

There are a majority of English sounds. They can be classified as consonants and vowels, as large. In terms of sounds, we can have a study on sounds, and this one is named as phonetics. Phonetics is a study that figures out how speech is described. To be specific, there are three types of phonetics: articulatory phonetics, acoustic phonetics, and auditory phonetics.

First of all, articulatory phonetics is the study about the production of speech. This is the most primitive step of speech. The very first step of articulation is to release air from lung to vocal tract. Vocal tract is composed of larynx, pharynx, nasal tract and vocal tract. To take a closer look, vocal tract is organized by upper side and lower side. Upper vocal tract includes upper lip, upper teeth, alveolar ridge, hard palate, soft palate(velum), uvula and pharynx wall, from the front. In addition, lower vocal tract constitutes lower lip, tongue, and epiglottis, also from the front.

Now again about the speech process, there are 5 speech organs, which are constrictors, also articulators, that make the actual sound during the speech. They are lips, tongue tip, tongue body, velum, and larynx. Phonation process occurs in larynx. Every sound appears through the larynx. Also, the sound from larynx can be divided by voiced sound and voiceless sound. Voiced sound is the sound that occurs by the vibration of vocal cords, and the examples are b, m, v and so on. Oral-nasal process happens by the position of velum. When nasal sounds are made, velum goes downward so as to make the air go through the nose. Otherwise, velum goes upward, when it is oral sounds. Articulatory process is created in lips, tongue tip and tongue body.

Moreover, each constrictor can be specified by constriction location and constriction degree. By the touch of lips, tongue body and tongue tip, the air flow is constricted at such location, and then it appears as different sounds. Constriction degree is about how much constrictions are made. The very much constriction made, we call it stops. The order goes as fricatives, approximants, vowels, from the most. Therefore, phonemes are produced by specifying constrictors, constriction location, and constriction degree.

Phonemes are individual sounds that form words. Also, phonemes can be defined as a combination of speech organs' actions. At lips, p, b, m, f, v, and w sounds are made. By tongue tip, θ, ð, ʒ, t, d, s, z, ʃ, l, and r sounds are made. By tongue body, k, g, j, ŋ and vowels are made. By velum, m, and ŋ sounds are made. By larynx, ʔ, ʃ, p, f, t, s, k and h sounds are made.

We can figure out acoustic process in Praat. We can check duration, pitch, formant and intensity in Praat. To verify vowel acoustics, we can measure pitch using Praat. By the number of occurrences of a repeating event per second, we can find out the Hz. Then the repeating event shows the vibration of vocal folds, and the repeating parts show us a sine wave.