**GLOSSARY** (Lecture 1)

**Language** as a means of human communication exists in two forms of speech: oral and written. Both forms of speech have a material substance: *phonic* in oral speech, or the sound substance, and *graphic* in written speech. The sound substance gives shape to a spoken message in communication as well as forms units of a certain language phonetic system, which consists of two levels: *segmental* (elementary sounds, vowels and consonants that form the vocalic and consonantal subsystems) and *suprasegmental* (syllables, accentual (rhythmic) units, intonation groups, utterances, that form the melodic, dynamic and temporal subsystems). Both levels (so called *phonetic level* of a language) serve to form and differentiate units of other subsystems of language (lexical and grammatical). *Grammatical level* defines the rules governing the modifications of words and their combination into sentences. *Lexical level* deals with the vocabulary, the origin of words and their meaning, and with word-building. These three language levels are very closely connected since they constitute one indivisible whole.

**Phonetics** /ϕ≅ˈνετΙκσ/ (/ϕ≅YˈνετΙκσ/)/ – the branch of linguistics which studies the sound means of the language. The central concerns of phonetics are the discovery of how speech sounds are produced (*articulatory* aspect of speech sounds), how they are transmitted through the air (*acoustic* aspect), how we hear and recognise different sounds (*auditory* aspect), how they are used in spoken language (*functional* aspect; *linguistic phonetics*), and how we can record speech sounds with written symbols (the International Phonetic Association has played a very important role in this).

**Phonology** /ϕ≅Yˈνθλ≅δΖι/ or *functional phonetics* – the branch of linguistics which studies sounds as units which serve for communicative purposes. Phonology discovers those segmental and prosodic features that have a differential value as well as establishes the system of phonemes and prosodemes. The basis of phonology is the *phoneme theory***,** created by I. Baudouin de Courtenay, later developed by L. Shcherba, N. Krushevsky. Phonology was founded in Prague by N. Trubetzkoy, R. Jacobson and others. The most basic activity in phonology is *phonemic analysis*, in which the objective is to establish what the phonemes are and arrive at the *phonemic inventory* of the language. But very few phonologists have ever believed that this would be an adequate analysis of the sound system of a language: it is necessary to go beyond this. Methods employed by phonology are linguistic. Phonology is connected with communication theory, mathematics, statistics, and cybernetics.

**Segmental Phonology** /σεγˌμεντ≅λ ϕ≅Yˈνθλ≅δΖι/ or *phonemics* is the part of phonology, which establishes the system of phonemes and allophones.

**Intonology** /ˌΙντ≅ˈnθλ≅δΖΙ/ (or *prosodemics*, or *suprasegmental phonology*) is the part of phonology, which establishes the system of prosodemes and discovers those prosodic features that have a differential value in the language. **P.Roach** writes in his book "Phonetics and Phonology" (p. 36) "… many significant sound contrasts are not the result of differences between phonemes. For example, **stress** is important: when the word "import" is pronounced with the first syllable sounding stronger than the second, English speakers hear it as a noun, whereas when the second syllable is stronger the word is heard as a verb. **Intonation** is also important: if the word "right" is said with the pitch of the voice rising, it is likely to be heard as a question or as an invitation to a speaker to continue, while falling pitch is more likely to be heard as confirmation or agreement. These examples show sound contrasts that extend over several segments (phonemes), and such contrasts are called **suprasegmental"**.

**Applied (practical) phonetics** /≅ˈπλαΙδ ϕ≅ˈνετΙκσ/ is the branch of phonetics, which studies the practical applications of a language phonetic phenomena. Practical phonetics is applied in the process of teaching foreign languages, in methods of speech correction, teaching deaf-mutes, film dubbing, transliteration, radio and television etc.

**Theoretical phonetics** is the branch of phonetics, which focuses on the application of existing theories to the language it analyses.

**Descriptive phonetics** /δΙ∀σκρΙπτΙϖ ϕ≅∀νετΙκσ/ is the branch of phonetics which studies the contemporary phonetic system of a particular language describing all the language phonetic units. Descriptive phonetics is based on general phonetics.

**General Phonetics** /ˌδΖεν≅ρ≅l ϕ≅ˈνετΙκσ/ is the branch of phonetics which is concerned with the study of man's sound producing possibilities and the functioning of his speech mechanism. It establishes the types of sounds, which exist in various languages, the ways they are produced, and their role in forming and expressing thoughts. General Phonetics is based on the extensive material provided by special phonetics of different languages and on the material of other sciences. It focuses on the complex nature of speech sounds and the formulation of a number of theories such as the phoneme theory, the theory of syllable formation, theories of stress, intonation, etc.

**Special Phonetics** /ˈσπeΣ≅λ f≅ˈνetΙκs/ is the branch of phonetics concerned with the study of the phonetic system of a definite language. The phonetic system can be studied synchronically, i.e. in its static form at a particular period of its development. In this case we deal with *descriptive phonetics.* When the language phonetic system is studied

diachronically, or in its historical development then we deal with *historical, or evolutionary phonetics*, which studies written documents and compares spelling and pronunciation of one and the same word in different periods of the language history.

**Historical (evolutionary) phonetics** is the branch of phonetics, which deals with the study of the changes in the phonetic system of a definite language (or a language family) at different stages of its historical development (diachronically). Historical phonetics uses the philological method of investigation. It studies written documents and compares the spelling and pronunciation of one and the same word in different periods of the history of the language. Historical phonetics is the part of the history of the language. It is also connected with archaeology.

**Phonostylistics** is concerned with the identification of the style-forming means, i.e. the phonetic features that enable the native speakers to distinguish intuitively between different styles of pronunciation. The main factors that cause speech modifications are as follows:

a) the aim of speech (which may be to instruct, to inform, to narrate, etc.);

b) the extent of spontaneity of speech (unprepared /prepared speech);

c) the nature, or the use of the form of speech which may either suggest only listening, or both listening and an exchange of remarks (a lecture, a discussion, a conversation, etc.);

d) social and psychological factors which determine the extent of formality of speech, the attitudes expressed, speaker's age, sex, occupation, education, etc.

