Speech sounds continued

Week	Week 4
Files	itl class 8.txt
Column	☐
Lecture	8
Unit/Module	Phonetics

More about consonant sounds

As of now, we have observed that there are consonant sounds which are three dimensional - that is they have three things that determine how they are.

There is a contact which we make between the two sets of articulators and there is a point where this contact is made which is known as the place of articulation.

There are also different ways in which we make the contact, like there can be a full contact, there can be some space, there can be an articulation or lateral air flow and that is what defines the manner of articulation. The way in which we make that contact is the manner of articulation.

The third criteria is whether our vocal chord if vibrating or not when we are making that contact or trying to produce that sound

The above stated things are the different characteristics which define how a consonant is produced.

There is however one more factor called **aspiration** (which falls under the category of **diacritic**) - basically what it means is the gush of air that might leave our mouth after we have produced a given sound. So basically the difference between k vs k^h or p vs p^h.

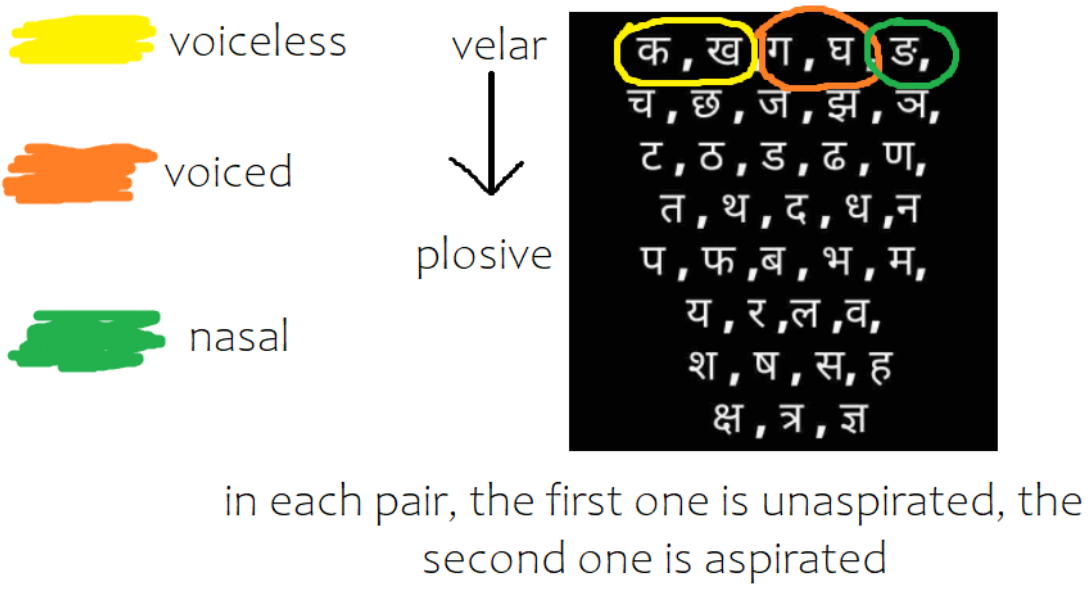
In Dravidian languages however, aspiration almost has no value but in Sanskrit languages (Devanagari script), aspiration is very important as we will also use and observe in phonology.

'**Diacritic symbols'** for dental and aspirated sounds are what we use, because they are present in a typical majority of Indian Languages.

Looking at the Devanagari script

Arrangement of letters *[Things to notice → aksharas, syllable (not alphabetical), default vowel, notion of 'halant']*

Place of articulation	Voicless	Aspirated voiceless	Voiced	Aspirated voiced	Nasal
Velar	k	kh	g	gh	ng
Labial	p	ph	b	bh	m



We are also able to observe how Indo-Aryan scripts are logically scripted and written such that the sounds are very logically arranged or grouped from the perspective of someone who is doing phonetics - the letters are arranged in a particular way. *(Like if we look at the place of articulation relation and relation of the **k c ta t p** sounds where we can observe the place of articulation slowly coming forward)*
[They are arranged such that we come from the velar sounds to the labial sounds when we go row wise, and while going column wise we first have the voiceless stops and sounds with their aspirated variants followed by the voiced stops and sounds with their aspirated variants and finally the nasal sounds for each row or place of articulation]

