



# **Phonetics: Speech Sounds**

**For M.A. I Students**

**By:  
Dr. Reeta Agnihotri  
Associate Professor  
Pt. DDU Govt Girls PG College  
Lucknow**

# Phonology



- the study of word-to-word relations in sentences; that is, how sound patterns are affected by the combination of words. For example, /gəv/give and /həm/ him may combine to /gəvəm/ give him.



# Phonology



- Phonology involves two studies:
- A. Phonetics: The study of the production, transmission, and reception of speech sound.
- B. Phonemic: the study of the sounds and sound patterns of a specific language



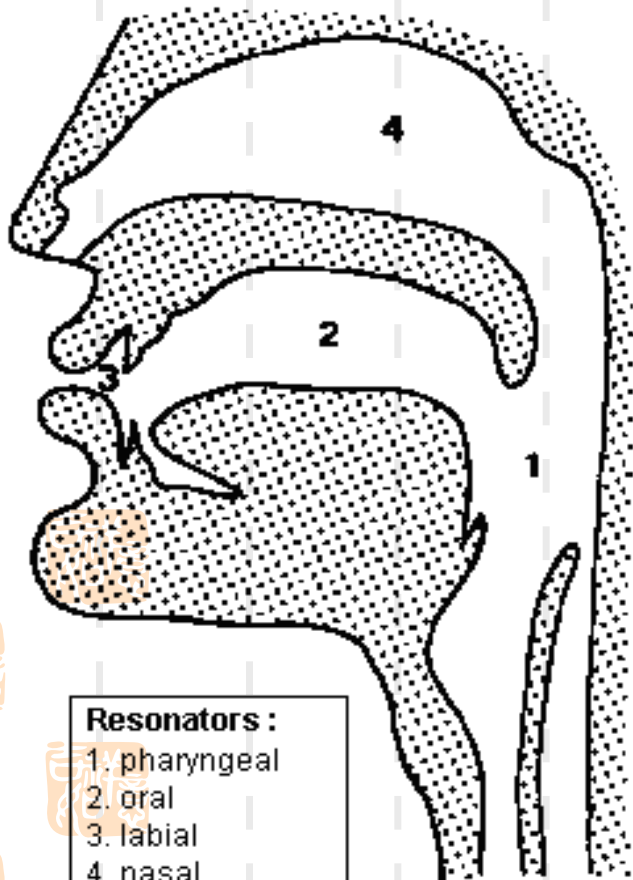
# Three stages in speech chain

- The production of the message
- The transmission of the message
- The reception of the message

➤ Articulatory phonetics

➤ Acoustic phonetics

➤ Auditory phonetics



- The principal cavities or resonators:
  - the pharyngeal cavity
  - the oral cavity
  - the nasal cavity
  - the labial cavity