**Sociophonetics** /ˌσ≅YsI≅Y ϕ≅ˈνετΙκσ/ is the branch of phonetics which studies the way the speaker's social background, education, status and roles, sex and age, physical and psychological states influence his/her pronunciation. The data obtained, as a result of sociophonetic investigations, enable us to give a coherent account of the relation between differences of pronunciation and differences of social grouping and social attitudes. In his book "Phonetics" J.D.O'Connor regarded language "...as an instrument of society, used for purposes of social co-operation and social intercourse. It must of its nature be tightly linked at many points to the structure of the community in which it operates, and it must therefore be capable to some extent ... of serving as an index of groups and attitudes within that community. So far as pronunciation is concerned, we are aware that it characterises geographical areas in the form of regional accents and perhaps classes within those areas by modification of the accent, but we really have very little knowledge about even this apparently obvious connections and no general theory to enable us to give a coherent account of the relation between differences of pronunciation and differences of social grouping and social attitudes".

**Phonosemantics** is the branch of phonetics, which studies the correlation between the phonetic structure of a word and its meaning. For example, the substitution of one phoneme for another (e.g. ∀сіла – ∀села) or an alteration in a word stress (e.g. ∀брати – бра∀ти) changes the word itself and, consequently, its meaning. Certain sequences are sometimes associated with particular feelings or human characteristics, e.g. *bump, lump, hump, rump, mump(s), clump* and others are associated with large blunt shapes; a whole family of such words as *muddle, fumble, straddle, cuddle, fiddle, buckle (vb.), struggle, wriggle* are associated with clumsy, awkward or difficult action because they all end with a plosive and a syllabic /ʎ/. Changes in any component of intonation may, in the same way, cause the change in the meaning of the utterance.

**Phonotactics** /ˌϕ≅Yν≅Yˈτ{κτΙκσ/ as the branch of phonetics studies the rules according to which the sounds are combined in connected speech in a certain language. English does not exploit all the possible clusters of phonemes in the word and in the syllable. For instance, long vowels and diphthongs do not precede final /N/, sounds /ε { Θ ς/ never occur finally, such consonant clusters as /pw, bw, tl, dl, μη, σρ, σΣ, σπω, ϕσ, ηρ, στλ/ never occur initially, etc.

**Cognitive phonetics** /∀κΘγν≅τΙϖ ϕ≅ˈνετΙκσ/ is the field of phonetics which studies the basic phonetic processes of knowledge representation during speech production, and of the mental processes that operate on those representations, namely speech perception, recognition, understanding and remembrance. In combination these processes of coding and decoding of oral speech permit people to perform an unlimited variety of complex mental tasks connected with the use of language in general and its phonetic means in particular. Thus cognitive phonetics is the interdisciplinary science. The phonetic representation of people's knowledge is usually organised around specific intonational patterns, or the form of an utterance, as well as sets of vowels and consonants, organising definite speech acts. For example, one type of pattern (schema) refers to the phonetic organisation of stating the facts (or constatives), another of asking for information, another of getting people react on this or that stimulus (directives), etc. All of these patterns (schemata) play an important role in speech processing since they provide a framework for correct organising and then expressing complex ideas and thoughts in oral communication.

**Dialectology** /ˌδαΙ≅λεκˈτΘλ≅δΖι/ The branch of phonetics which studies the dialectal differences in pronunciation.

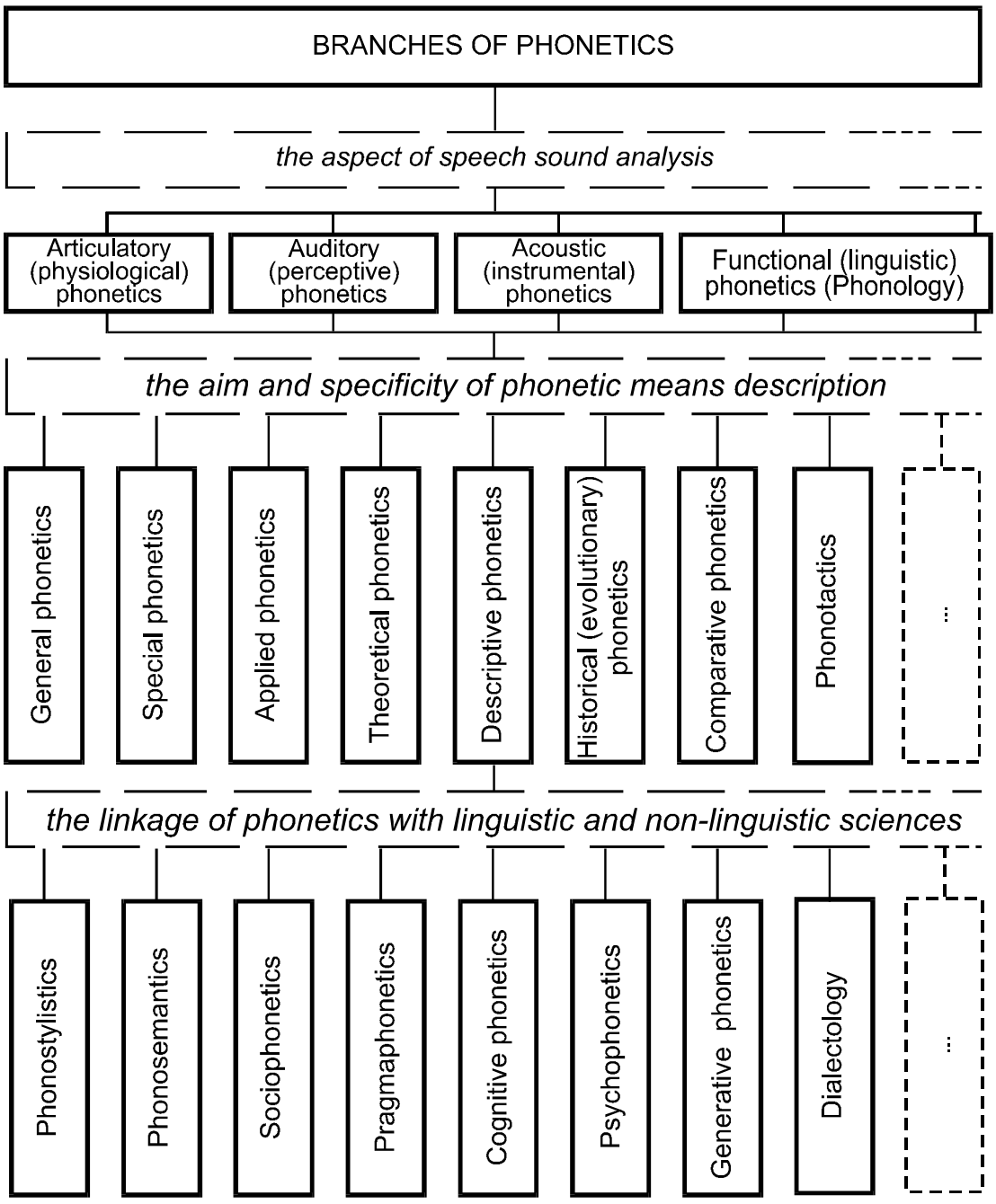
**Methods used in phonetic research.** *Direct observation method* is the oldest, simplest and most readily available method of investigation (visual or auditory) consisting in (1) observing the movements and positions of one's own or other people's organs of speech in pronouncing various speech sounds; (2) analysing the kinaesthetic sensations during speech sounds articulation; (3) in comparing speech sounds with the resultant auditory impressions. The

