GLIDES IN SHERPA

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I. THE PROBLEM

The low front and back vowels in Sherpa have been a problem in the phonemic interpretation.

Kent Gordon in 'Sherpa Phonemic Summary' 1969, introduced six vowels /i, e, a, ɑ, o, u/ and the co-vowels /y/ and /w/. In combining /y/ and /w/ with the two central vowels /a/ and /ɑ/, which he labelled assimilating, the vowels were grouped as follows:

/ya/ [æ·] [æ] [ɛ·] [ɛ^{ə}]

/yɑ/ [ɛ] [ɛ˃]

/wa/ [ɒ·] [ɔ^{ə}] [ɔ·]

/wɑ/ [ɒ]

This solution, however, created some problems in that palatalisation of the initial consonant and the co-vowel /y/ preceding /a/ and /ɑ/ in some instances were not easily readable.[1]

In order to overcome this problem an eight vowel system was introduced tentatively. The two additional phonemes were: /æ/ and /ɔ/.[2]

Further research resulted in a third solution consisting of six vowels without co-vowels.[3] This, however, was possible only by interpreting the low back vowel, for instance, by a trigraph: [^{w}ɔ^{ə}] /owɑ/, as in /'lówɑ/ *'liver'*.[4]

When this solution was set forth relatively few examples containing this vowel had been found. Since then we concentrated our work on the verbal system of Sherpa and a number of verb stems containing the low back vowel appeared. Most verbs in Sherpa are monosyllabic. Therefore representing the vowel slot of a monosyllabic verb stem by a trigraph

tends to obscure the structure of the verbal system. For that reason again an alternative was sought.

II. A PROPOSAL

Here we suggest a solution proposing the six vowel phonemes /i, e, a, ɑ, o, u/ and co-vowels /y/ and /w/. The co-vowels, however, will not co-occur with the central vowels /a/ and /ɑ/, as was suggested earlier, but with the mid front and mid back vowels /e/ and /o/.

The two co-vowels then, will *lower* the mid front and mid back vowels:

/ye/ [ɛ·] [æ·]

/wo/ [ɔ$^{ə}_{:}$] [ɒ$^{ə}_{:}$]

In order to account for the variants of /y/ and /w/ the following environments are relevant.

a. After /h/ and before /u/ and /o/
b. Elsewhere after /h/
c. Word-initial before /u/ and /o/
d. Intervocalic, adjacent to /i/ and /u/

	'norm'	a	b	c	d
/y/	1. [y]	2. [ÿ]	3. [ʏ]	4. [ÿ]	5. [ɨ]
/w/	6. [w]				7. [u]

The numbers of the chart above refer to the examples that follow.

1. [y] voiced high front unrounded glide:

/"yàku/	[ya̟ku]	*'brother-in-law'*
/'gyàmu/	[g^{ʏ}a̟·mu]	*'fat'*
/"gyɑ̀p/	[g^{ʏ}ʌp$^{˺}$]	*'back side'*

2. [ÿ] voiceless high front rounded glide:

/"rhyú/	[ʂ^{ÿ}u$^{ˆ}_{:}$]	*'monkey'*

3. [ʏ] voiceless high front unrounded glide:

/"khyyénɨ/	[k$^{ʏ}_{ˆ}$æ$^{ˆ}_{:}$n$^{ˆ}_{ɨ}$]	*'having frozen'*

4. [ÿ] voiced high front rounded glide:

/"yuɨ/	[ÿu̟^{ʷ}ɨ]	*'village'*

5. [ɨ] voiced high front unrounded vocoid:

/'péyɨ/	[pe^{ˈ}$^{ɨ}_{ˆ}$]	*'(I) opened (it)'*

6. [w] voiced high back rounded glide:

/"wòk/	[wo̞k̚]	*'under'*
/'kìwi/	[k̺ɨwi]	*'do (Present/Future disjunct)*

7. [u] voiced high back closed rounded vocoid:

/'kìwu/	[k̺ɨu / kʸu̟·]	*'did (you) do (it)?'*

The examples above show that the variants of /e/ and /o/ following the co-vowels /y/ and /w/ respectively are lengthened.