# The Organ of Speech

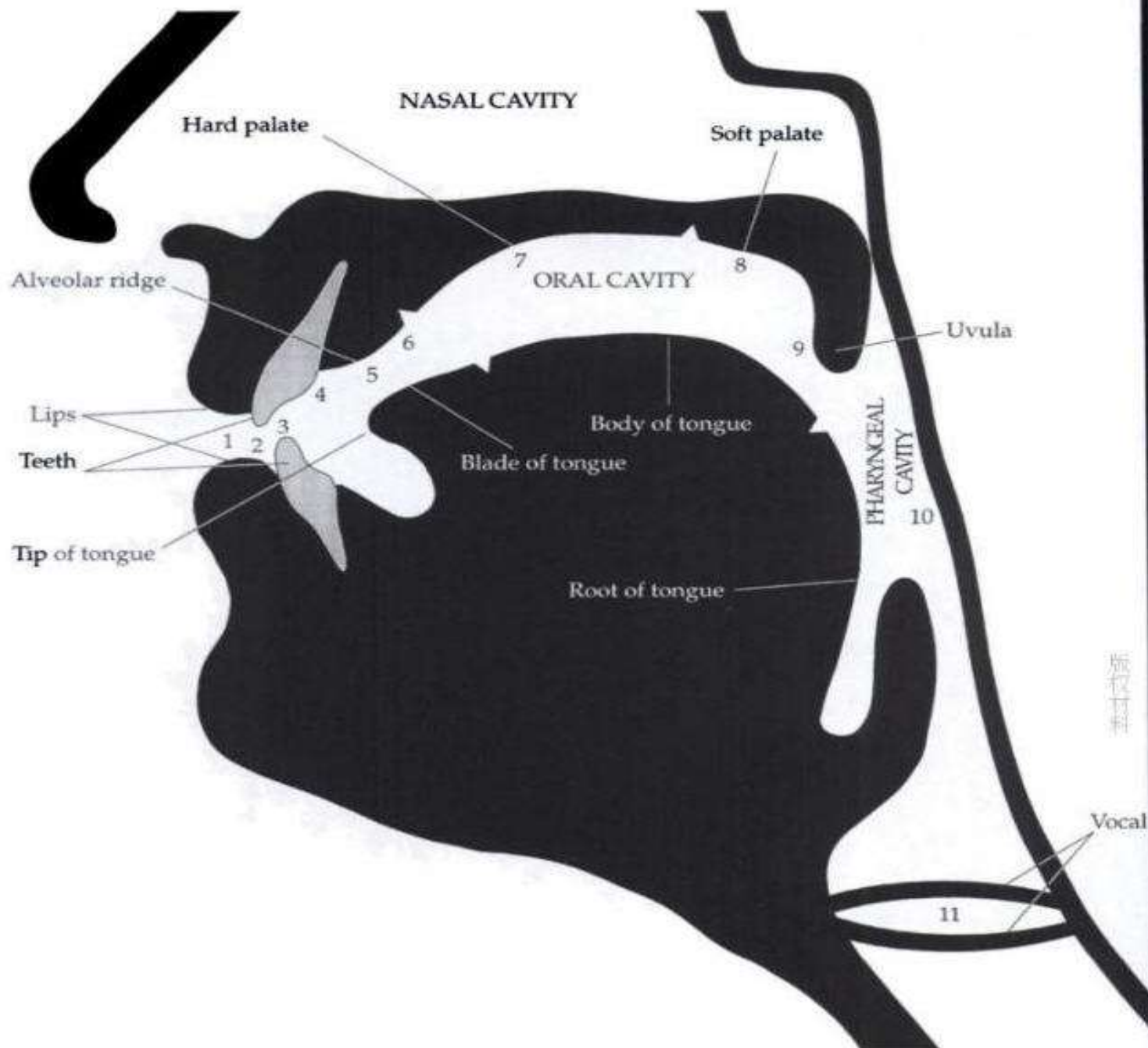


- The jaw
- The lips
- The teeth
- The teeth ridge  
(alveolar ridge)
- The vocal cords
- The tongue
- The hard palate
- The soft palate
- The uvula
- The larynx
- The pharynx



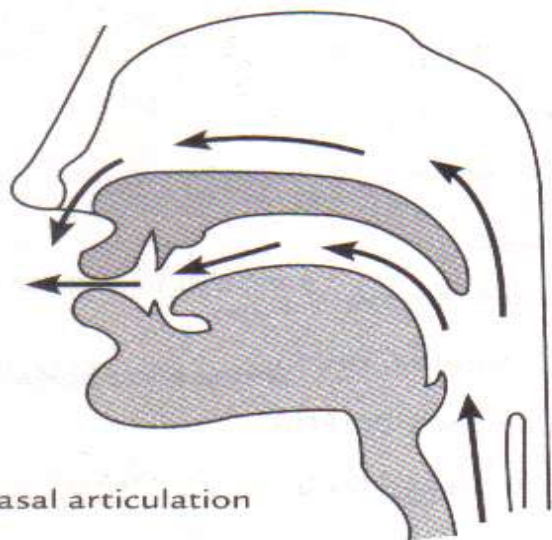
I

ns



# THE POSITION OF THE VELUM

## NASAL ARTICULATION



/m/ main, demand, seem

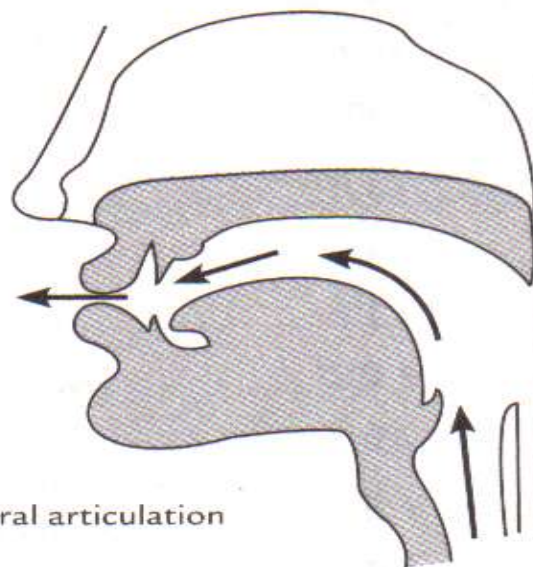
/n/ nest, deny, sin

/ŋ/ singer, bang



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## ORAL ARTICULATION



/p, t, k, b, d, g, s, z, f, v, ʃ, ʒ, ð, tʃ, dʒ/



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# Definition of Consonants & Vowels

**Consonants:** the sounds in the production of which there is an obstruction of the air- stream at some point of the vocal tract .