majority of experimental research makes use of the following instrumental phonetic techniques: (1) *spectrography,* in which a computer produces a "picture" of speech sounds; such computer systems can also carry out the analysis of *fundamental frequency* for producing "pitch displays"; (2) *radiography* (X-rays analysis), which refers to the radiographic study of the dimensions and movements of the vocal tract in producing speech sounds; (3) *laryngoscopy,* which is used for inspecting the inside of the larynx, (4) *palatography* -- for recording patterns of contact between tongue and palate, (5) *glottography* – for studying the vibration of the vocal folds and many others.

**Phonetics results** are widely applied in the process of teaching foreign languages. To underline the importance of the sound matter of the language prof. H.Gleason noted that ***to speak any language a person must know nearly all the 100% of its phonetics*, while *only 50-90% of its grammar* and *1% of the vocabulary* may be sufficient**. The data obtained as a result of different experimental studies in the field of phonetics find their practical applications (1) in teaching correct pronunciation and elocution to actors, singers, announcers and other public speakers; in eliminating dialectal features from the pronunciation of dialect speakers; (2) in logopedics (i.e. in curing speech defects and pathologic disturbances of speech, such as various forms of aphasia); (3) in surdo-pedagogics (i.e. in teaching normal oral speech to deaf and dumb people); (4) in devising alphabets and orthographies for unwritten languages and in reforming existing orthographies (i.e. in spelling reforms); (5) in cybernetics (i.e. phonetics provides valuable data for the design and construction of all sorts of cybernetic machines connected with sound recording, transmission, reproduction, speech recognition, sound synthesis, machine translation, etc.).

For better understanding, all branches of phonetics can be represented in the table according to the following principles:

**The Classification of Branches of Phonetics**



**GLOSSARY** (Lecture 2)

**The hierarchy of discrete and non-discrete phonological units**. The minimum unit in phonology is the *phoneme, a* discrete isolated unit constituting in speech other larger linguistic units; then comes the *syllable*, made up of phonemes in certain arrangement; then comes the *rhythmic group* consisting of a sequence of syllables; then – the *intonation group*; then comes *intonation pattern* consisting of a sequence of rhythmic groups and unified by the intonation pattern it carries; and perhaps beyond that a larger group still, i.e. the *utterance*, consisting of a sequence of intonation groups; and then comes the *text/discourse*. Thus it should be possible now to see the hierarchical relationship of phonological units, which may be represented in the following way: *phoneme > syllable > rhythmic group > intonation group > intonation pattern > utterance> text/discourse.*

**The Phoneme** /ˈɸ≅Yνι:μ/ is the smallest indivisible language unit which is capable of distinguishing one word from another word of the same language or one grammatical form from another of the same word, and which exists in the speech of all the members of a definite language community. Phonemes are the ultimate constituents of language, the smallest elements that it could be broken down into. Phoneme is the fundamental unit of phonology, which has been defined and used in many different ways during this century. All theories of phonology hold that spoken language can be broken down into a string of sound units (phonemes), and that each language has a certain, relatively fixed set of these phonemes. Every phoneme is represented in speech by its several variants or ***allophones***. In its turn each variant of a phoneme is a part, an aspect or the essence of that phoneme. Though phonemes have no meaning, they are linguistically important, since they perform several functions: (1) *constitutive* for they constitute morphemes, words; (2) *distinctive*, because they distinguish one word from another; (3) *identificatory*, or *recognitive* since they identify the right use of the allophone of a certain phoneme.

**The distributional method** /%δIστρI∀βφυ:Σ≅ν≅λ ∀μεT≅δ/ of the phonological analysis is based on the phonological rule that different phonemes can freely occur in one and the same position, while allophones of one and the same phoneme occur in different positions and, therefore, cannot be phonologically opposed to each other. The distributional method of analysis is a purely formal method of a language phonemes identification.

**The semantic method** /σ≅∀μ{ντIκ ∀μεT≅δ/ of the phonological analysis is used in establishing the set of phonemes of a language which is based on the *phonological rule* that a phoneme can distinguish words when opposed to another phoneme in identical phonetic context. The semantic method of identification of phonemes attaches great significance to meaning; the phonemes form a *phonological oppositions* and are realisations of two different phonemes. If not, they are allophones of one and the same phoneme. Such analysis sometimes is referred to as *minimal pair test*. The pairs of words, which differ in one sound only, are called *minimal pairs*. The procedure of finding *minimal pairs* consists in the application of the so-called *commutation test*, i.e. replacing of one speech sound by another in the same position in order to see whether that substitution will produce a *minimal pair* or not. E.g. pen – ben; ten – den; Ken – gen (not a member of minimal pair – no meaning).