After **p ph b bh m** we have semi vowels which are not full consonants but also not vowels either and thus they are called **semivowels** - ***ya, ra, la, va***
Then we have the **sibilants** - **s, sha, S**
And then, finally we have pharyngeal which is the ha sound

Organization of symbols: stops - semivowels - sibilants - pharyngeal

Thus we can say that we have an alphabet which is very phonetically designed or phonetically categorized from a linguist's point of view compared to the English language. Looking at the classification, we can conclude that the creators a knowledge or understanding of the phonetics or the place and manner of articulation of sounds.
(these are the vyanjan aka consonants and then we have the swarvarna aka vowels)

Something to ponder over: **Are Indian languages really more scientific? Why would learning in mother tongue be more beneficial for a child?** What is the argument based on? Is it valid? Does script/spelling system have anything to do with it? Do spellings in Indian languages always represent the spoken language faithfully?

Something to explore: theories given by Sapir Whorf

Different types of sounds and features of sounds

Consonants

The three things the sounds of consonants depend on are

- Are they voiced or voiceless, i.e., are the chords of the voice box vibrating when the sound is produced
- Place of articulation
- Manner of articulation

Examples-

- [g] voiced velar stop
- [p] voiceless bilabial stop
- [m] bilabial nasal - why is phonation not indicated?
- [f] f voiceless labio-dental fricative

Vowels

In consonants we have observed that the articulators need to have a contact in order for them to be consonants, however in the case of vowels, it's pretty different as we say that the articulators SHOULD NOT have a contact in order for them to be counted as vowels.

For vowels the only articulator is our tongue

Cardinal vowels
Features: front/back; high/low or open/close; rounded/unrounded

Front vowels - generally unrounded
Back vowels - generally rounded
However, this may not be true in the case of all languages

The features that determine the characteristics of vowels are

- Is the tongue position high or low?
- Is the tongue towards the front or back?
- Are the lips rounded or unrounded?

(In the IPA chart the second symbol for the vowel chart is for rounded and the first symbol is for rounded from left to right we go from rounded to unrounded basically)

Examples-

- **Chinese:** a) word meaning four with an initial [s] followed by unrounded [u]
  b) [su], rounded [u] meaning speed
- **German:** umlaut (usually when there are two dots on a letter it means that we are ommitting the normal convention or rounded or unrounded and making the unconventional sound)

Suprasegmentals

They are not segments, instead, they are something beyond vowels or consonants.

a) Stress

[export], [subject], [impact], [produce], [project], [invite]

Noun - stress on the first vowel
Verb - stress on the second vowel

in hindi stress doesn't have any influence or effect

b) Vowel length

Hindi:

[din] [di:n]

[puri] [pu:ri]

Japanese:

[biru] building
[bi:ru] beer

[tsiju] a proper name
[tsu:ji] moving one's bowels

Telegu:
[ceyi] verb 'do'
[ce:yi] 'huri'

c) Consonant germination (this is where we lengthen the consonant)

Hindi:
[paka:] 'ripe'
[pakka:] 'firm'

Bangla:
[shoti] 'sati'
[shotti] 'true'

Japanese:
[saki] 'island'
[sakki] 'before'

d) Nasalization (symbol: M used here for tilde)

Bangla:
[ka:c:] 'to wash'
[ka:Mca:] 'raw'

[ha:sh]
[ha:Msh]

[ba:dha:]
[ba:Mdha:]

[ga:tha]
[ga:Mtha:]

Hindi:
[baTa:]
[baMta:]

[ca:Ta:]
[ca:MTa:]

[ba:s]
[ba:Ms]

[gao]
[gaMo]

e) Tone (Frequency at which our vocal chords vibrate - high vs low frequency)

Chinese:

Chinese:

First **tone**: ma1 or mā	'mother'
Second **tone**: ma2 or má	'hemp'
Third **tone**: ma3 or mă	'horse'
Fourth **tone**: ma4 or mà	'scold'

[naa]	low tone	'a nickname'
[naa]	mid tone	'rice paddy'

[naa]	high tone	'young maternal uncle or aunt'
[naa]	falling tone	'face'
[naa]	rising tone	'thick'

Meitei and other Tibeto-Burman languages are also tonal.