**Vowels:** the sounds in the production of which no articulators come very close together and the air-stream passes through the vocal tract without obstruction.

# Consonants

The place of articulation  
the manner of articulation.



## ***(2) Place of Articulation***

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☀ When describing the place of articulation, what we usually consider is the place within the vocal tract where the articulators form a structure.



# PLACE OR POINT OF ARTICULATION

Place of articulation	Examples
<b>Bilabial</b> using closing movement of both lips.	/p, b, m/ as in pain, describe, main
<b>Alveolar</b> produced with the tongue tip on or near the tooth ridge	/d, t, n, l/ as in to, do, new, and light
<b>Labio – dental</b> using the lower lip and the upper teeth.	/f, v/ as in rifle, value
<b>Inter Dental</b> the tongue tip is used either between the teeth or close to the upper teeth.	/θ, ð/ as in thick, then
<b>Palato-alveolar</b> the blade (or tip) of tongue is used just behind the alveolar ridge	/s, z/ as in seal, zeal
<b>Palatal</b> the front of the tongue is raised close to the palate	/ʃ, tʃ, ʒ, dʒ/ as in chow, Jim, show, beige.
<b>Retroflex</b> the tip of the tongue curls back to touch or near the hard plate	/r/ as in rye
<b>Velar</b> the back of the tongue is used against the soft palate	/k, g, ŋ/ as in kite, go, and bang
<b>Glottal</b> the [h] word sound	/h/ as in house, who.

# Manner of Articulation



- the way in which a speech sound is produced by the speech organs.
- A. Voiced
- B. Voiceless Sounds



# Voiced Sounds



- Speech sounds which are produced with the vocal cords vibrating are called “voiced”. Such vibration can be felt when touching the neck in the region of the larynx .For example:

a. the /d/ in /den/ den is a voiced

b. the /z/ in /zɪŋk/ zinc is a voiced



# Voiceless Sounds



- Speech sounds which are produced without vibration of the vocal cords
- For example, in English:
- A. the /t/ in /tɪn/ tin is a voiceless
- B. the /s/ in /sæd/ sad is a voiceless



# MANNER OF ARTICULATION

Manner of articulation	Voiceless	Voiced
<b>Stop or Plosives</b> when the airstream is blocked or stopped completely before its release, we refer to the resulting explosion of sound as stop (or plosive)	/p,t,k/	/b,d,g/
<b>Fricative</b> when two vocal organs come close enough together for the movement of air between them to be heard	/f/, /θ/, /s/, /ʃ/	/v/, /ð/, /z/, /ʒ/
<b>Affricate</b> in two instances, sounds are a combination of a stop and final a fricative. These two sounds, known as affricates.	/tʃ/	/dʒ/
<b>Nasal</b> Another set of sounds is produced when air passes through the nasal cavity, this occurs when the oral passage is closed and the velum moves forward to free the nasal cavity.	/m/, /n/, /ŋ/	
<b>Lateral or Liquid</b> is a partial closure is made by the blade of the tongue against the alveolar ridge. Air is able to flow around the sides of the tongue	/l/	
<b>Approximant</b> vocal organs come near to each other, but not so close as to cause audible friction,		/r/, /w/