**Distinctive features** /δIσ∀τINκτIϖ ˅ɸι:τΣ≅z/ is a small set of important differences (or contrasting components) between certain phonemes: vowels and some consonants, plosives and affricates, nasal and oral consonants, and so on. These differences are identified by phonologists, and are known as *distinctive features*. And the problem of the phonological analysis is the identification of the inventory of *distinctive features* on which all the phonological oppositions are based. Every sound is characterised by a number of features, not all of which are equally important for communication. Allophones of /p/, for instance, have features common for all of them and some features which characterise only a few of them. The problem is to decide which of the features are relevant and which are irrelevant, or incidental.

**The system of phonological oppositions.** To discover distinctive features of the phoneme, it is to be opposed to some other phoneme in the same phonetic context. The phonemes of a language form a system of oppositions in which any phoneme is usually opposed to other phonemes in at least one position, in at least on *minimal pair* in word-initial, word-medial and word-final position. There are three kinds of oppositions: (1) **single** – if the members of the opposition differ in **one feature**:

| Opposed phonemes | Common Features | Distinctive Feature |
|---|---|---|
| /k/ –/g/ back – bag | 1) backlingual – backlingual<br>2) occlusive – occlusive | 1) fortis voiceless – lenis voiced |

(The distinctive feature fortis voiceless vs. lenis voiced is called **marked**);

(2) **Double** (двомірна) – if two distinctive features are marked:

| Opposed phonemes | Common Features | Distinctive Feature |
|---|---|---|
| /p/ –/d/ pen – den | 1) occlusive– occlusive | 1) labial – lingual<br>2) fortis voiceless – lenis voiced |

(3) **triple** – if three distinctive features are marked:

| Opposed phonemes | Common Features | Distinctive Feature |
|---|---|---|

| | | |
|---|---|---|
| /p/ –/Δ/ pen – then | – | 1) occlusive – constrictive<br>2)labial – dental<br>3) fortis voiceless – lenis voiced |

**The word as the basis for the phonological/phonemic analysis.** It frequently happens that a phonemic analysis is based on a unit not larger than the word since any larger section of the utterance makes the analysis a great deal more complicated. As D.Jones has pointed out, the two phrases *plum pie* and *plump eye* exemplify the complication, which will arise. The two phrases differ principally in the aspiration which accompanies the /p/ of the *pie* but which is absent from the final /p/ of *plump*. A phonemic analysis which is based on such an extensive sound sequence would require the establishment of two /p/ phonemes, one with, one without aspiration. The difficulty is avoided if the word is treated as a complex phonetic and phonemic entity, special consideration being given to word boundaries in the utterance. If, however, the linguistic analysis is based on a sequence more extensive than the word, a mark of contrast has to be established in order to deal with the behaviour of phoneme sequences at word or morpheme boundaries.

**Schools of phonology. (1) The Kazan linguistic school**, originated by Prof. **Ivan Olexandrovich Baudouin de Courtenay** (1845-1929), an eminent scholar of Polish background. The traditions of this school were later developed in St. Petersburg University. I.A.Baudouin de Courtenay's work may be roughly subdivided into two periods: 1) *the morphological approach* to the phoneme theory. He tried to analyse phonemes according to their functions in morphemes. Prof. N.S.Trubetskoy's archphoneme is practically based on Baudouin's morphological phoneme theory. 2) *the psychological or mentalistic approach*. I.A.Baudouin de Courtenay asserts that "a speech sound" is a fictitious unit, and what really exists being constantly renewed in the individual mind is the perception of a sound. It is a complex perception of the articulatory movements and of the muscular sensations connected with them together with the resulting acoustic impressions, all of which react on the mind simultaneously. This complex perception he called "the phoneme". **(2) The Prague Phonological School**, founded by **N.S. Trubetzkoy** (1890-1938) and **R.Jakobson** (1896-1982)**.** The main points of N.S. Trubetzkoy's theory are: (1) *the separation of phonology from phonetics*; (2*) the theory of phonological oppositions*; (3) *the theory of arch-phoneme,* which is defined as a unity of relevant features common to two phonemes. N.Trubetzkoy developed de Saussure's principle of the separation of speech from language by proclaiming a new science – phonology, as distinct from phonetics. **(3) St. Petersburg** (**Leningrad) Phonological school, founded by Prof. Lev Volodimirovich Scherba (1880-1944)**. The principal points of L.V.Scherba's phoneme theory are: 1) *the theory of phonemic variants, which represent phonemes in actual speech;* 2) *the theory of phonemic independence,* under which he meant the capability of phonemes to express meaning of their own or to express different emotions. L.Scherba was the first to advance the idea of the distinctive function of phonemes (the meaning and the forms of words). Profs. Zinder L.R., M.Matusevitch, L.Bondarko further develop L.Scherba's ideas. **(4) The Moscow Phonological School**, founded in the 20s of the last century (Prof. G.P.Torsuyev, A.A.Vassilyev), developed L.V.Scherba's theory and held the view that **the phoneme** is represented by a whole number of its alternating features. They presented the phoneme as a dialectical unity of three aspects: a) material, real, and objective; b) abstractional and generalised; c) functional. A number of linguists of the Moscow school (R.I.Avanesov, A.A.Reformatsky, P.S.Kuxnetsov, V.N.Sidorov, N.F.Yakovlev) have adopted and developed Baudouin's morphological phoneme theory of the early period, adding the notion of *the phonemic variations* viewed as the concrete representations of phonemes in "weak" position which are distinguished from phonemes in "strong" position. **(5) The London Phonological School,** originated by Prof. **D.Jones** (1881-1967). He defined the phoneme as a family of similar sounds, e.g.:

/t/ — Take [$\tau^{\eta}\varepsilon I\kappa^{\eta}$]
/t/ — Steak [$\sigma\tau\varepsilon I\kappa^{\eta}$]
/t/ — Shut the door [$\Sigma\varsigma\equiv\ \Delta\cong$ dO:]
/t/ — Twice [$\tau^{\omega}\omega\alpha I\sigma$]

D.Jones doesn't mention the distinctive function of the phoneme in his definition, however, he emphasises the fact that different members of the same phoneme are mutually exclusive, for instance, the /k/ that is used in *keep* cannot be used in *call* where we use a labialized /k/. He considers that it is impossible to give an adequate definition of the phoneme, since the term "language" is vague; a language can be said to exist only in some mentalistic or non-material sense). **(6) The American Phonological School,** headed by **Edward Sapir** and **Leonard Bloomfield**. They define the phoneme as a minimum unit of distinctive sound-features. Their treatment of phonetics is synchronic and descriptive; according to them all the phenomena of language are analysed in their present condition without any connection with the history of the language in question. **(7) The Copenhagen Linguistic Circle,** represented by Profs. **L.Hjelmslev, H.J.Uldall**, who regard the phoneme as essentially independent of the acoustic and physioligical properties of speech sounds.

