

## BRANCHES OF PHONETICS AND METHODS OF PHONETIC ANALISIS

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**Abstract.** *This article contains information about what phonetics and its branches. As well as it provides understandable information about general phonetics, special phonetics, theoretical phonetics, practical phonetics, historical phonetics, contemporary phonetics.*

**Keywords:** *Phonetics, vocal organs, consonant sounds, vowel sounds, 4 basic categories, the subjective and objective methods.*

### РАЗДЕЛЫ ФОНЕТИКИ И МЕТОДЫ ФОНЕТИЧЕСКОГО АНАЛИЗА

**Аннотация.** *В данной статье собрана информация о том, что такое фонетика и ее ответвления. А также дает доступную информацию об общей фонетике, специальной фонетике, теоретической фонетике, практической фонетике, исторической фонетике, современной фонетике.*

**Ключевые слова:** *фонетика, голосовые органы, согласные звуки, гласные звуки, 4 основные категории, субъективный и объективный методы.*

Linguistic analysis of the sound matter of any language allows to decompose all sound phenomena into the following aspects: articulatory, acoustic, auditory and function.

I. The vocal side includes all the movements and positions of the vocal organs necessary to produce speech sounds. The vocal organs have different functions and can therefore be divided into four groups:

1) The force-generating (breathing) mechanism provides energy in the form of air pressure and regulates the intensity of the airflow. It includes the following vocal organs: diaphragm, lungs, bronchi, trachea, vocal and epiglottis, larynx, oral cavity, nasal cavity.

2) Vibration mechanism acts as a vibrator when playing your voice. It consists of the vocal cords (voice box) located in the larynx.

3) The resonance mechanism consists of vocal organs that act as the main resonator. These are the pharynx, larynx, mouth, and nose.

4) Mechanisms of obstruction include tongue (squamous, apex, anterior, posterior/posterior), lips, teeth, soft palate with uvula, hard palate, alveolar ridge. These mouthpieces create all kinds of obstacles.

II. Acoustic aspect studies sound waves. Thus, the air oscillates between the speaker's mouth and the listener's ear. There can be different types of vibrations that affect the timbre of the voice. The primary vibrations of the vocal cords along their entire length produce the main tone of the voice. The simultaneous vibration of parts of the vocal cords produces a partial timbre (subtone). The number of oscillations per second is called the frequency. The frequency of the primary vibrations of the vocal cords is called the principal frequency, which is of great importance in the study of phonetics. It determines the pitch of the voice and is the acoustic basis for speech tone.

III. The auditory (acoustic) aspect is a physiological and psychological mechanism. It combines hearing with sound discrimination. A person can perceive a range of 16 to 20,000 Hz with a difference of 3 Hz. The human ear converts air vibrations into neural commands and

transmits them to the brain. This allows listeners to distinguish the quality, pitch, volume, and duration of the sound, as well as identify the sound.

IV. The functional (linguistic) aspect is concerned with the linguistic function of individual sounds and speech segments. From a functional point of view, all sound phenomena of any language represent a clear system of interdependent units: phonemes, syllables, stress and intonation. These phonetic phenomena have no meaning of their own. Their linguistic function is to synthesize and distinguish larger meaningful units such as morphemes, words, phrases, etc.

According to some scientists phonetics is the study of speech sounds, their physiological processes and their acoustic properties. It deals with the configuration of the vocal tract used to produce speech sounds, the acoustic properties of speech sounds, and how sounds combine to create speech sounds. into syllables, words, and sentences. Phonetic categories splitted to 4 basic categories as reported by specialities of study.

1. A leading phonetic section is regarded articulatory which examines exhibition of particular and amalgamated tones of vocal organs. This branch mastered at the greatest stage in view of the fact that numerous specialists in phonetics adopted several phrases in it.

The natural substances of vowels and consonant sounds as such shivering of air between producer and receiver is found out in acoustic phonetics.

The recognition of speech sounds by human beings is discovered in auditory phonetics.

Each of these categories are considered as substantial part furthermore they investigate, express and systematize sounds that available to produce human vocal folds. However, scientists are additionally captivated in the abstract, linguistic aspect of speech sounds and in the way top notch sound phenomena attribute in a particular language.

Phonology or functional phonetics examines speech sounds' linguistic characters.

2. As reported by area of application phonetics divided into two main parts. First one is general phonetics and the next one is special phonetics.

Each sound-producing probabilities of the human speech apparatus and the ways they are used for the cause of communication is examined in general phonetics.

The second, special phonetics is primarily based totally on common phonetics and examining of phonetic structure in a certain language.

Depending on the number of languages studied, special phonetics are divided into descriptive and comparative phonetics.

The system of articulation and phonetic units of a one language is studied in descriptive phonetics.

The purpose of comparative phonetics is to study the correspondence between the phonetic systems of two or more languages.

3. Due to the temporal character of the studied sound phenomena, linguists distinguish between historical and contemporary phonetics.

Historical phonetics traces and establishes successive changes in the phonetic structure of a given language at different stages of its development. The task of modern phonetics is to find and establish the characteristics of speech sounds of a language at the time of its present existence.

4. According to the field of application and research method, phonetics is also divided into theoretical and practical.

Practical phonetics studies the content and material form of phonetic phenomena by different methods of phonetic analysis. Theoretical phonetics mainly deals with the function of phonetic units in a language and uses methods of phonemic analysis.

All parts of phonics are closely related and teach language in a specific set of phonetic units arranged in an orderly manner.

Philosophers differentiate two groups of methods that can be used to study the sound problem of a language: the subjective and objective methods of the study of phonetics.

Subjective (introspective) methods can be derived from the sound study starting point. These include the first and most primitive methods of phonetic research: sensory analysis and direct observation. These include recognizing the actions and points of one's own or other's vocal organs in in shaping various speech sounds, as well as in investigating and contrasting one's own articulatory and auditory ideas.

Methods of objective (instrumental) phonetic analysis came out in the second half of the 20th century with the evolution of physiology and physics. They require the use of a variety of methods, such as nasopharynx, laryngoscopy, radiography, electromyography, and more. The use of instrumental analysis information allows detailed study of various phonetic phenomena and pronunciation processes.

To sum up phonetics is the study of speech sounds, their physiological processes and their acoustic properties. It is concerned with the configuration of the vocal tract used to produce speech sounds, the acoustic properties of speech sounds, and how the sounds are combined to produce speech sounds. into syllables, words, and sentences. And at present, almost no field of practical phonetic research is possible without a combination of subjective and objective methods, where the results of instrumental analysis are supplemented by the results of the analysis. introspection.

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