

**University of Basrah**  
**College of Arts**  
**Department of Translation**  
**Third Year**



# **Linguistics**

*The Sounds of Language*



## *Speech Sounds*

We noted some of the basic features of the human vocal tract and the intricate muscle interlacing in and around the mouth that give humans the ability to produce a wide range of sounds with great speed. Yet, as they chatter away, humans do not simply produce a random selection of these sounds. Only certain sounds are selected on a regular basis as significant for communicative activity. In order to identify and describe those sounds, we have to slow down the chatter of everyday talk and focus on each individual sound segment within the stream of speech. This may seem straightforward, but it is not an easy task.



# *Phonetics*

The general study of the characteristics of speech sounds is called *Phonetics*. Our main interest will be in articulatory phonetics, which is the study of how speech sounds are made, or articulated. Other areas of study are *Acoustic Phonetics*, which deals with the physical properties of speech as sound waves in the air, and *Auditory Phonetics* (or *Perceptual Phonetics*), which deals with the perception, via the ear, of speech sounds.

## *Consonants*

We are not generally aware of how we produce speech sounds and it takes a certain amount of concentration on what we are doing with our mouths to become capable of describing the individual sounds produced. We will begin with the consonants. When we describe the articulation of a consonant, we focus on three features: the voiced/voiceless distinction, the place of articulation and the manner of articulation.



## *Voiced and Voiceless Sounds*

To make a consonant sound, we start with the air pushed out by the lungs up through the trachea (or windpipe) to the larynx. Inside the larynx are your vocal folds (or vocal cords), which take two basic positions.

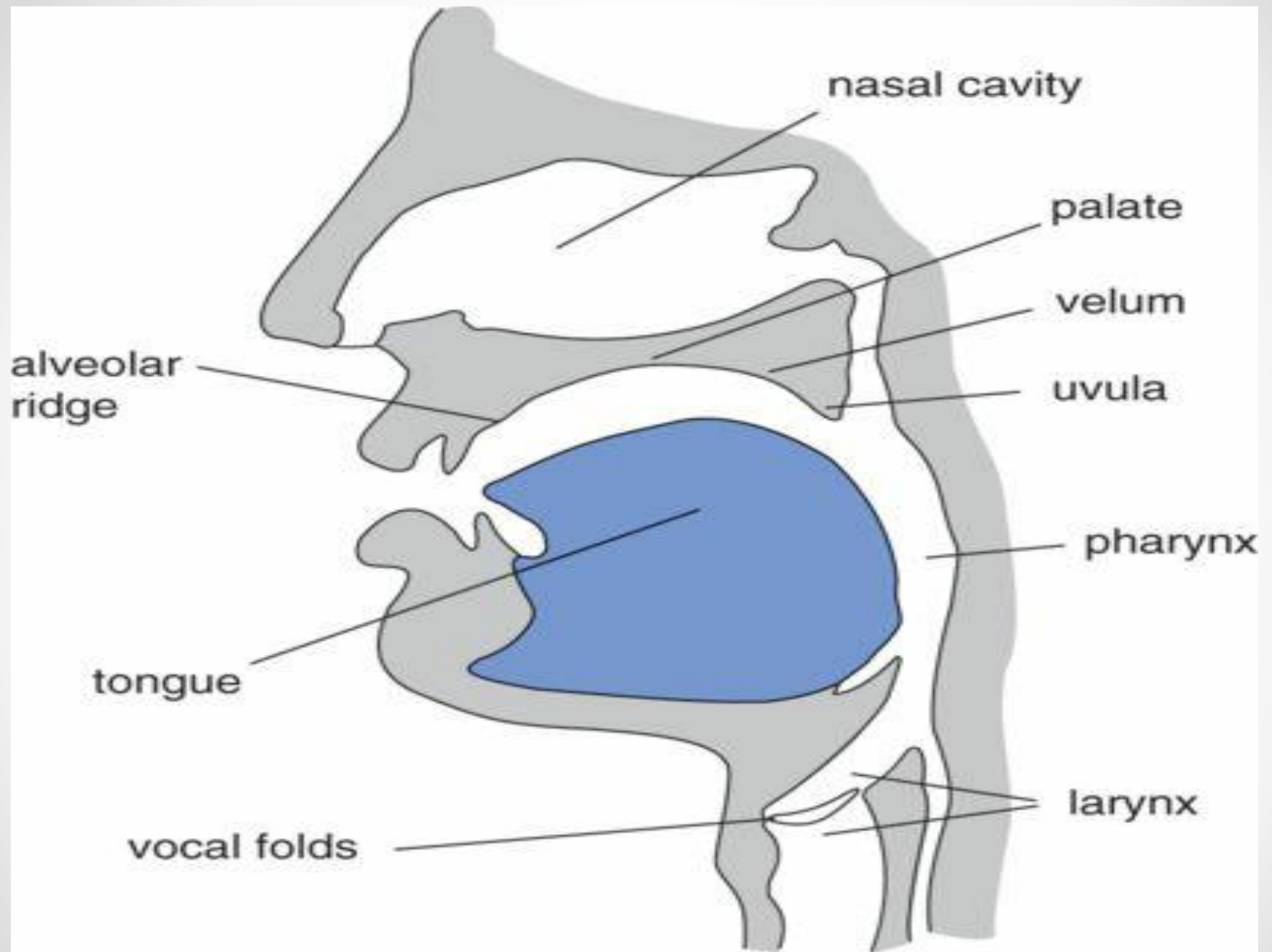
1. When the vocal folds are spread apart, the air from the lungs passes between them with no obstruction, producing voiceless sounds.
2. When the vocal folds are drawn together, the air from the lungs repeatedly pushes them apart as it passes through, with a vibration effect, producing voiced sounds.

