

LECTURE 3-4

THE THEORY OF A PHONEME.

OUTLINE

- 1. Phonemes and Allophones.**
- 2. Contrastive and Complementary Distribution. Free variations of a Single Phoneme.**
- 3. Distinctive and Non-distinctive Features.**
- 4. The Trends of the Theory of Phonemes.**
- 5. The Phoneme Theory in Other Countries.**
- 6. Distribution of Phonemes. The system of English Phonemes.**

1. Phonemes and Allophones

***Phoneme* is the smallest unit of sound of speech capable of distinguishing one word from another. Separate segments have no meaning of their own, they mean something only in combinations, which are called words.**

E.x. Pan-ban, ban-bin.

E.x. put, pair spare, speak

For example, in English, when the phoneme /p/ occurs at the beginning of words, like "put" and "pair" it is said with a little puff of air (called aspiration). But when /p/ occurs in words like "span" and "spare" it is said without the puff of air, it is unaspirated. Both the unaspirated /p/ in "put" in "span" and the aspirated /p/ in "put" have the same phonemic function. They are both heard and identified as /p/ and not as /b/. They are both allophones.

Therefore, "p" and "b" are different phonemes in English. If we replace aspirated "t" in the word "tip" by non-aspirated, we won't get different words. Therefore, "t" and "t" are variants of one and the same phoneme "t", that is *allophones*.

Ex. Twice-eighth – try – written – little – stay.

To avoid this ambiguity, the linguists use 2 separate terms:

Phoneme – is used to mean “sound” in its contrastive sense

Allophone – is used for sounds which are variants of a phoneme, they usually occur in different positions in the word and cannot contrast.

Allophones are the predictable realizations of phonemes.

2. Contrastive and Complementary Distribution.

The range of positions in which a particular unit of a language can occur is called its *distribution*.

Two or more sounds in a language contrast if they appear in the same position, in the same frame. These sounds are said to be in *contrasted distribution*.

E.x. pit-pot, tan-ban, seat-seed.

Sounds in a language that never occur in the same environment can never contrast.

They cannot appear in contrasted distribution.

They occur only in different environments,

They are said to be in *complementary distribution*.

Sounds that are in contrasted distribution are ***phonemes***, and those in complementary distribution are ***allophones***.

Free Variations of a Single Phoneme.

E.x. The man who we saw.

The man whom we saw.

Шкаф-шкап, калоши-галoши.

either, neither, economics.

Such variations are often considered as *social variations* or *stylistic variations*.

The suspension of phoneme contrast in isolated words is called *free variations* or a *temporary neutralization*.

Although phonetic contrast is suspended some social linguists have argued that free variations are often sociologically significant. The choice between variants is often conditioned by the social situation. One variety may be associated with a particular social group or geographical area or may be of higher or lower prestige.

3. Distinctive and Non-distinctive Features.

Some articulatory features are distinctive, relevant, others – are not.

To extract relevant features of the sound we have to oppose it to some other phoneme in the same phonetic context.

This is the *method of minimal pairs*.

E.x. Buy-pie, bore-pour, big-pig, bear-pear.

If the opposed sounds differ in one articulatory feature and this difference between them brings about changes in the meaning, the contrasting features are ***distinctive*** or ***relevant***.

The articulatory features which do not serve to distinguish meaning are called ***non-distinctive*** or ***irrelevant***.

The set of properties that are distinctive is not constant throughout the world's languages. It may differ from language to language.

E.x. Aspiration is non-distinctive in English, Japan.

It is distinctive in languages such as Korean and Thai.

The distinction between voiced and voiceless consonants is distinctive in English.

E.x. pin-bin, bat-bad, bag-back.

In Russian the voiced-voiceless feature is neutralized at the end of the word.

E.x. prut= twig – прут

prud=pond - пруд

Palatalization is a distinctive feature in Russian.

E.x. “mat” (checkmate) / “mat ’ ” (mother).

