Phonology

- Phonology is the branch of linguistics which studies the ways in which sounds are used in different languages to form words by following some system.
- So, Phonology is essentially the description of the systems and patterns of speech sounds in a language.
- It is, in effect, based on a theory of what every speaker of a language unconsciously knows about the sound patterns of that language.
- Because of this theoretical status, phonology is concerned with the abstract or mental aspect of the sounds in language rather than with the actual physical articulation of speech sounds.

There are some conventional notation in the field of Phonology and we must learn them first.

If we refer to any physical sound of a language, we put them under two slashes i.e. /p/, /t/ and /k/.

- However, if we talk about the representation of a sound in the mind as an abstract unit called phone, we put them in square brackets such as [p], [t] and [k].
- What should be the distinction of physical VS mental sounds?
- In other words, what is the difference between a phone and a phoneme?
- Let us make this clear first before we proceed any further in learning about phonology.

The source of Sound:

The physiology of the speech sound would tell us that the source of any sound in human body is the lungs.

The lungs must produce adequate airflow and air pressure to vibrate vocal folds.

The vocal folds (vocal cords) are a vibrating valve that chops up the airflow from the lungs into audible pulses that form the laryngeal sound source.

The articulators articulate and filter the sound that comes out from the larynx and can interact with the laryngeal airflow to modify the sound to meet the requirement of the context.

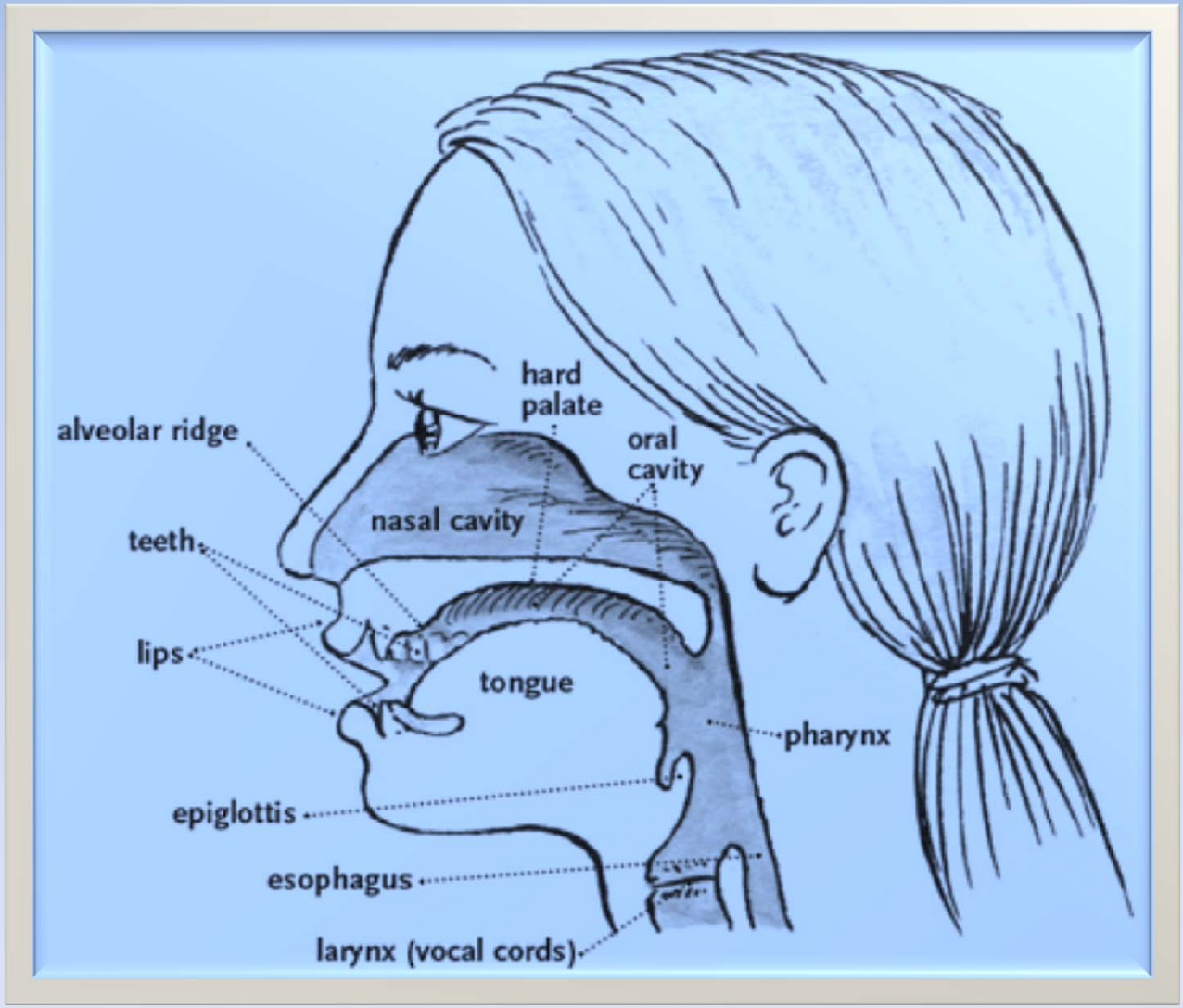
The vocal folds, also known commonly as vocal cords, are composed of twin infoldings of mucous membrane stretched horizontally across the larynx.

