I am sitting.)
/am a ra ha. (I am thirsty.)
/œe da ha. (I am tired.)
//am fj ìa ha. (I love you (a girl)).

4-3. Word-order of descriptive sentence

Word-orders of descriptive sentences found in this study are shown in the
following. Here, “S” stands for the subject, “O” for the object and “V” for
the verb. The subscript “p” or “c” means that “S” or “O” is a personal pronoun
or a common noun, respectively, and “d” or “i” of “O” means that “O” is a
direct object or an indirect object, respectively.

1. S-V
2. Sc V

22) In her A Bushman Dictionary, D. F. Bleek refers to the particle a which is placed before
a verb or after a subjective as follows.
a; Verb particle; repetition of tense.
tfæu ra ko k’annifæ, a dæe, a //k’um fi, a ≠ū fi.
(I dig ants, pick up, shift them, eat them)
xam a ga /ku //u. (The lion will kill them.)

In the first sentence, the a is the same as what I interpreted as a syntactic conjunction
(see, 6–2).
2-1. Sc Oc V
d, i
2-2. Sc V Op
d, i
2-2. Oc Sp V
d
2-2. Sp V Op
3. Sc Oc Oc V
d, i, d
3-2. Oc Sp V Op

Word-order in the above can be divided into two groups, i.e., into one

No marker to indicate a direct object or an indirect one is found. This is
case, which are either indicated by prepositions or more often merely understood. This
makes the translation of Naron sentences very difficult, as they do not follow any special sequence of words. (1928, p. 53)"

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23) D. F. Bleek states as follows: "There are no endings for nouns in the dative and accusative cases, which are either indicated by prepositions or more often merely understood. This makes the translation of Naron sentences very difficult, as they do not follow any special sequence of words. (1928, p. 53)"
≠ ae ra ko.  (I roast)
≠ hoo ra ko.  (I get wet)

2.  S-V-O

2-1.  Sc-Oc -V

/owaba aagoba oa.
kakoba tsaa au.

kakoba ko xamba boo.
kakoba !haisa tsaa au.

(The child has the dog)
(The man gives water, or Give water to the man)
(The man sees the lion)
(The man gives cold water)

d, i

2-1-2.  Sc-V-Op

duu ba ko moo ti.
xamba ko gaa ti.
xamba ko kxai’tsi.

(The eland sees me)
(The lion bites me)
(The lion laughs me)

d, i

2-2.  V-Op -Sp

moo tsì ra ko.
/nam tsì ra ha.
buri tsì ra ko.

(I see you)
(I love you (for a girl))
(I talk to you)

d

2-2-1.  Oc-Sp-V

duu ba ra ko moo.
xamba ra ko /am.
xamba ra ko /ao.
/nua da ko /ao.
aagoba da ko !xai
k’oani ra ko ≠ ae.
xamba ru ko /dō.

(I see the eland)
(I beat the lion)
(I shoot the lion)
(I throw the stone)
(I kick the dog)
(I roast the meat)
(I kill the lion)

d

2-2-2.  Sp-V-Op

!? oaka, mi ga moo mi.
t’owa, mi moo mi.

(Tomorrow, he shall see it)
(Yesterday, he saw it)

3.  S-V-O-O

3-1.  Sc-Oc -Oc -V

kakoba biiba tsaa au.
kakoba ≠ ?ano tsaa biba au.

(The man gives water to the horse)
(The man gives clean water to the horse)

d, i

3-2.  Oc-Sp-V-Op

aagoba da /na maa mi.

(I give him the dog)
5. Adverb

Adverbs are found at the following positions of a sentence. The temporal adverb is found in sentence initial position or in post-subjective position. The descriptive adverb is found in sentence initial or in post-verbal position. The locative adverb (including the postpositional phrase) is found in post-subjective or in post-verbal position. It is not clear whether the difference in position is dependent on the grouping.

The temporal adverb is often formed by attaching a particle ka to a noun. For example, /nim-/am means "this day", and then "on this day, on today" is formed /nim-/am-ka by the particle. Some descriptive adverbs can be formed by attaching fi to an adnoun. Examples are shown as follows.

- t'oi (clean, beautiful) → t'oi-fi (well, successfully)
- tso (bad) → tso-fi (badly)

Examples of temporal, descriptive and locative adverbs are shown in the following.

5-1. Sentence initial

koabaka /owaba duuba maaha. (In the daytime, the child sees the eland.)

gae ka m /owaba (ko) duuba moo (ha). (At dawn, the child sees the eland.)

!?ooka mi ga moo mi. (Yesterday, he saw it.)

/nim/amka moo mi ha. (Tomorrow, he shall see it.)

/?endaoka mi moo miha. (Today, he shall see it.)

k'aiha (mu ko) moo miha. (Sometimes, he sees it.)

ue/amka mu ko moo mi. (Every day, he sees it.)

5-2. Post-subjective

/owaba ≠nukui/owa duuba maaha. (The child, in the early morning, sees the eland.)

/owaba /oaka duuba maaha. (The child, in the evening, sees the eland.)

/owaba ≠nuuka duuba maaha. (The child, in the night, sees the eland.)

/owaba /a(o) /niifi duuba moo. (The child, long ago, saw the eland.)

kakoba ko /nikue xamba boo. (The man, at this place, sees the lion.)

agoba gasi ≠oko ≠nui. (The dog, in the box, lies.)