The phoneme theory was thoroughly analysed and gained popularity in linguistic world only after 1928, when the **1st International Linguistic Congress** tool place in the Hague and after the appearance of Nickolai Trubetskoi's manuscript the Foundations of Phonology (1938).

**GLOSSARY** (Lecture 4)

**Articulation basis** /A:ˌtIkφuˈlεIΣ˭n ˈβεIσIσ/. Due to the identical structure of speech organs of people of different races and nationalities, all languages may have sounds of identical types. But being identical typologically, the sounds are not identical articulatory. Their articulation distinctions are explained by the fact that each language has its own tendencies and modes of articulation. A set of articulatory habits characteristic of all the native speakers of a language is called **articulation basis of the language**. The peculiarities of the articulation basis of English determine the specific articulatory characteristics of its sound system, the character of sound modifications in connected speech and the physiological mechanism of syllable formation (e.g.: checked vowels (short vowels under the stress) require a great force of utterance at the end of their articulation; the lips do not protrude for /O:/ and /u:/ as they do for /o, y/; voiced consonants are less energetic, whereas voiceless consonants are much more energetic; stressed syllables are not so contrastively marked by loudness, etc).

**(Be prepared to explain the *articulatory differences in the production of identical phonemes in English and your mother tongue*)**

**Transcription –** the representation of speech sounds by means of a special set of phonetic symbols indicating an approximate specification of the articulations involved. There are many different types of transcription; the most fundamental division that can be made is between ***phonemic*** (or ***phonological,*** or ***broad***) and ***phonetic*** (or ***allophonic***, or ***narrow***) transcription. The term ***phonemic*** or ***broad transcription*** (***phonological***) is used to designate a transcription that uses a simple set of symbols representing one of the phonemes of the language without any of the details of the pronunciation that are predictable by phonological rules, thus giving a limited amount of phonetic information. In phonemic transcription we use the slant brackets to indicate phonemic symbols, e.g. /r/. **A *phonetic transcription*** (or ***allophonic***, or ***narrow***) presents the full range of phonetic symbols if these are required; which carry a lot of fine detail about the precise phonetic quality of sounds. The use of diacritics, small marks that can be added to a symbol to modify its value, is a means of increasing precision, e.g. a small circle [$_{o}$] placed under a symbol represents a voiceless sound like /λ/ in the word *play* [πλ⇓εI]; diacritic mark [ ∉ ] beneath a consonant stands for its dental allophone as in *eighth* [εIτ∉T]. The square brackets indicate phonetic (allophonic) symbols.

**Syllable** is the smallest unit, into which the speech continuum is divided. It is the smallest uninterrupted pronunciation and perceptible unit since in connected speech sounds are not pronounced separately. Boundaries between the sounds in a syllable are not clearly marked. On the contrary, boundaries between syllables are marked by the alternation of increases and decreases in articulatory tension. The syllable is a fundamentally important unit both in *phonetics* and in *phonology*. As a *phonetic unit* the syllable is defined in articulatory, auditory (perceptual) and acoustic terms with universal application for all languages. As a *phonological unit* the syllable can be defined and described only with reference to the structure of one particular language.

The syllable can be formed by a vowel (V), a vowel and a consonant (VC), a consonant and a sonorant (CS), the latter being typical of the English syllabic system. As to the presence, number and arrangement of consonants there are 23 syllable patterns in English (V, VC, CVC, CV, CCVC, CCVCC, CCCVC, CCCVCC, etc.), the CVC pattern being the most frequent and fundamental in English.

According to their accentual weight syllables are classified into *stressed* and *unstressed*; from the viewpoint of whether a syllable begins and ends with a vowel or a consonant sound, syllables are classified as *open, closed, covered* and *uncovered***.** According to the length syllables may be *short* ( ◡ ) and *long* ( ¯ ). The linguistic unit of syllable length is **mora**, which is equal to the duration of a short vowel sound.

Syllable performs several functions: (1) *constitutive* (syllable forms higher-level language units: words, rhythmic groups, utterances); (2) *distinctive* (смислорозрізнювальна) (the difference in the place of a syllabic boundary differentiates the meanings of the words and word combinations). Due to the distinctive importance of syllable division, the syllabic boundary is regarded as a separate phonological unit called *the juncture phoneme*. There are two types of juncture: *open* (which occurs between syllables, e.g. in *a ˈname* /≅ ˈnεIμ/ open juncture occurs between /≅/ and /n/), and *close* (which occurs between sounds within one syllable, e.g. in *an ˈaim* /≅n ˈεIμ/ close juncture occurs between /n/ and /εI/); 3) *identificatory* or *recognative* (the ability of the listener to perceive syllables as entire phonetic units with their definite allophones and syllabic boundaries).

**Examples of open and close syllabic junctures:**

| **Open juncture** | **Close juncture** |
|---|---|
| a nice house /≅ ∀nαIσ °ηαYσ/ | an ice-house /≅n °αIσηαYσ / |
| a nation /≅ °nεIΣn/ | an Asian /≅n °εIΣn/ |
| Joy sleeps /∀δZOI °σλι:πσ/ | Joyce leaps /∀δZOIσ °λι:πσ/ |
| I scream! /αI ˈσκρι:μ/ | Ice cream /αIσ ˈκρι:μ/ |
| I saw her race /αI ∀σO: η3• °ρεIσ/ | I ∀saw her ace /αI ∀σO: η3•ρ °εIσ/ |
| that stuff | that's tough |
| the waiter cut it | the way to cut it |

| | |
|---|---|
| pets enter | Pets centre |
| stopped aching | Stop taking |

The phonetic nature of open juncture is complex. Its occurrence involves changes in length, pitch, aspiration and in other features of sounds, e.g.: in the pair of words *ni*ˈ*trate – night*-ˈ*rate* the distinction in juncture lies in: 1) the greater degree of aspiration of /t/ in the first word; 2) allophonic difference of /r/ – in the first member of the opposition it is slightly devoiced under the influence of the initial /t/; 3) the diphthong /αI/ is shorter in the second word because the syllable is closed by a voiceless /t/, etc.