They vibrate, modulating the flow of air being expelled from the lungs during phonation.

Vocal folds are located within the larynx at the top of the trachea.

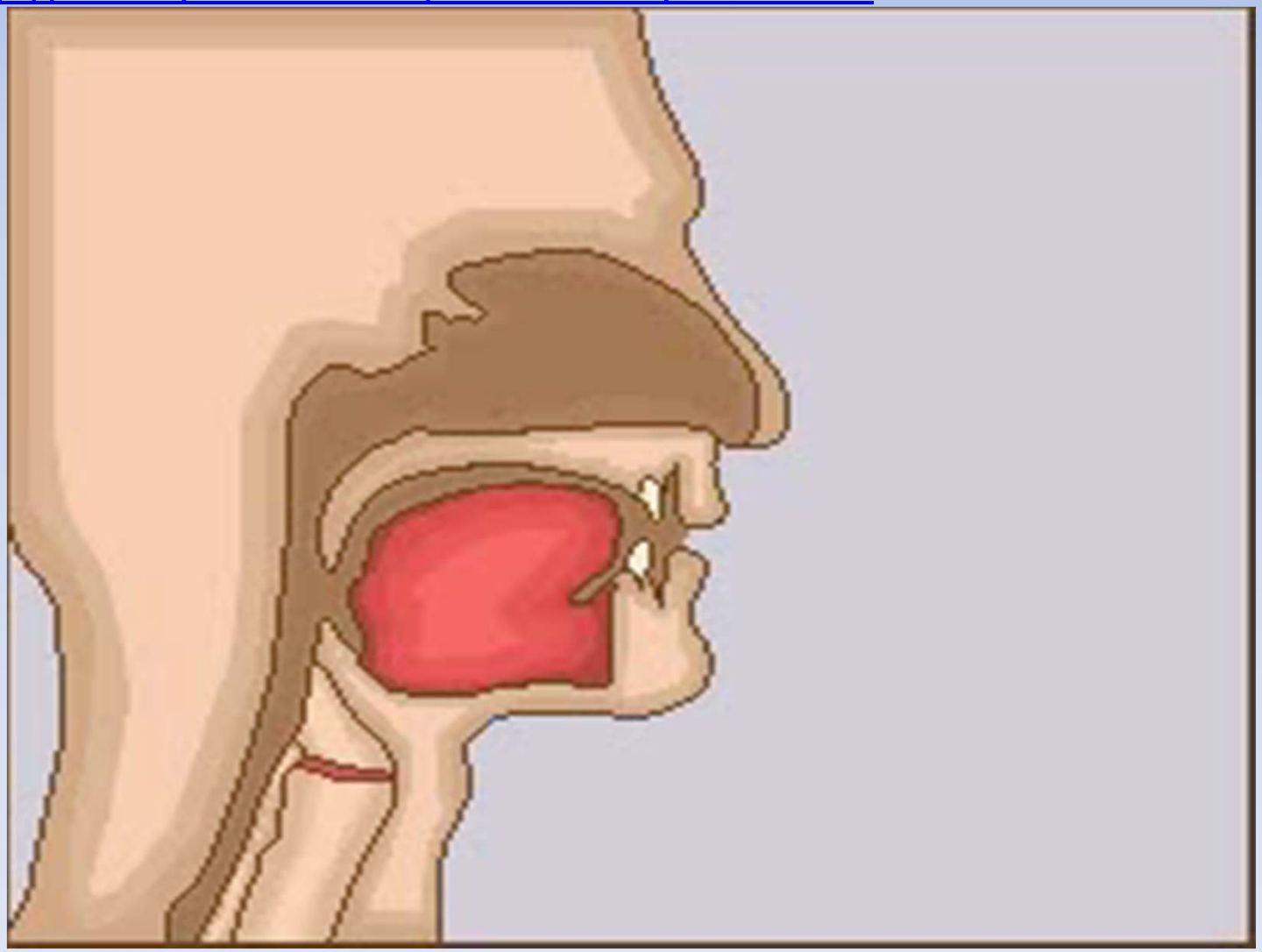
Some pictorial description of these human voice organs will help us to know the process of phonation better.

Anatomy of speech production



Source of Sounds for language:

http://www.youtube.com/watch?v=JzyHKYQzPBk



Difference between phonetics and phonology?

- Phonology deals with the sound systems languages
- Phonetics deals with the physical realisation of the elements of the sound system,
- e.g. how the sound is physically produced (articulatory phonetics),
- or how the sounds are percieved/heard (auditory phonetics)
- or the acoustic characteristics of the speech sound (acoustic phonetics)

The *phone*

- Each time a speech sound is produced it is different from the other sounds
- Each time you produce a /t/ it will be always slightly different from earlier produced /t/
- So, as a conceptual term, a *phone* is the physical realisation of a speech sound in a language.
- Don’t worry if you didn’t understand it at this point. The comparision of other terms will help us to get it better.