The distinction can be felt physically if you place a fingertip gently on the top of your Adam's apple (i.e. that part of your larynx you can feel in your neck below your chin), then produce sounds such as Z-Z-Z-Z or V-V-V V. Because these are voiced sounds, you should be able to feel some vibration. Keeping your fingertip in the same position, now make the sounds S-S-S-S or F-F-F-F. Because these are voiceless sounds, there should be no vibration. Another trick is to put a finger in each ear, not too far, and produce the voiced sounds (e.g. Z-Z-Z-Z) to hear and feel some vibration, whereas no vibration will be heard or felt if you make voiceless sounds (e.g. S-S-S-S) in the same way.



## ***Place of Articulation***

Once the air has passed through the ***larynx***, it enters the ***vocal tract*** and comes up via the ***pharynx***, an extended tube shape about five inches (13 centimeters) long. It is then pushed out through the ***mouth (the oral tract)*** and/or the ***nose (the nasal tract)***. We typically produce speech as we are breathing out and generally find it quite difficult to do very much talking while breathing. Most consonant sounds are produced by using the ***tongue*** and other parts of the mouth to constrict, in some way, the shape of the oral tract through which the air is passing. The terms used to describe many sounds are those that denote the place of articulation of the sound: that is, the location inside the mouth at which the constriction takes place.



## *Familiar Symbols*

Many of the symbols used in phonetics to describe consonant sounds will be familiar. We use [p] for the voiceless consonant in *pop*. We use [b] in *Bob*, [m] in *mom* and [w] in *wet* for the voiced versions. These are *bilabial consonants*, made with both *lips*. We use [f] and [v] for the *labiodentals*, which are formed using the upper front teeth and the lower lip at the beginning of *fat* and *vat*. The voiceless [f] is at the beginning and the voiced [v] is at the end of the pronunciation of *five*. Behind the upper teeth is a rough area called the alveolar ridge. We raise the front of the tongue to this area when we make the alveolar sounds of [t] in *tot*, [d] in *dad*, [s], [z] in *size*, [r], [l] in *rail* and [n] in *nun*; [t] and [s] are voiceless, [d], [z], [r], [l] and [n] are voiced.



## *Unfamiliar Symbols*

Other symbols may be much less familiar, as in the two ways of representing the “th” sounds in English. We use [θ], called “*theta*,” for the *voiceless version*, as in *thin* and *wrath*, and at the beginning and end of the phrase *three teeth*. We use [ð], called “*eth*,” for the *voiced version*, as in *thus*, *then*, *feather* and *loathe*. Because the teeth are involved in creating these sounds, they are called *dentals*. If these sounds are made with the tongue tip between (= inter) the teeth, they are described as *interdentals*.

