

# PHONETICS (§§ 1-9).

## SOUNDS AND SOUND-GROUPINGS (§§ 1-4).

### § 1. CONSONANTS.

	Stops.			Spirant.			Affricative.			Nasal.
	Surd.	Sonant.	Fortis.	Surd.	Sonant.	Fortis.	Surd.	Sonant.	Fortis.	
Alveolars . . .	<i>t'</i>	<i>d</i>	<i>ṭ</i>	<i>s</i>	—	<i>š</i>	<i>ts</i>	<i>dʒ</i>	<i>tʃ</i>	<i>n</i>
Palatals . . .	<i>k'</i>	<i>g</i>	<i>ḳ</i>	<i>c</i>	—	—	<i>tc</i>	<i>dj</i>	<i>tʃ</i>	—
Labialized palatals . . .	<i>kʷ</i>	<i>gʷ</i>	<i>ḳʷ</i>	<i>x</i>	( <i>y</i> )	<i>ç</i>	—	—	—	—
Velars . . .	<i>q'</i>	<i>ɣ</i>	<i>q̣</i>	<i>x</i>	—	<i>ç</i>	—	—	—	—
Labialized velars . . .	<i>qʷ</i>	<i>ɣʷ</i>	<i>q̣ʷ</i>	<i>xʷ</i>	—	<i>çʷ</i>	—	—	—	—
Laterals . . .				<i>l</i>	—	<i>ḷ</i>	<i>l</i>	<i>l</i>	<i>l</i>	—
Breathing Semi-vowels	<i>b</i> <i>y, w</i>									

The most striking characteristics of this series are the absence of all labials, the lack of almost all voiced spirants, and the occurrence of very strong glottalized spirants. The surd stops are strongly aspirated.

If I understand Dr. Swanton correctly,<sup>1</sup> the sound *y* occurs only in the southern dialects, but is replaced by *y* among the younger generation. In 1886 I heard it distinctly and without any tendency to merge into *y* when taking down notes from a Stikine Indian. In the northern pronunciation of Mr. Shotridge

<sup>1</sup> See p. 165.

it is replaced by *y*. In those cases in which from other sources the etymological value of *y* could be determined as *y*, I have so written it, because the behavior of the two sounds is quite different. In Mr. Shotridge's pronunciation there is, however, no difference whatever between *y* and *y*.

The spirant fortes are pronounced with high pressure, the glottis and nose being closed. The pressure is produced entirely with the tongue and the soft palate. The sounds are of short duration. The stopped fortes are produced in the same manner. Swanton writes throughout *q̇* in place of *q̇* and *q̇*, and *l* [*l!*] in place of *l*. I am unable to tell whether or not there is an actual difference of this kind in the southern dialect.

The affricative fortis *tš* is very rare in terminal position.

Labial *m* of foreign words is throughout replaced by *w*: for instance,

*tšutsxan* Tsimshian (*tšEM-cián*) 254.11  
*t'àwé* mountain-sheep (Tinneh *t'àmε*)  
*wàtsix* caribou (Tinneh *màtsi'*)<sup>1</sup>

Initial vowels open with a glottal closure. For this reason all terminal consonants may be followed by a glottal stop,—a condition which must not be confounded with the fortis, in which the glottal closure accompanies the articulation of the vowel, and in which the sound is formed with high air-pressure and greater muscular tension.

## § 2. VOWELS.

The following vowels occur:—

a e i u  
 a ε ι υ

<sup>1</sup> Both Tinneh words, according to Mr. Shotridge.

The quantitative value of vowels varies considerably. Unaccented syllables tend to have open vowels, which is due to the lack of intensity of movement. When *u* and *v* are in contact with velars, they are apt to assume a less rounded character, and verge on *o*, rarely on *ɔ*. In rapid speech the combination *wa* and *a* following a labialized *k* approach the sound *ɔ*.

### § 3. PITCH.

Vowels have well-marked pitch. They are high, low, or indifferent. The actual difference between high and low pitch is not very great, the ratio of vibrations being about 14 : 15, as shown on Plate I, which illustrates also the differences in quantity. Low pitch is indicated by the grave accent; high pitch, by the acute accent. Examples of words that differ in pitch only, are the following:—

<i>là</i> king-salmon	<i>lá</i> board
<i>xàt'</i> root	<i>xát'</i> salmon
<i>t'il</i> scar	<i>t'íl</i> shoe

Many suffixes are of indifferent pitch. If these are added to a stem with high pitch, they have the low pitch; if they are added to a stem with low pitch, they take the high pitch.

<i>dùlàyi</i> his king-salmon	<i>dùláyi</i> his board
<i>dùxàdi</i> his root	<i>dùxádi</i> his salmon
<i>dùt'ìli</i> his scar	<i>dùt'íli</i> his shoe
<i>nùgùn</i> having been sick ( <i>&lt; núk''-yìn</i> )	
<i>xàcín</i> having cut ( <i>&lt; xàc-yìn</i> )	

The high pitch is always accompanied by greater stress; but, according to Mr. Shotridge's feeling, the pitch is essential, the stress accidental; for when words were intentionally mis-