The *phoneme*

- The phoneme is the smallest speech sound that has linguistic value.
- When a series of phones are similar with regard to their articulations and can be distinguished from another series of phones in terms of meaning and collocation.
- The series or the group is given a name e.g. /t/.
- This is called a phoneme in linguistics.
- The phoneme is an abstract form of a sound that is located in human mind and specific to a particular language.

The allophones

If a phone is produced in two different forms in different environment and these two different forms don't change the meaning of the word, they can not be called two different physical sounds in the language.

These two forms must be connected to the same 'phoneme' which is abstractly stored in the mind of the speaker.

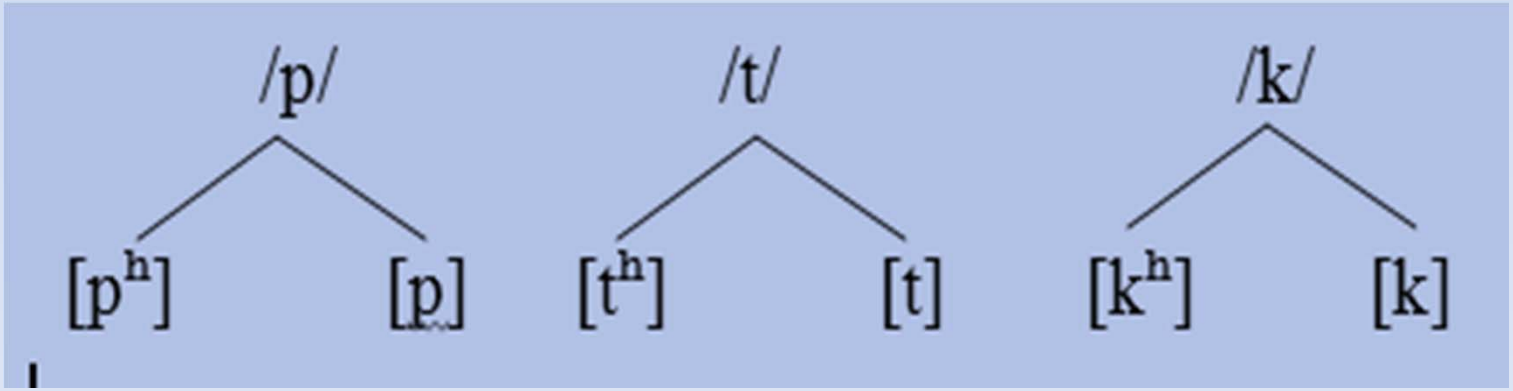
These two forms are **phonologically conditioned variants** of the same phoneme.

And they are called the ***allophones.***

Phone, Phoneme and Allophone

pan	tan	can
span	stan	scan

[p^hɛn]	[t^hɛn]	[k^hɛn]
[spɛn]	[stɛn]	[skɛn]



….more examples

Let us see the following examples from Hindi:

पल [pəl] = moment----------/p/

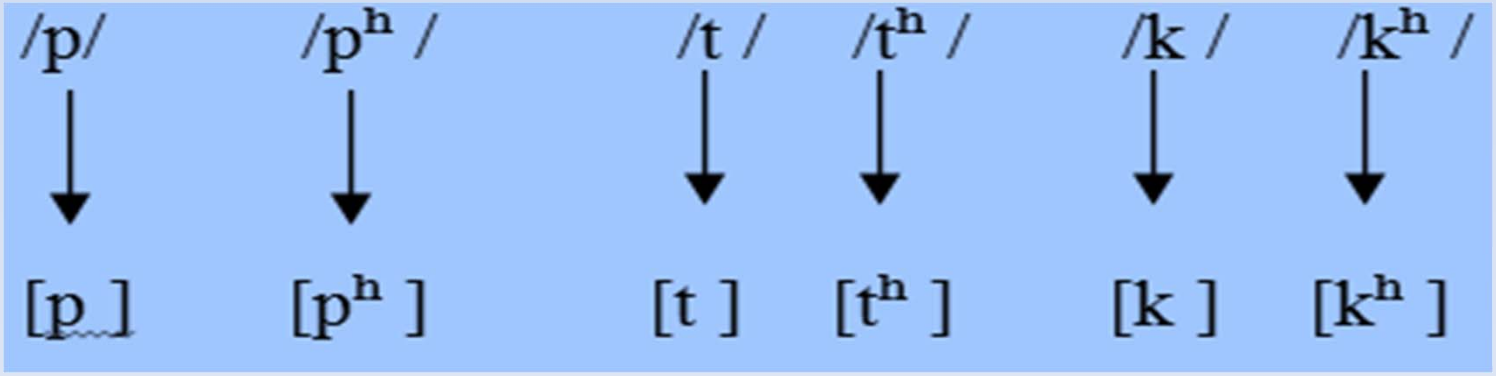
फल [p^həl] = fruit ----------/p^h/

तल [təl] = base or fry ----------/t /

थल [t^həl] = earth/ ground----------/t^h /

कल [kəl] = tomorrow, yesterday------ /k /

खल [k^həl] = grinder ----------/k^h /



Difference between English and Hindi