**Phonotactics** is the branch of phonology that studies the characteristics of sounds and sound sequences and the rules according to which sounds are combined in connected speech in a certain language. Phoneme sequences are at best described in terms of clustering habits. *A cluster* is a sequence of two or more phonemes of the same class without an intervention of a phoneme of another class. As is known languages do not allow phonemes to appear in any order. According to their position in the phonetic structure of a word clusters can be divided into: 1) *prevocalic*, 2) *post-vocalic* and 3) *intervocalic*. In English prevocalic clusters, the largest number of consonants is *three*:

| | | |
|---|---|---|
| /spl/ – splash | | /skl/ – sklent |
| /spr/ – spray | /str/ – straw | /skr/ – scream |
| /spj/ – spume | /stj/ – student | /skj/ – skewer |
| | | /skw/ – square. |

The clusters **/spl/, /spr/,** /str/, /skw/ are used most frequently, the others less so.

Certain initial and final clusters are sometimes associated with particular feelings or human characteristics. E.g. **such initial clusters as:** 1) /sl-/: *sly, slick, slothful, sluggard, sluggish, sloppy, slipshod, slime, slither, slug,* etc, /sn-/: *sniff, sneer, snigger, snitch, sneak, snivel, snob, snotty, snide, sniffle*, /kr-/: *crash, crack* evoke, as a rule, unpleasant associations; 2) /fl-/ associates with quick and light movement: *fly, flash, flame, flap, flip, flee, flit*; 3) /gl-/ associates with: a) static (unmoveable) light, e.g.: *glow, glimmer, glare, gloat*; b) obscure light, e.g.: *gleam, glitter, glisten*, c) dusky light, e.g.: *gloaming*; 3) /tr-/ associates with speed; 4) /gr-/ associates with grumbling; 5) /br-/ is associated with noise and mess, etc.

**Final consonantal clusters**, for instance, 1) /-mp/ associates with awkwardness and clumsiness as well as with large blunt shapes, e.g.: *bump*, *lump*, *hump*, *rump*, *mump(s)*, *clump*; 2) a whole family of such words as *muddle, fumble, straddle, cuddle, fiddle, buckle (v)*, *struggle, wriggle* are associated with clumsy, awkward or difficult action because they all end with a plosive and a syllabic /λ/.

As is known languages do not allow phonemes to appear in any order. It is the feature of English that 1) vowels /I, ɪ:, ε, {, ç, 3:, A:, Θ, O:, Y, ʊ:, εI, αI, OI, ≅Y, αY, I≅, ε≅, Y≅/ almost always constitute the peaks of prominence; 2) speech sound /≅/ never occurs in stressed syllables, the vowel /I / very often occurs in unstressed syllables; 3) long vowels and diphthongs do not precede final /N/, sounds /ε { Θ ç/ never occur finally. As to the consonants, one can come across the following constraints: 1) it is the feature of English that in initial position, i.e. before the vowel, there can be any consonant except /N/; 2) the central sonorant /w/ never occurs in the syllable final position; besides, the central sonorants /w, r, j/ are always followed by a vowel, e.g.: *winter* /ˈωIντ≅/, *written* /ˈρIτν/, *yellow* /ˈφελ≅Y/, i.e. they are used in a SVC syllable type; besides nasal sonorants /m, n/ as well as the lateral sonorant /l/ are capable of forming syllables, e.g.: *garden* /ˈγA:δ – ν/, *little* /ˈλIτ – λ/; rhythm /ˈρIΔ – μ/; 3) the sound /Z/ is rare in a word initial position, but it does appear in rather recent borrowings like *gigolo, jabot;* 4) no consonant combinations are possible with /Δ, τΣ, δZ/; 5) such consonant clusters as /pw, bw, tl, dl, μη, σρ, σΣ, σπω, φσ, ηρ, στλ/ never occur initially.

Phonotactic possibilities of English phonemes predetermine the rules of ***syllable division***:

1) English historically short vowels under stress (*checked vowels*) occur only in a closed syllable, /∀σIλ – ≅ – βλ/; the boundary between the syllables lies after the consonant or within it, as in *bigger* /□∀bIγ□□≅/;

2) English historically long vowels: monophthongs, diphthongs and unstressed short monophthongs (*free vowels*) can occur both in the open and in the closed syllables. When there is a cluster of consonants between two vowels, the place of the syllabic boundary is conditioned by whether this cluster is permitted at the beginning of words or not;

3) When two vowels are separated by more than two consonants, as, for instance, in the word *extra* /∀ek - str≅/ or /∀eks - tr≅/, the boundary may be both before /s/ and /t/ because both /str/ and /tr/ occur at the beginning of words;

4) The so-called thriphthongs in English are disyllabic combinations.

**GLOSSARY** (Lecture 5)

**Word stress/accent** is the greater degree of special prominence given to one or more syllables as compared with that of the other syllable or syllables in one and the same word. In English stress is a significant factor since it is an essential part of the word-shape. Word stress is regarded as a *word-level concept*, which should not be confused with utterance stress, which belongs to the sentence/utterance. Thus, stress in the word pronounced in isolation is called *word stress*; in connected speech stress is termed *sentence (utterance) stress*.

Word stress in English performs several functions: 1) *constitutive* (the ability of syllables to build up a word by forming its stress pattern, without which it ceases to be a word); 2) *distinctive* (the ability to differentiate words with analogous sound structure: ˈ*insult – in*ˈ*sult*, ˈ*suspect – su*ˈ*spect*, ˈ*accent – ac*ˈ*cent*); 3) *identificatory* (words stress patterns enable the listener to identify definite combinations of sounds as meaningful linguistic units).

