VOWEL AND TONE PATTERNS IN THE SHERPA VERB[1]

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This brief discussion of Sherpa vowel and tone patterns may be used to accompany a dictionary to enable the reader to handle the problem of vowel and tone changes that may occur within a given Sherpa verbal paradigm.

Since this paper deals exclusively with vowel and tone patterns, the rules for final consonant deletion and the derivation of verb forms are not included here.

I. THE BASE FORM

The base form of a verb in Sherpa is here viewed as an abstract representation from which all forms of the verb may be derived by a set of rules. Verbs will be entered in the dictionary according to their base forms. The purpose of this section is to introduce the reader to certain conventions used in spelling base forms.

The vowel of the verbal base may either be stable or unstable. Stable vowels remain the same in all forms of the verb and are represented by means of lower case characters in the verbal base. The following stable vowels occur in Sherpa verbal bases:[2]

<div align="center">i, e, o, u, aa</div>

Unstable vowels participate in various vowel shift patterns within their paradigms and are represented by means of upper case characters in the verbal base. The following unstable vowels occur in Sherpa verbal bases:[3]

<div align="center">E, A, O, AA, wO</div>

All verbal bases end in consonants. The final consonant of a base may either be stable or transient. Stable consonants occur in every

form of the verb and are represented by an unparenthesised character.
The following base-final stable consonants occur in Sherpa verbs:

p, k, l, r, m, n, ng

Transient consonants occur in certain forms of the verb but are
elided in other forms. The following transient consonants occur in
Sherpa verbal bases:

(p), (t), (k), (r), (w), (n), (ng)

The table below indicates which consonants occur only as stable con-
sonants, which occur only as transient consonants, and which occur as
stable consonants in certain verbs and as transient consonants in others.

function of consonant	*base form final consonant*								
	p	t	k	l	r	m	n	ng	w
stable			x	l	x				
transient		x							x
stable and/or transient	x	x		x			x	x	

Table 1. STEM FINAL CONSONANTS IN SHERPA

In the following sections we will see that the base final consonant
plays an important role in predicting the pattern of tone shifts and
vowel shifts which a given verb follows.

II. PRINCIPAL PARTS AND VOWEL PATTERNS

To account for the vowel patterns that occur we have set up seven
principal parts in the Sherpa verb. These parts reflect all contrastive
vowel shifts.

FIs   Present/Future Impersonal
Fcj   Present/Future conjunct[4]
Fdj   Present/Future disjunct
PIs   Past Impersonal
Pcj   Past conjunct
Pdj   Past disjunct
Imp   Imperative

Given these seven principal parts all possible forms of a verb may be
derived.

We have said above that the base final consonant plays an important role in determining the pattern of tone shifts and vowel shifts which a given verb follows. For the purpose of determining vowel shifts, we may distinguish four classes of final consonants as follows.

Class	Final Consonant
c	k, l, r, m, n, ng
p	p
(p)	(p)
(c)	(t), (k), (w), (r), (n), (ng)

Each class marks a different pattern of vowel shifts, as is indicated in the following table.

vowel of base and final cons.		Principal Parts						
		FIs	Fcj	Fdj	PIs	Pcj	Pdj	Imp
E	c	e	e	e	e	e	aa	o
	p	e	e	e	aa	aa	aa	o
	(c)	e	e	e	aa	aa	aa	wo
A	c	a	a	a	a	a	aa	o
	p	a	a	a	aa	aa	aa	o
	(c)	a	a	a	aa	aa	aa	wo
O	c	o	o	o	a	a	aa	o
	p	o	o	o	aa	aa	aa	o
	(c)	o	o	o	aa	aa	aa	wo
AA	(p)	aa	a	e	aa	aa	aa	o
wO	(p)	wo	wo	e	o	o	o	o

Table 2.   VOWEL PATTERNS OF SINGLE-BASE VERBS

There are also verbs in Sherpa that have two stems. These will be referred to as *twin-base* forms. One stem, having a voiced initial stop or voiced affricate, will occur in the *Present/Future* tense (FIs, Fcj, Fdj). The other stem, having the voiceless stop or affricate counterpart will occur in the *Past* (PIs, Pcj, Pdj) and *Imperative* – the P-base.

We may distinguish two kinds of twin-base verbs: those which have an upper case vowel in the P-base and those that have a lower case vowel in the P-base.

For example:

'bok / pokq *'to take from fire'*

has a lower case vowel in the P-base and

   Del / TAlq *'to separate'*

has an upper case vowel in its P-base.

   There are no twin-base verbs with upper case vowels in the first base. The shifts manifested by the second stem of a twin-base verb are slightly different from the corresponding shifts manifested by a single-base verb. These shifts are summarised in Table 3.

P-base vowel and final consonant	vowel of			
	PIs	Pcj	Pdj	Imp
A c /m, 1/	a	a	aa	o
A p	a	a	a	o
AA (w)	aa	aa	aa	wo

Table 3. VOWEL PATTERNS IN TWIN-BASE VERBS

III. TONE PATTERNS

   Every base form is marked for tone.[5] Most bases, however, manifest a shift of tone in the past disjunctive. The final consonant of the base indicates whether or not the base participates in a tone shift. It also indicates which tone shift occurs. Table 4 shows how the base final consonant correlates with tone shifts in the past disjunctive for bases with the vowels I, e, o, and u.

base final consonant	vowel of base	
	i, e	u, o
c, (w) /l,r,m,n/	4	4
k	s	s
(c) $\begin{array}{c}H\\L\end{array}$	3 4	3 4
(t)	s	4

Table 4. TONE PATTERNS OF SINGLE-BASE VERBS

   The table above may be read as follows:

a) A verb with a final consonant c and the vowel I has pitch contour 4 in the past disjunctive form.

b) A verb with a final consonant k and the vowel o has the "same" (s) pitch contour in the past disjunctive form as the base.