5-3. Post-verbal

xamana ko !oso ≠?ausi. (Lions walk slowly.)

xamana ko !oo !haif. (Lions run fast.)
54. Negatives
54-1. “N1 is not N2”
   A noun to be negated is followed by tama. Examples are:
   
   duuba ̄?o tama.  (The eland is not the food)
   cp. duuba ̄?o me.  (The eland is the food)
54-2. “N is not AN”
   tama is placed immediately after the adnoun to be negated, or ka(a) or
   ga(a) is placed immediately before the adnoun.
   
   kakoba !ari tama.  (The man is not strong)
   cp. kakoba !ari mi.  (The man is strong)
   koeba gaa !ari mi  (The man is not strong)
   cp. koeba !ari mi.  (The man is strong)
54-3. Negation in descriptive sentences
   In the case of negative descriptive sentences ta is found in pre-subjective
   or pre-verbal position, and tama in post-verbal position
   
   /nam ̄ji ta ra.  (I do not like you (for a boy))
   cp. /nam ̄ji ra ha.  (I like you)
   kakoba duuba boo tama.  (The man does not see the eland)
   cp. kakoba ko duuba boo.  (The man sees the eland)
   kaokoeba /na duuba  
   boo, xam ta /'oo me.  kill it
   =kaokoeba /na duuba  
   boo, a ta /'oo me.

6. Conjunction
   Conjunctions are shown in the following examples.
6-1. Nominal conjunctions
   “and”; N1 he N2 he, N1 he N2 te (N1 and N2)
   
   kakoba he /owa he (ko) bible  
   tsaa au.  (The man and the child give water to the
   horse)
   kakoba ko dongiba he bible  
   he tsaa au.  (The man gives water to the donkey and
   the horse)
   kakoba ko g/a he tsaa he  
   bible au.  (The man gives grass and water to the
   horse)
   kakoba ko /'are tsaa (he)  
   kai g/a (he) bible au.  (The man gives a little water and much
   grass to the horse)
   “or”; N1 iihaba N2 iihaba (N1 or N2)
   
   kakoba duuba iihaba xamba  
   iihaba /'owa.  (The man already killed the eland or the
   lion)
6-2. Syntactic conjunctions
   “and”, a
kakoba ko duuba boo, a ko //ao me.
(The man sees the eland, and (he) shoots it)
kakoba ko duuba boo, a (ko) //ao me, a (ko) /'oo me.
(The man sees the eland, and (he) shoots it, and (he) kills it)
kakoba ko duuba boo, a ko //ao me, a ko /'oo me, a ko k'oo me.
(The man sees the eland, and (he) shoots it, and (he) kills it, and he eats it)
"or", iihaba(ha)
kaokoeba ga duuba /'oo, xam iihabaxa.
(The man will kill the eland, or (he will kill) the lion)

7. Postposition
The following postpositions are found. In the examples, ga means "cox" ([gaasa] pronounced in isolation) and i means "tree".

agoba ga-siko ≠ nui.
(The dog is lying on the box.)
agoba ga-si ≠ koko ≠ nui.
(The dog is lying in the box.)
agoba i-si ≠ koko ≠ nui.
(The dog is lying under the tree.)
agoba ga-si ≠ kaiko ≠ nui.
(The dog is lying in front of the box.)
agoba ga-si ≠ kaako ≠ nui.
(The dog is lying behind the box.)

8. Interrogative
The following interrogatives are found. Interrogatives in the examples are underlined.

when; ñ:/amaba, m/ama
ñ:/amaba kaokoeba xaṁba /'ōo wa.
(When did the man kill the lion?)
/owaba m/ama duuba maaha.
(When does the child see the eland?)
where; ñ: dakoba, mrakoe
ñ: dakoba kaokoeba xaṁba /'ōo wa?
(Where did the man kill the lion?)
/owaba mrakoe duuba maaha.
(Where does the child sees the eland?)
which; ñ: dakam, dutʃo
ñ: dakam xaṁba (ba)
kaokoeba /'ōo wa.
(Which lion did the man kill?)
/owaba dutʃo duuba maaha.
(Which eland does the child see?)
who; diiba
diiba xaṁba /'ōo wa.
(Who killed the lion?)
why; duudom kaba
duudom kaba kaokoeba xaṁba /'ōo wa.
(Why did the man kill the lion?)
what; duusaba

\[
\text{duusaba kaokoeba xamba}
\]

\[\text{'ōōwā.}\]

how; duusikaba

\[
\text{duusikaba kaokoeba xamba}
\]

\[\text{'ōōwā.}\]

ACKNOWLEDGEMENTS

This is a report of the phonetic research of San languages in Botswana, which was conducted from January to July, 1976. I am grateful to the Institute for the Study of Languages and Cultures of Asia and Africa, Tokyo Gaikokugo Daigaku (Tokyo University of Foreign Studies), for their financial sponsorship, and I am indebted to the Botswana Government for permitting me to conduct field-work. I also wish to thank many people of Botswana, especially prof. Z. I. Matumo, Univ. of Botswana and Swaziland, all Naron friends and interpreters Mr. H. Kgari and Mr. S. Mothivi, who kindly helped me to conduct this study during my stay in Botswana.

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