Word stress in different languages may be of *different types*: (1) *dynamic or force stress* is achieved by a greater force of articulation, which results in greater degree of loudness or intensity. (2) *quantitative stress*, achieved by the quantity of the sound, i.e. its duration; vowels in stressed syllables are longer than vowels in unstressed syllables; (3) *qualitative stress*, achieved by different quality of vowels in stressed and unstressed syllables. Since the quantitative and qualitative types of word stress do not exist separately from dynamic stress we may say that dynamic stress is of two types: *dynamic quantitative stress* and *dynamic quantitative stress.* (4) *musical stress or tonic, or pitch* – prominence is mainly achieved by the variations in pitch level (e.g. in Chinese, Japanese, Vietnamese); the meaning of the words in these languages depends on the pitch level of their syllables. English word stress is considered as dynamic and is of a complex nature. It means that it can be either *dynamic quantitative* or *dynamic qualitative* since the effect of stress is mainly based on the quantity of a sound and its quality. Word stress in English manifests itself in different ways: either the intensity or duration of the stressed syllables may increase, or the spectrum of the stressed vowel may be sharpened, or the fundamental frequency may show a distinct rise (or fall), or the combination of any of these parameters. It is worth remembering that in identical positions the intensity of English vowels is different; it is the highest in the vowel /A:/, then the other vowels can be located in such an order according to the decrease of their inherent intensity: /O: > 3: > ɪ: > ʊ: > { > Θ > ɛ > Y > I/, the last one / I/ having the lowest degree of its inherent intensity. All English vowels may occur in stressed syllables, except /≅/.

Stress may be *fixed* in relation to the words of language, or it may be *free*. English stress is free: it may be on the first syllable like in *pillow, troublesomeness*; on the second as in *polite, ideally, potentially*; or on the third as in *international, possibility*, and so on.

There are **11 types** of the stress patterns in English**,** the commonest of which are as follows: words with one primary stress: ˈ– – (*language*), words with two or more equally strong stresses: ˈ– ˈ– (*well-known*), ˈ– ˈ– ˈ– (*USA*); words with primary and secondary stresse s: – ˌ– – ˈ– – (*assimilation*); ˈ– ˈ– ˌ– (ˈ*un*ˈ*sea*ˌ*worthy*) and so on. Though the English word stress is free, linguists agreed that there exist the following main accentuation tendencies in English: *recessive, retentive, rhythmic and semantic.*

***Recessive stress*** in Modern English is of two types: 1) **unrestricted recessive accent** in Modern English falls on the initial syllable provided if it is not a prefix which has no referential meaning now. It is this accent which is observed in the words of Anglo-Saxon origin and in the great majority of native English words of this type (*wonder, husband*, etc); 2) **restricted recessive stress** falls on the root of native English words with a prefix which has no referential meaning now (*among, before, between, withstand, forget, forgive*, etc.).

***Retentive tendency*** refers to the retention of the accent in all derivatives on the same syllable on which it falls in the original, or parent word, i.e. the word from which the derivative is formed, e.g. ˈ*wonder*, ˈ*wonderful*, ˈ*wonderfully;* ˈ*person*, ˈ*personal*, ˈ*personally*.

***Rhythmic tendency*** refers to avoiding a succession of weak syllables. As a result there appears a stress shift with rhythmic alteration of stressed and unstressed syllables, e.g., ˈ*exquisite* or *ex*ˈ*quisite*, ˈ*sonorous* or *so*ˈ*norous*, ˈ*hospitable* or *ho*ˈ*spitable*. This tendency is usually observed in polysyllabic words. The accent determined by this tendency is called *rhythmical*.

According to the ***semantic tendency*** the most important elements in words are stressed. Some meaningful prominence is given, for instance, to prefixes which have a distinct referential meaning of their own, e.g.: *un-* (unknown), *in-* (inadequate), *mis-* (misbehave) etc., or semantically important elements in compound words, e.g.: ˈ*well-known* (when used attributively) – *well-*ˈ*known* (when used predicatively), ˈ*blackbird*, or word combinations – ˈ*black* ˈ*bird*.

There are ***three linguistically relevant degrees*** of word stress in English (D.Jones, R.Kingdon, V.Vassilyev): *primary* (or *strong*), *secondary* (or *partial*), *weak* (the unstressed syllables have *weak* stress).

**GLOSSARY** (Lecture 6)

**Intonation** is a complex unity formed by the variations of the following components:

| | |
|---|---|
| **1. SPEECH MELODY** | 1.1. *Pitch* (extra-high, high, mid-raised, mid-lowered, low, extra-low); |
| | 1.2. *Range* (wide, widened, mid, narrowed, narrow); |
| | 1.3. *Interval* (positive: wide, widened, mid, narrowed, narrow; negative: wide, widened, mid, narrowed, narrow; zero); |
| | 1.4. *Rate of tone* (maximum; large, moderate, small, minimum). |
| **2. UTTERANCE STRESS** | 2.1. *Nuclear* (falling, rising, falling-rising, rising-falling, rising-falling-rising, level); |
| | 2.2. *Non-nuclear full;* |
| | 2.3. *Partial*; |
| | 2.4. *Weak*. |
| **3. RHYTHM** | 3.1. *Simple*; |
| | 3.2. *Compound*; |
| | 3.3. *Mixed*. |
| **4. LOUDNESS** | 4.1. High; |
| | 4.2. Increased; |
| | 4.3. Moderate; |
| | 4.4 Decreased; |
| | 4.5. Low (or soft). |
| **5. TEMPO and PAUSATION** | 5.1. *Tempo* (fast, accelerated, moderate, decelerated, slow); |
| | 5.2. *Pauses* (silent: short, long, extra-long; pauses of perception; filled). |
| **6. TIMBRE** | 6.1. Universal; 6.2. National; 6.3. Individual; 6.4. Acquired; 6.5. Linguistic. |

**Speech melody** is the variations in the pitch of the voice which take place with voiced sounds. Describing the speech melody we determine the relevant pitch levels, pitch ranges, rate and directions of pitch movement in the terminal tone of the intonation group and the type of interval at the juncture of intonation group segments. *The pitch level* of the whole utterance or intonation group is determined by the pitch of its highest-pitched syllable. It shows the degree of semantic importance the speaker attaches to the utterance in comparison with any other utterance, and also the speaker's attitude and emotions. Parenthetical phrases, for example, and other semantically less important intonation groups of and utterance are characterized by a lower pitch level than the neighbouring intonation groups. *The pitch range* of an utterance is the interval between its highest-pitched syllable and its lowest-pitched syllable. According to circumstances the speaker changes his voice range: it may be widened and narrowed to express emphasis or the speaker's attitudes and emotions. *The rate of pitch variations* may be different depending on the time, during which these variations take place, and on the range of the variations. The falling tone, for instance, is steeper when it is pronounced within a shorter period of time, its range being the same.