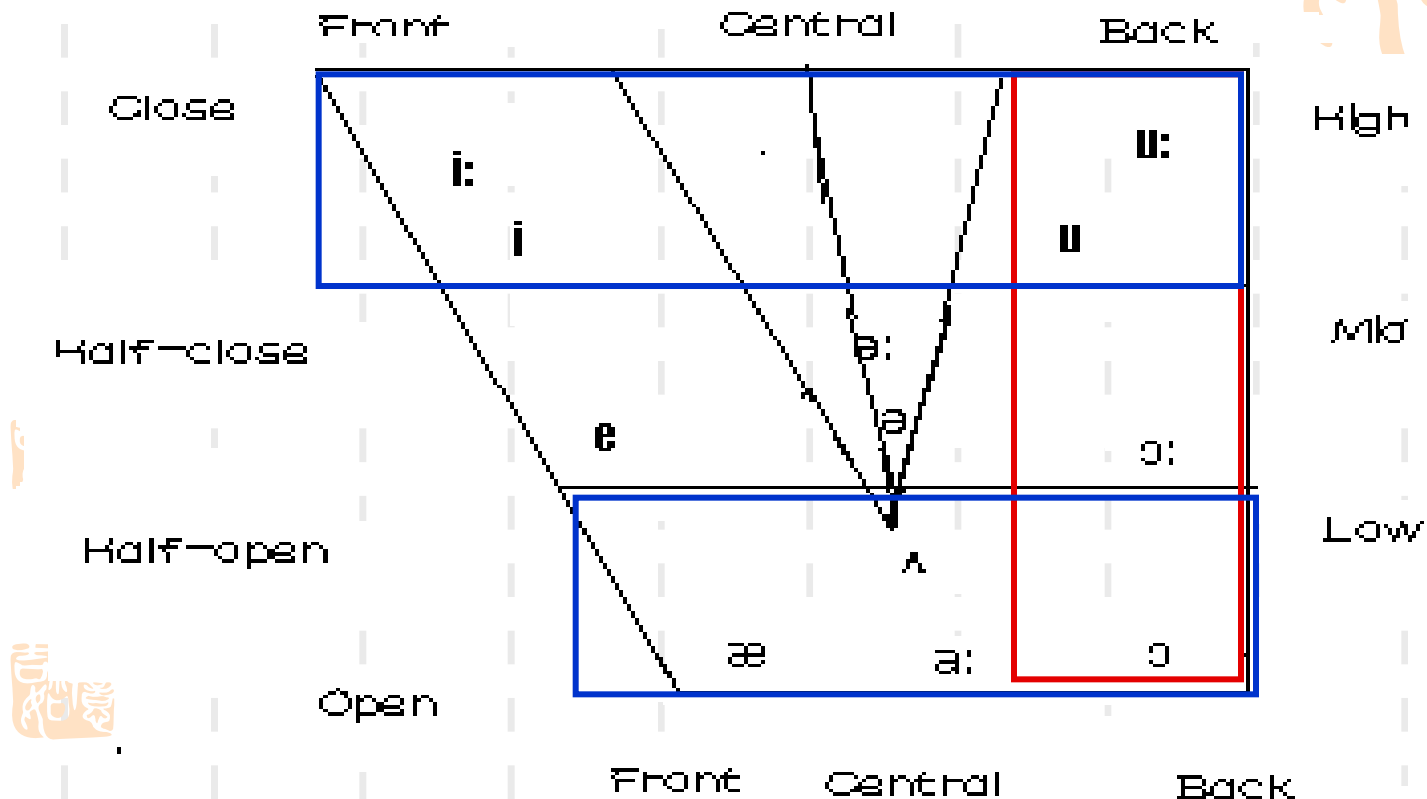
Manner of Articulation:	Place of Articulation:						
	Bilabial	Labiodental	Interdental	Alveolar	Palatal	Velar	Glottal
<u>Stop</u> voiceless voiced	p b			t d		k g	
<u>Nasal</u>	m			n		ŋ	
<u>Fricative</u> voiceless voiced		f v	θ ð	s z	ʃ ʒ		h
<u>Affricate</u> voiceless voiced					tʃ dʒ		
<u>Glide</u> voiceless voiced	ɹ w				j	ɹ w	h
<u>Liquid</u>				l r			



Vowels



# A Diagram of English Vowels



Rounded Vowels: /u:/ /u/ /ɔ:/ /ɑ/



monophthong

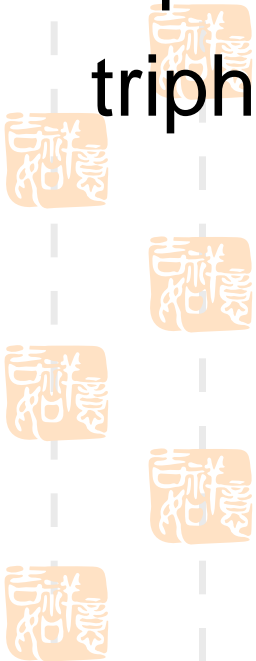
e.g. [u]

diphthong

e.g. [au] [uə]

triphthong

e.g. [auə]



# suprasegmentals



- stress
- pitch
- tone
- Intonation



They relate to aspects of pronunciation that go beyond the production of individual segments.



# Stress and pitch



[,u:nl'vɜ:sətɪ]