There are some special symbols used for the sounds made in the middle area of the mouth, involving the tongue and the palate (the roof of the mouth). We use [ʃ] for the “*sh*” sound, as in *shout* and *shoe-brush*, and [tʃ] for the “*ch*” sound, as in *child* and *church*. These are *voiceless consonants*. Their *voiced counterparts* are [ʒ] for the sound in *treasure* and *rouge*, and [dʒ] for the sound in *judge* and *George*. Because they are produced in an area where the *alveolar ridge* meets the *palate*, these sounds ([ʃ], [tʃ], [ʒ], [dʒ]) are sometimes described as “*post-alveolar*” or “*palato-alveolar*,” but we will just refer to them as *palatals*.

Another palatal is the voiced sound [j], which often represents the sound of the written letter “y,” as in *yes*, *yoyo* and *lawyer*. The sounds produced toward the back of the mouth, involving the *velum*, are represented by the velars [k], as in *kick* (voiceless), and [g], as in *gag* (voiced). Note that phonetic [g] is different from typewritten “g.” Another *velar consonant* is [ŋ], called “*angma*,” as in *thong* and *ringing*. There is no [g] sound at the end of these words.

There is one consonant sound produced without the active use of the tongue. It is the [h] sound in *have* and *hold*, and the first sound in *who* and *whose*. This sound is described as a *voiceless glottal*. The “*glottis*” is the space between the *vocal folds* in the *larynx*. When the *glottis* is open, as in the production of other voiceless sounds, and there is no manipulation of the air passing out of the mouth, the sound produced is [h].

## *Vowels*

While the consonant sounds are mostly articulated via obstruction in the vocal tract, vowel sounds are produced with a relatively free flow of air. They are all typically voiced. To describe vowel sounds, we consider the way in which the tongue influences the shape through which the airflow must pass. To talk about a place of articulation, we think of the space inside the mouth as having a front versus a back and a high versus a low area. Thus, in the pronunciation of *heat* and *hit*, we talk about “*high, front*” vowels because the sound is made with the front part of the tongue in a raised position.

In contrast, the vowel sound in *hat* is produced with the tongue in a lower position and the sound in *hot* can be described as a “*low, back*” vowel. The next time you’re facing the mirror, try saying the words *heat, hit, hat, hot*. For the first two, your mouth will stay fairly closed, but for the last two, your tongue will move lower and cause your mouth to open wider. (The sounds of relaxation and pleasure typically contain lower vowels.)

## ***Diphthongs***

In addition to single vowel sounds, we regularly create sounds that consist of a combination of two vowel sounds, known as diphthongs. When we produce ***diphthongs***, our ***vocal organs*** move from one ***vocalic position*** [***a***] to another [***ɪ***] as we produce the sound [***aɪ***], as in ***Hi*** or ***Bye***. The movement in this diphthong is from low toward high front. Alternatively, we can use movement from low toward high back, combining [***a***] and [***ʊ***] to produce the sound [***aʊ***], which is the diphthong repeated in the traditional speech training exercise [***haʊ naʊ braʊn kaʊ***].

# ***Triphthong***

In phonetics, a triphthong (UK: /'trɪfθɒŋ, 'trɪpθɒŋ/, US: /-θɔːŋ/) is a ***monosyllabic*** vowel combination involving a quick but smooth movement of the articulator from one vowel quality to another that passes over a third. While "***pure***" vowels, or ***monophthongs***, are said to have one target articulator position, diphthongs have two and triphthongs three. Triphthongs are not to be confused with ***disyllabic*** sequences of a diphthong followed by a ***monophthong***, as in German ***Feuer*** ['fɔɪə] '***fire***', where the final vowel is longer than those found in triphthongs.

A white, cloud-shaped sticker with a small tail at the bottom, placed on a brown corkboard. The sticker contains the text "Thank you!!" written in a black, casual, handwritten-style font. The word "Thank" is on the top line and "you!!" is on the bottom line, both centered within the bubble's shape.

Thank  
you!!