ел-ель, мел-мель, брат-брать

4. The trends of the Theory of Phonemes.

“phone” – «звук» - Ivan Baudoin de Courtenay (1845-1929).

“mentalist” view of the phoneme.

Phoneme is a psychic image of a sound. (1870s)

The role of sounds in the mechanism of language for communication between people does not coincide with their physical nature.

Daniel Jones – “The Phoneme: its nature, development and origin” – Phoneme – a phonetic one.

B. de Courtenay’s concept can be viewed psychologically and physically.

Psychophonetics is related to the pictured sounds.

Physiophonetics is related to concrete sounds actually uttered.

Immediate follower – L.V. Scherba (1880-1944) – “Russian vowels in their qualitative and quantitative aspects”.

In actual speech there exists a certain number of sound types which are capable of distinguishing the meaning and the form of words.

He gave the notion of allophones.

The Phoneme may be viewed as a **functional, material and abstract** element.

Phoneme- is the smallest general phonetic representation of the given language which is able to associate with the meaning representation and to differentiate words.

The definition is of a semantic character. There is a close connection between phoneme and meaning.

V.A. Vassilyev looked upon the phoneme “ as a dialectical unity of these aspects because they determine one another and are independent”.

“The segmental phoneme is the smallest language unit that exists in the speech of all the members of a given language community”.

The Phoneme is **material, objective and real; abstractional and generalized and functional.**

It's a truly materialistic point of view.

The Phoneme and its 3 aspects.

V.A. Vassilyev “English Phonetics. A Theoretical Course”.

Functional aspect – the opposition of phonemes in the same phonetic environment differentiates the meaning of morphemes, words or phrases.

E.x. He was hurt badly. He was heard badly.

It was a sin. It was a scene.

Said – says, bath – path.

Phoneme – material and objective. It is realized in speech of all English-speaking people in the form of speech sounds.

Phoneme – abstract and generalized. Native speakers abstract themselves from the difference between the allophones of the same phoneme.

V.A. Vassilyev: “Phoneme is an objective reality, existing independently from our will or intention.

It is an abstraction because we make it abstract from concrete realizations for classificatory purposes; it functions to make one word or its grammatical form distinct from the other, it constitutes words and helps to recognize them.

M.A. Sokolova: “The Phoneme is a minimal abstract linguistic unit realized in speech in the form of speech sounds opposable to other phonemes of the same language to distinguish the meaning of morphemes and words”.

5. The Phoneme Theory in Other Countries.

The abstractional conception of the phoneme was originated by **F. de Saussure**. He considered phonemes not as some material matter but some disembodied units of the language formed by the differences separating its acoustic image from the rest of the units.

In his opinion language contains nothing but differences between different sounds. In his words "language is a system of signs expressing ideas".

F. de Saussure's interpretation of the Phonemic Theory was shared by American structuralists **Leonard Bloomfield** and **Edward Sapir**.

Phonemes are declared by them as "*abstractional fictions*". They are only structural elements of the language. The "abstract" view regards the phoneme independent of the phonetic properties. It was advocated by their pupils in the **Copenhagen Linguistic Circle**.

The American linguist **Ch. Hockett** states that one of the main functions of speech sounds is to keep utterances apart. He says that the phonological system of any language is not so much a system of sounds, but it is a network of differences in them.

His definition of a phoneme is as follows:
“the phonemes are the elements which stand in contrast with each other in the phonological system of a language”.

During the late 1920s the study of the phoneme was started by the group of Eastern European scholars, who on the initiative of the Czech linguist **V. Mathesius** formed themselves in 1926 into the Circle Linguistique de Prague.

Among them were the Russian scientists **Nikolay Trubetzkoy** and **Roman Jakobson**.

They were not the pupils of B. de Courtenay, but they were familiar with his work and influenced by it.

L. Scherba disapproved of the concepts of the Prague School contributors and his efforts were continued by the linguists who regarded a phoneme as the smallest unit of speech.