There are a few cases of /ye/ that do not have lengthened variants, but rather a short one which is followed by an optional glottal stop.

/"gyè/	[gʸɛ?]	*'eight'*
/"wyè/	[wæ?]	*'there is'*
/"myè/	[mɛ?]	*'there isn't'*

The variants of /a/ by definition are inherently longer than variants of /ɑ/ following a postconsonantal /y/. (See example 1 above.)

The stops p, t, d, g tend to be optionally palatalised preceding front vowels, especially /e/. This type of palatalisation, however, is subphonemic and therefore not reflected in the phonemic orthography. Consider the following examples:

/'gèken/	[gʸe̟k̺en̺ / ge̟k̺en̺]	*'teacher'*
/'dyè/	[d̺ʸæ̟· / d̺æ̟·]	*'here'*
/'pyè/	[pʸæ̟· / pæ̟·]	*'rat'*
/'pé/	[pʸe^ / pe^]	*'open'*
/"tyè/	[t̺ʸæ̟· / t̺æ̟·]	*'there'*

A single /y/ following /n/ always indicates palatalisation of /n/. (Formerly we had phonemicised [n̂] by /ngy/ which will be /ny/ henceforth.) If two /y/ occur postconsonantally the first one will indicate palatalisation of the consonant, the second acts as a co-vowel. Thereby we differentiate the following pair:

/'nyè/	[n̂e̟·]	*'my'*
/"nyyékyok/	[n̂æ̂k̺ʸɔk̚]	*'pot, vessel'*

A single /y/ preceding /e/ after consonants other than /n/ may be regarded a co-vowel. If two /y/ occur the first one will signal palatalisation and the second one acts as a co-vowel.

/'lyèmu/	[l̂æ·mu̥]	*'nice'*
/'kyéplaa/	[k̺æ̂p̚ la]	*'for giving birth'*
/"khyyéni/	[k̺ʸæ̂n̺i]	*'having frozen'*

III. INITIAL CLUSTERING WITH /y/ AND /w/

The chart below demonstrates syllable initial clustering with /y/.

1. py	2. ty	3. ṭy	4. cy		5. ky
				6. čhy	7. khy
	8. dy			9. ǰy	10. gy
	11. sy			12. šy	
				13. ny	
	14. ly				
	15. lhy				
	16. ry				
	17. rhy				
18. wy					

The numbers of the chart above refer to the examples below.

1.	/'pyè/	[pʉ̟· / pʸʉ̟·]	*'rat'*
2.	/"tyè/	[t̪ʸʉ̟· / t̪ʉ̟·]	*'there'*
3.	/"ṭyèp/	[ʈʉ̟·pˀ]	*'to ask'*
4.	/'cyép/	[tsæ̂pˀ]	*'to play'*
5.	/'kyép/	[k̪æ̂pˀ]	*'to give birth'*
6.	/"čhyè/	[tšᵋɕ·]	*'great (man)'*
7.	/"khyyénì/	[k̪ʸæ̂n̪ì]	*'having frozen'*
8.	/'dyè/	[d̪ʸæ· / dʉ̟·]	*'here'*
9.	/'ǰyèp/	[ǰæ·p]	*'to change'*
10.	/'gyèmu/	[gʸæ·mu]	*'reddish-brown colour'*
11.	/'syè/	[sʉ̟·]	*'mane'*
12.	/"zyép/	[šæ̂pˀ]	*'to die'*
13.	/'nyè/	[n̂ɐ̟·]	*'my'*
14.	/'lyèmu/	[l̂ʉ̟·mu]	*'nice'*
15.	/'lhyé/	[l̂ᵋɕ·]	*'navel'*
16.	/"ryù/	[ɻʷʉ̈ɻ·]	*'puppy'*
17.	/"rhyú/	[ʂʷʉ̈û]	*'monkey'*
18.	/"wyè/	[wæʔ]	*'there is'*

The following chart gives syllable initial clustering with /w/.