**Utterance Stress** is the special prominence given to one or more words in an utterance. On the *auditory level* the special prominence is achieved by pitch, loudness, length and quality. *Acoustically*, utterance stress is determined by variations of fundamental frequency, intensity, duration and formant structure. The effect of utterance stress is created, as a rule, not by a single acoustic parameter, but by the interaction of different parameters. The subsystem of utterance stress in English includes the following basic types: *nuclear stress* (marked by a kinetic tone), *non-nuclear full stress* (often marked by static tones), *partial stress* (marked either by a dot (when the partially stressed word is pronounced after the rising tone in the rising tail) or a vertical bar (when the word that takes it follows the falling nuclear tone) and *weak stress* (syllables are not marked as a rule as they are not stressed). The distribution of stresses in an utterance depends on the following factors: *semantic* (which determines the placement, type and degree of stress), singles out the utterance semantic centre by this or that nuclear, or primary stress, carries the greatest semantic importance), *grammatical* (grammatical structure of the utterance also predetermines its accentual structure) and *rhythmical* (the distribution of stresses in an utterance is also affected by the rhythmical laws of English, e.g. notional words that are usually stressed may lose their stress under the influence of rhythm, and form words may take stress under the influence of rhythm). All these factors are closely linked, the semantic factor being the most important.

**Rhythm** has been defined as regularity or periodicity in the occurrence of a particular phenomenon in an utterance. English is considered to be mostly a language with stress-timed character. Stress-timed rhythm presupposes that utterance stress serves as a basis of the rhythmical organization of speech and that stresses segment the speech continuum into units of more or less equal length.

**Tempo** of speech is the rate at which utterances and their smaller units are pronounced. On the acoustic level tempo is generally measured by the number of syllables per second. It may vary depending on the size of audience, the acoustic qualities of the room, the individuality of the speaker and other extralinguistic factors. But most significant for the linguistic study is how variations in tempo correlate with changes in meaning. It is common knowledge that by slowing down the tempo of speech we can make an utterance or part of it more prominent, thus underlining the semantic importance of it. On the contrary, by increasing the speed of utterance we diminish prominence and, as a result, the actual semantic importance of what we say. In many languages, a sentence spoken with extra speed conveys urgency; while slower speed – deliberation or emphasis. A rapid, clipped single syllable may convey irritation; a slowly drawled syllable – greater personal involvement.

**Pause** is the means of speech continuum division into units of different length and hierarchy**.** The main function of a pause is to segment connected speech into utterances and intonation groups. Phoneticians distinguish three main *types of pauses*: silent pauses, pauses of perception and voiced or filled pauses. A silent pause is a stop in the phonation. Pauses of perception are marked by a wavy line and its effect is produced by a sharp change of pitch direction or by variation in duration. Filled pauses are used to signal hesitation or doubt.

**The Basic Functions of Intonation/Prosody** are constitutive, distinctive and identificatory. 1) *The constitutive function* is to form utterances as communicative units. Prosody unifies words into utterances, thus giving the latter the final form without which they cannot exist. Prosody is the only language device that transforms words as vocabulary items into communicative units – utterances. In constituting an utterance, prosody at the same time performs *the segmentative and delimitative subfunctions*. It means that intonation segments connected discourse into utterances and intonation groups, and simultaneously delimits them one from another.

2) *The distinctive function* of prosody manifests itself in several subfunctions: communicative-distinctive, modal-distinctive (attitudinal), culminative ("theme-and-rheme") distinctive, syntactical-distinctive and stylistic-distinctive functions. *The communicative-distinctive function* is to differentiate the communicative types of utterances, i.e. statements, questions, exclamations, imperatives, and communicative subtypes, e.g: statements proper (It was a 'very 'hot after\noon), commands ('Don't be \late!), requests (|Don't be /late.) etc. *The moda1-distinctive (attitudinal) function* of prosody manifests itself in differentiating modal meanings of utterances (such as certainty vs. uncertainty, definiteness vs. indefiniteness) and the speaker's attitudes (for instance, a reserved, dispassionate vs. involved, excitement vs. boredom, interested attitude, or antagonistic vs. friendly attitude and so on). *The culminative (*or *"theme-and-rheme")-distinctive function* of prosody manifests itself in differentiating the location of the semantic nuclei of utterances and other semantically important words. This function is also called logical, predicative or informational. Performing this function prosody distinguishes between what is already known and what is new in the meaning of an utterance, e.g. *The |teacher* (***theme***) *has \come* (***rheme***); *The \teacher* (***rheme***) *has |come* (***theme***). *The syntactica1-distinctive function* of prosody is to differentiate syntactical types of sentences and syntactical relations in sentences. E.g. *Her /sister, said Mary, | was a |well-known \actress* (a compound sentence); *Her |sister /said | |Mary was a |well-known \actress* (a complex sentence with an object subordinate clause); *|Smiling /Tom | |entered the \hall* ("*smiling*" is an attribute). */Smiling | Tom |entered the \hall* ("smiling" is an adverbial modifier). *Stylistic-distinctive function* of prosody manifests itself in that prosody differentiates phonetic styles: informational (or neutral), scientific (or academic), publicistic (or oratorial), declamatory (or artistic), conversational (or familiar), determined by extralinguistic factors.

3) *The identificatory function* of prosody is to provide a basis for the hearer's identification of the communicative and modal type of an utterance, its semantic and syntactical structure with the communicative situation. All the functions of prosody are fulfilled simultaneously and cannot be separated on from another. They show that utterance prosody is linguistically significant and meaningful.

***Further reading: Паращук В.Ю. Теоретична фонетика англійської мови. —Вінниця, 2005. – С.191-206.***