Following the theory of Ferdinand de Saussure, **N. Trubetzkoy** distinguishes the sounds of language and phonemes.

He viewed the **phoneme** as the minimal sound unit by which meanings may be differentiated.

He developed F. de Saussure's principle of the separation of speech from language by proclaiming a new science – **phonology**.

According to Trubetzkoy, phonology is a linguistic science and should concern itself with the distinctive features of a language.

Phonetics is a biological science and should concern itself with the sounds of a language as they are pronounced and are heard.

The London School of Phonology was headed by professor **Daniel Jones** and is considered to represent *the physical conception of the phoneme*:

“A Phoneme may be described roughly as a family of sounds consisting of an important sound of the language with other related sounds”.

The members of the family show phonetic similarity. No member of the family can occur in the same phonetic context as any other member.

D. Jones' conceptions show the influence of N.S. Trubetzkoy. According to D. Jones, the problem of phonemes is connected with philosophy. He considers that it's impossible to give an adequate definition of the phoneme, since the term “language” is vague.

6. Distribution of Phonemes. The System of English Phonemes.

Hawaiian – poor in phonemes. The only consonants are:
/ h, k, l, m, n, p, w /.

None of them may be used without a following vowel.
“Merry Christmas” = “Mele Kalikimaka”.

Arabic has the greatest variety of guttural sounds.
The languages of the Caucasus are considered to have
the richest assortment of consonant sounds.
The Hottentot-Bushman languages of southwest Africa
use grunts and clicks as normal parts of their speech
sounds.

Some European languages get along without vowels. The Yugoslav name for *Trieste* is *Trst*. In Czech "a hill full of fog" is "vrch pln mlh". The r and l in these words serve as vowels.

The name of the former capital of Kirgistan Frunze usually sounds/purunze/.

There is no the distribution of /fr/ at the beginning of the words in the Kirgiz language.

In Tatar and English there is no phoneme /ɥ/ = /ts/ as in Russian words tsar, koltso, tsentr and the learners will face additional difficulties acquiring this phoneme.

R. Jacobson and his associates report that they have found no language where the syllable cannot begin with a consonant or end with a vowel, but there are many where the syllable cannot begin with a vowel or end with a consonant.

42 phonemes – in Russian

44 phonemes – in English

20 phonemes – in Polynesian languages

75 phonemes– in certain Caucasian dialects

32 phonemes- in French

40 phonemes – in German.

Comparative Table of Phonemes in Different Languages

Language	Conso- nants	Vowels	Total	Language	Conso- nants	Vowels	Total
Russian	36	6	42	German	22	18	40
English	24	20	44	Abkhazian	68	3	71
French	17	15	32	Finnish	13	8	21

ɪ:	I	ʊ	u:	Iə	eI	ɪ:	X
e	ə	ɜ:	ɔ:	ʊə	ɔI	əʊ	
æ	ʌ	ɑ:	ɒ	eə	aI	aʊ	
p	b	t	d	ts	dʒ	k	g
f	v	θ	ð	s	z	ʃ	ʒ
m	n	ŋ	h	l	r	w	j

The variant of the phoneme which is described as the most representative and free from the influence of the neighbouring phonemes is called ***principal***.

The variants used in actual speech are called ***subsidiary***.

E.x. *light, let* – clear in the initial position.

hill, mill – dark in the terminal position.

In Russian – вопль, рубль – the terminal [l] is devoiced after the voiceless [п], [б].

The distinction between **consonants** and **vowels** is based mainly on auditory effect.

Consonants – voice+ noise

Vowels – voice

From the articulatory point of view the difference is due to the work of speech organs.

Consonants – obstruction is made.

Vowels – no obstruction is made.

Consonants are characterized by the so-called “close articulation”. The air stream is blocked, hindered or restricted.

Vowels are articulated when a voiced air-stream is shaped using the tongue and the lips.

THANK YOU

FOR YOUR

ATTENTION!