					1. kyw
2. pw		3. ṭw	4. cw	5. čw	6. kw
	7. thw	8. ṭhw		9. čhw	10. khw
11. bw	12. dw	13. ḍw	14. jw		15. gyw
	16. sw			17. šw	
				18. nyw	19. ŋw
	20. lw				
	21. lhw				
	22. rw				
23. ww					

The numbers in the chart above refer to the following examples.

1.	/"kywò/	[k̭ʸɔ̟ᵊ̣]	*'bend (it)!'*
2.	/"pwó/	[pʷɔᵊ̣^]	*'dip!'*
3.	/"ṭwo/	[ṭʷɔ̟ᵊ̣]	*'tie (it)!'*
4.	/'cwó/	[tsʷɔᵊ̣^]	*'strain (it)!'*
5.	/'čwó/	[tšʷɔᵊ̣^]	*'sweep!'*
6.	/'kwó/	[kʷɔᵊ̣^]	*'split (it)!'*
7.	/"thwóplaa/	[ṭ̭ᵊ̱ɔᵊ̣^p˺ la]	*'in order to pick'*
8.	/'ṭhwo/	[ṭᵊ̱ɔᵊ̣^]	*'snap it (away)!'*
9.	/'čhwó/	[tšᵊ̱ɔᵊ̣^]	*'decorate!'*
10.	/'khwónì/	[kᵊ̱ɒᵊ̣^ṋì]	*'having brought'*
11.	/'bwò/	[bʷɔ̟ᵊ̣]	*'hide (it)!'*
12.	/'dwòp/	[dʷɔ̟ᵊ̣p˺]	*'to put on ornaments'*
13.	/"ḍwòp/	[ḍʷɔ̟ᵊ̣p˺]	*'to go'*
14.	/'jwò/	[dzʷɔ̟ᵊ̣]	*'k.o. game'*
15.	/"gywò/	[gʸɔ̟ᵊ̣]	*'to expand'*
16.	/'swò/	[sʷɔ̟ᵊ̣]	*'collect (it)!'*
17.	/'zwó/	[šʷɔᵊ̣^]	*'cross (it)!'*
18.	/"nywóp/	[n̂ɔᵊ̣^p˺]	*'mad'*
19.	/'ngwó/	[ŋʷɔᵊ̣^]	*'cut crops!'*
20.	/'lwó/	[lʷɔᵊ̣^]	*'liver'*
21.	/'lhwó/	[lʷᵊ̱ɔᵊ̣^]	*'hunger'*
22.	/'rwò/	[řɔ̟ᵊ̣]	*'study (silently)!'*
23.	/'wwòsung/	[wɔ̟ᵊ̣suŋ]	*'(he) came'*

NOTES

1. For detailed review of these problems see 'A Note on Sherpa Vowels' by Burkhard Schöttelndreyer and Austin Hale in *Tone Systems of Tibeto-Burman Languages of Nepal*, in: Hale and Pike, *Occasional Papers of the Wolfenden Society on Tibeto-Burman Linguistics*, vol.3. Part I (1970). Urbana: University of Illinois.

2. See 'Sherpa Word List' and 'Sherpa Texts' in *Tone Systems of Tibeto-Burman Languages of Nepal*, parts II and IV.

3. See 'Sherpa Segmental Synopsis' in *Tone Systems of Tibeto-Burman Languages of Nepal*, part I.

4. Sherpa words have four contrastive pitch contours, arising from the intersection of two tones, High (marked by ˊ on initial vowel) and Low (ˋ), with two contours, Rising (marked by ˊ initial) and Falling (ˋ initial). For a note on phonetic realisation of the contours see footnote 5 to the following article, pp. 122-3.